

Ministry of Higher Education and Scientific Research  
Academic Supervision and Evaluation Authority  
Quality Assurance and Academic Accreditation Department  
Accreditation Department



# Description of the academic program and curriculum of the Department of Mathematics

**2024–2025**

## Academic Program Description Form

University name: Al-Mustansiriya

College/ Institute: College of Basic Education

Scientific Department: mathematics

Name of academic or professional program :Bachelor's\Mathematics

Final Degree Name: Bachelor of Mathematics

Academic system: .....semester

Description preparation date : 1/5/2024

Date of filling out the file: 1/7/2025

Signature

Name of Department Head: Asst. Prof.

Dr. Talat Jassim Mahmoud

Date

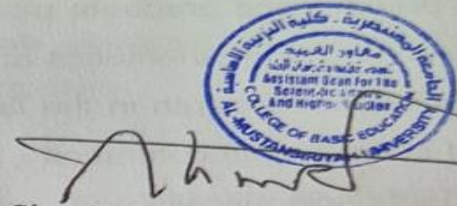


Signature

Name of Scientific Assistant: Asst.

Prof. Dr. Ahmed Baqer Hussein

Date



Check the file by

Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University

Performance Division

Prof. Dr. Salam Hussein Alwan

the date: 16/7/2025

the signature

Dean's approval

Prof. Dr. Qusay Abdul Abbas Hassan



### 1. Program vision

Basic Education seeks to prepare graduates in the field of mathematics to work in schools and government departments and benefit from the specialization in the practical and applied field.

### 2. Program message

To prepare and graduate pioneering scientific and leadership competencies in the field of mathematics and to develop the knowledge base in the field of scientific research in the field of mathematics to serve the local, regional and international community, in addition to training and refining the minds of students scientifically and cognitively, emphasizing social and cultural values and responding to the requirements of the local market.

### 3. Program objectives

- 1) Preparing qualified students in mathematics who are able to teach mathematics in middle and primary schools.
- 2) Keeping pace with scientific developments in mathematics and working to employ them.
- 3) Aligning theoretical trends with practical reality in mathematical sciences.
- 4) Students acquire skills in dealing with modern techniques related to mathematics and work on employing them in the field of study and work.
- 5) ,Enabling students to learn about the latest teaching strategies, methods and modern educational tools for teaching mathematics.

- 6) Enabling students to learn about scientific research tools and methods of employing them.
- 7) Introducing students to educational, psychological and cultural sciences and arming them with them in order to achieve excellence and scientific and professional development.
- 8) Enabling students to learn about all branches of mathematics .
- 9) Providing students with the ability to solve mathematical problems using various types of thinking.
- 10) Preparing and qualifying students to pursue postgraduate studies by developing their intellectual, scientific and research skills.

#### 4. Program accreditation

The application was submitted to the Ministry on 6/26/2025

#### 5. Other external influences

None

#### 6. Program structure

| * comments | percentage | Study unit | Number of courses | Program structure          |
|------------|------------|------------|-------------------|----------------------------|
| Essential  | 24.61      | 32         | 16                | Institutional requirements |
|            | 21.53      | 28         | 1 1               | College requirements       |
|            | 53.84      | 70         | 25                | Department requirements    |

|  |  |  |         |                 |
|--|--|--|---------|-----------------|
|  |  |  | nothing | Summer training |
|  |  |  |         | Other           |

.Notes may include whether the course is core or optional \*

| 7. Program description   |             |                                |                                                 |   |
|--------------------------|-------------|--------------------------------|-------------------------------------------------|---|
| Year/Level               | Course code | Course name                    | Theoretical credit hours Practical credit hours |   |
| First<br>First semester  | MAB03D111   | Differentiation                | 2                                               | 2 |
| First<br>First semester  | MAB03M112   | Foundations of Mathematics 1   | 2                                               | 2 |
| First<br>First semester  | MAB03P113   | Probability principles         | 2                                               | - |
| First<br>First semester  | MAB03NT123  | Number theory                  | 2                                               | - |
| First<br>First semester  | MAB03GP115  | developmental psychology       | 3                                               | - |
| First<br>First semester  | MAB03MO1110 | Computer                       | 1                                               | 2 |
| First<br>First semester  | MAB03HR119  | Human rights and democracy     | 2                                               | - |
| First<br>Second semester | MAB03M 128  | Matrices                       | 2                                               | - |
| First<br>Second semester | MAB03I121   | Integration                    | 2                                               | 2 |
| First<br>Second semester | MAB03M122   | Foundations of Mathematics 2   | 2                                               | 2 |
| First<br>Second semester | MAB03AL124  | Arabic                         | 2                                               | - |
| First<br>Second semester | MAB03BE116  | Principles of education        | 3                                               | - |
| First<br>Second semester | MAB03EL127  | English language               | 2                                               | - |
| First<br>Second semester | MAB03MO128  | Computer                       | 1                                               | 2 |
| First<br>Second semester | MAB03IE129  | Islamic education              | 2                                               | - |
| Second<br>third semester | MAB03AD211  | Advanced differential calculus | 2                                               | 2 |

|                           |             |                                             |   |   |
|---------------------------|-------------|---------------------------------------------|---|---|
| Second<br>third semester  | MAB03AP212  | Advanced<br>possibilities                   | 1 | 2 |
| Second<br>third semester  | MAB03LA213  | Linear algebra                              | 2 | 2 |
| Second<br>third semester  | MAB03EL219  | English language                            | 2 | - |
| Second<br>third semester  | MAB03AL216  | Arabic                                      | 2 | - |
| Second<br>Third semester  | MAB03D226   | Baath Party crimes                          | 2 | - |
| Second<br>third semester  | MAB03CT416  | Curricula and<br>textbooks                  | 2 | - |
| Second<br>Fourth semester | MAB03AI221  | Advanced<br>integration                     | 2 | 2 |
| Second<br>Fourth semester | MAB03G222   | engineering                                 | 3 | - |
| Second<br>Fourth semester | MAB03DT322  | Graph Theory                                | 2 | - |
| Second<br>Fourth semester | MAB03SE228  | Psychology of<br>Classroom<br>Learning      | 2 | 2 |
| Second<br>Fourth semester | MAB03EP214  | Educational<br>Psychology                   | 2 | - |
| Second<br>Fourth semester | MAB03MO 217 | Computer                                    | 1 | 2 |
| Second<br>Fourth semester | MAB03MO227  | Computer (my<br>(specialty                  | 1 | 2 |
| Second<br>Fourth semester | MAB03MT313  | Mathematical thinking                       | 2 | - |
| Third<br>Fifth Semester   | MAB03ODE314 | Ordinary<br>differential<br>equations       | 2 | 2 |
| Third<br>Fifth Semester   | MAB03GT312  | Group theory                                | 1 | 2 |
| Third<br>Fifth Semester   | MAB03AS223  | Advanced Statistics                         | 2 | 2 |
| Third<br>Fifth Semester   | MAB03ELM328 | Educational<br>leadership and<br>management | 2 | - |
| Third<br>Fifth Semester   | MAB03ME326  | Measurement and<br>Evaluation               | 2 | - |
| Third<br>Fifth Semester   | MAB03STM324 | .Specialized T.T                            | 2 | 2 |

|                            |             |                                                   |    |   |
|----------------------------|-------------|---------------------------------------------------|----|---|
| Third<br>Sixth semester    | MAB03SD329  | sustainable<br>development                        | 2  | - |
| Third<br>Sixth semester    | MAB03IT330  | Educational<br>technology and its<br>applications | 2  | 2 |
| Third<br>Sixth semester    | MAB03ARM331 | Action research<br>method                         | 2  | 2 |
| Third<br>sixth semester    | MAB03MA321  | Mathematical<br>analysis                          | 2  | 2 |
| Third<br>sixth semester    | MAB03NA311  | Numerical analysis                                | 2  | 2 |
| Third<br>sixth semester    | MAB03R323   | Ring Theory                                       | 2  | 1 |
| Third<br>sixth semester    | MAB03O228   | specialized<br>computer                           | 1  | 2 |
| Fourth<br>Seventh Semester | MAB03EH423  | Environment and<br>Health                         | 2  | - |
| Fourth<br>Seventh Semester | MAB03AI424  | Arabic literature                                 | 2  | - |
| Fourth<br>Seventh Semester | MAB03PE425  | Professional ethics                               | 2  | - |
| Fourth<br>Seventh Semester | MAB03PE327  | Practical Education<br>(Observation) 1            | 1  | 4 |
| Fourth<br>Seventh Semester | MAB03LP411  | Linear<br>programming                             | 1  | 2 |
| Fourth<br>Seventh Semester | MAB03T412   | Topology                                          | 2  | 2 |
| Fourth<br>Seventh Semester | MAB03CA413  | Complex analysis                                  | 2  | 2 |
| Fourth<br>Seventh Semester | MAB03CAI426 | Computers<br>artificial)<br>(intelligence         | 1  | 1 |
| Fourth<br>Seventh Semester | MAB03GR415  | Graduation<br>research project                    | -  | 2 |
| Fourth<br>Eighth semester  | MAB03GR415  | Graduation<br>research project                    | -  | 2 |
| Fourth<br>Eighth semester  | MAB03TP421  | Science Education<br>(Application)                | 12 | - |

| 8. Expected learning outcomes of the program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <ol style="list-style-type: none"> <li>1) Enabling students to acquire and understand the foundations, theories and knowledge of mathematics.</li> <li>2) Possess knowledge in solving various mathematical problems at all levels.</li> <li>3) Enabling students to acquire and understand integration and differentiation in mathematics.</li> <li>4) Enabling students to acquire and understand methods for evaluating mathematical problems.</li> <li>5) Enabling students to acquire and understand the basics, concepts and knowledge of educational measurement, evaluation and statistics.</li> <li>6) Enabling students to acquire and understand the language of mathematics, including symbols terms, shapes, tables, and their interpretation.</li> <li>7) Enabling students to acquire and understand methods for making comparisons between mathematical shapes and graphs.</li> <li>8) Enabling students to acquire and understand the basics and concepts of the Arabic and English languages.</li> <li>9) Enabling students to acquire and understand strategies, methods and techniques for teaching mathematics.</li> <li>10) Enabling students to understand mathematics as an integrated system of knowledge and its role in explaining some natural phenomena.</li> <li>11) Enabling students to understand and interpret the meanings behind mathematical operations.</li> </ol> |  |
| Skills                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| <ol style="list-style-type: none"> <li>1) Enabling students to acquire the skills of drawing geometric shapes accurately.</li> <li>2) ,Enabling students to have the ability to collect, tabulate represent and interpret data(quantitative and numerical).</li> <li>3) Enabling students to employ mathematical laws and rules in other sciences.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

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| <ol style="list-style-type: none"> <li>4) Enabling students to acquire the skills of presenting and discussing mathematical information and reaching the stage of proof.</li> <li>5) Acquiring mathematical knowledge that will help develop a sense of sportsmanship.</li> <li>6) Acquire the ability to solve various mathematical problems for all levels.</li> <li>7) Enabling students to acquire the skills of understanding and reading shapes, tables, symbols and mathematical terms.</li> <li>8) Enabling students to acquire skills in using modern teaching methods in teaching and learning mathematics.</li> <li>9) Developing students' abilities to acquire scientific thinking skills and critical thinking to solve mathematical problems.</li> <li>10) Enabling students to acquire planning skills for various types of teaching.</li> <li>11) Training and empowering students to possess the skills of preparing and constructing examination tests and methods for correcting them in mathematics.</li> <li>12) Enabling students to possess the capabilities to design and invent effective educational activities that encourage students to learn and participate in it.</li> <li>13) Enabling students to acquire classroom management skills, classroom interaction, and the art of dealing with classroom problems using educational methods.</li> <li>14) Enabling students to acquire teaching skills in middle and primary schools.</li> <li>15) ,Enabling students to acquire the skills of dialogue discussion, listening to others, and accepting their opinions.</li> <li>16) Enabling students to acquire self-learning skills to acquire new information, skills and knowledge.</li> </ol> |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <ol style="list-style-type: none"> <li>1) Educating students to respect human dignity.</li> <li>2) Training students to work honestly and objectively in conveying and presenting scientific information.</li> <li>3) Strengthening students' sense of belonging and loyalty to the country.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |

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| 4) Enhancing students' sense of integrity and combating corruption in all its forms.<br>5) Educating students to respect the principles and highest ethics of the profession.<br>6) Training students to respect the rights of those who benefit from their profession, culture, religion, gender and race.<br>7) Developing students' sense of responsibility during the study and work period.<br>8) ,Training students to respect the freedom of thought expression and creativity of others.<br>9) Forming positive tendencies and attitudes among students towards studying mathematics.<br>10) Introducing students to the importance of mathematics and its effective role in cultural progress and scientific development.<br>11) Enhancing the spirit of cooperation and teamwork among students. |  |
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| 9. Teaching and learning strategies                               |
|-------------------------------------------------------------------|
| Lecture and delivery<br>Discussion method<br>Interrogation method |

| 10. Evaluation methods                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assessment methods for cognitive and skill levels of teaching and learning processes<br><br>1) Uarterly or monthly essay or objective written tests.<br>2) Points awarded for daily participation.<br>3) Oral exam.<br>4) Grades for research and reports related to the lecture topic.<br>5) Grades for attendance and regularity in lectures.<br>6) Daily exams are agreed upon or not agreed upon.<br>7) Classroom and extracurricular assignments.<br>. ----- |

Evaluation methods for affective and value-based levels of teaching and learning:

- 1) Trend scales.
- 2) Questionnaires.
- 3) Case study.
- 4) Projective methods.
- 5) Note.
- 6) Self-reports.
- 7) The interview.

D - General and transferable qualification skills:

- 1) Work with quality and efficiency within a team.
- 2) He faces professional pressures positively.
- 3) He is able to manage time and invest it to achieve the best goals.
- 4) Communicate with others in a positive way.

| Academic rank                               | Specialization |                                  | Faculty preparation |          |
|---------------------------------------------|----------------|----------------------------------|---------------------|----------|
|                                             | general        | private                          | Permanent staff     | lecturer |
| 1- Prof. Dr. Ahmed Baqir Hussein            | Mathematics    | Algebra                          | Permanent staff     |          |
| 2- Asst. Prof. Dr. Talat Jassim Mahmoud     | Mathematics    | Differential Equations           | Permanent staff     |          |
| 3- Prof. Dr. Faiza Abdul Qader Abdul Razzaq | Mathematics    | Teaching Methodology Mathematics | Permanent staff     |          |
| 4- Prof. Dr. Taghreed Abdul-Kazem Jawad     | Mathematics    | Teaching Methodology Mathematics | Permanent staff     |          |
| 5- Prof. Dr. Shaima Amer Abdel Karim        | Mathematics    | Algebra                          | Permanent staff     |          |
| 6- Prof. Dr. Riad Fakher Hamid              | Mathematics    | Teaching Methodology Mathematics | Permanent staff     |          |

|                                                 |             |                                  |                 |  |
|-------------------------------------------------|-------------|----------------------------------|-----------------|--|
| 7- Prof. Dr. Ghaleb Khazal Muhammad             | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 8- Asst. Prof. Dr. Ghassan Rashid Hamid         | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 9- Asst. Prof. Baidaa Mohammed Ahmed            | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 10- .Asst. Prof. Dr. Ghiath Hameed Majeed       | Statistics  | Statistics                       | Permanent staff |  |
| 11- Asst. Prof. Dr. Imad Abbas Kofi             | Mathematics | Functional Analysis              | Permanent staff |  |
| 12- Asst. Prof. Atifa Jalil Saleh               | Mathematics | I ntegral Equations              | Permanent staff |  |
| 13- Asst. Prof. Montaha Abdul Razzaq Hassan     | Mathematics | Algebra                          | Permanent staff |  |
| 14- Asst. Prof. Tahreer Abdul-Hussein Khazal    | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 15- Asst. Prof. Dr. Alaa Tariq Blasim           | Mathematics | D ifferential Equations          | Permanent staff |  |
| 16- .Asst. Prof. Dr. N.D Al-Taha Khalifa Hassan | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 17- Asst. Prof Dr. Fayez Nafi Ghafouri          | Mathematics | D ifferential Equations          | Permanent staff |  |
| 18- Asst. Prof. Dr. Aseel Hamid Abdul-Sada      | Mathematics | Complex Analysis                 | Permanent staff |  |
| 19- Asst. Prof. Rasha Hussein Ibrahim           | Mathematics | D ifferential Equations          | Permanent staff |  |
| 20- Asst. Prof. Dr. Ali Karim Kazim             | Mathematics | Algebra                          | Permanent staff |  |
| 21- Lec. Dr. Muhammad Jabbar Hussein            | Mathematics | Topology                         | Permanent staff |  |
| 22- Asst. Prof. Taghreed Khader Hazal           | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |

|                                          |             |                                  |                 |  |
|------------------------------------------|-------------|----------------------------------|-----------------|--|
| 23- Lec. Dr. Abeer Jabbar Saad           | Mathematics | Algebra                          | Permanent staff |  |
| 24- Lec. Dr. Saif Zuhair Hameed          | Mathematics | Topology                         | Permanent staff |  |
| 25- Lec. Lu ma Jabbar Barghout           | Mathematics | Functional Analysis              | Permanent staff |  |
| 26- Lec. Yusra Muhammad Laibi            | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 27- Asst. Prof. Hind Abdel Razzaq Naji   | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 28- Lec. Nour Ali Mahdi                  | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 29- Asst. Lec. Ban Alaa Al Majeed        | Statistics  | Operations Research              | Permanent staff |  |
| 30- Asst. Lec. Youssef Hussein Mohammed  | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 31- Asst. Lec. Ahmed Hussein Hammadi     | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 32- Asst. Lec. Rawasi Mahdi Hussein      | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 33- Asst. Lec. Sarah Abdel Salam Ibrahim | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 34- Asst. Lec. Shaimaa Abdel Hamza Zboon | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 35- Asst. Lec. Zeina Muzail Majeed       | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 36- Asst. Lec. Elaf Raad Hassan Ali      | Mathematics | Algebraic Combinations           | Permanent staff |  |
| 37- Asst. Lec. Marwa Hashem Adnan        | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |

|                                    |             |                                  |                 |  |
|------------------------------------|-------------|----------------------------------|-----------------|--|
| 38- Asst. Lec. Rafah Riyadh Khazal | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 39- Asst. Lec. Nour Karim Salman   | Mathematics | N umerical Analysis              | Permanent staff |  |
| 40- Asst. Lec. Shaza Haider Diab   | Mathematics | N umerical Analysis              | Permanent staff |  |
| 41- Asst. Lec. Zainab Ali Khudair  | Mathematics | Functional Analysis              | Permanent staff |  |
| 42- Asst. Lec. Ruwa Ali Muhammad   | Mathematics | Teaching Methodology Mathematics | Permanent staff |  |
| 43- Zeina Hamed Khamas             | Mathematics | Senior Technical Director        | Permanent staff |  |

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| Professional development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Orientation of new faculty members                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p>Conduct seminars and workshops</p> <p>1- Workshop: How to deal with different types of students in the class (second month)</p> <p>2- Scientific seminar: How to choose your specialized journal in the Scopus container(fourth month)</p> <p>3- Scientific seminar: Developing e-management skills (fifth month)</p>                                                                                                                                                                                                                          |
| Professional development for faculty members                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p>By holding strengthening courses and introducing them to the most important changes occurring in developed societies, in addition to workshops and seminars .that work to develop the capabilities of faculty members</p> <p>1- Scientific seminar: How to respond to residents step by step (fourth month)</p> <p>2- Workshop: Documenting references according to the American Psychological Association(APA) style (fourth month)</p> <p>3- Workshop: Promoting a culture of participation in the decision-making process (fifth month)</p> |

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|-------------------------|
| 11. Acceptance criteria |
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|                                              |
|----------------------------------------------|
| According to central admission/student's GPA |
|----------------------------------------------|

|                                                                 |
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| 12. The most important sources of information about the program |
|-----------------------------------------------------------------|

|                                                      |
|------------------------------------------------------|
| Ministry of Higher Education and Scientific Research |
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|                              |
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| 13. Program Development Plan |
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|                                             |
|---------------------------------------------|
| . There is a plan to develop the curriculum |
|---------------------------------------------|

## Curriculum Skills Map

### Required learning outcomes of the program

| values |           |           |           | For skills |    |    |    | knowledge |    |    |    | essential<br>Or my<br>choice | Course name                   | Course code | Year/Level |
|--------|-----------|-----------|-----------|------------|----|----|----|-----------|----|----|----|------------------------------|-------------------------------|-------------|------------|
| A4     | Part<br>3 | Part<br>2 | Part<br>1 | B4         | B3 | B2 | B1 | A4        | A3 | A2 | A1 |                              |                               |             |            |
|        |           |           |           |            |    |    | √  |           |    |    |    | essential                    | Differentiation               | MAB03C111   | First      |
|        |           |           |           |            |    |    |    |           |    |    | √  | essential                    | Foundations1<br>Mathematics   | MAB03C112   |            |
|        |           |           |           |            |    |    | √  |           |    |    |    | essential                    | Probability principles        | MAB03C113   |            |
|        |           |           | √         |            |    |    |    |           |    |    |    | Sassy                        | Human rights and<br>democracy | MAB03HR118  |            |
|        |           |           | √         |            |    |    |    |           |    |    |    | essential                    | developmental<br>psychology   | MAB03GP115  |            |
|        |           |           |           |            |    |    | √  |           |    |    |    | essential                    | Computer                      | MAB03MO119  |            |
|        |           |           |           |            |    |    | √  |           |    |    |    | essential                    | Number theory                 | MAB03NT123  |            |

|  |  |   |  |  |  |   |  |  |  |   |                  |                                |             |        |
|--|--|---|--|--|--|---|--|--|--|---|------------------|--------------------------------|-------------|--------|
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Arabic                         | MAB03AL129  |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Fundamentals of education      | MAB03BE116  |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Integration                    | MAB03C111   |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Foundations 2 Mathematics      | MAB03F122   |        |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Islamic education              | MAB03IE128  |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Matrices                       | MAB03M124   |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | English language               | MAB03EL127  |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Computer                       | MAB03MO1211 |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Curricula and textbooks        | MAB03CA416  | Second |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Advanced differential calculus | MAB03C121   |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Advanced possibilities         | MAB03P212   |        |

|  |  |   |  |  |  |   |  |  |  |   |                  |                        |            |  |
|--|--|---|--|--|--|---|--|--|--|---|------------------|------------------------|------------|--|
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Linear algebra         | MAB03LA213 |  |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Baath Party crimes     | MAB03D226  |  |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | English language       | MAB03EL218 |  |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Arabic                 | MAB03AL217 |  |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | computer               | MAB03MO219 |  |
|  |  |   |  |  |  | √ |  |  |  |   | <b>Basic</b>     | Advanced integration   | MAB03C121  |  |
|  |  |   |  |  |  |   |  |  |  | √ | <b>Basic</b>     | Engineering            | MAB03G223  |  |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | mathematical thinking  | MAB03M224  |  |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Graph theory           | MAB03GT322 |  |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | specialized computer   | MAB03MO227 |  |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Educational Psychology | MAB03EP214 |  |

|  |  |  |   |  |  |   |  |  |  |   |           |                                       |             |       |
|--|--|--|---|--|--|---|--|--|--|---|-----------|---------------------------------------|-------------|-------|
|  |  |  | √ |  |  |   |  |  |  |   | essential | Psychology of Classroom Learning      | MAB03SE228  |       |
|  |  |  |   |  |  |   |  |  |  | √ | essential | Group theory                          | MAB03G222   | Third |
|  |  |  |   |  |  | √ |  |  |  |   | essential | Advanced statistics                   | MAB03G224   |       |
|  |  |  |   |  |  | √ |  |  |  |   | essential | Ordinary differential equations       | MAB03ODE313 |       |
|  |  |  | √ |  |  |   |  |  |  |   | essential | Educational leadership and management | MAB03ELM328 |       |
|  |  |  |   |  |  | √ |  |  |  |   | essential | Measurement and Evaluation            | MAB03ME325  |       |
|  |  |  |   |  |  | √ |  |  |  |   | essential | .Specialized T.T                      | MAB03STM324 |       |
|  |  |  |   |  |  | √ |  |  |  |   | essential | specialized computer                  | MAB03ME317  |       |
|  |  |  |   |  |  |   |  |  |  | √ | Basic     | Mathematical analysis                 | MAB03RA312  |       |
|  |  |  |   |  |  | √ |  |  |  |   | Basic     | Numerical analysis                    | MAB03NA311  |       |
|  |  |  |   |  |  |   |  |  |  | √ | essential | Ring theory                           | MAB03R314   |       |

|  |  |   |  |  |  |   |  |  |  |   |                  |                                             |             |        |
|--|--|---|--|--|--|---|--|--|--|---|------------------|---------------------------------------------|-------------|--------|
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Action research method                      | MAB03ARM331 |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Educational technology and its applications | MAB03IT330  |        |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | sustainable development                     | MAB03SD329  |        |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Practical Education 1 (Observation)         | MAB03PE326  | Fourth |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Linear programming                          | MAB03LP411  |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Topology                                    | MAB03T412   |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Complex analysis                            | MAB03CA413  |        |
|  |  |   |  |  |  | √ |  |  |  |   | <b>essential</b> | Computers (artificial intelligence)         | MAB03CAI426 |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Graduation research project                 | MAB03GR422  |        |
|  |  |   |  |  |  |   |  |  |  | √ | <b>essential</b> | Arabic literature                           | MAB03AI424  |        |
|  |  | √ |  |  |  |   |  |  |  |   | <b>essential</b> | Environment and Health                      | MAB03EH423  |        |

|  |  |  |   |  |  |  |   |  |  |  |   |  |                  |                                      |            |  |
|--|--|--|---|--|--|--|---|--|--|--|---|--|------------------|--------------------------------------|------------|--|
|  |  |  | √ |  |  |  |   |  |  |  |   |  | <b>Basic</b>     | Professional ethics                  | MAB03PE425 |  |
|  |  |  |   |  |  |  | √ |  |  |  |   |  | <b>essential</b> | Science Education 2<br>(Application) | MAB03TP421 |  |
|  |  |  |   |  |  |  |   |  |  |  | √ |  | <b>essential</b> | Graduation research<br>project       | MAB03GR422 |  |
|  |  |  |   |  |  |  |   |  |  |  |   |  |                  |                                      |            |  |



**-Mustansiriyah University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                             |          |           |         |        |                                                                 |
|-----------------------------------------------------------------------------|----------|-----------|---------|--------|-----------------------------------------------------------------|
| Differential Calculus                                                       |          |           |         |        | : Course Name: 1                                                |
| MABO3M224                                                                   |          |           |         |        | Course Code and Number: 2                                       |
| Total                                                                       | Training | Practical | Seminar | Lecter | : Credit Hours: 3                                               |
| 4                                                                           | /        | 1         | /       | 3      |                                                                 |
| First stage, first semester                                                 |          |           |         |        | Level and Semester: 4                                           |
| Study of the general concepts of real numbers and differentiation           |          |           |         |        | Prerequisites for the Course 5                                  |
| Knowing the basic concepts in differentiation                               |          |           |         |        | Co-requisites for the Course 6                                  |
| Knowing the basic concepts in differentiation                               |          |           |         |        | The Program(s) in Which the Course Is Taught 7                  |
| English                                                                     |          |           |         |        | Language of Instruction for the Course 8                        |
| college of Basic Education – Department of Mathematics                      |          |           |         |        | Place of Course Instruction 9                                   |
| Prof. Dr. Emad Abbas Kuffi Dagher Al-Saadi<br>Assit.Lec · Nour Karim Salman |          |           |         |        | Name of the Course Specifications Preparer 10                   |
| Department of Mathematics – Scientific Committee – 2024                     |          |           |         |        | Authority and Date of Approval of the Program Specifications 11 |

**(Course description) : .II**

- 1- The student will learn the meaning of real numbers, absolute value, and inequalities.
- 2- The student will learn the meaning of domain and range functions.
- 3- The student will learn the concept of continuity and limits.



- 4- The student will learn the rules of derivatives with examples.
- 5- The student will learn the derivatives of trigonometric functions, their inverses, and their applications
- 6- -The student will learn the concept of exponential and logarithmic functions, their derivatives, hyperbolic functions, their inverses, and their applications.

### III. (Course outcomes)

- 1- The student will understand real numbers.
- 2- The student will be able to solve inequalities.
- 3 -The student will understand functions and find their domain and range.
- 4- The student will learn to graph functions.
- 5- the student will learn to find the limit and continuity of functions.
- 6- the student will be able to identify the derivative and inverse of trigonometric functions and their properties.
- 7- The student will understand exponential and logarithmic functions, the relationship between them, their derivatives, and hyperbolic functions and their applications.

BED-QA-QU26-1  
V1-2022/10/2

| 7- -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                    |              |                                                                     |    |
|--------------------------------------------------------------------|-----------------|----------------------------------------------------|--------------|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                                |                 |                                                    |              |                                                                     |    |
| First: Theoretical Aspect                                          |                 |                                                    |              |                                                                     |    |
| Actual Hours                                                       | Number of Weeks | Course Units Detailed Topics                       | Course units | We expect the student, after completing : the course, to be able to | NO |
| 8                                                                  | 2               | . Forests and Derivatives Review                   | 2            | Differential Calculus Review                                        | 1  |
| 4                                                                  | 1               | Understand the definition of continuity and limits | 2            | The student learns the meaning of continuity                        | 2  |



|    |   |                                                                                                   |                                             |                                                                                                                      |   |
|----|---|---------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---|
| 12 | 3 | Understand the properties of inverse trigonometric functions and their derivatives and graph them | 4                                           | The student understands the meaning of trigonometric functions                                                       | 3 |
| 8  | 2 | Understand the properties of inverse trigonometric functions and their derivatives and graph them | 3                                           | The student learns the inverse of trigonometric functions                                                            | 4 |
| 21 | 7 | A detailed study of exponential, logarithmic, and hyperbolic functions and their derivatives      | 4                                           | The student will learn Asian functions, logarithmic functions, hyperbolic functions, their inverses and derivatives. | 5 |
|    |   | Total Weeks and Hours<br>Total Weeks and Hours<br>2*15                                            | Total Weeks and Hours Total Weeks and Hours |                                                                                                                      |   |
|    |   |                                                                                                   |                                             |                                                                                                                      |   |

### Teaching Strategy:

1. Lecture and Presentation

2. Discussion Method

3. Interrogation Method

### -Learning Resources:

1. Purcell, "Differential and Integral Calculus and Analytical Geometry", translated by Ali Aziz and others, University of Mosul, second edition, 1981

2. Thomas G.B. and Finney R.L. "Calculus and Analytic Geometry" 6<sup>th</sup> ed. 1984.

3. Ramadan Muhammad Juhayma and Dr. Ahmed Abdel-Ali Hab Al-Reeh, "Differential and Integral Calculus," Parts One and Two, 2007



**4. Books and Enrichment References (Scientific Journals, etc.):B. Electronic sources and websites, etc.**

**-Course Policy and Regulations:**

**- To manage attendance at educational events: In the event of a student's absence, he will be given an initial warning, then a second warning, then a final warning. A memo will be submitted to the department, and the student will be considered expelled for absence.**

**-Late attendance will be deducted from the student's daily grades.**

**Examination regulations: If a student is late for an exam, he will not be allowed to take the same questions and at the same time.**

**-Assignments and projects: Submit assignments or projects on the due date specified by the teacher or refuse to accept them if they are late.**

**Cheating: If a student cheats on exams, a memo will be submitted to the department head to take the necessary action.**

**Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.**

**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3

V1-2024/09/16

Prof. Dr. Emad Abbas Kuffi Dagher Al-Saadi

Assistant Professor Nour Karim Salman

**Course Professor**



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                        |                 |                  |                |               |                        |
|------------------------------------------------------------------------|-----------------|------------------|----------------|---------------|------------------------|
| <b>Foundations Mathematics 1</b>                                       |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>MABO3F112</b>                                                       |                 |                  |                |               | <b>: Credit Hours:</b> |
| <b>Total</b>                                                           | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Course Name:</b>  |
| <b>4</b>                                                               | <b>/</b>        | <b>1</b>         | <b>/</b>       | <b>3</b>      | <b>: Credit Hours:</b> |
| <b>Stage first -(first term)</b>                                       |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Study of mathematical concepts</b>                                  |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Knowledge of differential calculus, matrices, and number theory</b> |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Bachelor of Education in Mathematics</b>                            |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>English , Arabic</b>                                                |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>college of Basic Education – Department of Mathematics</b>          |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Lec. Dr. Abeer Jabbar</b>                                           |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Department of Mathematics – Scientific Committee – 2014</b>         |                 |                  |                |               | <b>: Course Name:</b>  |



## II. وصف المساق: (Course description)

A study of mathematical expressions and sentences, the method of mathematical proof, sets and their operations, relations, and equivalence classes. This course prepares students to deal with mathematical operations in the future in a logical, mathematically correct manner, and trains them in operations on sets and applications of equivalence classes.

## II. مخرجات تعلم المساق: (Course outcomes)

1. To enable the student to acquire the skill of expressing the concept of expressions and mathematical logic and how to deal with them algebraically.
2. To develop the student's ability to choose the appropriate method for mathematical proof.
3. To clarify the concept of sets, operations on sets, and related relationships and theories.
4. To provide the student with experience in dealing with equivalence classes.

BED-QA-QU26-1  
V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                |    |                                                                                                                                                |    |
|-------------------------------------------------------------------|-----------------|------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                                |    |                                                                                                                                                |    |
| First: Theoretical Aspect                                         |                 |                                                |    |                                                                                                                                                |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics                   |    | We expect the student, after completing : the course, to be able to                                                                            | NO |
| 24                                                                | 6               | Chapter One                                    | 14 | 1. The student acquires the skill of expressing the concept of expressions and mathematical logic and ways of dealing with them algebraically. | 1  |
| 4                                                                 | 1               | Study of types of mathematical proof           | 3  | Developing the student's ability to choose the appropriate method for mathematical proof                                                       | 2  |
| 16                                                                | 4               | Study of the concept of the group, Chapter Two | 10 | Explaining the concept of sets, operations on sets, relationships, and theories related to them.                                               | 3  |



|    |    |                                                                      |                                             |                                                                   |   |
|----|----|----------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------|---|
| 6  | 2  | Studying Relationships and Forming Equivalence Classes Chapter Three | 2                                           | Giving the student experience in dealing with equivalence classes | 4 |
| 56 | 14 | Total Weeks and Hours                                                | Total Weeks and Hours Total Weeks and Hours |                                                                   |   |
|    |    |                                                                      |                                             |                                                                   |   |

#### Teaching Strategy:

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method

#### -Learning Resources:

- 1- Dr. Basil Atta Al-Hashemi and others, 2000, Introduction to the Foundations of Mathematics
- 2- Dr. Mustafa Ahmed and others, 1998, Introduction to Finite Mathematics

#### - Main References: (No more than two references)

- 1- Foundations of Mathematics Dr. Adel Naoum

#### A. Supporting References

#### B. Books and Enrichment References (Scientific Journals, etc.

#### C. Electronic Resources and Websites, etc.

#### A. Enrichment books and references (scientific journals, etc.):

#### B. Electronic sources and websites, etc.

#### -Course Policy and Regulations:

- Educational Events Attendance Policy: In the event of a student's absence, he/she will be given an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered expelled for absence.



**Late attendance:** If a student is late for a lecture, he will only be allowed to enter the first hour of the lecture.

**Examination regulations:** If a student is late for an exam, he will not be allowed to take the same questions and at the same time.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**-Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3

**Course Professor  
Lec. Dr. Abeer Jabbar**

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

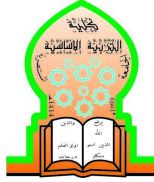
**-Mustansiriyah University – College of Basic Education**

**Department of Mathematics**

**Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                |          |           |         |        |                                                              |    |
|---------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|----|
| the principles of probability                           |          |           |         |        | : Course Name:                                               | 4  |
| MAB03G223                                               |          |           |         |        | Course Code and Number:                                      | 2  |
| Total                                                   | Training | Practical | Seminar | Lecter | : Credit Hours:                                              | 3  |
| 3                                                       | /        | /         | /       | 3      |                                                              |    |
| Stage One                                               |          |           |         |        | Level and Semester:                                          | 4  |
| Studying basic concepts the principles of probability   |          |           |         |        | Prerequisites for the Course                                 | 5  |
| Knowledge of concepts the principles of probability     |          |           |         |        | Co-requisites for the                                        | 6  |
| Bachelor of Education in Mathematic                     |          |           |         |        | The Program(s) in Which the Course Is Taught                 | 7  |
| Arabic                                                  |          |           |         |        | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics  |          |           |         |        | Place of Course Instruction                                  | 9  |
| Asst. Prof. Atifa Jalil Saleh                           |          |           |         |        | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014 |          |           |         |        | Authority and Date of Approval of the Program Specifications | 11 |

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

**II. وصف المساق:**

**The student should be able to know the history of the probability**

**III. مخرجات تعلم المساق: (Course outcomes)**

**This course aims to provide graduates with the following knowledge:**

1. Teaching the student the meaning of the principles of possibilities
2. The students learned the history of the principles of possibilities
3. The student learns the basic concepts of the principles of probability
4. The student learns about the relationship between the principles of probability and the arrays
5. The student learns about the paths and paths in the principles of possibilities

**BED-QA-QU26-1**  
**V1-2022/10/2**

**7. - Writing Course Topics and Aligning Them with Learning Outcomes**

**Writing Course Content Units/Topics**

**First: Theoretical Aspect**

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

| Actual Hours | Number of Weeks | Course Units Detailed Topics                                         |  | We expect the student, after completing : the course, to be able to | NO |
|--------------|-----------------|----------------------------------------------------------------------|--|---------------------------------------------------------------------|----|
| 3            | 1               | The student should know the meaning of probability                   |  | the meaning of probability                                          |    |
|              | 3               | The student should know the ways of                                  |  | know the ways of probability                                        | 2  |
|              | 2               | The student should know the exchange and the conciliation            |  | know the exchange and the conciliation                              |    |
|              |                 | The student should learn the legality of addition and multiplication |  | learn the legality of addition and multiplication                   |    |
| 9            | 3               | The student should learn the conditional possibility                 |  | conditional possibility                                             |    |
| 9            | 3               |                                                                      |  |                                                                     |    |
| 30           | 15              | Total Weeks and Hours<br>Total Weeks and Hours<br>15*2               |  | Total Weeks and Hours Total Weeks and Hours                         |    |
|              |                 |                                                                      |  |                                                                     |    |

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

**Teaching Strategy:**

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method

**-Learning Resources:**

- Al-Kubaisi, Abdul Wahid Hamid and Mudrasah Saleh Abdullah (2018): Mind Maps in Mathematics Teaching, Arab Community Library, Amman.
- A. Main References: (No more than two references)
- Al-Absi, Muhammad Mustafa (2009): Games and Thinking in Mathematics, Dar Al-Masirah, Amman

- . Main References: (No more than two references)

**1. A. Supporting References**

**B. Books and Enrichment References (Scientific Journals, etc.**

**C. Electronic Resources and Websites, etc.**

**A. Enrichment books and references (scientific journals, etc.):**

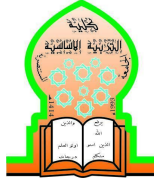
**B. Electronic sources and websites, etc.**

**- Course Policy and Regulations:**

**-Attendance Policy for Educational Activities: In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.**

**- Lateness: If a student is repeatedly late to educational activities, they will be considered absent from the lecture**

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

|                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>- Exam Controls: If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.</b> |
| <b>- Assignments and Projects: Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.</b>         |
| <b>- Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.</b>                                          |
| <b>Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.</b>                 |
| <b>Other Policies: Any other policies related to course privacy, or according to university regulations.</b>                                                      |
|                                                                                                                                                                   |

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2025/07/7

**Course Professor**

Assistant Professor: Atifa jalil Saleh



**...Course Description...**

**(Department: .....Mathemati.....**

**Academic Year: (2024-2025)**

| <b>I. General information about the course: (Number Theory )</b>                                                |                 |                  |                |                                                                                                                 |                                     |
|-----------------------------------------------------------------------------------------------------------------|-----------------|------------------|----------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>NUMBER THEORY</b>                                                                                            |                 |                  |                | <b>:Course name</b>                                                                                             | <b>.1</b>                           |
|                                                                                                                 |                 |                  |                | <b>:Course code and number</b>                                                                                  | <b>.2</b>                           |
| <b>Total</b>                                                                                                    | <b>training</b> | <b>practical</b> | <b>Seminar</b> | <b>a lecture</b>                                                                                                | <b>Credit hours: 2</b><br><b>.3</b> |
| <b>2</b>                                                                                                        | <b>-</b>        | <b>-</b>         | <b>-</b>       | <b>2</b>                                                                                                        |                                     |
| <b>Level and semester: First stage - First course - First semester</b>                                          |                 |                  |                | <b>Level and semester: First stage - First course - First semester</b>                                          | <b>.4</b>                           |
|                                                                                                                 |                 |                  |                | <b>Course prerequisites</b>                                                                                     | <b>.5</b>                           |
|                                                                                                                 |                 |                  |                | <b>Course requirements</b>                                                                                      | <b>.6</b>                           |
| <b>Program(s) in which the course is taught Bachelor of Education in Mathematics</b>                            |                 |                  |                | <b>Program(s) in which the course is taught Bachelor of Education in Mathematics</b>                            | <b>.7</b>                           |
| <b>Course language of instruction: Arabic</b>                                                                   |                 |                  |                | <b>Course language of instruction: Arabic</b>                                                                   | <b>.8</b>                           |
| <b>Course location: College of Basic Education - Department of Mathematics</b>                                  |                 |                  |                | <b>Course location: College of Basic Education - Department of Mathematics</b>                                  | <b>.9</b>                           |
| <b>assistant professor / Tahreer Abdul Hussain khazael</b>                                                      |                 |                  |                | <b>Course Specifications Preparer :Name</b>                                                                     | <b>.10</b>                          |
| <b>Department and date of approval of program specifications: Mathematics Department - Scientific Committee</b> |                 |                  |                | <b>Department and date of approval of program specifications: Mathematics Department - Scientific Committee</b> | <b>.11</b>                          |



- **II. Course Description:**
- This course aims to introduce students majoring in mathematics to information about number theory, the most important of which are:
- (( Different number systems (decimal, binary, base 12), finite and infinite sets, countable sets, mathematical induction, natural numbers and their origin, properties, and operations on them, Peano system, integers and their origin, properties, and operations on them, divisibility, definition and properties, greatest common divisor and Euclid's algorithm, least common multiple and its relationship to the greatest common divisor, free ordering, prime numbers, factoring of prime numbers, fundamental theorem of arithmetic, and some special numbers (excess numbers, missing numbers, perfect numbers, amicable numbers, Pythagorean numbers ))).

### **III. Course outcomes:**

This course aims to provide graduates with a comprehensive understanding of the following:

- .1Different number systems (decimal, binary, base 12).
- .2Finite and infinite sets.
- .3Countable sets and mathematical induction.
- .4Natural numbers, their origin, properties, and operations on them. Peano system.
- .5Integers, their origin, properties, and operations on them.
- .6Divisibility, its definition and properties.
- .7The greatest common divisor (GCD) and Euclid's algorithm.
- 8The least common multiple (LCM) and its relationship to the greatest common divisor (GCD).
- 9Free ordering, prime numbers.
- 10Factorization of prime numbers (Fermat's method).
- 11The fundamental theorem of arithmetic.
- 12Some special numbers (excess numbers, missing numbers, perfect numbers, amicable numbers, Pythagorean numbers).

### **IV. Writing course topics and aligning them with learning outcomes**

#### **Writing course content units/topics**

#### **First: The theoretical aspect**

| <b>Actual hours</b> | <b>Number of weeks</b> | <b>Detailed topics</b>                                                | <b>Course units</b> | <b>Learning Outcomes After completing the course, we expect the student to be able to:</b> | <b>The number</b> |
|---------------------|------------------------|-----------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------|-------------------|
| 2                   | 1                      | Decimal system, binary system, ) (base 12 system                      |                     | Different number systems                                                                   | 1                 |
| 2                   | 1                      | Finite and infinite sets, countable sets, mathematical induction.     |                     | Groups                                                                                     | 2                 |
| 2                   | 1                      | How it was created, its properties and operations on it, piano system |                     | natural numbers                                                                            | 3                 |
| 2                   | 1                      | How it originated, its properties .and the processes involved         |                     | Integers                                                                                   | 4                 |



|    |    |                                                                                                |  |                                 |    |
|----|----|------------------------------------------------------------------------------------------------|--|---------------------------------|----|
| 2  | 1  |                                                                                                |  | First month exam                | 5  |
| 2  | 1  | Its definition and characteristics                                                             |  | .Divisibility                   | 6  |
| 2  | 1  | Greatest common divisor (GCD) and Euclid's algorithm                                           |  | greatest common divisor ((GCD   | 7  |
| 2  | 1  | The least common multiple (L.C.D.) and its relationship to the greatest common divisor (.G.C.D |  | Least Common Multiple ((LCM     | 8  |
| 2  | 1  |                                                                                                |  | Free order, prime numbers       | 9  |
| 2  | 1  | (Fermat's method)                                                                              |  | Factorization of prime numbers  | 10 |
| 2  | 1  |                                                                                                |  | Second month exam               | 11 |
| 2  | 1  | Theorem                                                                                        |  | The basic theory of arithmetic. | 12 |
| 2  | 1  | (Excess numbers, missing numbers, perfect numbers, amicable numbers, Pythagorean numbers       |  | Some special numbers            | 13 |
| 2  | 1  |                                                                                                |  | Third month exam                | 14 |
| 2  | 1  |                                                                                                |  | Review                          | 15 |
| 30 | 15 | Total weeks and hours 15*2                                                                     |  | Total weeks and hours           |    |

**V. - Teaching strategy:** - Relying on the model of preparing students for discussion and questioning after explaining the topic on the board and assigning them to explain some paragraphs of the study material and solve them on the board or on papers .The main reference for the material is based on the PPT slides.

**Lecture and delivery**

**Discussion method**

**Problem solving method**

**Interrogation method**

#### **VI. Learning resources:**

1- -1Numbers and their mathematical and life applications - written by Farid Abu Zeina and others - 1st ed., 2007, Jordan

2- -1Number Theory - Written by: Daad Al-Hussaini and others, 2007, Damascus.

#### **A. Supporting references**

1- -1Fundamentals of Modern Mathematics, written by Ramadan Masoud Badawi, 1st ed., 2004, Jordan

2- -1Teacher's lectures / Internet resources

**A. Enrichment books and references (scientific periodicals, etc) :**

**A. Electronic sources and websites...etc.**



| <b>VII. Course Policy and Regulations:</b>                                                                                                                                                                                                                                              |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b><u>Educational Events Attendance Policy: In the event of a student's absence, he/she will receive an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered expelled for absence.</u></b> | <b>.1</b> |
| <b><u>Late attendance: If a student is repeatedly late to educational activities, he/she will be considered absent from the lecture.</u></b>                                                                                                                                            | <b>.2</b> |
| <b><u>Examination regulations: In the event of absence from the exam without an excuse, a zero will be given. If the student is late to the exam, he/she will be examined with students in another hall.</u></b>                                                                        | <b>.3</b> |
| <b><u>Assignments and Projects: Assignments or projects must be submitted by the due date specified by the teacher and will not be accepted if they are late.</u></b>                                                                                                                   | <b>.4</b> |
| <b><u>Cheating: If a student cheats on exams, a memo will be submitted to the department head to take the necessary action.</u></b>                                                                                                                                                     | <b>.5</b> |
| <b><u>Plagiarism: If a student is found to be impersonating another person, a report will be submitted to the department head immediately.</u></b>                                                                                                                                      | <b>.6</b> |
| <b><u>Other Policies: Any other policies related to course privacy, or according to university regulations.</u></b>                                                                                                                                                                     | <b>.7</b> |

Subject teacher: assistant professor / Tahreer Abdul Hussain khazael

Stamp and signature of the head of the department

BED-QA-QU26-3

V1-2024/11/10



...Course Description ...

.... Department: Mathematics....Academic Year: 2024 - 2025

| I. ( Developmental Psychology ) :General information about the course |          |           |         |                                                              |                     |
|-----------------------------------------------------------------------|----------|-----------|---------|--------------------------------------------------------------|---------------------|
| developmental psychology                                              |          |           |         | : Course name                                                | .1                  |
|                                                                       |          |           |         | Course code and number                                       | .2                  |
| Total                                                                 | training | practical | Seminar | a lecture                                                    | :Credit hours<br>.3 |
| 2                                                                     |          |           |         | 2                                                            |                     |
| First stage - first semester                                          |          |           |         | :Level and semester                                          | .4                  |
|                                                                       |          |           |         | Course prerequisites                                         | .5                  |
|                                                                       |          |           |         | Course requirements                                          | .6                  |
| Blackboard and colored pens                                           |          |           |         | The program(s) in which the course is taught                 | .7                  |
| Arabic                                                                |          |           |         | :Course language of instruction                              | .8                  |
| Department of Mathematics                                             |          |           |         | :Course teaching location                                    | .9                  |
| Asst.Lec.Shaimaa Abdul Hamza                                          |          |           |         | :Course Specifications Preparer Name                         | .10                 |
| Department of Mathematics                                             |          |           |         | Authority and date of approval of<br>:program specifications | .11                 |



## **II. Course : description**

**Learn about the concept of psychology, its branches, schools of psychology and behavior, principles of development and its laws, some childhood and adolescence problems, as well as digital security .and the dangers of drug addiction**

## **II. outcomes Course**

- 1- . Learn about the concept of developmental psychology**
- 2- . Learn about the branches of psychology**
- 3- Distinguish between the concepts of growth, maturity and development**
- 4- Recognizing types of behavior**
- 5- Distinguish between types of behavior**
- 6- . Learn about the concept of schools of psychology**
- 7- Compares types of schools**
- 8- . Understand the concept of basic aspects of psychology**
- 9- Learn the principles and laws of growth**
- 10- Identifying childhood and adolescent problems**
- 11- Distinguish between childhood problems and adolescent problems**
- 12- Learn about addiction and digital addiction**
- 13- Distinguish between drug addiction and digital addiction**



| IV. course topics and aligning them with learning outcomes |                 |                 |                        |                                                                          |            |
|------------------------------------------------------------|-----------------|-----------------|------------------------|--------------------------------------------------------------------------|------------|
| Writing course content units/topics                        |                 |                 |                        |                                                                          |            |
| First: The theoretical aspect                              |                 |                 |                        |                                                                          |            |
| Actual hours                                               | Number of weeks | Detailed topics | Course units           | Learning outcomes                                                        | The number |
| 3                                                          | 1               |                 |                        | Recognition on concept science self growth                               | 1          |
| 3                                                          | 1               |                 |                        | Recognition on Branches science The soul                                 | 2          |
| 3                                                          | 1               |                 |                        | He distinguishes between The concept of growth, maturity and development | 3          |
| 3                                                          | 1               |                 |                        | Recognition on Types behavior                                            | 4          |
| 3                                                          | 1               |                 |                        | He distinguishes between Types behavior                                  | 5          |
| 3                                                          | 1               |                 |                        | Recognition on concept schools science The soul                          | 6          |
| 3                                                          | 1               |                 |                        | compare between Types schools                                            | 7          |
| 3                                                          | 1               |                 |                        | Recognition on concept Aspects Basic in science The soul                 | 8          |
| 3                                                          | 1               |                 |                        | Recognition on principles and laws growth                                | 9          |
| 3                                                          | 1               |                 |                        | Recognition on problems childhood and adolescence                        | 10         |
| 3                                                          | 1               |                 |                        | He distinguishes between problems childhood and problems adolescence     | 11         |
| 3                                                          | 1               |                 |                        | Recognition on addiction and addiction Digital                           | 12         |
| 3                                                          | 1               |                 |                        | He distinguishes between addiction on drugs and addiction Digital        | 13         |
| 39                                                         | 13              |                 | Total weeks and hours  |                                                                          |            |
| :Second: The practical aspect                              |                 |                 |                        |                                                                          |            |
| Writing practical experiences (topics)                     |                 |                 |                        |                                                                          |            |
| Learning outcomes                                          | Actual hours    | Number of weeks | Laboratory experiments |                                                                          | The number |
|                                                            |                 |                 |                        |                                                                          | .1         |
|                                                            |                 |                 |                        |                                                                          | .2         |
|                                                            |                 |                 |                        |                                                                          | .3         |
|                                                            |                 |                 |                        |                                                                          | .4         |
|                                                            |                 |                 |                        |                                                                          | .5         |
|                                                            |                 |                 |                        |                                                                          |            |



|                                                                                                                                                                                                                                                                                                     |  |  |                       |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------|----|
|                                                                                                                                                                                                                                                                                                     |  |  |                       |    |
|                                                                                                                                                                                                                                                                                                     |  |  | Total weeks and hours |    |
| V. :Teaching strategy                                                                                                                                                                                                                                                                               |  |  |                       |    |
| .Use the discussion and cooperative learning method by dividing students into groups                                                                                                                                                                                                                |  |  |                       |    |
| Display educational videos and pictures of the subject matter using a computer and PowerPoint .slides                                                                                                                                                                                               |  |  |                       |    |
|                                                                                                                                                                                                                                                                                                     |  |  |                       |    |
| VI. :Learning resources                                                                                                                                                                                                                                                                             |  |  |                       |    |
| (Author, Year, Title, Place of Publication and Publisher)                                                                                                                                                                                                                                           |  |  |                       |    |
| ا. (not more than two references) : Main references                                                                                                                                                                                                                                                 |  |  |                       |    |
| 1- Al-Ghamdi, Hussein Abdel Fattah (1997): Psychology of Lifespan Development, Dar Al-Fikr, .Jeddah                                                                                                                                                                                                 |  |  |                       |    |
| 2- Developmental Psychology Lectures (Prof. Dr. Jamal Salem Ahmed)                                                                                                                                                                                                                                  |  |  |                       |    |
| ب. :Supporting references                                                                                                                                                                                                                                                                           |  |  |                       |    |
| Al-Zuwaini, Ibtisam (2017): General Psychology Lectures, University of Babylon, College of Basic Education                                                                                                                                                                                          |  |  |                       |    |
|                                                                                                                                                                                                                                                                                                     |  |  |                       |    |
| ج. .Electronic sources and websites...etc                                                                                                                                                                                                                                                           |  |  |                       |    |
| <a href="http://www.mawdoo3.com">http://www.mawdoo3.com</a><br><a href="http://www.moh.gov.sa">http://www.moh.gov.sa</a>                                                                                                                                                                            |  |  |                       |    |
| /II. :Course policy and regulations                                                                                                                                                                                                                                                                 |  |  |                       |    |
| The general policy of the course is written according to the university regulations regarding the :following                                                                                                                                                                                        |  |  |                       |    |
| Educational Events Attendance Policy : In the event of a student’s absence, a first warning (second warning) will be given, followed by a final warning. A memo will then be sent to the .department to consider the student in question dismissed due to absence                                   |  |  |                       | .1 |
| Late attendance : An attempt is made to determine the reasons for the student’s lateness. If the student is repeatedly late, the reasons for the lateness will be discussed with him/her, and then the student will be referred to the advisor and the department head to take appropriate . action |  |  |                       | .2 |



|                                                                                                                                                                                                                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b><u>Examination regulations</u></b> : The reasons for the student's absence from the exam are investigated. If the reason is convincing, the exam will be retaken. If it is not convincing, the student will be given a zero                                                                      | .3 |
| <b><u>Assignments and projects</u></b> : Project and assignment deadlines are set, and if they are not completed, a zero is given to the student, so that he does not repeat this next time                                                                                                         | .4 |
| <b><u>Cheating</u></b> : A zero is given for the semester exam. However, for end-of-course exams, the appropriate procedure is to catch the cheating and refer the student to the department head to take appropriate action and report the matter to the deanship to issue a decision to expel him | .5 |
| <b><u>Plagiarism</u></b> : The student will be referred to the department's disciplinary committee to take deterrent measures to prevent the recurrence of this phenomenon                                                                                                                          | .6 |
| <b><u>Other policies</u></b> : Any other policies in which the decision is made by the department's academic committee                                                                                                                                                                              | .7 |

Asst. Prof. Dr. Talat Jassim Mahmoud

Seal and signature of the department head



**Course description.....**  
**Mathematics Department**  
**2025 – 2024 Academic year**

| General information about the course .I                 |          |           |         |           |                                                                  |
|---------------------------------------------------------|----------|-----------|---------|-----------|------------------------------------------------------------------|
|                                                         |          |           |         |           | Course name: Computer basics .1                                  |
|                                                         |          |           |         |           | Course Code and Number: MAB03MO1110 .2                           |
| Total                                                   | training | practical | Siminer | a lecture | :Credit Hours .3                                                 |
| 3                                                       |          | 2         |         | 1         |                                                                  |
| First stage, first semester                             |          |           |         |           | Level and Semester: .4                                           |
|                                                         |          |           |         |           | Prerequisites for the Course .5                                  |
| Activities and reports                                  |          |           |         |           | Co-requisites for the Course .6                                  |
| Bachelor of Education in Mathematics                    |          |           |         |           | The Program(s) in Which the Course Is Taught .7                  |
| Arabic                                                  |          |           |         |           | Language of Instruction for the Course .8                        |
| college of Basic Education – Department of Mathematics  |          |           |         |           | Place of Course Instruction .9                                   |
| Teacher. Yusra Mohammed luibi                           |          |           |         |           | Name of the Course Specifications Preparer .10                   |
| Department of Mathematics – Scientific Committee – 2014 |          |           |         |           | Authority and Date of Approval of the Program Specifications .11 |



(Course description) .II

- 1- Definition of computer, its most important types and characteristics
- 2- Computer components
- 3- Desktop components: Start menu and taskbar.
- 4- Folder, file and operations on windows
- 5- right click menu on desktop
- 6- Control panel window
- 7- Computer viruses
- 8- Internet
- 9- e-mail

(Course outcomes) .II

- 1- Identify the computer. .
2. List the types of computers and their most important characteristics
- . 3. Identify the hardware and software components of a computer.
4. Differentiate between data input and data output units.
5. List the components of a desktop
- 6- List the components of the Start menu.
7. Identify folders, files, and window operations
8. Create, rename, and delete a file or folder
9. The student should know how to change the desktop background, time, and date
10. Identify the Control Panel window and list its components
11. Identify the components of a computer
12. List the types of viruses and the damage they cause
- 13 .the Internet, list the services it provides, know e-mail, and list its advantages

BED-QA-QU26-1  
V1-2025/10/2

| I. Writing course topics and aligning them with learning outcomes .IV |                 |                                                                                                                                                                                                                                                                       |              |                                                                             |        |
|-----------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------|--------|
| Writing course content units/topics                                   |                 |                                                                                                                                                                                                                                                                       |              |                                                                             |        |
| The theoretical aspect :1                                             |                 |                                                                                                                                                                                                                                                                       |              |                                                                             |        |
| Actual hours                                                          | Number of weeks | Detailed topics                                                                                                                                                                                                                                                       | Course units | Learning outcomes                                                           | Number |
| 12                                                                    | 4               | Definition of computer, how computer works, characteristics of computer, types of computer, external physical computer components, input units, output units, physical computer components, software computer components, random access memory, and read-only memory. | 2            | <b>He knows the computer</b><br><b>Computer components</b><br><b>Memory</b> | 1      |
| 6                                                                     | 2               | Default programs, system and security, networks and the Internet, hardware and sounds, user accounts                                                                                                                                                                  | 3            | Control panel window                                                        | 2      |



|    |   |                                                   |                                             |                  |   |
|----|---|---------------------------------------------------|---------------------------------------------|------------------|---|
|    |   | and family safety, clock, language, accessibility |                                             |                  |   |
|    |   |                                                   |                                             | Computer viruses | 3 |
|    |   |                                                   |                                             |                  | 4 |
| 3  | 1 |                                                   | 2                                           |                  | 5 |
| 21 | 7 |                                                   | Total Weeks and Hours Total Weeks and Hours |                  |   |

Second: The practical aspect

Writing practical experiences (topics)

| Learning outcomes                                                                                                                                                                                                | Actual hours | Number of weeks | Laboratory experiments                                                                     | Number |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|--------------------------------------------------------------------------------------------|--------|
| I know the user interface and list the components of the user interface, I know the desktop and list the components of the desktop, I know the start menu and its application on the computer in a practical way | 3            | 1               | 1User Interface.<br>2. Desktop Components.<br>3. Start Men                                 | 1      |
| The student will learn about the components of the taskbar and differentiate between .folders and files                                                                                                          | 6            | 2               | 1Taskbar. .<br>2. Folders and files<br>3. Icons.<br>4. Performing operations<br>on windows | 2      |
| Display desktop icons in different sizes according to type, name, and date, create a new folder, rename it, copy, cut, and paste the folder, and change the desktop .background                                  | 3            | 1               | mouse button on desktop                                                                    | 3      |
| Internet services, network connection requirements, web browsers and their uses                                                                                                                                  | 6            | 2               | Internet                                                                                   | 4      |
| Email features and email interface components                                                                                                                                                                    | 6            | 2               | Email                                                                                      | 5      |
|                                                                                                                                                                                                                  | 24           | 15              | Total weeks and hours                                                                      |        |

Teaching strategy .V

|                            |
|----------------------------|
| Lecture method             |
| Discussion method          |
| Method of solving problems |

Learning Resources: Aboud, Ziad Muhammad and others (2014). Computer Basics and Office .VI  
.Applications. Part One

(Author, year, title, place of publication and publisher)

Main references: (not more than two references)



|                                               |
|-----------------------------------------------|
| -1                                            |
| Supporting references                         |
| .                                             |
| 2 Lectures from websites                      |
| .A. Electronic sources and websites ..... etc |

BED-QA-QU26-2  
V1-2025/10/2

| V.II:Course Policy and Regulations                                                                                                                                                                                                                                            |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Policy for attending educational events                                                                                                                                                                                                                                       | .1 |
| Late attendance: He will be warned first, and if he continues to be late, he will be absent from the .lecture                                                                                                                                                                 | .2 |
| Examination regulations: If a student is absent from an exam, he will not be examined and given a zero mark unless there is an excuse. If he is late for an exam, he will not be examined in the same .hall as the one holding the exam, but will be examined in another hall | .3 |
| Assignments and Projects: Assignments and projects are not due until the deadline specified by the .course instructor                                                                                                                                                         | .4 |
| Cheating: If a student cheats on the monthly or final exam, a memorandum will be submitted to .the department head to take action against him according to the laws                                                                                                           | .5 |
| Plagiarism: In the event of impersonating another student, a memorandum will be submitted to the .department head to take action against him according to the laws                                                                                                            | .6 |
| .Other Policies: Any other policies related to course privacy, or as per university regulations                                                                                                                                                                               | .7 |

Stamp and signature of the head of the department

BED-QA-QU26-3  
V1-2025/10/2



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                                    |                 |                  |                |               |                                                              |    |
|------------------------------------------------------------------------------------|-----------------|------------------|----------------|---------------|--------------------------------------------------------------|----|
| Matrices                                                                           |                 |                  |                |               | : Course Name:                                               | 1  |
| MAB03M124                                                                          |                 |                  |                |               | Course Code and Number:                                      | 2  |
| <b>Total</b>                                                                       | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | : Credit Hours:                                              | 3  |
| 2                                                                                  | /               | /                | /              | 2             |                                                              |    |
| First stage / second semester                                                      |                 |                  |                |               | Level and Semester:                                          | 4  |
| Introductory experience with the basic concepts of matrices and their applications |                 |                  |                |               | Prerequisites for the Course                                 | 5  |
| Assignments at the end of each topic                                               |                 |                  |                |               | Co-requisites for the Course                                 | 6  |
| Bachelor of Education in Mathematics                                               |                 |                  |                |               | The Program(s) in Which the Course Is Taught                 | 7  |
| Arabic + English                                                                   |                 |                  |                |               | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics                             |                 |                  |                |               | Place of Course Instruction                                  | 9  |
| M. Lama Jabbar Barghouth                                                           |                 |                  |                |               | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014                            |                 |                  |                |               | Authority and Date of Approval of the Program Specifications | 11 |



## II. وصف المساق: (Course description)

This course provides a simplified explanation of the fundamentals and types of matrices, as well as operations on matrices, including: Matrix inversion, Matrix transpose, Determinants and their properties, Solving systems of linear equations using matrices. Additionally, it includes a brief explanation of vectors and algebraic operations on them

## II. مخرجات تعلم المساق: (Course outcomes)

Understand the definition and types of matrices  
Comprehend algebraic operations on matrices  
Train to solve systems of linear equations using matrices  
Identify vectors and perform algebraic operations on them

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                                                      |  |                                                                     |    |
|-------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                                                                      |  |                                                                     |    |
| First: Theoretical Aspect                                         |                 |                                                                                      |  |                                                                     |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics                                                         |  | We expect the student, after completing : the course, to be able to | NO |
| 4                                                                 | 2               | and subtraction, Matrix multiplication, Matrix transpose                             |  | Understanding matrices and algebraic operations                     | 1  |
| 8                                                                 | 4               | Determinants definition, Properties of determinants, Finding the inverse of a matrix |  | Understanding determinants and matrix inverse                       | 2  |



|    |    |                                                                                                            |  |                                             |   |
|----|----|------------------------------------------------------------------------------------------------------------|--|---------------------------------------------|---|
|    |    | and its properties                                                                                         |  |                                             |   |
| 4  | 2  | Solving systems using matrices: Cramer's Rule, Gauss-Jordan Method, Inverse matrix method                  |  | Solving systems using matrices              | 3 |
| 8  | 4  | Definition of vectors, Algebraic operations on vectors, Finding vector magnitude and angle between vectors |  | Understanding vectors and their operations  | 4 |
| 30 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>2*15                                                     |  | Total Weeks and Hours Total Weeks and Hours |   |
|    |    |                                                                                                            |  |                                             |   |

|                                                                                                                                                                             |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| <b>Teaching Strategy:</b>                                                                                                                                                   |  |  |  |  |  |
| <b>-Learning Resources:</b><br><b>-Assigning homework and solving some of it in the next class</b><br><b>Daily quizzes</b><br><b>. In-class discussions and questioning</b> |  |  |  |  |  |
| <b>i. A. Calculus</b><br><br><b>B. Introduction to Advanced Calculus C. Electronic Resources and Websites, etc.</b>                                                         |  |  |  |  |  |
| <b>A. Enrichment books and references (scientific journals, etc.):</b><br><b>B. Electronic sources and websites, etc.</b>                                                   |  |  |  |  |  |

|                                                                           |  |  |  |  |  |
|---------------------------------------------------------------------------|--|--|--|--|--|
| <b>-Course Policy and Regulations:</b>                                    |  |  |  |  |  |
| <b>Attendance Policy: Mandatory attendance of all learning activities</b> |  |  |  |  |  |



|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Late Attendance: Students repeatedly arriving late will be warned; repeated offenses will result in being denied entry</b> |
| <b>Exam Rules: No make-up exams without an official excuse. Zero mark given for unexcused absences</b>                        |
| <b>Assignments and Projects: Must be submitted on time</b>                                                                    |
| <b>Cheating: Any cases will be reported immediately to the department head</b>                                                |
| <b>Impersonation: Students must present ID, especially in final exams</b>                                                     |
| <b>Other Policies: Any additional rules specific to the course or university regulations must be followed</b>                 |

**Stamp and Signature of the Head of Department"**

**Course Professor**

Lama Jabbar Barghouth



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course: (Integration)            |          |           |         |        |                                                              |    |
|-------------------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|----|
| Integration                                                       |          |           |         |        | : Course Name:                                               | 1  |
| MABO3M224                                                         |          |           |         |        | Course Code and Number:                                      | 2  |
| Total                                                             | Training | Practical | Seminar | Lecter | : Credit Hours:                                              | 3  |
| 4                                                                 | /        | 1         | /       | 3      |                                                              |    |
| Stage First -(second semester)                                    |          |           |         |        | Level and Semester:                                          | 4  |
| Study the basic theorem of integration and methods of integration |          |           |         |        | Prerequisites for the Course                                 | 5  |
| Knowledge of the basic concepts and laws of integration           |          |           |         |        | Co-requisites for the Course                                 | 6  |
| Bachelor of Education in Mathematics                              |          |           |         |        | The Program(s) in Which the Course Is Taught                 | 7  |
| English                                                           |          |           |         |        | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics            |          |           |         |        | Place of Course Instruction                                  | 9  |
| Prof.Dr. Emad A. Kuffi                                            |          |           |         |        | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee                  |          |           |         |        | Authority and Date of Approval of the Program Specifications | 11 |



(Course description) .II

Teaching the student the concept of integration through the basic theorem and the basic rules and laws of integration .The student also learns the methods of integration and their applications through calculating areas.

(Course outcomes) .II

- 1.The student should know the definition of integration.
- 2.The student gets to know the basic theorem of integration .
- 3.The student gets to know the basic laws of integration and their relationship to differentiation
- 4.The student learns the solution using integration methods.
- 5.The student will be able to apply the methods in basic applications of integration.

BED-QA-QU26-1

V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                          |  |                                                                     |    |
|-------------------------------------------------------------------|-----------------|------------------------------------------|--|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                          |  |                                                                     |    |
| First: Theoretical Aspect                                         |                 |                                          |  |                                                                     |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics             |  | We expect the student, after completing : the course, to be able to | NO |
| 8                                                                 | 2               | Review the laws of integration           |  | Review to integration                                               | 1  |
| 4                                                                 | 1               | the basic theorem of integration .       |  | the basic theorem of integration .                                  | 2  |
| 12                                                                | 3               | Substitutions of integration             |  | Substitutions of integration                                        | 3  |
| 8                                                                 | 2               | Substitutions of trigonometric functions |  | Substitutions of trigonometric functions                            | 4  |



|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|---------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------|---|
| 21                                                                                                | 7  | Integral by parts and fractional functions , rational functions and irrational functions |                                             | Integral by parts and fractional functions , rational functions and irrational functions | 5 |
| 60                                                                                                | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>4*15                                   | Total Weeks and Hours Total Weeks and Hours |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
| -. Main References:<br>1.Thomas G.B. and Finney R.L. "Calculus and Analytic Geomaty"6 th ed.1984. |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |
|                                                                                                   |    |                                                                                          |                                             |                                                                                          |   |

Stamp and Signature of the Head of Department"

BED-QA-QU26-3  
V1-2024/

Course Professor  
Prof.Dr. Emad A. Kuffi



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                        |          |           |         |        |                                                              |    |
|-----------------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|----|
| Foundations Mathematics 2                                       |          |           |         |        | : Course Name:                                               | 1  |
| MABO3F122                                                       |          |           |         |        | Course Code and Number:                                      | 2  |
| Total                                                           | Training | Practical | Seminar | Lecter | : Credit Hours:                                              | 3  |
| 3                                                               | /        | 1         | /       | 2      |                                                              |    |
| Stage first    -(second term)                                   |          |           |         |        | Level and Semester:                                          | 4  |
| Study of mathematical concepts (Foundations of Mathematics 1)   |          |           |         |        | Prerequisites for the Course                                 | 5  |
| Knowledge of differential calculus, matrices, and number theory |          |           |         |        | Co-requisites for the Course                                 | 6  |
| Bachelor of Education in Mathematics                            |          |           |         |        | The Program(s) in Which the Course Is Taught                 | 7  |
| English                                                         |          |           |         |        | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics          |          |           |         |        | Place of Course Instruction                                  | 9  |
| Lec. Dr. Abeer Jabbar                                           |          |           |         |        | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014         |          |           |         |        | Authority and Date of Approval of the Program Specifications | 11 |



## II. وصف المساق: (Course description)

The first chapter includes a study of the most important conditions that make relations functions, as studied in the first semester. It then examines the types of functions, the composition of functions, and the most important properties of composition. It then discusses the conditions that must be met for a function to have an inverse.

The second chapter covers the definition of binary operations and groups, some important examples, and some group properties that will be important for students in the next stage, especially in the second-grade linear algebra course..

## II. مخرجات تعلم المساق: (Course outcomes)

1. To provide the student with examples of relationships that can be transformed into functions.
2. To clarify the concept of functions, operations on them, and related theories.
3. To provide the student with experience in working with functions and their types.
4. To explain how to find the inverse of a function.
5. To familiarize the student with binary operations and their types.
6. To develop the student's ability to provide examples of the concept of a group.

BED-QA-QU26-1  
V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                         |   |                                                                                     |    |
|-------------------------------------------------------------------|-----------------|-----------------------------------------|---|-------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                         |   |                                                                                     |    |
| First: Theoretical Aspect                                         |                 |                                         |   |                                                                                     |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics            |   | We expect the student, after completing : the course, to be able to                 | NO |
| 3                                                                 | 1               | Review the concept of relationships and | 2 | To give the student examples of relationships that can be converted into functions. | 1  |



|           |           |                                                                                                                                          |          |                                                                                              |          |
|-----------|-----------|------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------|----------|
|           |           | <b>properties of sets</b>                                                                                                                |          |                                                                                              |          |
| <b>9</b>  | <b>3</b>  | <b>Functions and their types</b>                                                                                                         | <b>2</b> | <b>Explaining the concept of functions, operations on them, and theories related to them</b> | <b>2</b> |
| <b>6</b>  | <b>2</b>  | <b>Application installation and some theorems</b>                                                                                        | <b>2</b> | <b>Giving the student experience in dealing with functions and their types</b>               | <b>3</b> |
| <b>6</b>  | <b>2</b>  | <b>inverse of a function</b>                                                                                                             | <b>2</b> | <b>How to find the inverse of a function</b>                                                 | <b>4</b> |
| <b>6</b>  | <b>2</b>  | <b>Definition of binary operations and their most important types</b>                                                                    | <b>4</b> | <b>The student will learn about binary operations and their types.</b>                       | <b>5</b> |
| <b>12</b> | <b>4</b>  | <b>Definition of the mathematical system and the group, and the study of the properties of the group. Some basic theorems of groups.</b> | <b>2</b> | <b>Developing the student's ability to give examples of the concept of group</b>             | <b>6</b> |
| <b>45</b> | <b>15</b> | <b>Total Weeks and Hours</b>                                                                                                             |          | <b>Total Weeks and Hours Total Weeks and Hours</b>                                           |          |
|           |           |                                                                                                                                          |          |                                                                                              |          |

**Teaching Strategy:**

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method



|                                                                        |                                                                                            |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>-Learning Resources:</b>                                            |                                                                                            |
| 1-                                                                     | Dr. Basil Atta Al-Hashemi and others, 2000, Introduction to the Foundations of Mathematics |
| 2-                                                                     | Dr. Mustafa Ahmed and others, 1998, Introduction to Finite Mathematics                     |
| <b>-. Main References: (No more than two references)</b>               |                                                                                            |
| 1-                                                                     | Foundations of Mathematics Dr. Adel Naoum                                                  |
| <b>A. Supporting References</b>                                        |                                                                                            |
| <b>B. Books and Enrichment References (Scientific Journals, etc.</b>   |                                                                                            |
| <b>C. Electronic Resources and Websites, etc.</b>                      |                                                                                            |
| <b>A. Enrichment books and references (scientific journals, etc.):</b> |                                                                                            |
| <b>B. Electronic sources and websites, etc.</b>                        |                                                                                            |

|                                                                                                                                                                                                                                                                                    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>-Course Policy and Regulations:</b>                                                                                                                                                                                                                                             |  |
| <b>-Educational Events Attendance Policy: In the event of a student's absence, he/she will be given an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered expelled for absence.</b> |  |
| <b>Late attendance: If a student is late for a lecture, he will only be allowed to enter the first hour of the lecture.</b>                                                                                                                                                        |  |
| <b>Examination regulations: If a student is late for an exam, he will not be allowed to take the same questions and at the same time.</b>                                                                                                                                          |  |
| <b>-Assignments and Projects: Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.</b>                                                                                                                           |  |
| <b>-Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.</b>                                                                                                                                                            |  |
| <b>Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.</b>                                                                                                                                  |  |
| <b>Other Policies: Any other policies related to course privacy, or according to university regulations.</b>                                                                                                                                                                       |  |

Stamp and Signature of the Head of Department"

BED-QA-QU26-3

Course Professor  
Lec. Dr. Abeer Jabbar



this course aims to enable mathematics majors to achieve the following learning outcomes:

- Understanding the concepts and importance of education and teaching.
- Exploring the relationship between education and teaching.
- Identifying similarities, differences, and relationships among education, learning, and instruction.
- Examining education and teaching in Islamic heritage.
- Understanding the principles of education and teaching.
- Recognizing the roles of the teacher in light of modern educational trends.
- Understanding the concept and standards of the teaching profession license.
- Identifying the essential requirements for teachers' professional success.
- Describing the characteristics of an effective teacher.
- Understanding the concept and roles of the classroom teacher as a guide.
- Exploring the concept and stages of basic education in Iraq.
- Studying models of basic education in selected Arab countries (e.g., Qatar).
- Studying models of basic education in selected world countries (e.g., Japan).
- Studying models of basic education in selected world countries (e.g., the United Kingdom).

#### IV. Writing Course Topics and Aligning Them with Learning Outcomes-

##### Writing Units / Topics of the Course Content

##### First: Theoretical Aspect

| Actual hours | Number of weeks | Detailed Topics                 | Course Units | Learning Outcomes                                                                                                                                                                                                                                          | NO |
|--------------|-----------------|---------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 6            | 1               | Define the concept of education |              | <input type="checkbox"/> Defines the concept of education.<br><input type="checkbox"/> Defines the concept of teaching.<br><input type="checkbox"/> Explains the importance of education.<br><input type="checkbox"/> Clarifies the importance of teaching | 1  |
| 6            | 1               | The relationship -              |              | Compares the concepts of education                                                                                                                                                                                                                         | 2  |

|   |   |                                                                                                                  |  |                                                                                                                                                                                         |    |
|---|---|------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|   |   | <b>between education and teaching</b>                                                                            |  | <b>and teaching</b>                                                                                                                                                                     |    |
| 8 | 1 | <b>The Similarities, Differences, and Interrelationships among Teaching, Learning, and Instruction</b>           |  | <ul style="list-style-type: none"> <li>identifies the similarities between teaching and learning.</li> <li>Identifies the similarities between teaching and instruction.</li> </ul>     | 3  |
| 3 | 1 | <b>Education and Teaching in Islamic Heritage</b>                                                                |  | <ul style="list-style-type: none"> <li>Distinguishes between the concepts of education and teaching in Islamic heritage.</li> </ul>                                                     | 4  |
| 3 | 1 | <ul style="list-style-type: none"> <li>Principles of Education and Teaching</li> </ul>                           |  | <ul style="list-style-type: none"> <li>Identifies the principles of teaching.</li> <li>Identifies the principles of education.</li> </ul>                                               | 5  |
| 3 | 1 | <ul style="list-style-type: none"> <li>The Roles of the Teacher in Light of Modern Educational Trends</li> </ul> |  | <ul style="list-style-type: none"> <li>Explains the roles of the teacher in modern educational trends.</li> <li>Compares the teacher's roles across modern educational trend</li> </ul> | 6  |
| 3 | 1 | <b>Teaching Profession Licenses (Concept and Standards)</b>                                                      |  | <p>Identifies the standards of the teaching profession.</p> <ul style="list-style-type: none"> <li>Defines the concept of the teaching license.</li> </ul>                              | 7  |
| 3 | 1 | <b>Essential Requirements for a Teacher's Success in Their Profession</b>                                        |  | <ul style="list-style-type: none"> <li>Identifies the essential requirements for a teacher's success.</li> <li>Evaluates the essential requirements for a teacher's success.</li> </ul> | 8  |
| 3 | 1 | <b>Characteristics of a Successful Teacher</b>                                                                   |  | <ul style="list-style-type: none"> <li>Explains the characteristics of a successful teacher.</li> </ul>                                                                                 | 9  |
| 3 | 1 | <b>The Classroom Teacher as a Mentor</b>                                                                         |  | <ul style="list-style-type: none"> <li>Defines the concept of the teacher as a mentor.</li> <li>Compares the roles of the</li> </ul>                                                    | 10 |

|    |    |                                                                      |                                                                                                                                                                              |                                                                                                                                                            |    |
|----|----|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|    |    | (Concept and Roles)                                                  |                                                                                                                                                                              | teacher as a mentor                                                                                                                                        |    |
| 3  | 1  | Basic Education in Iraq: Concept and Stages                          |                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Defines the concept of basic education in Iraq.</li> <li>Explains the stages of basic education in Iraq.</li> </ul> | 11 |
| 3  | 1  | Models of Basic Education in Some Arab Countries (Qatar)             |                                                                                                                                                                              | States the concept of basic education in Qatar                                                                                                             | 12 |
| 3  | 1  | Models of Basic Education in Some Arab Countries (Japan              |                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Describes the concept of basic education in Japan</li> </ul>                                                        | 13 |
| 3  | 1  | Models of Basic Education in Some Arab Countries the United Kingdom. |                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Describes the concept of basic education in the United Kingdom.</li> </ul>                                          | 14 |
| 3  | 1  |                                                                      |                                                                                                                                                                              | Comprehensive review                                                                                                                                       | 15 |
| 30 | 15 |                                                                      | If the course consists of 15 weeks, and each week includes 3 hours (lecture), then the total is:<br><br>$15 \text{ weeks} \times 3 \text{ hours} = 45 \text{ lecture hours}$ |                                                                                                                                                            |    |

**Second: Practical Component: None**

**List the practical experiments (topics)**

| "Learning outcomes" | "Actual hours" | "Number of weeks" | Laboratory Experiments | No |
|---------------------|----------------|-------------------|------------------------|----|
|                     |                |                   |                        | .  |
|                     |                |                   |                        | .. |

**Total Weeks and Hours**

**I. Teaching Strategy:**

Relying on the model of preparing students for discussion and assigning them to explain some sections of the study material.

The main reference for the material is based on PPT slides.

**II. Learning Resources:**

1. Al-Sawi, Muhammad Wajih, *Primary Education – Reality and Aspirations*, Al-Falah Library, Kuwait, First Edition, 1999.
2. Hassan, Hassan Muhammad, *Basic Education Between Theory and Practice*, University Student Library, Mecca, 1406 AH.
3. Mahatma Gandhi, *Basic Education*, translated by Muhammad Al-Shaibti, Dar Al-Ma'arif, Cairo

- Relying on the model of preparing students for discussion and assigning them to explain some sections of the study material.

-The main reference for the material is based on PPT slides.

**V. Learning Resources:**

-Al-Sawi, Muhammad Wajih, *Primary Education – Reality and Aspirations*, Al-Falah Library, Kuwait, First Edition, 1999.

- Hassan, Hassan Muhammad, *Basic Education Between Theory and Practice*, University Student Library, Mecca, 1406 AH.

- Mahatma Gandhi, *Basic Education*, translated by Muhammad Al-Shaibti, Dar Al-Ma'arif, Cairo.

**-VI. Course Policy and Regulations:****1. Attendance Policy:**

In case of student absence, a first warning is given, followed by a second warning, then a final warning. After that, a report is submitted to the department, and the student is considered dismissed due to absence.

**2. Late Attendance:**

If a student repeatedly arrives late to educational sessions, they will be considered absent for that lecture.

**3. Exam Regulations:**

If a student misses an exam without an excuse, they receive a zero. If the student is late for the

4. exam, they will take the exam with students in another room.

**5. Assignments and Projects:**

6. Assignments or projects must be submitted by the deadline set by the instructor. Late submissions will be refused.

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| <b>7. Cheating:</b>                                                                                                                |
| <b>8. If a student is caught cheating in exams, a report is submitted to the department head to take the necessary action.</b>     |
| <b>9. Plagiarism:</b>                                                                                                              |
| <b>10. If it is discovered that a student impersonated someone else, a report is immediately submitted to the department head.</b> |
| <b>11. Other Policies:</b>                                                                                                         |
| <b>12. Any other policies related to the specifics of the course or according to university regulations</b>                        |

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**

**Assistant Professor** Hind Abdulrazzaq



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                |                 |                  |                |               |                                                                     |           |
|----------------------------------------------------------------|-----------------|------------------|----------------|---------------|---------------------------------------------------------------------|-----------|
| <b>Microsoft Office</b>                                        |                 |                  |                |               | <b>: Course Name: 2</b>                                             | <b>1</b>  |
| <b>MABO3M224</b>                                               |                 |                  |                |               | <b>Course Code and Number:</b>                                      | <b>2</b>  |
| <b>Total</b>                                                   | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Credit Hours: 3</b>                                            | <b>3</b>  |
| <b>2</b>                                                       | <b>/</b>        | <b>1</b>         | <b>/</b>       | <b>3</b>      |                                                                     |           |
| <b>First stage, second semester</b>                            |                 |                  |                |               | <b>Level and Semester:</b>                                          | <b>4</b>  |
| <b>Study of general concepts of Microsoft Office</b>           |                 |                  |                |               | <b>Prerequisites for the Course</b>                                 | <b>5</b>  |
| <b>Knowledge of basic Microsoft Office concepts</b>            |                 |                  |                |               | <b>Co-requisites for the Course</b>                                 | <b>6</b>  |
| <b>Bachelor of Basic Education in Mathematics</b>              |                 |                  |                |               | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>7</b>  |
| <b>English + Arabic</b>                                        |                 |                  |                |               | <b>Language of Instruction for the Course</b>                       | <b>8</b>  |
| <b>college of Basic Education – Department of Mathematics</b>  |                 |                  |                |               | <b>Place of Course Instruction</b>                                  | <b>9</b>  |
| <b>Assit.LectNour Karim Salman</b>                             |                 |                  |                |               | <b>Name of the Course Specifications Preparer</b>                   | <b>10</b> |
| <b>Department of Mathematics – Scientific Committee – 2014</b> |                 |                  |                |               | <b>Authority and Date of Approval of the Program Specifications</b> | <b>11</b> |



## (Course description) : .II

- 1- Introducing the student to the methods of operating all Microsoft Office programs
- 2- Teaching students the basics of Microsoft Office
- 3- Teaching students how to create professional formatted texts in Microsoft Office Word
- 4- Teaching students how to create a formatted presentation in Microsoft Office PowerPoint
- 5- Teaching students how to create a formatted presentation in Microsoft Office PowerPoint
- 6- Teaching students how to use Excel to solve mathematical equations
- 7- Teaching students how to create an email
- 8- Teaching students how to use Access to create tables, information forms, and reports.

## III. (Course outcomes)

- 1- Students learn how to operate all Microsoft Office programs.
- 2- Students learn the basics of Microsoft Office.
- 3- Students learn how to create professional formatted texts in Microsoft Office Word.
- 4- Students learn how to create a formatted presentation in Microsoft Office PowerPoint.
- 5- Students learn how to create a formatted presentation in Microsoft Office PowerPoint.
- 6- Students learn how to use Excel to solve mathematical equations.
- 7- Students learn how to create an email account.
- 8- Students learn how to use Access to create tables, information forms, and reports.

BED-QA-QU26-1  
V1-2022/10/2

| IV. Writing Course Topics and Aligning Them with Learning Outcomes |                 |                              |              |                                                                     |    |
|--------------------------------------------------------------------|-----------------|------------------------------|--------------|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                                |                 |                              |              |                                                                     |    |
| First: Theoretical Aspect                                          |                 |                              |              |                                                                     |    |
| Actual Hours                                                       | Number of Weeks | Course Units Detailed Topics | Course units | We expect the student, after : completing the course, to be able to | NO |
| 6                                                                  | 2               | Microsoft office word        | 2            | Computer Science Review                                             | 1  |



|   |   |                              |   |                                                                                                |   |
|---|---|------------------------------|---|------------------------------------------------------------------------------------------------|---|
| 3 | 1 | Microsoft office point       | 2 | The student learns how to create a well-structured presentation in Microsoft Office PowerPoint | 2 |
| 6 | 2 | Microsoft Excel              | 4 | The student learns how to use Excel to solve mathematical equations                            | 3 |
| 6 | 2 | Microsoft Access             | 3 | The student learns how to use Access to create tables, forms, and reports.                     | 4 |
| 3 | 1 | email                        | 4 | <b>The student learns how to create an email.</b>                                              | 5 |
|   |   | <b>Total Weeks and Hours</b> |   | <b>Total Weeks and Hours</b>                                                                   |   |
|   |   | <b>Total Weeks and Hours</b> |   | <b>Total Weeks and Hours</b>                                                                   |   |
|   |   | <b>2*15</b>                  |   |                                                                                                |   |

#### Teaching Strategy:

1. Lecture and Presentation

2. Discussion Method

3. Interrogation Method

#### -Learning Resources:

1. . M.M. Musa Abdullah Hamid Al-Duri, Microsoft Office

4. Books and Enrichment References (Scientific Journals, etc.):**B. Electronic sources and websites, etc.**

#### -Course Policy and Regulations:

**- To manage attendance at educational events: In the event of a student's absence, he will be given an initial warning, then a second warning, then a final warning. A memo will be submitted to the department, and the student will be considered expelled for absence.**

**-Late attendance will be deducted from the student's daily grades.**



**Examination regulations: If a student is late for an exam, he will not be allowed to take the same questions and at the same time.**

**-Assignments and projects: Submit assignments or projects on the due date specified by the teacher or refuse to accept them if they are late.**

**Cheating: If a student cheats on exams, a memo will be submitted to the department head to take the necessary action.**

**Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.**

**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3

V1-2024/09/16

Assistant Professor Nour Karim Salman

**Course Professor**



**Mustansiriyah University – College of Basic Education–Department of Mathematics**

**Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b> |                                                                     |                                                                |                |                  |                 |
|-------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|----------------|------------------|-----------------|
| <b>1.</b>                                       | <b>Course Name:</b>                                                 | <b>Advanced Calculus</b>                                       |                |                  |                 |
| <b>2.</b>                                       | <b>Course Code and Number:</b>                                      | <b>MAB03AC211</b>                                              |                |                  |                 |
| <b>3.</b>                                       | <b>Credit Hours:</b>                                                | <i>Lecture</i>                                                 | <i>Seminar</i> | <i>Practical</i> | <i>Training</i> |
|                                                 |                                                                     | <b>4</b>                                                       | <b>/</b>       | <b>/</b>         | <b>/</b>        |
| <b>4.</b>                                       | <b>Level and Semester:</b>                                          | <b>Stage Second - (Chapter Three)</b>                          |                |                  |                 |
| <b>5.</b>                                       | <b>Prerequisites for the Course</b>                                 | <b>Calculus 1+2</b>                                            |                |                  |                 |
| <b>6.</b>                                       | <b>Co-requisites for the Course</b>                                 |                                                                |                |                  |                 |
| <b>7.</b>                                       | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>Bachelor of Education in Mathematics</b>                    |                |                  |                 |
| <b>8.</b>                                       | <b>Language of Instruction for the Course</b>                       | <b>Arbaic</b>                                                  |                |                  |                 |
| <b>9.</b>                                       | <b>Place of Course Instruction</b>                                  | <b>College of Basic Education – Department of Mathematics</b>  |                |                  |                 |
| <b>10.</b>                                      | <b>Name of the Course Specifications Preparer</b>                   | <b>Ass. Prof. Dr. Faez Nafea Ghaffoori</b>                     |                |                  |                 |
| <b>11.</b>                                      | <b>Authority and Date of Approval of the Program Specifications</b> | <b>Department of Mathematics – Scientific Committee – 2024</b> |                |                  |                 |



## **II. Course description**

This course deals with the function of two variables, its definition, domain, operations on it, finding the graph of these functions, using the limit function and continuity, testing the existence of the limit, learning how to find the partial derivative of the function of two variables, perfect differentiation, partial differentiation of higher orders, and applying the chain rule. It also deals with hyperbolic functions and the differentiation of hyperbolic functions.

## **III. Course outcomes**

This course aims to provide graduates with the following knowledge:

1. *Understand functions with two variables, purpose, and continuity.*
2. *Understand the theorems that explain functions and partial differentiation.*
3. *Understand the chain rule, polar and Cartesian coordinates.*
4. *Identify hyperbolic functions and their differentiation.*
5. *Understand that advanced differentiation serves as an introduction to mathematical analysis and establishes its mathematical foundations.*



| <b>VI. Writing Course Topics and Aligning Them with Learning Outcomes</b> |                                                                                           |                                                                                                       |                        |                     |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------|---------------------|
| <b>Writing Course Content Units/Topics</b>                                |                                                                                           |                                                                                                       |                        |                     |
| <b>First: The Theoretical Aspect</b>                                      |                                                                                           |                                                                                                       |                        |                     |
| <b>NO.</b>                                                                | <b>Learning outcomes</b>                                                                  | <b>Detailed Topics</b>                                                                                | <b>Number of Weeks</b> | <b>Actual Hours</b> |
| 1.                                                                        | Understanding functions with two variables, limit, continuity, and mathematical problems. | Two-variable function - definition - domain - operations on it -limit - continuity                    | 5                      |                     |
| 2.                                                                        | Understand the theories that explain the function and partial differentiation             | Partial differentiation - Exact differentiation - Higher order partial differentiation                | 4                      |                     |
| 3.                                                                        | Understand the chain rule, polar and Cartesian coordinates.                               | Chain Rule - Examples and Exercises                                                                   | 3                      |                     |
| 4.                                                                        | Understanding and Deriving Hyperbolic Functions                                           | Hyperbolic functions - Some hyperbolic trigonometric identities - Derivatives of hyperbolic functions | 3                      |                     |



**V. Main References: (No more than two references)**

**Calculus.**

**Supporting References**

**Introduction Of Advance Calculus.**

**VI-Course Policy and Regulations:**

**Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

**Ass. Prof. Dr. Talat Jassim**  
**Head of Department**

**College of Basic Education  
Assurance Quality Division and  
University Performance**





...Course Description...:

:Department: .....Mathematics..... Academic Year2024-2025

| I. :General information about the course ( Advanced possibilities )                                                                                                                                                                                                                                 |          |           |         |           |                                                          |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|---------|-----------|----------------------------------------------------------|-----|
|                                                                                                                                                                                                                                                                                                     |          |           |         |           | Course Name:Advanced Probability                         | .١  |
|                                                                                                                                                                                                                                                                                                     |          |           |         |           | Course code and numberMAB03P212                          | .٢  |
| Total                                                                                                                                                                                                                                                                                               | training | practical | Seminar | a lecture | :Credit hours                                            | .٣  |
| ξ                                                                                                                                                                                                                                                                                                   | /        | /         | /       | ξ         |                                                          |     |
| The second stage, morning and evening / first course third semester /                                                                                                                                                                                                                               |          |           |         |           | :Level and semester                                      | .٤  |
| Advanced Probabilities                                                                                                                                                                                                                                                                              |          |           |         |           | Course prerequisites                                     | .٥  |
| each topic Homework at the end of                                                                                                                                                                                                                                                                   |          |           |         |           | Course requirements                                      | .٦  |
| nothing                                                                                                                                                                                                                                                                                             |          |           |         |           | The program(s) in which the course is taught             | .٧  |
| Arabic + English                                                                                                                                                                                                                                                                                    |          |           |         |           | Course language of instruction                           | .٨  |
| Mathematics Department / Classrooms                                                                                                                                                                                                                                                                 |          |           |         |           | Course teaching location                                 | .٩  |
| Asist Lecture. zainab ali                                                                                                                                                                                                                                                                           |          |           |         |           | Course Specifications Preparer Name                      | .١٠ |
| Scientific Committee - Department of Mathematics 2024-2025                                                                                                                                                                                                                                          |          |           |         |           | and date of approval of program Authority specifications | .١١ |
| <b>II. Course : description</b><br><br><p>provides a concise summary of the course's key features and the learning outcomes expected of the student, demonstrating whether the student has made the most of the available learning opportunities. It must be linked to the program description:</p> |          |           |         |           |                                                          |     |
| <b>III. outcomes ourseC</b>                                                                                                                                                                                                                                                                         |          |           |         |           |                                                          |     |

V1-2022/10/2

| IV. writing Course topics and their alignment with learning outcomes |        |                 |       |                   |     |
|----------------------------------------------------------------------|--------|-----------------|-------|-------------------|-----|
| Writing course content units/topics                                  |        |                 |       |                   |     |
| :Firstly The theoretical aspect                                      |        |                 |       |                   |     |
| Actual                                                               | Number | Detailed topics | Units | Learning outcomes | The |



| hours | of weeks |                                                                      | The course | expect the After completing the course, we :student to be able to                           | number |
|-------|----------|----------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------|--------|
|       |          | To know the continuous and discrete random variable                  |            | -                                                                                           | 1      |
|       |          | To distinguish between continuous and discrete random variables      |            |                                                                                             | 2      |
|       |          | Defines the joint distribution function of .two variables            |            | -                                                                                           | 3      |
|       |          | Know the mathematical and variance expectation .of a variable random |            | - The student learns to find the arithmetic mean, .variance, and moment generating function | 4      |
|       |          | Know conditional - probability and some distributions of discrete    |            | - The student learns the conditional .of two variables probability                          | 5      |



|  |  |                   |  |  |                       |
|--|--|-------------------|--|--|-----------------------|
|  |  | .random variables |  |  |                       |
|  |  |                   |  |  | Total weeks and hours |

**V. :Teaching strategy**

**Lecture and delivery**

**Discussion method**

**Problem solving method**

**Interrogation method**

**VI. :resources Learning**

(Author, Year, Title, Place of Publication and Publisher)

١. (not more than two references) : **Main references**

1- Wakil-The Book of Probability/Dr. Ali Al

2- Wakil-Sports Statistics / Dr. Dhuya Al

٢. **Supporting references**

ج. :(.references (scientific periodicals, etc Enrichment books and

د. .Electronic sources and websites...etc

**II. :Course policy and regulations**

**:Educational Events Attendance Policy**

.١

**: Late arrival**

.٢

**: Examination controls**

.٣

**: Assignments and projects**

.٤

**: Cheating**

.٥

**: Plagiarism**

.٦

**: Other policies**

.٧

Stamp and signature of the head of the department

**Asist Lecturer. zainab ali**



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| . General Information about the Course: Linear algebra     |          |           |         |        |                                                              |  |    |
|------------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|--|----|
| Linear algebra                                             |          |           |         |        | : Course Name:                                               |  | 1  |
| MABO3LA213                                                 |          |           |         |        | Course Code and Number:                                      |  | 2  |
| Total                                                      | Training | Practical | Seminar | Lecter | : Credit Hours:                                              |  | 3  |
| 4                                                          | /        | 1         | /       | 3      |                                                              |  |    |
| The second stage, the third semester                       |          |           |         |        | Level and Semester:                                          |  | 4  |
| Study of general concepts of linear algebra                |          |           |         |        | Prerequisites for the Course                                 |  | 5  |
| Knowing the basic concepts in vectors                      |          |           |         |        | Co-requisites for the Course                                 |  | 6  |
| Bachelor of Education in Mathematics                       |          |           |         |        | The Program(s) in Which the Course Is Taught                 |  | 7  |
| English                                                    |          |           |         |        | Language of Instruction for the Course                       |  | 8  |
| college of Basic Education – Department of Mathematics     |          |           |         |        | Place of Course Instruction                                  |  | 9  |
| Asst. Prof Muntaha Abdul Razaq Hassan                      |          |           |         |        | Name of the Course Specifications Preparer                   |  | 10 |
| Department of Mathematics – Scientific Committee 2023-2024 |          |           |         |        | Authority and Date of Approval of the Program Specifications |  | 11 |



(Course description) : -1

Teach students the meaning of linear information-1-  
Teach students the meaning of vectors and operations on vectors -2  
Learn how to use vector spaces -3  
Learn the relationship between vectors -4  
Learn how to calculate the dimension and basis of finite-dimensional spaces -5  
How to calculate eigenvalues and eigenvectors -6

(Course outcomes) : .V

1. The student will understand vector spaces.
2. The student will be able to find the basis and dimension of a finite space.
3. The student will understand when a subset of a vector space is linearly related or independent.
4. The student will learn about linear combinations and generating sets.
5. The student will learn about inner product spaces and how to construct the norm basis.
6. The student will be able to calculate eigenvalues and eigenvectors.
7. The student will understand linear transformations.

BED-QA-QU26-1  
V1-2022/10/2

-Writing Course Topics and Aligning Them with Learning Outcomes

Writing Course Content Units/Topics

First: Theoretical Aspect

| Actual Hours | Number of Weeks | Course Units Detailed Topics                              |   | We expect the student, after completing : the course, to be able to | NO |
|--------------|-----------------|-----------------------------------------------------------|---|---------------------------------------------------------------------|----|
| 8            | 2               | Addition, subtraction, and multiplication of matrices and | 2 | Review of matrices, mathematical foundations, and groups            | 1  |



|    |    |                                                        |   |                                                                                 |   |
|----|----|--------------------------------------------------------|---|---------------------------------------------------------------------------------|---|
|    |    | <b>transformations on matrices</b>                     |   |                                                                                 |   |
| 4  | 1  | Know the properties of the field                       | 2 | : The student learns the meaning of the field                                   | 2 |
| 12 | 3  | Learn the properties of vector space                   | 4 | The student should know the meaning of vector space.                            | 3 |
| 8  | 2  | Finding the subspace                                   | 3 | The student learns subspace                                                     | 4 |
| 28 | 7  | A detailed study of the vector and its properties      | 4 | The student learns linear independence, dependence, foundation and self-values. | 5 |
| 60 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>4*15 |   | Total Weeks and Hours Total Weeks and Hours                                     |   |
|    |    |                                                        |   |                                                                                 |   |

**Teaching Strategy:**  
Lecture and delivery  
Discussion method  
Interrogation method

**-Learning Resources:**  
.  
.  
.

**- Main References: (No more than two references)**

1 Howardton - Simplified Linear Algebra  
.  
2- Dr. Basil Atta Al-Hashemi and others - Introduction to Linear Algebra with its Applications

1. **A. Supporting References**  
Seymour Lipchins's Linear Algebra Summaries Series  
2- Linear Algebra  
Dr. George Al-Sabti

**A. Enrichment books and references (scientific journals, etc.):**  
**B. Electronic sources and websites, etc.**

**-Course Policy and Regulations:**



**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**-Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

Stamp and Signature of the Head of Department"

Asst. Prof. Dr. Talat Jassim Mahmoud

BED-QA-QU26-3  
V1-2024/09/16

Course Professor

Asst..Prof.Muntaha Abdul Razaq Hassan



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                |                 |                  |                |               |                                                                     |           |
|----------------------------------------------------------------|-----------------|------------------|----------------|---------------|---------------------------------------------------------------------|-----------|
| <b>Counseling and Mental Health</b>                            |                 |                  |                |               | <b>: Course Name:</b>                                               | <b>1</b>  |
|                                                                |                 |                  |                |               | <b>Course Code and Number:</b>                                      | <b>2</b>  |
| <b>Total</b>                                                   | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Credit Hours:</b>                                              | <b>3</b>  |
| 2                                                              | /               | /                | /              | 2             |                                                                     |           |
| <b>Second Stage -(Chapter three)</b>                           |                 |                  |                |               | <b>Level and Semester:</b>                                          | <b>4</b>  |
|                                                                |                 |                  |                |               | <b>Prerequisites for the Course</b>                                 | <b>5</b>  |
|                                                                |                 |                  |                |               | <b>Co-requisites for the Course</b>                                 | <b>6</b>  |
| <b>Bachelor of Education in Mathematics</b>                    |                 |                  |                |               | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>7</b>  |
| <b>Arabic</b>                                                  |                 |                  |                |               | <b>Language of Instruction for the Course</b>                       | <b>8</b>  |
| <b>college of Basic Education – Department of Mathematics</b>  |                 |                  |                |               | <b>Place of Course Instruction</b>                                  | <b>9</b>  |
| <b>Asst. Prof. Dr. Sadiq Mutasher Ali Kh Al-Bahadeli</b>       |                 |                  |                |               | <b>Name of the Course Specifications Preparer</b>                   | <b>10</b> |
| <b>Department of Mathematics – Scientific Committee – 2025</b> |                 |                  |                |               | <b>Authority and Date of Approval of the Program Specifications</b> | <b>11</b> |



## II. وصف المساق: (Course description)

### Main Topics:

- \_ The concept of psychological counseling, its objectives, and its areas in the school environment
- \_ Mental health: its definition, characteristics, and importance for students and teachers. The eight psychological characteristics of basic stage students
- \_ Common behavioral disorders and problems among students (such as shyness, aggression, learning difficulties, and school anxiety)
- \_ Communication and educational counseling skills for teachers
- \_ The teacher's role in promoting mental health and preventing problems. The relationship between the family and the school in supporting mental health
- \_ The ethics of counseling work within the school

## II. مخرجات تعلم المساق: (Course outcomes)

By the end of this course, the student is expected to be able to:

- \_ Explain the basic concepts of psychological counseling and mental health. Identify common behavioral and psychological problems among basic school students.
- \_ Practice basic skills in counseling interaction in the classroom.
- \_ Employ mental health principles to promote a safe and positive classroom environment.
- \_ Cooperate with the family and school administration in caring for students psychologically and educationally.

BED-QA-QU26-1  
V1-202 / /

|                                                                   |  |
|-------------------------------------------------------------------|--|
| . -Writing Course Topics and Aligning Them with Learning Outcomes |  |
| Writing Course Content Units/Topics                               |  |
| First: Theoretical Aspect                                         |  |



| Actual Hours | Number of Weeks | Course Units Detailed Topics                                                                                                                              |  | We expect the student, after completing : the course, to be able to                                           | NO |
|--------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------|----|
| 3            | 1               | <b>Counseling:</b><br><b>What is counseling, counseling objectives, counseling theories</b>                                                               |  | - <b>Know the concept of counseling, know the goals of counseling, know counseling and mental health.</b>     | 1  |
| 9            | 3               | <b>Behavioral foundations, educational and psychological foundations, social foundations, guidance ethics, and the tasks of the educational counselor</b> |  | - <b>Knows counseling. Writes a report on counseling and mental health</b>                                    | 2  |
| 15           | 5               | <b>The educational counselor and the counseling teacher, the roles and tasks of each of the educational counselor and the educational teacher.</b>        |  | <b>Knows who an educational counselor is. The student recognizes the role and duties of the counselor.</b>    | 3  |
| 9            | 3               | <b>Data collection tools: testing, observation, interview, case study. Applications and criticism of the theory: mirrors and defects</b>                  |  | <b>Lists the means and tools of collecting information, theoretical applications in counseling</b>            | 4  |
| 9            | 3               | <b>Definition of mental health, its concept and importance for the teacher and</b>                                                                        |  | <b>Learns the concept of mental - health, the importance of mental health for the teacher and the learner</b> | 5  |



|                                                                                                                                                              |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
|                                                                                                                                                              |    | <p>learner, psychological compatibility, its types, and indicators indicating compatibility, compatibility and its relationship to health, normal and abnormal behavior, who is a normal person and who is an abnormal person, criteria for determining behaviors, primary forms of defense</p> |  | <p>Psychological compatibility and its types, normal and abnormal behavior, and who is a normal person</p> <p>Who is an abnormal person, criteria for determining normal and abnormal behavior</p> <p>Primary forms of defense</p> |                              |
| 45                                                                                                                                                           | 15 |                                                                                                                                                                                                                                                                                                 |  | <b>Total Weeks and Hours</b>                                                                                                                                                                                                       | <b>Total Weeks and Hours</b> |
|                                                                                                                                                              |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| <b>Teaching Strategy:</b><br>- Lecture Method<br>- Discussion Method                                                                                         |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| . Al-Yaqoubi, Haider Hassan (2004) Psychological Counseling and Mental Health, Baghdad, Local Publishing House, Ahl al-Bayt University, peace be upon them . |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| - Main References: (No more than two references)                                                                                                             |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| Hamed Abdel Salam Zahran, Dar Al Kutub, Cairo, several editions, the latest being 2010                                                                       |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| i. A. Supporting References                                                                                                                                  |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| B. Books and Enrichment References (Scientific Journals, etc .                                                                                               |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| C. Electronic Resources and Websites, etc.                                                                                                                   |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
|                                                                                                                                                              |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| A. Enrichment books and references (scientific journals, etc.):                                                                                              |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |
| B. Electronic sources and websites, etc.                                                                                                                     |    |                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                    |                              |



|                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>-Course Policy and Regulations:</b>                                                                                                                                                                                                                                                 |
| <b>-Attendance Policy for Educational Activities:</b> In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence. |
| <b>-Lateness:</b> If a student is repeatedly late to educational activities, they will be considered absent from the lecture                                                                                                                                                           |
| <b>-Exam Controls:</b> If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.                                                                                                                       |
| <b>-Assignments and Projects:</b> Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.                                                                                                                               |
| <b>-Cheating:</b> If a student cheats on an exam, a memo will be submitted to the department head for necessary action.                                                                                                                                                                |
| <b>Plagiarism:</b> If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.                                                                                                                                      |
| <b>Other Policies:</b> Any other policies related to course privacy, or according to university regulations.                                                                                                                                                                           |

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-202 / /

**Course Professor**

Sadiq Mutasher Ali Al-Bahdali :Assistant Professor



**-Mustansiriya University – College of Basic Education**  
**Department of Mathematics**  
**Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                  |          |           |         |        |                                                                 |    |
|-----------------------------------------------------------|----------|-----------|---------|--------|-----------------------------------------------------------------|----|
|                                                           |          |           |         |        | : Course Name:Spss                                              | 1  |
|                                                           |          |           |         |        | Course Code and<br>Number:MAB03AS223                            | 2  |
| Total                                                     | Training | Practical | Seminar | Lecter | : Credit Hours:3                                                | 3  |
| 2                                                         | /        | 1         | /       | 3      |                                                                 |    |
| Second Stage /Second semester                             |          |           |         |        | Level and Semester:                                             | 4  |
| statistics                                                |          |           |         |        | Prerequisites for the Course                                    | 5  |
| Spss                                                      |          |           |         |        | Co-requisites for the Course                                    | 6  |
| White board/interactive white board                       |          |           |         |        | The Program(s) in Which the Course<br>Is Taught                 | 7  |
| Arabic and English                                        |          |           |         |        | Language of Instruction for the<br>Course                       | 8  |
| college of Basic Education – Department of<br>Mathematics |          |           |         |        | Place of Course Instruction                                     | 9  |
| Asist Lecture. zainab ali                                 |          |           |         |        | Name of the Course Specifications<br>Preparer                   | 10 |
| Department of Mathematics – Scientific Committee          |          |           |         |        | Authority and Date of Approval of<br>the Program Specifications | 11 |



## II. وصف المساق: (Course description)

This course aims to introduce students to the SPSS statistical program, how variables are defined and data is entered, and to learn about the program interface and program menus and study several types of statistical analysis. It is considered one of the most important programs that students benefit from in analyzing questionnaires, especially in research that contains questionnaires.

## II. مخرجات تعلم المساق: (Course outcomes)

This course aims to equip students with foundational knowledge and practical skills in using SPSS for statistical data analysis. The specific objectives include:

1. **Introduction to SPSS:** Understanding what SPSS is, its importance in scientific research, and how to use it effectively.
2. **Variable View Window:** Learning how to define variables, assign their properties, and manage variable settings within the Variable View tab.
3. **Data Entry in Data View:** Understanding how to input and manage data within the Data View interface.
4. **Program Menus and Toolbar:** Exploring SPSS menus, commands, and familiarization with toolbar functions.
5. **Data Arrangement:** Learning to sort data in ascending or descending order, and how to transpose rows and columns.
6. **Descriptive Analysis - Frequencies Command:** Introduction to basic descriptive statistics using the Frequencies function
7. **One-Sample T-Test:** Performing and interpreting the One-Sample T-Test to compare a sample mean to a known value.
8. **Independent Samples T-Test:** Conducting the Independent Samples T-Test to compare the means of two independent groups.
9. **Paired-Samples T-Test:** Applying the Paired-Samples T-Test for related or matched groups.
10. **Correlation and Regression Analysis:** Understanding and applying correlation and regression techniques to explore relationships between variables..



| -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
|-----------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                             |                 |                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
| First: Theoretical Aspect                                       |                 |                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
| Actual Hours                                                    | Number of Weeks | Course Units Detailed Topics                                                                                                                                 |  | We expect the student, after completing : the course, to be able to                                                                                                                                                                                                                                                                                                                                                                                                                   | NO |
| 6                                                               | 2               | Learn about the program that can be configured to include two components of the program, along with the definition of how to define variables and enter data |  | <b>1. Introduction to SPSS:</b><br><b>Importance and Usage</b><br><b>Understanding the SPSS software: its significance and how to use it effectively.</b><br><b>2. Variable View and Data Entry</b><br><b>Exploring the Variable View window and how to define variables.</b><br><b>Learning how to input data in the Data View window.</b><br><b>3. SPSS Menus and Toolbars</b><br><b>Familiarization with program menus, executing commands, and identifying toolbar functions.</b> | 1  |
| 6                                                               | 2               | Learn about the program that can be configured to include two components of the program, along with the definition of how to define variables and enter data |  | <b>4. Data Management Techniques</b><br><b>Learning how to sort data in ascending and descending order.</b><br><b>Understanding how to switch columns and rows.</b><br><b>T-Test to compare the means of two independent groups.</b>                                                                                                                                                                                                                                                  | 2  |
| 12                                                              | 4               | Descending and ascending order and also the first statistical analysis (measures of                                                                          |  | <b>1. Basics of Statistical Analysis in SPSS</b><br><b>Introduction to basic statistical analysis using the "Frequencies" command.</b><br><b>2. T-Tests in SPSS</b>                                                                                                                                                                                                                                                                                                                   | 3  |



|           |           |                                                                                            |  |                                                                                                                                                                 |          |
|-----------|-----------|--------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|           |           | <b>central tendency:<br/>arithmetic mean<br/>(average),<br/>weighted mean<br/>(weighte</b> |  | <b>Performing the One-Sample T-Test<br/>to compare a sample mean to a<br/>known value.</b>                                                                      |          |
|           |           |                                                                                            |  | <b>Conducting the Independent Samples</b>                                                                                                                       |          |
| <b>10</b> | <b>4</b>  | <b>Specialist will<br/>analyze each<br/>analysis<br/>according to each<br/>question</b>    |  | <b>Executing the Paired-Samples T-Test<br/>to compare means from the same<br/>group at two different times.</b>                                                 | <b>4</b> |
| <b>11</b> | <b>3</b>  | <b>Conduct<br/>statistical analysis<br/>according to the<br/>type of study</b>             |  | <b>7. Correlation and Regression<br/>Analysis<br/>Understanding how to perform<br/>correlation analysis and linear<br/>regression to examine relationships.</b> | <b>5</b> |
| <b>45</b> | <b>15</b> | <b>Total Weeks and Hours<br/>Total Weeks and Hours<br/>2*15</b>                            |  | <b>Total Weeks and Hours Total Weeks and<br/>Hours</b>                                                                                                          |          |
|           |           |                                                                                            |  |                                                                                                                                                                 |          |

|                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| <b>Teaching Strategy:</b><br>- Relying on a discussion prep model and assigning students to explain specific sections of the course material.<br>- Relying on the main reference for the material, using PowerPoint slides.<br>-Lecture and presentation<br>-Discussion method<br>-Problem-solving method<br>-Interrogation method |  |  |  |  |  |
| -. Main References: (No more than two references)<br>"SPSS Survival Manual" – Julie Pallant                                                                                                                                                                                                                                        |  |  |  |  |  |
| i. <b>A. Supporting References</b><br><b>IBM Official Documentation</b><br><b>ibm.com/docs/en/spss-statistics</b>                                                                                                                                                                                                                  |  |  |  |  |  |
| <b>A. Enrichment books and references (scientific journals, etc.</b>                                                                                                                                                                                                                                                               |  |  |  |  |  |

|                                        |
|----------------------------------------|
| <b>-Course Policy and Regulations:</b> |
|----------------------------------------|



**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**-Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

Stamp and Signature of the Head of Department"

BED-QA-QU26-3

Course Professor

Asist Lecturer. zainab ali



...Course Description ...

: Department: Mathematics .... Academic Year 2024-2025.....

| I. :General information about the course               |          |           |         |           |                                                          |     |
|--------------------------------------------------------|----------|-----------|---------|-----------|----------------------------------------------------------|-----|
|                                                        |          |           |         |           | Course name Advanced integration                         | 1.  |
| MAB03A1221                                             |          |           |         |           | Course code and number                                   | 2.  |
| Total                                                  | training | practical | Seminar | a lecture | Credit hours:4                                           | 3.  |
| 4                                                      | /        |           | /       | 4         |                                                          |     |
| Second stage morning / second course / fourth semester |          |           |         |           | :Level and semester                                      | 4.  |
| integration                                            |          |           |         |           | Course prerequisites                                     | 5.  |
| Homework at the end of each topic                      |          |           |         |           | Course requirements                                      | 6.  |
| nothing                                                |          |           |         |           | The program(s) in which the course is taught             | 7.  |
| Arabic + English                                       |          |           |         |           | Course language of instruction                           | 8.  |
| Mathematics Department / Classrooms                    |          |           |         |           | Course teaching location                                 | 9.  |
| Dr. Faez Nafea Ghaffoori                               |          |           |         |           | Course Specifications Preparer Name                      | 10. |
| 2024-2025 of Mathematics - Scientific Committee        |          |           |         |           | Authority and date of approval of program specifications | 11. |



## II. Course : description

this first -stage course The course expands many of the basic concepts that the student studied in the including functions in more than one variable, and provides them with the skills to find multiple , integrals, linear and surface integrals. This course is also considered the basis for the courses that . the student will study at higher levels

## III Courseoutcomes :

:After completing the course, the student will be able to

- 1- Explains basic concepts related to the course such as three-dimensional space concepts, linear .and surface integrals and their applications
- 2- Lists the different integration methods for calculating double integrals in Cartesian, spherical, .and cylindrical coordinate systems
- 3- Solves double integrals, linear and surface integrals using various methods and uses them to .formulate applied problems
- 4- .Works effectively individually or as part of a team to resolve course-related issues
- 5- He is good at communicating mathematical ideas clearly and logically, both orally and in .writing

## IV Writing Course topics and their alignment with learning outcomes

### Writing course content units/topics

:Firstly The theoretical aspect

| Actual hours | Number of weeks | Detailed topics                                                                                                                                                    | Units The course | Learning outcomes                                                                                                                                                            | The number |
|--------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4            | 1               | Explaining the importance of studying the course and some concepts outer space tripartite Dimensions and coordinates Cartesian Surfaces in three-dimensional space | 4                | Explains basic concepts related to the course such as three-dimensional space concepts, linear and surface integrals .and their applications                                 | 1          |
| 12           | 3               | Finding volumes using single integrals using the disc method                                                                                                       | 4                | Lists the different integration methods for calculating double integrals in Cartesian, spherical, and cylindrical coordinate systems and the .study of volumes of revolution | 2          |
| 12           | 3               | Finding volumes using                                                                                                                                              | 4                | Solves double integrals, linear                                                                                                                                              | 3          |



|    |    |                                                                                                  |                       |                                                                                                   |   |
|----|----|--------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------|---|
|    |    | single integrals using the Washer method                                                         |                       | and surface integrals in various ways and uses them in .formulating applied problems              |   |
| 16 | 4  | Finding volumes using single integrals, cylindrical shell method, curve length, and surface area | 4                     | Works effectively individually or as part of a team to resolve .course-related issues             | 4 |
| 12 | 3  | Applications of double integration<br>Finding the areas between the curves                       | 4                     | He is good at communicating mathematical ideas clearly and logically, both orally and in .writing | 5 |
| 56 | 14 |                                                                                                  | Total weeks and hours |                                                                                                   |   |

**:secondly :Practical side**

**Writing practical experiences (topics)**

| Learning outcomes | Actual hours | Number of weeks | Laboratory experiments | The number |
|-------------------|--------------|-----------------|------------------------|------------|
|                   |              |                 |                        | 1.         |
|                   |              |                 |                        | 2.         |
|                   |              |                 |                        | 3.         |
|                   |              |                 |                        | 4.         |
|                   |              |                 |                        | 5.         |
|                   |              |                 |                        | 6          |
|                   |              |                 | Total weeks and hours  |            |
|                   |              |                 |                        |            |

**V Teaching Strategies**

|                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1- Brainstorming strategy by motivating the learner to generate creative ideas and search for possible solutions                                                               |
| 2- Group work strategy: Dividing students into several small groups and then giving them a specific task                                                                       |
| 3- Discussion strategy: paying attention to the individual differences of the learner, opening the .way for everyone to participate, and then motivating them by praising them |

**VI :Learning Resources**

(Author, Year, Title, Place of Publication and Publisher)

**1. (not more than two references) : Main references**

|                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1- .DrMohammed Abdulkarim The accusative ,et al2019 account , differentiation and integration ,Advanced Edition ,Second Republic Yemeni |
|-----------------------------------------------------------------------------------------------------------------------------------------|



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <p>2- ,Murray R. Spiegel1995 Schaum's Outline Series: Theory and Problems of Advanced ,<br/>,Calculus Edition .The second is the International House for Publishing and Distribution</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
| Internet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
| ب. :Enrichment books and references (scientific periodicals, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
| ج. .Electronic sources and websites...etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    |
| <a href="https://www.youtube.com/watch?v=NmIDdU-Hpfo">https://www.youtube.com/watch?v=NmIDdU-Hpfo</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
| VII :Course Policy and Regulations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
| <p><b>:Educational Events Attendance Policy</b></p> <ul style="list-style-type: none"> <li>• When entering the classroom, be careful not to crowd others.</li> <li>• Boys are not required to wait for girls to enter the classroom or to get vacant seats, because everyone is equal here. The "ladies first" rule applies to public spaces and social life.</li> <li>• Sit in an empty space and do not try to sit next to your friends if space does not allow it. You and your friends can split into more than one group, so that each group sits in the appropriate place.</li> <li>• Make sure you have all the necessary materials, such as pens, required books, and notebooks.</li> <li>• Make sure to turn off your cell phone or put it on silent mode before entering the lecture hall, so as not to distract the professors or your fellow students who are eager to learn.</li> <li>• Be kind and positive in your behavior in class. Address your problems appropriately, preferably outside the lecture hall.</li> <li>• Participating in the lesson and interacting with the professor or lecturer is good, but be sure to ask permission before asking your question and do not ask until you are given permission.</li> <li>• Make sure your question is within the context of the lesson being explained. If you have any specific questions, approach the professor after the lesson or lecture and ask him/her your question.</li> <li>• Don't prolong your questions, as other classmates will also want to participate.</li> </ul> | 1. |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <p><b>: <u>Late arrival</u></b> The policy to be followed in cases of repeated student tardiness to educational .activities is determined</p> <p>Failure to adhere to deadlines Lectures .The student who is late will have to register on Start date Lecture Ten minutes late and in case Student late Three times the student is considered absent for a full school hour. condition Student late For more than ten minutes, the student .will not be allowed to enter the classroom</p>                                                                                                                           | 2. |
| <p><b><u>Examination regulations</u></b> : Determine the policies to be followed in cases of absence from the examination and describe the policy to be followed in cases of a student being late for the .examination</p> <p>1- A student who is absent from the final exams for all courses of the semester without an .acceptable excuse will be expelled</p> <p>2- In the event that a student is absent from one or more semester exams for medical he must submit an official document , reasons or the death of a first-degree relative .proving the excuse and allowing him to take an alternative exam.</p> | 3. |
| <p><b><u>Assignments and projects</u></b> : Determine the controls related to the deadlines for submitting assignments or projects and the consequences of delaying or not submitting them on time, if .any</p>                                                                                                                                                                                                                                                                                                                                                                                                      | 4. |
| <p><b><u>Cheating</u></b> : The policy followed in cases of cheating in exams or in completing assignments by .any means of cheating</p> <p>The student is quietly taken out of the examination hall to a place far from his classmates to avoid making noise. The supervisor takes the examination paper and hands it over to the examination committee and the department head. A report is then prepared regarding the .cheating, attaching the means of cheating to take the necessary action</p>                                                                                                                | 5. |
| <p><b><u>Plagiarism</u></b> : Definition of plagiarism, its cases, and procedures to follow if it occurs</p> <p>Includes Plagiarism Cheating", "fraud" Academic dishonesty such as" the most obvious , form For plagiarism It happens when you present The student A research paper written in .whole or in part by someone else And the “stealing” of ideas and other forms of intellectual</p>                                                                                                                                                                                                                     | 6. |



|                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p>property, whether published or unpublished. Plagiarism is an offense that the university takes absolutely seriously in all cases, so it is necessary for Students Commitment to avoid Plagiarism Based on the instructions If it is proven that any Student of plagiarism The .university will take disciplinary action against him, which may result in penalties Or his .final expulsion from the university</p> |           |
| <p><b><u>Other Policies</u></b> : Any other policies related to course privacy, or according to university .regulations</p>                                                                                                                                                                                                                                                                                           | <p>7.</p> |

Stamp and signature of the head of the department

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

**-Mustansiriya University – College of Basic Education**

**Department of Mathematics**

**Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                         |          |           |         |        |                                                              |    |
|------------------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|----|
| engineering                                                      |          |           |         |        | : Course Name:                                               | 4  |
| MAB03G223                                                        |          |           |         |        | Course Code and Number:                                      | 2  |
| Total                                                            | Training | Practical | Seminar | Lecter | : Credit Hours:                                              | 3  |
| 3                                                                | /        | /         | /       | 3      |                                                              |    |
| Stage four                                                       |          |           |         |        | Level and Semester:                                          | 4  |
| Lernen Sie die grundlegenden Konzepte des Ingenieurwesens kennen |          |           |         |        | Prerequisites for the Course                                 | 5  |
| Knowledge of the engineering concepts required for each theorem  |          |           |         |        | Co-requisites for the                                        | 6  |
|                                                                  |          |           |         |        | The Program(s) in Which the Course Is Taught                 | 7  |
| Arabic                                                           |          |           |         |        | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics           |          |           |         |        | Place of Course Instruction                                  | 9  |
| Asst. Prof. Atifa Jalil Saleh                                    |          |           |         |        | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014          |          |           |         |        | Authority and Date of Approval of the Program Specifications | 11 |

and



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**II. وصف المساق:**

The student should be able to know the history of the emergence of engineering and the stages that engineering has gone through until it reaches the state in which it is now.

**III. مخرجات تعلم المساق: (Course outcomes)**

**This course aims to provide graduates with the following knowledge:**

1. Die Studierenden sind mit dem Axiomatiksystem vertraut.
2. Die Studierenden sind mit den Systemen von Young und Fano vertraut.
3. Die Studierenden sind mit der euklidischen Geometrie und der Parallelitätshypothese vertraut.
4. Die Studierenden sind mit den Beweisversuchen für die Parallelitätshypothese vertraut.
5. Die Studierenden sind mit dem Halbrecht-System vertraut.
6. Die Studierenden sind mit der euklidischen Geometrie vertraut.
7. Die Studierenden können die drei Geometrien vergleichen und gegenüberstellen.. .

BED-QA-QU26-1  
V1-2022/10/2

| 7. - Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                                            |   |                                                                     |    |
|---------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------|---|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                                 |                 |                                                                            |   |                                                                     |    |
| First: Theoretical Aspect                                           |                 |                                                                            |   |                                                                     |    |
| Actual Hours                                                        | Number of Weeks | Course Units Detailed Topics                                               |   | We expect the student, after completing : the course, to be able to | NO |
| 3                                                                   | 1               | The student should know the components of the intuitive system             | 2 | Components of the                                                   |    |
| 9                                                                   | 3               | The student should learn some theorems about the probal and probable level | 6 | projektiven Ebene                                                   | 2  |

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|    |    |                                                                                                           |                                             |                                         |  |
|----|----|-----------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------|--|
| 6  | 2  | The student should learn the theorems of Yunk and Fano                                                    | 4                                           | Theorems of the next level              |  |
| 9  | 3  | The student should learn engineering according to the concept of Euclid and the hypothesis of parallelism | 4                                           | Younk and Fano's theorems               |  |
| 9  | 3  | The student should learn engineering according to the concept of Hilbert                                  | 6                                           | Hilbert's theorems                      |  |
| 9  | 3  | The student should learn the engineering of these and the engineering of the language                     | 6                                           | The theorems of Al-Huliya and Al-Ahliji |  |
| 30 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>15*2                                                    | Total Weeks and Hours Total Weeks and Hours |                                         |  |
|    |    |                                                                                                           |                                             |                                         |  |

and



**College of Basic Education**  
**Division Quality Assurance**  
**University Performance**

**Teaching Strategy:**

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method

**-Learning Resources:**

- Al-Kubaisi, Abdul Wahid Hamid and Mudrakah Saleh Abdullah (2018): Mind Maps in Mathematics Teaching, Arab Community Library, Amman.
- A. Main References: (No more than two references)
- Al-Absi, Muhammad Mustafa (2009): Games and Thinking in Mathematics, Dar Al-Masirah, Amman

- . Main References: (No more than two references)

Basic concepts in engineering Talif D. Amal Shehab

Systems of axioms and geometry Talif Dr. Abdul Wahab Al-Sarraj

**1. A. Supporting References**

**B. Books and Enrichment References (Scientific Journals, etc.**

**C. Electronic Resources and Websites, etc.**

**A. Enrichment books and references (scientific journals, etc.):**

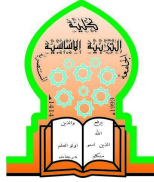
**B. Electronic sources and websites, etc.**

**- Course Policy and Regulations:**

**-Attendance Policy for Educational Activities: In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.**

**- Lateness: If a student is repeatedly late to educational activities, they will be considered absent from the lecture**

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**University Performance**

|                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>- Exam Controls: If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.</b> |
| <b>- Assignments and Projects: Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.</b>         |
| <b>- Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.</b>                                          |
| <b>Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.</b>                 |
| <b>Other Policies: Any other policies related to course privacy, or according to university regulations.</b>                                                      |
|                                                                                                                                                                   |

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2025/07/7

**Course Professor**

Assistant Professor: Atifa jalil Saleh



...Course Description ...

.... Department: Mathematics....Academic Year: 2024 - 2025

| I. ( Educational Psychology ) :General information about the course |          |           |         |                                                              |                     |
|---------------------------------------------------------------------|----------|-----------|---------|--------------------------------------------------------------|---------------------|
| Educational Psychology                                              |          |           |         | : Course name                                                | .1                  |
|                                                                     |          |           |         | Course code and number                                       | .2                  |
| Total                                                               | training | practical | Seminar | a lecture                                                    | :Credit hours<br>.3 |
| 2                                                                   |          |           |         | 2                                                            |                     |
| First stage - first semester                                        |          |           |         | :Level and semester                                          | .4                  |
|                                                                     |          |           |         | Course prerequisites                                         | .5                  |
|                                                                     |          |           |         | Course requirements                                          | .6                  |
| Blackboard and colored pens                                         |          |           |         | The program(s) in which the course is taught                 | .7                  |
| Arabic                                                              |          |           |         | :Course language of instruction                              | .8                  |
| Department of Mathematics                                           |          |           |         | :Course teaching location                                    | .9                  |
| Asst.Lect.Shaimaa Abdul Hamza                                       |          |           |         | :Course Specifications Preparer Name                         | .10                 |
| Department of Mathematics                                           |          |           |         | Authority and date of approval of<br>:program specifications | .11                 |



## II. Course : description

To understand the concept of psychology, its basics, importance, objectives, the relationship of educational psychology to other sciences, desirable characteristics of the teacher's personality, factors influencing the effectiveness of the educational process, the concept of motivation in learning, its elements and educational functions, some criteria that play a role in stimulating motivation, methods used to stimulate motivation among students in the classroom, the concept of memory and its types, contemporary viewpoints in interpreting memory, the concept of forgetting and the factors influencing it, the importance of studying the transfer of the effect of training, its dimensions, types and theories, feedback, its foundations and dimensions, learning, its characteristics, conditions, theories and laws

## II. outcomes Course

- 1- . Recognition on concept science self Educational
- 2- He distinguishes between importance science self Educational And its goals
- 3- Recognition on concept Motivation
- 4- Recognition on concept Memory
- 5- compare between Types memory
- 6- Recognition on concept forgetfulness
- 7- He distinguishes between memory And forgetfulness
- 8- Recognition on Dimensions transmission effect Training
- 9- Recognition on Types transmission effect Training
- 10- Recognition on concept Nutrition The return
- 11- Recognition on concept learning
- 12- Recognition on Theories learning and its laws
- 13- He distinguishes between theory learning when Thorndyke And when Pavlov



| IV. course topics and aligning them with learning outcomes |                 |                 |                        |                                                                            |            |
|------------------------------------------------------------|-----------------|-----------------|------------------------|----------------------------------------------------------------------------|------------|
| Writing course content units/topics                        |                 |                 |                        |                                                                            |            |
| First: The theoretical aspect                              |                 |                 |                        |                                                                            |            |
| Actual hours                                               | Number of weeks | Detailed topics | Course units           | Learning outcomes                                                          | The number |
| 2                                                          | 1               |                 |                        | Recognition on concept science self . Educational                          | 1          |
| 2                                                          | 1               |                 |                        | He distinguishes between importance science self Educational And its goals | 2          |
| 2                                                          | 1               |                 |                        | Recognition on concept Motivation                                          | 3          |
| 2                                                          | 1               |                 |                        | Recognition on concept Memory                                              | 4          |
| 2                                                          | 1               |                 |                        | compare between Types memory                                               | 5          |
| 2                                                          | 1               |                 |                        | Recognition on concept forgetfulness                                       | 6          |
| 2                                                          | 1               |                 |                        | He distinguishes between memory And forgetfulness                          | 7          |
| 2                                                          | 1               |                 |                        | Recognition on Dimensions transmission effect Training                     | 8          |
| 2                                                          | 1               |                 |                        | Recognition on Types transmission effect Training                          | 9          |
| 2                                                          | 1               |                 |                        | Recognition on concept Nutrition The return                                | 10         |
| 2                                                          | 1               |                 |                        | Recognition on concept learning                                            | 11         |
| 2                                                          | 1               |                 |                        | Recognition on Theories learning and its laws                              | 12         |
| 2                                                          | 1               |                 |                        | He distinguishes between theory learning when Thorndyke And when Pavlov    | 13         |
| 26                                                         | 13              |                 | Total weeks and hours  |                                                                            |            |
| :Second: The practical aspect                              |                 |                 |                        |                                                                            |            |
| Writing practical experiences (topics)                     |                 |                 |                        |                                                                            |            |
| Learning outcomes                                          | Actual hours    | Number of weeks | Laboratory experiments |                                                                            | The number |
|                                                            |                 |                 |                        |                                                                            | .1         |
|                                                            |                 |                 |                        |                                                                            | .2         |
|                                                            |                 |                 |                        |                                                                            | .3         |
|                                                            |                 |                 |                        |                                                                            | .4         |
|                                                            |                 |                 |                        |                                                                            | .5         |
|                                                            |                 |                 |                        |                                                                            |            |
|                                                            |                 |                 |                        |                                                                            |            |



|                                                                                                                                                                                                                                                                                                            |  |  | Total weeks and hours |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------|
| <b>V. :Teaching strategy</b>                                                                                                                                                                                                                                                                               |  |  |                       |
| .Use the discussion and cooperative learning method by dividing students into groups                                                                                                                                                                                                                       |  |  |                       |
| Display educational videos and pictures of the subject matter using a computer and PowerPoint .slides                                                                                                                                                                                                      |  |  |                       |
|                                                                                                                                                                                                                                                                                                            |  |  |                       |
| <b>VI. :Learning resources</b>                                                                                                                                                                                                                                                                             |  |  |                       |
| (Author, Year, Title, Place of Publication and Publisher)                                                                                                                                                                                                                                                  |  |  |                       |
| i. (not more than two references) : <b>Main references</b>                                                                                                                                                                                                                                                 |  |  |                       |
| 1- Al-Zaghoul, Imad Abdul Rahim (2001): Principles of Educational Psychology, Dar Al-Kitab .Al-Jami'i, 1st ed., Al Ain, United Arab Emirates                                                                                                                                                               |  |  |                       |
| 2- Mansi, Mahmoud Abdel Halim, and others (2001): Introduction to Educational Psychology, .Dar Al-Kutub for Printing and Publishing, Iraq                                                                                                                                                                  |  |  |                       |
| ii. :Supporting references                                                                                                                                                                                                                                                                                 |  |  |                       |
| Al-Azirjawi, Fadhel Mohsen (1991): Foundations of Educational Psychology, Dar Al-Kutub for .Printing and Publishing, Iraq                                                                                                                                                                                  |  |  |                       |
|                                                                                                                                                                                                                                                                                                            |  |  |                       |
| iii. .Electronic sources and websites...etc                                                                                                                                                                                                                                                                |  |  |                       |
| <a href="http://www.uobabylon.edu.iq">http://www.uobabylon.edu.iq</a>                                                                                                                                                                                                                                      |  |  |                       |
|                                                                                                                                                                                                                                                                                                            |  |  |                       |
| <b>II. :Course policy and regulations</b>                                                                                                                                                                                                                                                                  |  |  |                       |
| The general policy of the course is written according to the university regulations regarding the :following                                                                                                                                                                                               |  |  |                       |
| Educational Events Attendance Policy : In the event of a student's absence, a warning ( first or second) is given, followed by a final warning. A memo is then submitted to the department .regarding the student being dismissed due to absence                                                           |  |  | .1                    |
| <u>Late attendance</u> : An attempt is made to determine the reasons for the student's lateness. If the student is repeatedly late, the reasons for the lateness will be discussed with him/her, and then the student will be referred to the advisor and the department head to take appropriate . action |  |  | .2                    |
| <u>Examination regulations</u> : The reasons for the student's absence from the exam are                                                                                                                                                                                                                   |  |  | .3                    |



|                                                                                                                                                                                                                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| investigated. If the reason is convincing, the exam will be retaken. If it is not convincing, the student will be given a zero                                                                                                                                                                      |    |
| <b><u>Assignments and projects</u></b> : Project and assignment deadlines are set, and if they are not completed, a zero is given to the student, so that he does not repeat this next time                                                                                                         | .4 |
| <b><u>Cheating</u></b> : A zero is given for the semester exam. However, for end-of-course exams, the appropriate procedure is to catch the cheating and refer the student to the department head to take appropriate action and report the matter to the deanship to issue a decision to expel him | .5 |
| <b><u>Plagiarism</u></b> : The student will be referred to the department's disciplinary committee to take deterrent measures to prevent the recurrence of this phenomenon                                                                                                                          | .6 |
| <b><u>Other policies</u></b> : Any other policies in which the decision is made by the department's academic committee                                                                                                                                                                              | .7 |

Asst. Prof. Dr. Talat Jassim Mahmoud

Seal and signature of the department head



## ...Course Description...

..... Department: .....Mathematics.....Academic Year: 2024-2025

| I. :General information about the course (Educational statistics) |          |           |         |         |                                                          |     |
|-------------------------------------------------------------------|----------|-----------|---------|---------|----------------------------------------------------------|-----|
|                                                                   |          |           |         |         | Educational Statistics : Course Name                     | .1  |
| MABO3LA213                                                        |          |           |         |         | :Course code and number                                  | .2  |
| Total                                                             | training | practical | Seminar | a       | Credit hours: 3                                          | .3  |
|                                                                   |          |           |         | lecture |                                                          |     |
| 4                                                                 |          | 1         |         | 3       |                                                          |     |
| The second stage                                                  |          |           |         |         | Level and semester: Second                               | .4  |
| Study of general concepts of statistics                           |          |           |         |         | Course prerequisites                                     | .5  |
| Knowing how to apply statistical measures to variables            |          |           |         |         | Course requirements                                      | .6  |
| Bachelor of Education in Mathematics                              |          |           |         |         | The program(s) in which the course is taught             | .7  |
| English + Arabic                                                  |          |           |         |         | Course language of instruction                           | .8  |
| College of Basic Education - Department of Mathematics            |          |           |         |         | Course teaching location                                 | .9  |
| Asst.Lec.Shaimaa Abdul Hamza                                      |          |           |         |         | Course Specifications Preparer Name                      | .10 |
| Department of Mathematics - Scientific Committee - 2024-2025      |          |           |         |         | Authority and date of approval of program specifications | .11 |



## II. Course : description

- 1- Teaching the student the meaning Statistics
- 2- Teach students types of statistics and variables
- 3- .The student learns how to apply statistical measures to data and extract results
- 4- The student learns how to analyze data based on the results extracted using statistical .methods

## II. outcomes Course

- 1- Understanding the term statistics, its applications and types
- 2- Knowledge of the most important statistical measures
- 3- Ability to apply statistical measures to data to extract results
- 4- The ability to analyze and interpret solution results and evaluate alternative .solutions
- .Acquire quantitative analysis skills and appropriate decision-making .6

V1-2022\10\2

## IV. writing Course topics and their alignment with learning outcomes

### Writing course content units/topics

### :Firstly The theoretical aspect

| Actual hours | Number of weeks | Detailed topics                                                                               | Units The course | Learning outcomes                                            | The number |
|--------------|-----------------|-----------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------|------------|
| 4            | 1               | Knowledge of the concept of statistics in general, its types, and the types of variables used | 2                | The concept of statistics                                    | 1          |
| 12           | 3               | Explaining statistical measures, including measures of dispersion and measures of central     | 2                | The student learns the most important . statistical measures | 2          |



|   |   |                                                                                                                                                                                                                                                              |   |                                                                        |   |
|---|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------|---|
|   |   | tendency,<br>and how to<br>apply them<br>to data,<br>whether<br>grouped or<br>.ungrouped                                                                                                                                                                     |   |                                                                        |   |
| 8 | 2 | To<br>understand<br>the<br>relationship<br>between two<br>variables and<br>to show<br>whether<br>there is a<br>relationship<br>or not and<br>the type of<br>relationship,<br>whether it is<br>direct or<br>inverse,<br>using<br>correlation<br>.coefficients | 4 | The student should know the type of<br>.relationship between variables | 3 |
|   |   |                                                                                                                                                                                                                                                              |   |                                                                        | 4 |
|   |   |                                                                                                                                                                                                                                                              |   |                                                                        |   |
|   |   |                                                                                                                                                                                                                                                              |   |                                                                        |   |

**:secondly :Practical side**

**Writing practical experiences (topics)**

| Learning<br>outcomes | Actual hours | Number of<br>weeks | Laboratory experiments | The number |
|----------------------|--------------|--------------------|------------------------|------------|
|                      |              |                    |                        | .1         |
|                      |              |                    |                        | .2         |
|                      |              |                    |                        | .3         |
|                      |              |                    |                        | .4         |
|                      |              |                    |                        | .5         |
|                      |              |                    |                        |            |
|                      |              |                    |                        |            |
|                      |              |                    | Total weeks and hours  |            |



|                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>V. :Teaching strategy</b>                                                                                                                              |
| <b>Lecture and delivery</b>                                                                                                                               |
| <b>Discussion method</b>                                                                                                                                  |
| <b>Interrogation method</b>                                                                                                                               |
| <b>VI. :Learning resources</b>                                                                                                                            |
| (Author, Year, Title, Place of Publication and Publisher)                                                                                                 |
| ١. (not more than two references) : <b>Main references</b>                                                                                                |
| Basics of Educational Statistics, Dr. Kamel Thamer Al-Kubaisi, and Dr. Mail Kamel -1<br>Educational statistics using -2SPSS By Dr. Ali Salah Abdel Mohsen |
| ٢. <b>Supporting references</b>                                                                                                                           |
| Schaum's Summary of Statistics Series                                                                                                                     |
| ٣. : <b>Enrichment books and references (scientific periodicals, etc.)</b>                                                                                |
|                                                                                                                                                           |
| ٤. . <b>Electronic sources and websites...etc</b>                                                                                                         |

BED-QA-QU26-2  
V1-2022\10\2

| /II. :Course policy and regulations                                                                                                                                                                                                                                             |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Educational events attendance policy</b> : In the event of a student’s absence, a warning is given, followed by a first warning, a second warning, and then a final warning. A memo is then submitted to the department, .and the student is considered expelled for absence | .1 |
| <b><u>Late arrival</u></b> , failure to submit the application, and sometimes forgiveness depending on the circumstances                                                                                                                                                        | .2 |
| <b>: <u>Examination controls</u></b> If a student is late for an exam, he will not be allowed to .take the same questions and at the same time                                                                                                                                  | .3 |
| <b><u>Homework and projects:</u> Homework or projects must be submitted on the due .date specified</b> by the teacher. They will not be accepted if submitted late                                                                                                              | .4 |
| <b><u>Cheating</u></b> : If a student cheats on exams, a memo will be submitted to the .department head to take the necessary action                                                                                                                                            | .5 |



**Plagiarism** : If a student is found to be impersonating another person, a report will  
.be submitted to the department head immediately

.6

**Other Policies** : Any other policies related to course privacy, or according to  
.university regulations

.7

Asst. Prof. Dr. Talat Jassim Mahmoud

Seal and signature of the department head



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                |          |           |         |        |                                                              |  |    |
|---------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|--|----|
| Microsoft Access 2010                                   |          |           |         |        | : Course Name: ٧                                             |  | 1  |
| MABO3M224                                               |          |           |         |        | Course Code and Number:                                      |  | 2  |
| Total                                                   | Training | Practical | Seminar | Lecter | : Credit Hours: 3                                            |  | 3  |
| 2                                                       | /        | 1         | /       | 3      |                                                              |  |    |
| First stage, first semester                             |          |           |         |        | Level and Semester:                                          |  | 4  |
| Study of general concepts of Microsoft Access 2010      |          |           |         |        | Prerequisites for the Course                                 |  | 5  |
| Knowledge of basic Microsoft Access 2010concepts        |          |           |         |        | Co-requisites for the Course                                 |  | 6  |
| Bachelor of Basic Education in Mathematics              |          |           |         |        | The Program(s) in Which the Course Is Taught                 |  | 7  |
| English + Arabic                                        |          |           |         |        | Language of Instruction for the Course                       |  | 8  |
| college of Basic Education – Department of Mathematics  |          |           |         |        | Place of Course Instruction                                  |  | 9  |
| Assit.Lect Nour Karim Salman                            |          |           |         |        | Name of the Course Specifications Preparer                   |  | 10 |
| Department of Mathematics – Scientific Committee – 2024 |          |           |         |        | Authority and Date of Approval of the Program Specifications |  | 11 |



**(Course description) : .II**

- 1- Introducing the student to Microsoft Access 2010 operating methods
- 2- Teaching students the basics of Microsoft Access 2010
- 3- Teaching students what databases are and their functions in Microsoft Access 2010
- 4- Teaching students what components of Microsoft Access 2010 are
- 5- Teaching students what tables, queries, reports, and forms are in Microsoft Access 2010 and how to create them

**III. (Course outcomes)**

1. Students will learn how to operate all the programs used in Microsoft Access 2010.
2. Students will learn the basics of Microsoft Access 2010.
3. Students will learn what databases are and their functions in Microsoft Access 2010.
4. Students will learn what components of Microsoft Access 2010 are.
5. Students will learn what tables, queries, reports, and forms are in Microsoft Access 2010 and how to create them.

BED-QA-QU26-1  
V1-2022/10/2

| <b>IV. Writing Course Topics and Aligning Them with Learning Outcomes</b> |                        |                                                                            |                     |                                                                            |           |
|---------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------|-----------|
| <b>Writing Course Content Units/Topics</b>                                |                        |                                                                            |                     |                                                                            |           |
| <b>First: Theoretical Aspect</b>                                          |                        |                                                                            |                     |                                                                            |           |
| <b>Actual Hours</b>                                                       | <b>Number of Weeks</b> | <b>Course Units Detailed Topics</b>                                        | <b>Course units</b> | <b>We expect the student, after : completing the course, to be able to</b> | <b>NO</b> |
| 6                                                                         | 2                      | Microsoft Access 2010                                                      | 3                   | Computer Science Review                                                    | 1         |
| 3                                                                         | 1                      | Definition of data and information and what are the functions of databases | 3                   | Students will learn the basics of Microsoft Access 2010.                   | 2         |



|   |   |                                                                 |                                                    |                                                                                                                   |   |
|---|---|-----------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---|
| 6 | 2 | Microsoft Access 2010 components                                | 5                                                  | Students will learn what databases are and their functions in Microsoft Access 2010.                              | 3 |
| 6 | 2 | what tables, queries, reports, and forms                        | 4                                                  | Students will learn what tables, queries, reports, and forms are in Microsoft Access 2010 and how to create them. | 4 |
|   |   |                                                                 |                                                    |                                                                                                                   | 5 |
|   |   | <b>Total Weeks and Hours<br/>Total Weeks and Hours<br/>2*15</b> | <b>Total Weeks and Hours Total Weeks and Hours</b> |                                                                                                                   |   |
|   |   |                                                                 |                                                    |                                                                                                                   |   |

### Teaching Strategy:

1. Lecture and Presentation

2. Discussion Method

3. Interrogation Method

### -Learning Resources:

1. . M.M. Musa Abdullah Hamid Al-Duri, Microsoft Office

4. Books and Enrichment References (Scientific Journals, etc.):**B. Electronic sources and websites, etc.**

### -Course Policy and Regulations:

- To manage attendance at educational events: In the event of a student's absence, he will be given an initial warning, then a second warning, then a final warning. A memo will be submitted to the department, and the student will be considered expelled for absence.

-Late attendance will be deducted from the student's daily grades.



**Examination regulations: If a student is late for an exam, he will not be allowed to take the same questions and at the same time.**

**-Assignments and projects: Submit assignments or projects on the due date specified by the teacher or refuse to accept them if they are late.**

**Cheating: If a student cheats on exams, a memo will be submitted to the department head to take the necessary action.**

**Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.**

**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3

V1-2024/09/16

Assistant Professor Nour Karim Salman

**Course Professor**



...Course Description...

: Department: Mathematics....Academic Year2024-2025.....

| I. : General information about the course                     |          |           |         |           |                                                          |     |
|---------------------------------------------------------------|----------|-----------|---------|-----------|----------------------------------------------------------|-----|
|                                                               |          |           |         |           | Course name differential equations                       | 1.  |
| MAB03ODE314                                                   |          |           |         |           | Course code and numbe                                    | 2.  |
| Total                                                         | training | practical | Seminar | a lecture | Credit hours:4                                           | 3.  |
| 4                                                             | /        |           | /       | 4         |                                                          |     |
| Third stage / morning + evening, first course, fifth semester |          |           |         |           | Level and semester                                       | 4.  |
| Calculus                                                      |          |           |         |           | Course prerequisites                                     | 5.  |
| Homework at the end of each topic                             |          |           |         |           | Course requirements                                      | 6.  |
| nothing                                                       |          |           |         |           | The program(s) in which the course is taught             | 7.  |
| Arabic + English                                              |          |           |         |           | Course language of instruction                           | 8.  |
| Mathematics Department                                        |          |           |         |           | Course teaching location                                 | 9.  |
| Rasha Hussein Ibrahim                                         |          |           |         |           | Course Specifications Preparer Name                      | 10. |
| Mathematics Department - Scientific Committee2024-2025        |          |           |         |           | Authority and date of approval of program specifications | 11. |



## II. Course : description

this first and second stage The course expands on the basic concepts that the student studied in the introduces the student to the differential equation (its classification and formation), courses , and methods of solving ordinary differential equations of the first and second degree (homogeneous and .(non-homogeneous

## III outcomes Course .

### I- knowledge and understanding

Introducing the student -1to the basics of differential equations and providing a clear .introduction to this topic in mathematics

Study -2most of the different methods available to solve the differential equation, i.e. find the function that satisfies the differential equation.

The student -3's ability to classify differential equations and solve common types of differential . equations

4- The student's ability to translate the actual reality of many natural problems that occur in physics, chemistry, engineering, medicine, etc. and transform them into mathematical models with specific features that can be studied from a mathematical point of view and then work to .find appropriate solutions for them

### B - Subject-specific skills

.Applications of differential equations such as heat and mass transfer, vibration and waves -1

Developing cognitive skills (thinking and analysis) so that the student is able to solve different -2 .models of differential equations

.Proposing the most moderate methods for solving differential equations -3

The student was able to reach the solution in different ways by using the appropriate method - 4 for the solution.

### C- Thinking skills

Developing the student's ability to work on completing assignments and submitting them on -1 time.

Analyze the problem and find solutions -2.

Developing the student's ability to dialogue and discuss -3.

## IV Writing Course topics and their alignment with learning outcomes

### Writing course content units/topics

#### :Firstly The theoretical aspect

| Actual hours | Numbe<br>r of<br>weeks | Detailed topics                                                                                                                                                   | Units<br>The<br>course | Learning outcomes                       | The<br>num<br>ber |
|--------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------|-------------------|
| 8            | 2                      | Explaining the importance<br>of studying the course and<br>some concepts<br>Basics of Equation<br>Classification<br>rank - degree - linearity - )<br>(homogeneity | 4                      | Basic concepts related to the<br>course | 1                 |



|     |     |                                                                                                                                                              |                       |                                                                                                   |   |
|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------|---|
| 8 2 | 7   | Solving differential equations by separation of variables and solving complete equations<br>Homogeneous and linear equation and solving Bernoulli's equation | 4                     | First-order differential equations and their solutions                                            | 2 |
| 8   | 2   | Basic principles of homogeneous and non-homogeneous second-order differential equations and methods for solving them<br>How to lower the rank                | 4                     | Second-order differential equations and their solutions                                           | 3 |
| 16  | 4   | homogeneous and non-homogeneous second-degree equations and methods for solving them<br>How to lower the rank                                                | 4                     | Works effectively individually or as part of a team to resolve .course-related issues             | 4 |
| 4   | 1   | Various examples and applications                                                                                                                            | 4                     | He is good at communicating mathematical ideas clearly and logically, both orally and in .writing | 5 |
| 60  | 6 1 |                                                                                                                                                              | Total weeks and hours |                                                                                                   |   |

:secondly :Practical side

Writing practical experiences (topics)

| Learning outcomes | Actual hours | Number of weeks | Laboratory experiments | The number |
|-------------------|--------------|-----------------|------------------------|------------|
|                   |              |                 |                        | 1.         |
|                   |              |                 |                        | 2.         |
|                   |              |                 |                        | 3.         |
|                   |              |                 |                        | 4.         |
|                   |              |                 |                        | 5.         |
|                   |              |                 |                        | 6          |
|                   |              |                 | Total weeks and hours  |            |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>V. :Teaching strategy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |
| 1- Brainstorming strategy by motivating the learner to generate creative ideas and search for possible solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |
| 2- Group work strategy: Dividing students into several small groups and then giving them a specific task                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |    |
| 3- Discussion strategy: paying attention to the individual differences of the learner, opening the .way for everyone to participate, and then motivating them by praising them                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| <b>VI. :Learning Resources</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| (Author, Year, Title, Place of Publication and Publisher)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| ا. (not more than two references) : Main references                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
| 1- calculus& Analytic Geometry(Thomas) 2-Modern Introduction Differential equations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |
| <b>Internet</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    |
| ب. :Enrichment books and references (scientific periodicals, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |    |
| ج. .Electronic sources and websites...etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |
| <a href="https://www.youtube.com/watch?v=NmIDdU-Hpfo">https://www.youtube.com/watch?v=NmIDdU-Hpfo</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |
| <b>VII. :Course Policy and Regulations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |    |
| <b>:Educational Events Attendance Policy</b> <ul style="list-style-type: none"> <li>• When entering the classroom, be careful not to crowd others.</li> <li>• Boys are not required to wait for girls to enter the classroom or to get vacant seats, because everyone is equal here. The "ladies first" rule applies to public spaces and social life.</li> <li>• Sit in an empty space and do not try to sit next to your friends if space does not allow it. You and your friends can split into more than one group, so that each group sits in the appropriate place.</li> <li>• Make sure you have all the necessary materials, such as pens, required books, and notebooks.</li> <li>• Make sure to turn off your cell phone or put it on silent mode before entering the lecture hall, so as not to distract the professors or your fellow students who are eager to learn.</li> <li>• Be kind and positive in your behavior in class. Address your problems appropriately, preferably outside the lecture hall.</li> <li>• Participating in the lesson and interacting with the professor or lecturer is good, but be</li> </ul> | 1. |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <p>sure to ask permission before asking your question and do not ask until you are given permission.</p> <ul style="list-style-type: none"> <li>• Make sure your question is within the context of the lesson being explained. If you have any specific questions, approach the professor after the lesson or lecture and ask him/her your question.</li> <li>• Don't prolong your questions, as other classmates will also want to participate.</li> </ul>                                                                                                                                                          |    |
| <p><b>: <u>Late arrival</u></b> The policy to be followed in cases of repeated student tardiness to educational activities is determined</p> <p>Failure to adhere to deadlines Lectures .The student who is late will have to register on Start date Lecture Ten minutes late and in case Student late Three times the student is considered absent for a full school hour. condition Student late For more than ten minutes, the student .will not be allowed to enter the classroom</p>                                                                                                                            | 2. |
| <p><b><u>Examination regulations</u></b> : Determine the policies to be followed in cases of absence from the examination and describe the policy to be followed in cases of a student being late for the .examination</p> <p>1- A student who is absent from the final exams for all courses of the semester without an .acceptable excuse will be expelled</p> <p>2- In the event that a student is absent from one or more semester exams for medical he must submit an official document , reasons or the death of a first-degree relative .proving the excuse and allowing him to take an alternative exam.</p> | 3. |
| <p><b><u>Assignments and projects</u></b> : Determine the controls related to the deadlines for submitting assignments or projects and the consequences of delaying or not submitting them on time, if .any</p>                                                                                                                                                                                                                                                                                                                                                                                                      | 4. |
| <p><b><u>Cheating</u></b> : The policy followed in cases of cheating in exams or in completing assignments by .any means of cheating</p> <p>The student is quietly taken out of the examination hall to a place far from his classmates to avoid making noise. The supervisor takes the examination paper and hands it over to the</p>                                                                                                                                                                                                                                                                               | 5. |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p>examination committee and the department head. A report is then prepared regarding the .cheating, attaching the means of cheating to take the necessary action</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |
| <p><b><u>.Plagiarism</u> : Definition of plagiarism, its cases, and procedures to follow if it occurs</b></p> <p>Includes Plagiarism Cheating", "fraud" Academic dishonesty such as" the most obvious , form For plagiarism It happens when you present The student A research paper written in .whole or in part by someone else And the “stealing” of ideas and other forms of intellectual property, whether published or unpublished. Plagiarism is an offense that the university takes absolutely seriously in all cases, so it is necessary for Students Commitment to avoid Plagiarism Based on the instructions If it is proven that any Student of plagiarism The .university will take disciplinary action against him, which may result in penalties Or his .final expulsion from the university</p> | <p>6.</p> |
| <p><b><u>Other Policies</u> : Any other policies related to course privacy, or according to university .regulations</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>7.</p> |

Stamp and signature of the head of the department



**Mustansiriya University – College of Basic Education**  
**Department of Mathematics**  
**Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>               |                 |                  |                |               |                                                                     |           |
|---------------------------------------------------------------|-----------------|------------------|----------------|---------------|---------------------------------------------------------------------|-----------|
| <b>Group theory</b>                                           |                 |                  |                |               | <b>: Course Name:</b>                                               | <b>1</b>  |
| MAB03GT312                                                    |                 |                  |                |               | <b>Course Code and Number:</b>                                      | <b>2</b>  |
| <b>Total</b>                                                  | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Credit Hours:</b>                                              | <b>3</b>  |
| 6                                                             | /               | /                | /              | 3             |                                                                     |           |
| Third / Fifth                                                 |                 |                  |                |               | <b>Level and Semester:</b>                                          | <b>4</b>  |
|                                                               |                 |                  |                |               | <b>Prerequisites for the Course</b>                                 | <b>5</b>  |
|                                                               |                 |                  |                |               | <b>Co-requisites for the Course</b>                                 | <b>6</b>  |
| <b>Bachelor of Education in Mathematics</b>                   |                 |                  |                |               | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>7</b>  |
| <b>English</b>                                                |                 |                  |                |               | <b>Language of Instruction for the Course</b>                       | <b>8</b>  |
| <b>College of Basic Education – Department of Mathematics</b> |                 |                  |                |               | <b>Place of Course Instruction</b>                                  | <b>9</b>  |
| <b>Prof. Dr. Shaymaa Amer Abdul Kareem</b>                    |                 |                  |                |               | <b>Name of the Course Specifications Preparer</b>                   | <b>10</b> |
| <b>Department of Mathematics – Scientific Committee</b>       |                 |                  |                |               | <b>Authority and Date of Approval of the Program Specifications</b> | <b>11</b> |



## II. وصف المساق: (Course description)

**The goals of this course are to present students specializing in mathematics several information about the following subjects**

- 1- Group with examples explains the definition of group.
- 2- Properties of group.
- 3- Cyclic group.
- 4- Symmetric group.
- 5- Order of group and order of element.
- 6- Abelian group and center of group.
- 7- Subgroup.
- 8- Finite group and infinite group.
- 9-Quotient group

## II. مخرجات تعلم المساق: (Course outcomes)

**The knowledge that graduates of this course are expected to acquire is as follows:**

1. The student understands the meaning of binary operations and mathematical systems.
2. The student understands the meaning of a group.
3. The student studies the difference between the characteristics of a group, a semigroup, and subgroups.
4. The student understands the types of groups.
5. The student learns about the concept of commutative groups, cyclic group, and symmetry groups.
6. The student understands the meaning of element order and group order.
7. The student learns about group properties.
8. The student learns about subgroups.
9. The student learns about finite and infinite groups.
10. The student learns about normal subgroups and quotient groups.

BED-QA-QU26-1

V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                              |  |                                                                                               |    |
|-------------------------------------------------------------------|-----------------|------------------------------|--|-----------------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                              |  |                                                                                               |    |
| First: Theoretical Aspect                                         |                 |                              |  |                                                                                               |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics |  | We expect the student, after : completing the course, to be able to                           | NO |
| 3                                                                 | 1               |                              |  | Review of previous information + Daily quiz on previous information                           | 1  |
| 3                                                                 | 1               |                              |  | The student understands the definition of a group and applies the definition to some examples | 2  |
| 3                                                                 | 1               |                              |  | The student learns the properties of a group and meaning of finite and infinite groups        | 3  |



|    |    |                                                |  |                                                                             |    |
|----|----|------------------------------------------------|--|-----------------------------------------------------------------------------|----|
| 3  | 1  |                                                |  | Study the difference between the characteristics of a group and a semigroup | 4  |
| 3  | 1  |                                                |  | The student understands the meaning of a commutative group and cyclic group | 5  |
| 3  | 1  |                                                |  | The student understands the meaning of a generating group                   | 6  |
| 3  | 1  |                                                |  | First Month Exam                                                            | 7  |
| 3  | 1  |                                                |  | The student learns the center of group                                      | 8  |
| 3  | 1  |                                                |  | The student understands the meaning of symmetry groups                      | 9  |
| 3  | 1  |                                                |  | The student learns the meaning of order of element and order of group       | 10 |
| 3  | 1  |                                                |  | Give examples that illustrate the meaning of element order and group order  | 11 |
| 3  | 1  |                                                |  | The student learns the meaning of a subgroup                                | 12 |
| 3  | 1  |                                                |  | Second Month Exam                                                           | 13 |
| 3  | 1  |                                                |  | The student learns about normal subgroups                                   | 14 |
| 3  | 1  |                                                |  | The student learns about quotient groups                                    | 15 |
| 45 | 15 | Total Weeks and Hours<br>Total Weeks and Hours |  | Total Weeks and Hours<br>Total Weeks and Hours                              |    |



|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

### Teaching Strategy:

**There are several strategies used in the classroom, including:**

1. Brainstorming strategy, which encourages learners to generate creative ideas and search for possible solutions.
2. Discussion method, which recognizes learners' individual differences, allows everyone to participate and then motivates them with praise.
3. Group work strategy, which divides students into several small groups of four students and assigns them specific assignments. This helps students gain academic proficiency.
4. Questioning method

### Learning Resources:

#### -Main References: (No more than two references)

- 1- Introduction to Modern Algebra by M.Burton.
- 2- Topics in Algebra 2nd edition by John Wiley & Sons, New York: Chichester • Brisbane • Toronto - Singapore, Printed in the United States of America, 1975.

**A. Supporting References:** Introduction to modern algebraic concepts by R.E.Larson, University of Nebraska, Addison - Wesley Publishing Company, 1974.

**B. Enrichment books and references (scientific journals, etc.):** Group theory by M. Suzuki

#### **C. Electronic sources and websites, etc.:** [http://www.e-](http://www.e-booksdirectory.com/listing.php?category=43&gclid=EAlalQobChMIgZTktOql2QIVSAZCh1RBAJQEAMYASA AEgKxzPD BwE)

[booksdirectory.com/listing.php?category=43&gclid=EAlalQobChMIgZTktOql2QIVSAZCh1RBAJQEAMYASA AEgKxzPD BwE](http://www.e-booksdirectory.com/listing.php?category=43&gclid=EAlalQobChMIgZTktOql2QIVSAZCh1RBAJQEAMYASA AEgKxzPD BwE)

### Course Policy and Regulations:

**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.



**-Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.**

**Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.**

**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| I. General Information about the Course:                |          |           |         |        |                                                              |    |
|---------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|----|
| Mathematical thinking                                   |          |           |         |        | : Course Name:                                               | 1  |
| MABO3M224                                               |          |           |         |        | Course Code and Number:                                      | 2  |
| Total                                                   | Training | Practical | Seminar | Lecter | : Credit Hours:                                              | 3  |
| 2                                                       | /        | /         | /       | 2      |                                                              |    |
| Stage Three -(Chapter Five)                             |          |           |         |        | Level and Semester:                                          | 4  |
|                                                         |          |           |         |        | Prerequisites for the Course                                 | 5  |
|                                                         |          |           |         |        | Co-requisites for the Course                                 | 6  |
| Bachelor of Education in Mathematics                    |          |           |         |        | The Program(s) in Which the Course Is Taught                 | 7  |
| Arabic                                                  |          |           |         |        | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics  |          |           |         |        | Place of Course Instruction                                  | 9  |
| Asst. Prof. Hind Abdulrazaq Naj                         |          |           |         |        | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014 |          |           |         |        | Authority and Date of Approval of the Program Specifications | 11 |



## II. وصف المساق: (Course description)

This course aims to introduce students specializing in mathematics to information about the subject of mathematical thinking, in terms of its definition, objectives, philosophical, educational, social, and cognitive foundations, requirements, needs, and strategies. It also focuses on the skills of integrating thinking with mathematical content that the student will need in his work as a future mathematics teacher.

## II. مخرجات تعلم المساق: (Course outcomes)

This course aims to provide graduates with the following knowledge:

- Thinking and its levels.
- Types of thinking.
- Mathematical thinking and the goals of the intermediate stage.
- Areas of mathematical thinking.
- Programs for developing mathematical thinking.
- Developing thinking in children.

BED-QA-QU26-1  
V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                         |  |                                                                     |    |
|-------------------------------------------------------------------|-----------------|---------------------------------------------------------|--|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                                         |  |                                                                     |    |
| First: Theoretical Aspect                                         |                 |                                                         |  |                                                                     |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics                            |  | We expect the student, after completing : the course, to be able to | NO |
| 4                                                                 | 2               | . Thinking and its Levels Thinking and its Levels       |  | Thinking and its Levels Thinking                                    | 1  |
| 8                                                                 | 4               | Critical, Logical, Scientific, Innovative, Mathematical |  | Types of Thinking:                                                  | 2  |



|    |    |                                                                   |  |                                                             |   |
|----|----|-------------------------------------------------------------------|--|-------------------------------------------------------------|---|
| 4  | 2  | Mathematical Thinking and its Goals                               |  | . Goals of Mathematical Thinking in the Intermediate Stage. | 3 |
| 8  | 4  | Induction, Deduction, Logical, Relational, Proof, Problem Solving |  | Areas of Mathematical Thinking:.                            | 4 |
| 6  | 3  | Programs for Developing Thinking, Developing Thinking             |  | Programs for Developing Mathematical Thinking.              | 5 |
| 30 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>2*15            |  | Total Weeks and Hours Total Weeks and Hours                 |   |
|    |    |                                                                   |  |                                                             |   |

#### Teaching Strategy:

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method

#### -Learning Resources:

- Al-Kubaisi, Abdul Wahid Hamid and Mudrasah Saleh Abdullah (2018): Mind Maps in Mathematics Teaching, Arab Community Library, Amman.
- A. Main References: (No more than two references)
- Al-Absi, Muhammad Mustafa (2009): Games and Thinking in Mathematics, Dar Al-Masirah, Amman
- Main References: (No more than two references)
- Al-Absi, Muhammad Mustafa (2009): Games and Thinking in Mathematics, Dar Al-Masirah, Amman

#### i. A. Supporting References

B. Books and Enrichment References (Scientific Journals, etc.

C. Electronic Resources and Websites, etc.



|                                                                        |
|------------------------------------------------------------------------|
| <b>A. Enrichment books and references (scientific journals, etc.):</b> |
| <b>B. Electronic sources and websites, etc.</b>                        |

|                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>-Course Policy and Regulations:</b>                                                                                                                                                                                                                                                 |
| <b>-Attendance Policy for Educational Activities: In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.</b> |
| <b>-Lateness: If a student is repeatedly late to educational activities, they will be considered absent from the lecture</b>                                                                                                                                                           |
| <b>-Exam Controls: If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.</b>                                                                                                                       |
| <b>-Assignments and Projects: Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.</b>                                                                                                                               |
| <b>-Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.</b>                                                                                                                                                                |
| <b>Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.</b>                                                                                                                                      |
| <b>Other Policies: Any other policies related to course privacy, or according to university regulations.</b>                                                                                                                                                                           |

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**

Hind Abdulrazzaq:Assistant Professor



## ... Course Description...

Academic year: 2023-2024

Mathematics :department

| I. General information about the course:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |           |         |         |                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|---------|---------|----------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |           |         |         | Course Name: Research Curricula                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |           |         |         | Course Code and Number: MAB03MER316                      |
| Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | training | practical | Seminar | lecture | Credit hours:3                                           |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |           |         | 3       |                                                          |
| Third stage/Fifth semester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |           |         |         | Level and semester:                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |           |         |         | Course prerequisites                                     |
| Subject preparation exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |           |         |         | Course requirements                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |           |         |         | The program/ in which the course is taught               |
| Arabic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |           |         |         | Course language of instruction                           |
| Mathematics Department Halls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |           |         |         | Course teaching location                                 |
| Prof. Dr. Taghreed Abdul-Kazem Jawad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |           |         |         | Course Specifications Preparer Name                      |
| Department of Mathematics - Scientific Committee - 2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |           |         |         | Authority and date of approval of program specifications |
| <p><b>.Course Description:</b></p> <p><b>First: Science and Scientific Research.</b></p> <ul style="list-style-type: none"> <li>-Stages of Acquiring Knowledge</li> <li>-The Nature of Science, Objectives of Science, Characteristics of Research.</li> <li>-Educational Research and its Steps.</li> <li>-Ethical Considerations in Educational Research.</li> </ul> <p><b>Second: Stages of Preparing Educational Research.</b></p> <ul style="list-style-type: none"> <li>-Selecting the Research Problem</li> <li>-Preparing the Research Plan</li> <li>-Preparing the Research Report</li> </ul> <p><b>Third: Research Variables.</b></p> <p><b>Fourth: Samples in Educational Research:</b></p> <ul style="list-style-type: none"> <li>.1Random or Probability Samples.</li> <li>.2Non-Random or Non-Probability Samples.</li> <li>-Sample Size</li> </ul> <p><b>Fifth: Data Collection Tools: Questionnaire, Interview, Observation, Test</b></p> <p><b>Sixth: Research Classification: Descriptive Research, Experimental Research, Historical Research</b></p> <p><b>Seventh: Student Summary of the Master's Thesis.</b></p> |          |           |         |         |                                                          |
| II. (Course outcomes)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |           |         |         |                                                          |
| <p>1 -Understand the concept of science.</p> <p>2- Understand the objectives of science.</p> <p>3- Understand educational research.</p> <p>4- Distinguish between types of educational research.</p> <p>5- Write a research report.</p> <p>6- List data collection tools.</p> <p>7- Distinguish between educational research samples.</p> <p>8 -List types of educational research.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |           |         |         |                                                          |
| IX. Writing course topics and aligning them with learning outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |           |         |         |                                                          |
| Writing course content units/topics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |           |         |         |                                                          |



| First: The theoretical aspect |              |                                                                                                                                                                                                                     |                       |                                                                                                                          |             |
|-------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------|-------------|
| الساعات الفعلية               | عدد الأسابيع | Detailed topics                                                                                                                                                                                                     | Cours e units         | Learning Outcomes<br>After completing the course, we expect the student to be able to:                                   | The num ber |
| 3                             | 1            | Science: the nature of science, its objectives, its general characteristics, the concept of educational research, its objectives, its steps, its characteristics, its ethical considerations, and its implications. | 3                     | 1- Understand the concept of science.<br>2- Understand the objectives of science.<br>3- Understand educational research. | 1           |
| 9                             | 3            | Stages of preparing educational research:<br>-Selecting the research problem<br>-Preparing the research plan<br>-Preparing the research report<br>First exam                                                        | 3                     | 4-Distinguish between types of educational research.<br>5- Write a research report.                                      | 2           |
| 15                            | 5            | Research variables.<br>Fourth: Samples in educational research:<br>1- Random or probability samples.<br>2 -Non-random or non-probability samples.<br>-Sample size                                                   | 3                     | 6 -Distinguish between educational research samples.<br>7 -List the types of educational research.                       | 3           |
| 9                             | 3            | Data collection tools: questionnaire, .interview, observation, test                                                                                                                                                 | 3                     | 8- List the data collection tools.                                                                                       | 4           |
| 9                             | 3            | Research Classification:<br>-Descriptive Research -<br>Experimental Research -<br>Historical Research<br>Seventh: Students' summary of the master's thesis.<br>Second Exam                                          | 3                     | 9- List the types of educational research.                                                                               | 5           |
| 45                            | 15           |                                                                                                                                                                                                                     | Total weeks and hours |                                                                                                                          |             |

## XX. Teaching strategy:

Lecture Method

Discussion Method

## XI. Learning Resources:

(Author, Year, Title, Place of Publication and Publisher)

A. Main references: (No more than two references)

**Bedi, Rahim Kazim and others (2019): Educational Research Methods, Dar Al-Kutub and Documents, Baghdad, no.**

B. Supporting references

**1- Measurement and Evaluation in the Educational Process, Ahmed Suleiman Awda**

**2- Online Lectures**

A. Electronic sources and websites...etc.

## Course policy and regulations:

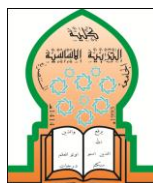
Educational Events Attendance Policy:



|                                                                                                                                                                                                                                                                                        |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Lateness: A warning will be given first, and if the tardiness continues, the student will be absent from the lecture.                                                                                                                                                                  |  |
| Exam Regulations: If a student is absent from an exam, they will not be examined and will be given a zero grade unless there is an excuse. If they are late for an exam, they will not be examined in the same room as the one holding the exam, but will be examined in another room. |  |
| Assignments and Projects: Students will not submit assignments or projects until the deadline specified by the course instructor.                                                                                                                                                      |  |
| Cheating: If a student cheats on a monthly or final exam, a memo will be submitted to the department head for disciplinary action in accordance with the regulations.                                                                                                                  |  |
| Plagiarism: If a student impersonates another student, a memo will be submitted to the department head for disciplinary action in accordance with the regulations.                                                                                                                     |  |
| Other Policies: Any other policies related to course privacy or university regulations.                                                                                                                                                                                                |  |

Stamp and signature of the head of the department

BED-QA-QU26-3  
V1-2023/2/10

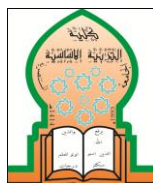


## ... وصف المساق الدراسي ...

العام الدراسي : 2024-2025

القسم : ..... الرياضيات

| I. المعلومات العامة عن المساق: ( طرائق التدريس العامة )                                                                 |  |                                         |       |      |       |
|-------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|-------|------|-------|
| 1. اسم المساق: طرائق التدريس العامة                                                                                     |  |                                         |       |      |       |
| 2. رمز المساق ورقمه: MAB03GMT317                                                                                        |  |                                         |       |      |       |
| 3. الساعات المعتمدة:                                                                                                    |  | محاضرة                                  | سمنار | عملي | تدريب |
|                                                                                                                         |  | 3                                       | /     | /    | /     |
| 4. المستوى والفصل الدراسي:                                                                                              |  | المرحلة : الثالثة الفصل الدراسي : الأول |       |      |       |
| 5. المتطلبات السابقة للمساق                                                                                             |  | لا توجد                                 |       |      |       |
| 6. المتطلبات المصاحبة للمساق                                                                                            |  | لا توجد                                 |       |      |       |
| 7. البرنامج/البرامج التي يتم فيها تدريس المساق                                                                          |  | بكلوريوس تربية في الرياضيات             |       |      |       |
| 8. لغة تدريس المساق                                                                                                     |  | العربية                                 |       |      |       |
| 9. مكان تدريس المساق                                                                                                    |  | كلية التربية الاساسية-قسم الرياضيات     |       |      |       |
| 10. اسم معد مواصفات المساق                                                                                              |  | أ.م. بيداء محمد أحمد                    |       |      |       |
| 11. جهة وتاريخ المصادقة على مواصفات البرنامج                                                                            |  | قسم الرياضيات-اللجنة العلمية-2022       |       |      |       |
| II. وصف المساق: (Course description)                                                                                    |  |                                         |       |      |       |
| 1. نظرية التدريس : مفهومها ، أهميتها ، اهتماماتها ، العالقة بين نظرية التدريس ونظرية التعلم ، نماذج من نظريات التدريس . |  |                                         |       |      |       |
| 2. مصطلحات التدريس : طرائق التدريس ، أساليب التدريس ، استراتيجيات التدريس ، نماذج التدريس                               |  |                                         |       |      |       |
| 3. مهارات التدريس : مفهومها عناصرها .                                                                                   |  |                                         |       |      |       |
| 4. التدريس الفعّال ، والتدريس المبدع .                                                                                  |  |                                         |       |      |       |
| 5. تنوع التدريس واستراتيجياته : مفهومه ، مبرراته ، اسسه ومبادئه ، استراتيجياته                                          |  |                                         |       |      |       |
| 6. أنواع طرائق التدريس :                                                                                                |  |                                         |       |      |       |
| أ) طرائق التدريس الشائعة الاستخدام : المحاضرة ، الاستجواب ، المناقشة ، الاستقراء والقياس .                              |  |                                         |       |      |       |
| ب) طرائق التدريس التي تقوم على البحث في المعرفة وتنظيمها : الاستقصاء ، حل المشكلات ، الوحدات ، المشروع ، التعيينات .    |  |                                         |       |      |       |
| ج) طرائق التدريس التي تقوم على الجهد التعاوني والفردية : طريقة التعلم التعاوني ، طريقة التعلم الفردي .                  |  |                                         |       |      |       |
| د) طرائق التدريس التي تقوم على التمكن والبداع : طريقة التعلم من أجل التمكن ، لعب الدور ، العصف الذهني.                  |  |                                         |       |      |       |



## II. مخرجات تعلم المساق: (Course outcomes)

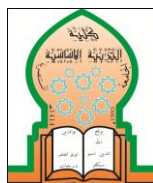
- نتوقع من الطالب بعد الانتهاء من دراسة المساق أن يكونوا قادرًا على أن:
- 1- يُعرّف نظرية التدريس.
  - 2- يقارن بين نظريات التعلم ونظريات التدريس.
  - 3- يتعرف على بعض من نظريات التدريس
  - 4- يُعرّف (طريقة ، أسلوب ، استراتيجية ، أنموذج) التدريس.
  - 5- يميز بين مصطلحات التدريس
  - 6- يقارن بين (طريقة ، أسلوب ، استراتيجية) التدريس.
  - 7- يذكر أهمية ومواصفات كل من (طريقة ، أسلوب ، استراتيجية ، أنموذج) التدريس.
  - 8- يذكر (قواعد استخدام، عوامل اختيار، أهمية، مميزات) طريقة التدريس.
  - 9- يتعرف على مفهوم مهارات التدريس
  - 10- يعدد مهارات التدريس التي يجب أن يمتلكها كل معلم.
  - 11- يطبق بعض من مهارات التدريس.
  - 12- يصوغ أسئلة ضمن مادة طرائق التدريس العامة.
  - 13- يتعرف على مفهوم التدريس الفعال والتدريس المبدع.
  - 14- يذكر أهمية وفوائد التدريس الفعال والتدريس المبدع.
  - 15- يتعرف على طرائق التدريس المستخدمة بحسب طبيعتها واستخدامها وأنواعها
  - 16- يصنف طرائق التدريس بحسب أنواعها.
  - 17- يذكر مزايا وعيوب كل طريقة من طرائق التدريس.
  - 18- يستخدم خطوات بعض أنواع طرائق التدريس في تدريس بعض الموضوعات.
  - 19- يقارن بين طرائق التدريس.
  - 20- يختار الطريقة المناسبة لتدريس مسألة رياضية.

## IV. كتابة مواضيع المساق ومواعمتها بمخرجات التعلم

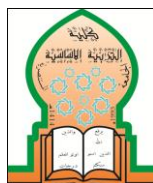
### كتابة وحدات /مواضيع محتوى المساق

### أولاً: الجانب النظري

| الرقم | مخرجات التعلم                                                                                                                                                                                                                                                                                                                            | وحدات المساق     | المواضيع التفصيلية                                                                                                                      | عدد الأسابيع | الساعات الفعلية |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|
| 1     | <ul style="list-style-type: none"> <li>- يتعرف على مفهوم التدريس والتعلم والتعليم</li> <li>- يميز بين التعلم والتعليم والتدريس</li> <li>- يقارن بين التعلم والتعليم والتدريس</li> <li>- يتعرف على عناصر عملية التدريس</li> <li>- يتعرف على طبيعة عملية التدريس</li> <li>- يتعرف على مراحل عملية التدريس</li> </ul>                       | مقدمة عن التدريس | مفهوم التدريس، الفرق بين التعلم والتعليم والتدريس،                                                                                      | 1            | 2               |
| 2     | <ul style="list-style-type: none"> <li>- يتعرف على مفهوم (النظرية ، نظرية التدريس، نظرية التعلم)</li> <li>- يتعرف على نماذج من نظريات التدريس</li> <li>- يعارن بين نظرية التعلم ونظريات التعليم (التدريس)</li> <li>- يعدد بنقاط أهمية نظريات التدريس</li> <li>- يعدد أهداف نظرية التدريس</li> <li>- يعدد مسلمات نظرية التدريس</li> </ul> | نظرية التدريس    | مفهومها ، أهميتها ، اهتماماتها) الول الثاني العالقة بين نظرية التدريس ونظرية التعلم ، نماذج من نظريات (التدريس) نماذج من نظريات التدريس | 2            | 4               |



|   |   |                                                                                                  |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
|---|---|--------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|   |   |                                                                                                  |                                                       | <ul style="list-style-type: none"> <li>- يوضح مسلمات نظرية التدريس</li> <li>- يتعرف على نماذج من نظريات التدريس</li> <li>- يقارن بين نظريتي برونر واوزيل</li> </ul>                                                                                                                                                                                                                                                                                                        |   |
| 2 | 1 | طرائق التدريس ،<br>أساليب التدريس<br>استراتيجيات التدريس ،<br>نماذج التدريس                      | مصطلحات<br>التدريس                                    | <ul style="list-style-type: none"> <li>- يذكر تعريف (طريقة التدريس، أسلوب التدريس، استراتيجية التدريس، أنموذج التدريس)</li> <li>- يميز بين (طريقة التدريس، أسلوب التدريس، استراتيجية التدريس، أنموذج التدريس)</li> <li>- يقارن بين (طريقة التدريس، أسلوب التدريس، استراتيجية التدريس، أنموذج التدريس)</li> <li>- يذكر مواصفات وأهمية طريقة التدريس واسلوب التدريس</li> <li>- يحدد عوامل اختيار وتفضيل طريقة التدريس</li> </ul>                                             | 3 |
| 4 | 2 | مفهومها عناصرها<br>الأهداف التعليمية<br>صياغة الأهداف<br>السلوكية الأهداف<br>الوجدانية والمهارية | مهارات<br>التدريس                                     | <ul style="list-style-type: none"> <li>- يذكر تعريف مهارات التدريس</li> <li>- يتعرف على مهارات التدريس اللزم توافرها لدى كل معلم</li> <li>- يصنف مهارات التدريس بحسب مراحل عملية التدريس</li> <li>- يعطي تعريف الهدف السلوكي يميز بين الأهداف المعرفية والوجدانية والمهارية</li> <li>- يحدد مستويات الأهداف المعرفية لتبلم</li> <li>- يصوغ أهداف سلوكية ضمن المستويات المعرفية لتصنيف بلوم</li> <li>- يذكر شروط صياغة الأهداف السلوكية يعطي امثلة لأهداف سلوكية</li> </ul> | 4 |
| 2 | 1 |                                                                                                  | امتحان الشهر<br>الأول                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5 |
| 2 | 1 | مفهومها ، مميزاتاها ،<br>طريقة استخدامها                                                         | التدريس الفعال<br>والتدريس المبدع                     | <ul style="list-style-type: none"> <li>- يتعرف على مفهوم كل من التدريس الفعال والتدريس المبدع</li> <li>- يذكر أهمية كل من التدريس الفعال والتدريس المبدع</li> </ul>                                                                                                                                                                                                                                                                                                        | 6 |
| 4 | 2 | المحاضرة الاستجواب<br>، المناقشة<br>الطريقة الاستقرائية ،<br>الطريقة الاستنتاجية                 | طرائق التدريس<br>الشائعة<br>للبستخدام                 | <ul style="list-style-type: none"> <li>- يتعرف على طرائق التدريس الشائعة الاستخدام (المحاضرة الاستجواب ، المناقشة الطريقة الاستقرائية ، الطريقة الاستنتاجية)</li> <li>- يذكر أهمية ومميزات وعيوب كل من طريقة (المحاضرة الاستجواب ، المناقشة الطريقة الاستقرائية ، الطريقة الاستنتاجية)</li> <li>- يقارن بين طريقتي الاستقراء والاستنتاج</li> <li>- يقارن بين أنواع طريقة المناقشة</li> <li>- يختار اي منها افضل في تدريس موضوع معين</li> </ul>                             | 7 |
| 3 | 2 | الاستقصاء (الاكتشاف)<br>، حل المشكلات،<br>المشروع                                                | طرائق التدريس<br>التي تقوم على<br>البحث في<br>المعرفة | <ul style="list-style-type: none"> <li>- يتعرف على طريقة (الاستقصاء (الاكتشاف) ، حل المشكلات، المشروع)</li> <li>- يذكر أهمية كل منها</li> <li>- يحدد مميزات وعيوب كل منها</li> <li>- يقارن بين طريقتي الاكتشاف وحل المشكلات</li> <li>- يستخدم خطوات كل طريقة في تعليم أحد الموضوعات</li> </ul>                                                                                                                                                                             | 8 |



|   |   |                                                                                |                                                    |                                                                                                                                                                                                                                                                                                                                                              |    |
|---|---|--------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|   |   |                                                                                |                                                    | - يهتار اي منها الانسب لتدريس موضوع ما                                                                                                                                                                                                                                                                                                                       |    |
| 1 | 1 | التعلم التعاوني، التعلم الفردي                                                 | طرائق التدريس التي تقوم على الجهد التعاوني والفردي | - يتعرف على طريقتي التعلم التعاوني، التعلم الفردي<br>- يحدد مميزات وعيوب كل منها<br>- يقارن بين التعلم التعاوني، التعلم الفردي                                                                                                                                                                                                                               | 9  |
| 2 | 1 |                                                                                | امتحان الشهر الثاني                                |                                                                                                                                                                                                                                                                                                                                                              | 10 |
| 2 | 1 | طريقة التعلم من أجل التمكن ، لعب الدور ، العصف الذهني                          | طرائق التدريس التي تقوم على التمكن والابداع :      | - يعطي تعريف كل من (طريقة التعلم من أجل التمكن ، لعب الدور ، العصف الذهني)<br>- يذكر خطوات كل منها<br>- يميز بين (طريقة التعلم من أجل التمكن ، لعب الدور ، العصف الذهني)<br>- يحدد مميزات وعيوب كل منها<br>- يستخدم هطوات كل منها في تدريس موضوع ما<br>- يحدد أي منها تثير التفكير الابداعي وتحفزه لدى المتعلمين<br>- يشرح كيف يعلم احد الموضوعات باستخدامها | 11 |
| 2 | 1 | مفهومه ، مبرراته ، اسسه ومبادئ، استراتيجيات تنويع التدريس                      | تنويع التدريس واستراتيجيات ته                      | - يعطي تعريف تنويع التدريس<br>- يذكر مبررات استخدام تنويع التدريس<br>- يحدد الموضوعات التي يمكن تنويعها<br>- يتعرف على استراتيجيات تنويع التدريس<br>- يشرح كيف يمكن تطبيقه داخل الصف الدراسي                                                                                                                                                                 | 12 |
| 2 | 1 | يقدم الطالب درس رياضيات يستخدم فيه طرائق التدريس التي درسها خلال الفصل الدراسي | تقديم درس عملي                                     |                                                                                                                                                                                                                                                                                                                                                              | 13 |

ثانيا: الجانب العملي:

تكتب تجارب (مواضيع) العملي

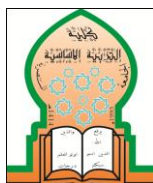
| الرقم | التجارب المختبرية        | عدد الأسابيع | الساعات الفعلية | مخرجات التعلم |
|-------|--------------------------|--------------|-----------------|---------------|
| 1.    |                          |              |                 |               |
| 2.    |                          |              |                 |               |
| 3.    |                          |              |                 |               |
|       | إجمالي الأسابيع والساعات |              |                 | 30            |

V. استراتيجية التدريس:

المحاضرة واللقاء

طريقة المناقشة

التعلم التعاوني



|                                                              |                                                                                                                        |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>طريقة العصف الذهني</b>                                    |                                                                                                                        |
| <b>طريقة الاستجواب</b>                                       |                                                                                                                        |
| <b>VI. مصادر التعلم:</b>                                     |                                                                                                                        |
| <b>أ. المراجع الرئيسية: ( لا تزيد عن مرجعين)</b>             |                                                                                                                        |
| 1-                                                           | التميمي، عواد جاسم، 22112، طرائق التدريس العامة، بغداد.                                                                |
| 2-                                                           | المشهداني، عباس ناجي، 2011، طرائق ونماذج تعليمية في تدريس الرياضيات، عمان: دار اليازوري للنشر والتوزيع.                |
| <b>ب. المراجع المساندة</b>                                   |                                                                                                                        |
| 1-                                                           | شبيب/ علاء عبد الحسين، 2020، طرائق التدريس في رياض الأطفال والتربية الخاصة، ط1، بغداد: مكتب نور الحسن للطباعة.         |
| <b>ج. الكتب والمراجع الاثرانية (الدوريات العلمية...الخ):</b> |                                                                                                                        |
| 1-                                                           | سلامة، حسن علي، 2007، طرق تدريس الرياضيات بين النظرية والتطبيق، ط3، القاهرة: دار الفجر للنشر والتوزيع.                 |
| 2-                                                           | طرائق تدريس الرياضيات للمرحلة الخامسة / معاهد اعداد المعلمين                                                           |
| <b>د. المصادر الإلكترونية ومواقع الإنترنت...الخ</b>          |                                                                                                                        |
| 1-                                                           | طفلاح، حبيب راضي؛ وآخرون ، 2018، طرائق التدريس العامة ( بين التدريس التقليدي والتدريس الالكتروني المعاصر)، ط1، بغداد . |
| 2-                                                           | المبروك، فرج ؛ عمر عامر، 2019، طرائق التدريس العامة، بنغزي : دار الكتب الوطنية.                                        |

|                                  |                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VI. سياسة المساق وضوابطه:</b> |                                                                                                                                                                                              |
| 1.                               | <b>سياسة حضور الفعاليات التعليمية :</b> عند غياب الطالب يعطى انذار اولي ثم انذار ثاني وبعدها انذار نهائي حيث يرفع مذكرة للقسم لاعتباره مفصولا بالغياب.                                       |
| 2.                               | <b>الحضور المتأخر :</b> تنبيه الطالب اولا ومحاولة معرفة الاسباب، وفي حالة تكرار التأخير يتم مناقشته عن الاسباب مرة ثانية، ومن ثم يحال الطالب الى المرشد ورئاسة القسم لاتخاذ الاجراء المناسب. |
| 3.                               | <b>ضوابط الامتحان:</b> البحث عن اسباب الغياب عن الامتحان، فاذا كانت مقنعة فسوف نعيد الامتحان له وان كانت غير مقنعة فيعطى صفرا له وهو استحقاقه.                                               |
| 4.                               | <b>الواجبات والمشاريع :</b> تحديد مواعيد تسليم المشاريع والواجبات، وفي حالة عدم انجازها يعطى صفرا له، لكي لا يكرر ذلك في المرة القادمة.                                                      |
| 5.                               | <b>الغش:</b> في حالة غش الطالب في الامتحانات ترفع به مذكرة الى رئاسة القسم لاتخاذ ما يلزم                                                                                                    |
| 6.                               | <b>الانتحال:</b> في حالة اكتشاف انتحال الطالب لشخصية اخرى ترفع به مذكرة الى رئاسة القسم فوراً                                                                                                |
| 7.                               | <b>سياسات أخرى:</b> أي سياسات أخرى تتعلق بخصوصية المساق، أو بحسب لوائح الجامعة.                                                                                                              |

ختم وتوقيع رئيس القسم



...Course Description...

Department: .....Mathematics.....Academic Year: 2024-2025

| I. :General information about the course ( Advanced Statistics )                                                                                                                                                                                                                                                                                                                                                                      |                                              |                                                            |         |           |          |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------|---------|-----------|----------|-------|
| .1                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course Name: Advanced Statistics             |                                                            |         |           |          |       |
| .2                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course code and numberMAB03AS223             |                                                            |         |           |          |       |
| .3                                                                                                                                                                                                                                                                                                                                                                                                                                    | Credit hours                                 | a lecture                                                  | Seminar | practical | training | Total |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                              | 3                                                          | 0       | 0         | 0        | 3     |
| .4                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level and semester                           | Third stage / First semester                               |         |           |          |       |
| .5                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course prerequisites                         | Advanced statistics                                        |         |           |          |       |
| .6                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course requirements                          | Possibilities                                              |         |           |          |       |
| .7                                                                                                                                                                                                                                                                                                                                                                                                                                    | The program(s) in which the course is taught | whiteboard/interactive whiteboard                          |         |           |          |       |
| .8                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course language of instruction               | Arabic                                                     |         |           |          |       |
| .9                                                                                                                                                                                                                                                                                                                                                                                                                                    | Course teaching location                     | Classrooms in the Mathematics Department                   |         |           |          |       |
| .10                                                                                                                                                                                                                                                                                                                                                                                                                                   | Course Specifications Preparer Name          | Asst. Prof. Dr. Ghiath Hamid Majeed                        |         |           |          |       |
| .11                                                                                                                                                                                                                                                                                                                                                                                                                                   | approval of program specifications           | Faculty of Political Education / Department of Mathematics |         |           |          |       |
| Course : description                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |                                                            |         |           |          |       |
| It is the probability experiment, .This description aims to introduce students to advanced statistical methods the discrete and continuous probability distributions, and addressing the sampling distribution of the mean and percentage of the population, in addition to the subject of testing statistical hypotheses, the goal and . intended purpose, and how to make the appropriate decision in light of the results obtained |                                              |                                                            |         |           |          |       |
| II. outcomes Course                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                                                            |         |           |          |       |
| 1- . The concept of probability experiment                                                                                                                                                                                                                                                                                                                                                                                            |                                              |                                                            |         |           |          |       |
| 2- . Probability distributions                                                                                                                                                                                                                                                                                                                                                                                                        |                                              |                                                            |         |           |          |       |
| 3- .Discrete probability distributions (binomial distribution)                                                                                                                                                                                                                                                                                                                                                                        |                                              |                                                            |         |           |          |       |
| 4- .Discrete probability distributions (Poisson distribution)                                                                                                                                                                                                                                                                                                                                                                         |                                              |                                                            |         |           |          |       |
| 5- .Continuous probability distributions (normal distribution)                                                                                                                                                                                                                                                                                                                                                                        |                                              |                                                            |         |           |          |       |
| 6- .Standard normal distribution                                                                                                                                                                                                                                                                                                                                                                                                      |                                              |                                                            |         |           |          |       |
| 7- .Preview distribution                                                                                                                                                                                                                                                                                                                                                                                                              |                                              |                                                            |         |           |          |       |
| 8- .Finding the probability of the sampling distribution of the population mean                                                                                                                                                                                                                                                                                                                                                       |                                              |                                                            |         |           |          |       |
| 9- .Finding the probability of a sampling distribution for the population proportion                                                                                                                                                                                                                                                                                                                                                  |                                              |                                                            |         |           |          |       |
| 10-.Statistical hypothesis testing                                                                                                                                                                                                                                                                                                                                                                                                    |                                              |                                                            |         |           |          |       |
| 11-. Statistical hypothesis testing for a single sample mean                                                                                                                                                                                                                                                                                                                                                                          |                                              |                                                            |         |           |          |       |
| 12-. Testing statistical hypotheses for the mean of two independent samples                                                                                                                                                                                                                                                                                                                                                           |                                              |                                                            |         |           |          |       |
| 13-.Chi-square test                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                                                            |         |           |          |       |



V1-2024/9/19

| V. Writing course topics and aligning them with learning outcomes |                 |                                                                                                     |                        |                                                            |            |
|-------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------|------------|
| Writing course content units/topics                               |                 |                                                                                                     |                        |                                                            |            |
| First: The theoretical aspect                                     |                 |                                                                                                     |                        |                                                            |            |
| Actual hours                                                      | Number of weeks | Detailed topics                                                                                     | Course units           | Learning outcomes                                          | The number |
| 6                                                                 | 2               | Calculating probabilities from a random experiment                                                  | 3                      | Understanding the concept of probability experimentation   | 1          |
| 6                                                                 | 2               | Binomial distribution + Poisson distribution                                                        | 3                      | Discrete probability distributions                         | 2          |
| 6                                                                 | 2               | normal distribution                                                                                 | 3                      | Continuous probability distributions                       | 3          |
| 6                                                                 | 2               | Calculating the probability from a population mean distribution                                     | 3                      | Sampling distribution of the population mean               | 4          |
| 6                                                                 | 2               | Calculating probability from a population proportion distribution                                   | 3                      | Sample distribution of the population proportion           | 5          |
| 6                                                                 | 2               | Formulate the test hypothesis, conduct the test, and then make a decision based on the test .result | 3                      | Hypothesis testing for a single sample mean                | 6          |
| 6                                                                 | 2               | Formulate the test hypothesis, conduct the test, and then make a decision based on the test .result | 3                      | Hypothesis testing for the mean of two independent samples | 7          |
| 3                                                                 | 1               | Formulate the test hypothesis, conduct the test, and then make a decision based on the test .result | 3                      | Chi-square test                                            | 8          |
| 45                                                                | 15              |                                                                                                     | Total weeks and hours  |                                                            |            |
| .Second: The practical aspect: None                               |                 |                                                                                                     |                        |                                                            |            |
| Writing practical experiences (topics)                            |                 |                                                                                                     |                        |                                                            |            |
| Learning outcomes                                                 | Actual hours    | Number of weeks                                                                                     | Laboratory experiments | The number                                                 |            |
|                                                                   |                 |                                                                                                     | nothing                | .1                                                         |            |
|                                                                   |                 |                                                                                                     | nothing                | .2                                                         |            |
|                                                                   |                 |                                                                                                     |                        |                                                            |            |
|                                                                   |                 | 0                                                                                                   | Total weeks and hours  |                                                            |            |

| V. :Teaching strategy                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lectures, presentations , tests and daily participation                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VI. :Learning resources                                                                                                                                                                                                                                                                                                                                                                                         |
| (Author, Year, Title, Place of Publication and Publisher)                                                                                                                                                                                                                                                                                                                                                       |
| A. : Main references                                                                                                                                                                                                                                                                                                                                                                                            |
| Mathematical Statistics, Author: Amir Hanna Hormuz, Assistant Professor, Department of Statistics, .1<br>.College of Administration and Economics, University of Mosul<br>Statistical Hypothesis Testing, by: Kamal Alwan Khalaf Al-Mashhadani, Professor, Dr. Imad Hazem .2<br>Abboudi, Assistant Professor, Department of Statistics, College of Administration and Economics,<br>University of Baghdad, 2009 |



|                                                                           |
|---------------------------------------------------------------------------|
| <b>B. Supporting references</b>                                           |
| Inferential Statistics in Educational Research Dr. Ahmed Al-Saedi 1995    |
| <b>C. :Enrichment books and references (scientific periodicals, etc.)</b> |
| <b>D. .Electronic sources and websites...etc</b>                          |

|                                                                                                                                                                              |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>/II. :Course policy and regulations</b>                                                                                                                                   |           |
| <b>Educational events attendance policy:</b> Absences of 25% are considered an initial warning, and if .they exceed 50% of the number of hours, the student will be expelled | <b>.1</b> |
| <b>.Late attendance :</b> The late student will be warned and will not receive grade assistance                                                                              | <b>.2</b> |
| <b>.Examination regulations :</b> The student is subject to two exams in one course                                                                                          | <b>.3</b> |
| <b>Assignments and Projects :</b> Homework                                                                                                                                   | <b>.4</b> |
| <b>.Cheating :</b> It is a fixed policy in the department and the student will be expelled from all subjects                                                                 | <b>.5</b> |
| <b>Plagiarism :</b> Definition of plagiarism, its cases, and procedures to follow if it occurs                                                                               | <b>.6</b> |
| <b>Other Policies :</b> None                                                                                                                                                 | <b>.7</b> |

Stamp and signature of the head of the department

BED-QA-QU26-3  
V1-2024/9/19



... Course Description ...

Department: .....Mathematic.

Academic Year: (2024-2025)

| I. General information about the course: (Sustainable Development) . |          |           |         |           |                                                       |     |
|----------------------------------------------------------------------|----------|-----------|---------|-----------|-------------------------------------------------------|-----|
| )Sustainable Development(                                            |          |           |         |           | Course name:                                          | .1  |
|                                                                      |          |           |         |           | Course code and number:                               | .2  |
| Total                                                                | training | practical | Seminar | a lecture | Credit hours:                                         | .3  |
| 2                                                                    | -        | -         | -       | 2         |                                                       |     |
| Third Stage - Sixth Course - Second Semester                         |          |           |         |           | Level and Semester:                                   | .4  |
|                                                                      |          |           |         |           | Course Prerequisites                                  | .5  |
| Bachelor of Education in Mathematics                                 |          |           |         |           | Course Co-requisites                                  | .6  |
| Arabic Language                                                      |          |           |         |           | Program(s) in which the course is taught              | .7  |
| College of Basic Education - Department of Mathematics               |          |           |         |           | Course Instruction Language                           | .8  |
| Third Stage - Sixth Course - Second Semester                         |          |           |         |           | Course location                                       | .9  |
| assistant professor / Tahreer Abdul Hussain khazael                  |          |           |         |           | Course specifications provider name                   | .10 |
| Department of Mathematics - Scientific Committee                     |          |           |         |           | Authority and date of program specifications approval | .11 |



## II. Course Description:

This course aims to introduce students majoring in mathematics to information about sustainable development, the most important of which are:

(( The concept of sustainable development, the reasons for establishing sustainable development goals, their characteristics, their historical development, the requirements of sustainable development and its most important elements (economic, social, environmental, technological), their dimensions and their most important trends for local communities and the most important factors influencing them, their philosophy, their pillars and indicators of achievement, their role in achieving goals and confronting problems, their objectives, Iraq's vision for the Sustainable Development Goals 2030, the international community's vision for the Sustainable Development Goals, and the challenges and obstacles facing achieving the Sustainable Development Goals)).

## III. Course outcomes:

This course aims to provide graduates with a mathematics major with the following knowledge:

1. The concept of sustainable development and its most important definitions (environmental, economic, social, and technological )
2. The rationale for establishing sustainable development goals.
3. The characteristics of sustainable development and the elements of its continuity.
4. The historical development of sustainable development.
5. The requirements of sustainable development and its most important elements (economic, social, environmental, and technological )
6. The dimensions of sustainable development and its most important areas (social, economic, environmental, and technological )
7. Trends in sustainable development for local communities and the most important factors influencing them.
8. The philosophy of sustainable development (values and ethics of sustainable development, the facts upon which sustainable development is based).
9. The pillars of sustainable development and indicators for its achievement.
10. The role of sustainable development in achieving goals and addressing problems.
11. The goals of sustainable development and their principles (goals, indicators, and targets).
12. Iraq's Vision for the Sustainable Development Goals 2030.
13. The International Community's Vision for the Sustainable Development Goals.
14. Challenges and Obstacles to Achieving the Sustainable Development Goals

## IV. Writing course topics and aligning them with learning outcomes

### Writing course content units/topics

#### First: The theoretical aspect

| Actual hours | Number of weeks | Detailed topics                                                                                                                                      | Course units | Learning Outcomes After completing the course, we expect the student to be able to: | The number |
|--------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|------------|
| 2            | 1               | <p>Its most important definitions (environmental, economic, social, and (technical</p> <p>Reasons for establishing sustainable development goals</p> |              | <p>- The concept of sustainable development</p>                                     | 1          |



|    |    |                                                                                                                                            |  |                                                                                                          |    |
|----|----|--------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------|----|
| 2  | 1  | - And the elements of its continuity, the historical development of sustainable development                                                |  | - Characteristic<br>s of sustainable development<br>- -Historical development of sustainable development | 2  |
| 2  | 1  | - Its most important elements are (the economic aspect, the social aspect, the environmental aspect, and the technological aspect )        |  | - Sustainable development requirements)                                                                  | 3  |
| 2  | 1  | Its most important areas are (the social dimension, the economic dimension, the environmental dimension, and the technological dimension). |  | - Dimensions of Sustainable Development                                                                  | 4  |
| 2  | 1  |                                                                                                                                            |  | - First Month Exam                                                                                       | 5  |
| 2  | 1  | Trends in sustainable development for local communities and the most important factors influencing them.                                   |  | - Philosophy of Sustainable Development                                                                  | 6  |
| 2  | 1  |                                                                                                                                            |  | - Pillars of Sustainable Development                                                                     | 7  |
| 2  | 1  | (Values and ethics of sustainable development, the facts upon which sustainable development is based).                                     |  | - The Role of Sustainable Development                                                                    | 8  |
| 2  | 1  | Pillars of sustainable development and indicators for its achievement.                                                                     |  | - Sustainable Development Goals                                                                          | 9  |
| 2  | 1  | The role of sustainable development in achieving goals and addressing problems.                                                            |  | - Iraq's Vision Part 1                                                                                   | 10 |
| 2  | 1  | Sustainable development goals and their principles (goals, indicators, and targets).                                                       |  | - Second Month Exam                                                                                      | 11 |
| 2  | 1  | Iraq's vision for the Sustainable Development Goals 2030. Part 1                                                                           |  | - Iraq's Vision Part 2                                                                                   | 12 |
| 2  | 1  |                                                                                                                                            |  | -                                                                                                        | 13 |
| 2  | 1  | Iraq's vision for the Sustainable Development Goals 2030. Part 2                                                                           |  | - The International Community's Vision                                                                   | 14 |
| 2  | 1  |                                                                                                                                            |  | - Challenges and Obstacles                                                                               | 15 |
| 30 | 15 | Total weeks and hours 15×2                                                                                                                 |  | Total weeks and hours                                                                                    |    |



|                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>V. - Teaching strategy: - Relying on the model of preparing students for discussion and questioning after explaining the topic on the board and assigning them to explain some paragraphs of the study material and solve them on the board or on papers .The main reference for the material is relied upon. Slides (PPT).</b> |
| <b>Lecture and Presentation</b>                                                                                                                                                                                                                                                                                                    |
| <b>Discussion Method</b>                                                                                                                                                                                                                                                                                                           |
| <b>Problem-Solving Method</b>                                                                                                                                                                                                                                                                                                      |
| <b>Interrogation Method</b>                                                                                                                                                                                                                                                                                                        |

|                                                                                                                                                                                                                                                                                  |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Educational Events Attendance Policy: In the event of a student's absence, he/she will receive an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered expelled for absence.</b> | <b>.1</b> |
| <b>Late Attendance: If a student is repeatedly late to educational activities, they will be considered absent from the lecture.</b>                                                                                                                                              | <b>2.</b> |
| <b>Exam Regulations: If a student is absent from an exam without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.</b>                                                                                                  | <b>.3</b> |
| <b>Assignments and Projects: Assignments or projects must be submitted by the deadline specified by the instructor. Late submissions will be rejected.</b>                                                                                                                       | <b>.4</b> |
| <b>Cheating: If a student cheats on an exam, a memo will be submitted to the department chair for necessary action.</b>                                                                                                                                                          | <b>.5</b> |
| <b>Plagiarism: If a student is discovered to be impersonating another person, a memo will be submitted immediately to the department chair.</b>                                                                                                                                  | <b>.6</b> |
| <b>Other Policies: Any other policies related to the privacy of the course, or according to university regulations.</b>                                                                                                                                                          | <b>.7</b> |

(Author, Year, Title, Place of Publication and Publisher)

## **VI. Course Policy and Regulations:**

### **A. Enrichment books and references (scientific periodicals, etc )**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Supporting References:</b><br>-Shanafi, Nawal, and Rabeh Khouni (2020), "Sustainable Development: Its Philosophy and Measurement Tools," Al-Manhal Economic Journal, Martyr Hama Lakhdar University, El Oued, Volume 3, Issue 1, pp. 67-78.<br>-Al-Saqqal, Ahmed Hashim (2014), "Sustainable Development Requirements in Iraq: The Role of Resource Management in Achieving Sustainable Development," Journal of the Baghdad College of Economic Sciences, University of Baghdad/Special Issue of the Joint Scientific Conference, pp. 313-338.<br>-Taher, Qadri Muhammad (2013), "Sustainable Development in Arab Countries: Between Theory and Practice," Hassan Al-Asriya Library, Beirut. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **A. Electronic sources and websites...etc.**

## **VII . VI. Learning Resources:**

|                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sources:</b><br>-United Nations - General Assembly (2015), 2030 Agenda for Sustainable Development, United Nations.<br>-Al-Baridi, Abdullah bin Abdul Rahman (2015), Sustainable Development: An Integrated Approach to Sustainability Concepts and Applications with a Focus on the Arab World, 1st ed., Riyadh, Al-Obeikan.<br>-Al-Hassan, Abdul Rahman Muhammad (2011), "Sustainable Development and Requirements |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



for its Achievement," a paper presented at the Forum: Government Strategy for Eliminating Unemployment and Achieving Sustainable Development, Al-Maslaia University, Khartoum.

-Deeb, Rida, and Suleiman Mahna (2009), "Planning for Sustainable Development," Damascus University Journal of Engineering Sciences, Volume 25, Issue 1, pp. (1-34 )

Subject teacher: assistant professor / Tahreer Abdul Hussain khazael

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BED-QA-QU26-3  
V1-2025/1/10



College

of Basic Education

Division of Quality Assurance

Performance, performance, and university perfusion.

### ... Course Description ...

Section:..... Math.....

Academic

Year : 2024-2025

| I. General Information about the course: ( Course ) |                                          |                                                        |         |           |          |
|-----------------------------------------------------|------------------------------------------|--------------------------------------------------------|---------|-----------|----------|
| 1.                                                  | Course Title :Mathematical Analysis      |                                                        |         |           |          |
| 2.                                                  | Course Code and Number:<br>MAB03RA312    |                                                        |         |           |          |
| 3.                                                  | Credit Hours: 4                          | Lecture                                                | Seminar | practical | training |
|                                                     |                                          | 4                                                      | 0       | 0         | 0        |
| 4.                                                  | Level and Semester:                      | Stage: Third Semester: Second                          |         |           |          |
| 5.                                                  | Prerequisites for the course             | Foundations and linear algebra                         |         |           |          |
| 6.                                                  | Course Requirements                      | Assignments at the end of each topic                   |         |           |          |
| 7.                                                  | Program(s) in which the course is taught | Bachelor of Education in Mathematics                   |         |           |          |
|                                                     |                                          |                                                        |         |           |          |
| 8.                                                  | Language of instruction                  | English Language                                       |         |           |          |
| 9.                                                  | Place of instruction                     | College of Basic Education - Department of Mathematics |         |           |          |
| 10.                                                 | Course specification preparer name       | dr. Aseel Hamid Abdul sada                             |         |           |          |



Entity and date of approval of  
the program specifications

Department of Mathematics-Scientific Committee-2025

## II. Course description: (Course description)

The course deals with real analysis: the real number field  $\mathbb{R}$ , the algebraic properties of the set of real numbers, order postulates, bounded sets, the smallest constraint higher and the greatest constraint lower, the property of perfection of the field  $\mathbb{R}$ , the archimedian property, the absolute value and its properties, limits, theorems of limits, Continuum, Uniform Continuum, Sequences, Monotone Sequences, Convergence and Divergence of Sequences, Infinite Series, Convergence and Divergence of Series

## III Course outcomes:

Know the full ordered field

Recognize the Archimedian property and identify the  
concept of absolute value and its properties

Recognize the concept of limits and how to find the limits  
of functions

Know the concept of continuity, identify continuity theories,  
and be able to use the definition of continuity and its theories  
to distinguish continuous and non-continuous functions

Identify the concept of sequences and Kushite sequences  
and identify the convergence or divergence of sequences and  
how to distinguish them.



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#### IV. Writing course topics and aligning them with learning outcomes

##### Writing Course Content Units/Topics

##### First: The theoretical aspect

| figure | Learning Outcomes                  | Course Units | Detailed Topics                                                                                                                                   | Number of weeks | Actual Hours |
|--------|------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|
| 1      | Basic concepts of numerical totals |              | <p>Definitions of the basics of the full ordered field</p> <p>Algebraic properties of real numbers and proving that set R is an ordered field</p> | 4               | 16           |



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|   |                          |  |                                                                                                                                                              |   |    |
|---|--------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|
|   | Understanding groups     |  | <p>Restricted Groups – Smallest Upper Constraint and Largest Lower Constraint</p> <p>– Perfect Property – <math>R</math> Represents a Full Ordered Field</p> | 4 | 16 |
| 3 | Basic theories in groups |  | <p>Recognize the Archimedian property and identify the concept of absolute value and its properties</p>                                                      | 3 | 12 |



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Continuity - definition and examples - continuity theories and sequences

Know the concept of continuity, identify continuity theories, and be able to use the definition of continuity and its theories to distinguish continuous and non-continuous functions - Identify the concept of sequences and Kushite sequences and identify the convergence or divergence of sequences and how

4

16

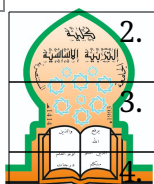
15

56

Second: The practical aspect: None

Write practical experiments (topics)

| figure | Laboratory experiments | Number of weeks | Actual Hours | Learning Outcomes |
|--------|------------------------|-----------------|--------------|-------------------|
| 1.     |                        |                 |              |                   |



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|                       |  |  |  |  |
|-----------------------|--|--|--|--|
| 2.                    |  |  |  |  |
| 3.                    |  |  |  |  |
| 4.                    |  |  |  |  |
| 5.                    |  |  |  |  |
|                       |  |  |  |  |
|                       |  |  |  |  |
| Total weeks and hours |  |  |  |  |

## V. Teaching Strategy:

Lecture and Presentation

Discussion method

Interrogation method

## VI. Learning Resources:

(Author, year, title, place of publication and publisher)

### I. Main references: (no more than two references)

Elements of real analysis, Shanti Narayan, 2012

Introduction to Mathematical Analysis - Salim Ismail Al-Gharabi, 2001

### II. Supporting References

Lectures by Dr. Nader George - Al-Nahrain University - 1996

### III. Enrichment books and references (scientific periodicals,... etc.):

There isn't any

### IV. Electronic resources and websites... etc



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## VII. Course Policy and Controls:

|    |                                                                                                                                                                                                |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                                                                                                |
| 1. | Educational Event Attendance Policy:                                                                                                                                                           |
| 2. | <u>Late attendance</u> : The student is alerted in the event that the student is late to attend educational events, and in cases of repetition, he is prevented from entering the lecture      |
| 3. | <u>Exam controls</u> : The exam is not postponed except with an official excuse and a zero grade is given in case of absence from the exam without an official excuse or an acceptable excuse. |
| 4. | <u>Assignments and projects</u> There must be specific deadlines for submitting assignments or projects                                                                                        |
| 5. | <u>Cheating</u> : In the event that the student cheats in the exams, a memorandum shall be submitted to the department presidency to take the necessary action                                 |
| 6. | <u>Plagiarism</u> : In the event that the student is discovered impersonating another personality, a memorandum shall be                                                                       |



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submitted to the department presidency immediately

Other policies: Any other policies related to the privacy of the course, or according to the university's regulations.

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**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| . General Information about the Course: Graph theory       |          |           |         |        |                                                              |  |    |
|------------------------------------------------------------|----------|-----------|---------|--------|--------------------------------------------------------------|--|----|
| Graph theory                                               |          |           |         |        | : Course Name:                                               |  | 1  |
| MAB03DT322                                                 |          |           |         |        | Course Code and Number:                                      |  | 2  |
| Total                                                      | Training | Practical | Seminar | Lecter | : Credit Hours:                                              |  | 3  |
| 3                                                          | /        | 1         | /       | 2      |                                                              |  |    |
| Stage Three -(Chapter Five)                                |          |           |         |        | Level and Semester:                                          |  | 4  |
| The third stage, the sixth semester                        |          |           |         |        | Prerequisites for the Course                                 |  | 5  |
| Study general concepts of graph                            |          |           |         |        | Co-requisites for the Course                                 |  | 6  |
| Knowing the basic concepts of graph                        |          |           |         |        | The Program(s) in Which the Course Is Taught                 |  | 7  |
| Arabic                                                     |          |           |         |        | Language of Instruction for the Course                       |  | 8  |
| college of Basic Education – Department of Mathematics     |          |           |         |        | Place of Course Instruction                                  |  | 9  |
| Asst. Prof. Muntaha Abdul razaq Hassan                     |          |           |         |        | Name of the Course Specifications Preparer                   |  | 10 |
| Department of Mathematics – Scientific Committee 2024-2025 |          |           |         |        | Authority and Date of Approval of the Program Specifications |  | 11 |



(Course description) : .II

- 1- Teach students the meaning of data theory
- 2- Teach students the history of data theory
- 3- Learn the basic concepts of data theory
- 4- Learn the relationship between data and matrices
- 5- Learn paths and paths in graph theory

Learn about trees -6

(Course outcomes) : .II

- 1 - The student will understand the meaning of data theory.
- 2- The student will understand the basic concepts in data theory.
- 3- The student will understand the history of the emergence of data theory.
- 4- The student will learn the relationship between matrices and data theory.
- 5- The student will learn paths and routes in graph theory.
- 6- The student will learn about trees in graph theory.

BED-QA-QU26-1  
V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                   |   |                                                                              |    |
|-------------------------------------------------------------------|-----------------|-----------------------------------|---|------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                   |   |                                                                              |    |
| First: Theoretical Aspect                                         |                 |                                   |   |                                                                              |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics      |   | We expect the student, after completing : the course, to be able to          | NO |
| 6                                                                 | 2               | Statement of heads and edges.     | 2 | The student learns the meaning of data theory and basic definitions in data. | 1  |
| 6                                                                 | 2               | How to apply definitions to graph | 2 | The student learns how to draw a graph.                                      | 2  |



|    |    |                                                                    |                                             |                                                                  |   |
|----|----|--------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------|---|
| 6  | 2  | Find the partial and the statement                                 | 2                                           | . The student learns to find partial data and similar graph      | 3 |
| 6  | 2  | Finding the incidence matrix of the graph and the adjacency matrix | 2                                           | The student learns the relationship between data and the matrix. | 4 |
| 12 | 4  | Find the path, route and circuit                                   | 3.5                                         | The student learns the paths, tracks and circuits.               | 5 |
| 9  | 3  | A detailed study of the tree and its properties                    | 2.5                                         | The student learns about trees                                   | 6 |
| 45 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>3*15             | Total Weeks and Hours Total Weeks and Hours |                                                                  |   |
|    |    |                                                                    |                                             |                                                                  |   |

#### Teaching Strategy:

- - Lecture and presentation
- Discussion method
- Interrogation method

#### -Learning Resources:

##### - Main References: (No more than two references)

- 1- Introduction to Data Theory\Ali Aziz Ali
- 2- Introduction to Finite Mathematics\Mustafa Ahmed

##### A. Supporting References

##### Basic Concepts in Drawing Theory\_West Douglas B

- A. Enrichment books and references (scientific journals, etc.):
- B. Electronic sources and websites, etc.

#### -Course Policy and Regulations:



**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**-Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

**Stamp and Signature of the Head of Department"**

**Asst. Prof. Dr. Talat Jassim Mahmoud**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**

Asst.Prof. Muntaha Abdul razzaq:Hassan



**Mustansiriyah University – College of Basic Education**  
**Department of Mathematics**  
**Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                                |                 |                  |                |               |                        |
|--------------------------------------------------------------------------------|-----------------|------------------|----------------|---------------|------------------------|
| <b>Ring theory</b>                                                             |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>MAB03R323</b>                                                               |                 |                  |                |               | <b>: Credit Hours:</b> |
| <b>Total</b>                                                                   | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Course Name:</b>  |
| <b>6</b>                                                                       | <b>/</b>        | <b>/</b>         | <b>/</b>       | <b>3</b>      | <b>: Credit Hours:</b> |
| <b>Third / Sixth</b>                                                           |                 |                  |                |               | <b>: Course Name:</b>  |
|                                                                                |                 |                  |                |               | <b>: Credit Hours:</b> |
|                                                                                |                 |                  |                |               | <b>: Course Name:</b>  |
|                                                                                |                 |                  |                |               | <b>: Credit Hours:</b> |
| <b>Bachelor of Education in Mathematics</b>                                    |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>English</b>                                                                 |                 |                  |                |               | <b>: Credit Hours:</b> |
| <b>College of Basic Education – Department of Mathematics</b>                  |                 |                  |                |               | <b>: Course Name:</b>  |
| <b>Prof. Dr. Shaymaa Amer Abdul Kareem</b><br><b>Ass. Prof. Dr. Ali Kareem</b> |                 |                  |                |               | <b>: Credit Hours:</b> |
| <b>Department of Mathematics – Scientific Committee</b>                        |                 |                  |                |               | <b>: Course Name:</b>  |



## II. وصف المساق: (Course description)

**The goals of this course are to present students specializing in mathematics several information about the following subjects**

- 1- Ring with examples explain the definition of ring.
- 2- Commutative ring.
- 3- Ring with unity element and division ring.
- 4- Quotient ring.
- 5- Subring.
- 6- Ideals with examples.
- 7- Maximal ideals.

## II. مخرجات تعلم المساق: (Course outcomes)

**The knowledge that graduates of this course are expected to acquire is as follows:**

1. The student understands the meaning of binary operations and mathematical systems.
2. The student understands the meaning of a ring.
3. Study the difference between a group and a ring.
4. The student understands the types of rings.
5. The student recognizes the concept of a division ring and commutative ring.
6. The student understands the meaning of a subring.
7. The student understands the meaning of an ideal.
8. The student recognizes the types of ideals.
9. The student understands the difference between ideals.
10. The student understands the meaning of quotient ring.

BED-QA-QU26-1

V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                              |  |                                                                                               |    |
|-------------------------------------------------------------------|-----------------|------------------------------|--|-----------------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                              |  |                                                                                               |    |
| First: Theoretical Aspect                                         |                 |                              |  |                                                                                               |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics |  | We expect the student, after : completing the course, to be able to                           | NO |
| 3                                                                 | 1               |                              |  | Review of the previous information + Daily Exam on previous information                       | 1  |
| 3                                                                 | 1               |                              |  | The student understands the definition of a ring and applies the definition to some examples. | 2  |
| 3                                                                 | 1               |                              |  | The student is introduced to the types of rings.                                              | 3  |



|    |    |                                                |  |                                                                                                               |    |
|----|----|------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------|----|
| 3  | 1  |                                                |  | The student understands the meaning of a commutative ring.                                                    | 4  |
| 3  | 1  |                                                |  | The student understands the meaning of a ring with a unity element.                                           | 5  |
| 3  | 1  |                                                |  | The student recognizes that the two previous concepts are separate concepts, with examples illustrating this. | 6  |
| 3  | 1  |                                                |  | First Month Exam                                                                                              | 7  |
| 3  | 1  |                                                |  | The student is introduced to a division ring.                                                                 | 8  |
| 3  | 1  |                                                |  | The student understands the meaning of a subring, with examples illustrating the definition.                  | 9  |
| 3  | 1  |                                                |  | The student is introduced to some important theorems on subrings.                                             | 10 |
| 3  | 1  |                                                |  | The student understands the meaning of an ideal.                                                              | 11 |
| 3  | 1  |                                                |  | The student is introduced to the types of ideals, including maximal ideals.                                   | 12 |
| 3  | 1  |                                                |  | The student is introduced to some theorems related to ideals.                                                 | 13 |
| 3  | 1  |                                                |  | Second Month Exam                                                                                             | 14 |
| 3  | 1  |                                                |  | The student understands the difference between maximal and prime ideals, with examples illustrating this.     | 15 |
| 45 | 15 | Total Weeks and Hours<br>Total Weeks and Hours |  | Total Weeks and Hours<br>Total Weeks and Hours                                                                |    |



|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|  |  |  |  |  |

### Teaching Strategy:

**There are several strategies used in the classroom, including:**

1. Brainstorming strategy, which encourages learners to generate creative ideas and search for possible solutions.
2. Discussion method, which recognizes learners' individual differences, allows everyone to participate and then motivates them with praise.
3. Group work strategy, which divides students into several small groups of four students and assigns them specific assignments. This helps students gain academic proficiency.
4. Questioning method

### Learning Resources:

**-Main References: (No more than two references)**

- 1- Introduction to Modern Algebra by David Joyce, Clark University, 2017.
- 2- Topics in Algebra 2nd edition by John Wiley & Sons, New York • Chichester • Brisbane • Toronto • Singapore, Printed in the United States of America, 1975.

**A. Supporting References:** Introduction to modern algebraic concepts by R.E.Larson, University of Nebraska, Addison - Wesley Publishing Company, 1974.

**B. Enrichment books and references (scientific journals, etc.):** Introduction to modern algebra by M.Burton

**C. Electronic sources and websites, etc.:** [http://www.e-booksdirectory.com/listing.php?category=43&gclid=EAIaIQobChMIgZTktOql2QIVS-AZCh1RBAjQEAMYASAAEgKxzPD\\_BwE](http://www.e-booksdirectory.com/listing.php?category=43&gclid=EAIaIQobChMIgZTktOql2QIVS-AZCh1RBAjQEAMYASAAEgKxzPD_BwE)

### Course Policy and Regulations:

**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.



**-Cheating: If a student cheats on an exam, a memo will be submitted to the department head for necessary action.**

**Plagiarism: If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.**

**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                |                 |                  |                |               |                                                                     |           |
|----------------------------------------------------------------|-----------------|------------------|----------------|---------------|---------------------------------------------------------------------|-----------|
| <b>Specialized teaching methods</b>                            |                 |                  |                |               | <b>: Course Name:</b>                                               | <b>1</b>  |
|                                                                |                 |                  |                |               | <b>Course Code and Number:</b>                                      | <b>2</b>  |
| <b>Total</b>                                                   | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Credit Hours:</b>                                              | <b>3</b>  |
| 3                                                              | /               | /                | /              | 3             |                                                                     |           |
| <b>Stage: Fourth -(Chapter Seventh)</b>                        |                 |                  |                |               | <b>Level and Semester:</b>                                          | <b>4</b>  |
| <b>General teaching methods</b>                                |                 |                  |                |               | <b>Prerequisites for the Course</b>                                 | <b>5</b>  |
| <b>Preparing plans and providing means and activities</b>      |                 |                  |                |               | <b>Co-requisites for the Course</b>                                 | <b>6</b>  |
| <b>Bachelor of Education in Mathematics</b>                    |                 |                  |                |               | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>7</b>  |
| <b>Arabic</b>                                                  |                 |                  |                |               | <b>Language of Instruction for the Course</b>                       | <b>8</b>  |
| <b>college of Basic Education – Department of Mathematics</b>  |                 |                  |                |               | <b>Place of Course Instruction</b>                                  | <b>9</b>  |
| <b>Assit.Lect.Marwa Hashim Adnan</b>                           |                 |                  |                |               | <b>Name of the Course Specifications Preparer</b>                   | <b>10</b> |
| <b>Department of Mathematics – Scientific Committee – 2024</b> |                 |                  |                |               | <b>Authority and Date of Approval of the Program Specifications</b> | <b>11</b> |



## II. وصف المساق: (Course description)

It aims to introduce students to how to analyze content, formulate general and specific objectives, and behavioral objectives. It also teaches students how to utilize these concepts in developing curriculum plans and applying them to mathematical concepts and skills from the four basic operations and other chapter concepts.

## II. مخرجات تعلم المساق: (Course outcomes)

- The learner will learn how to analyze mathematical content.
- Formulate educational objectives according to Bloom's cognitive levels.
- Implement a daily lesson plan based on the five steps of teaching.
- Understand how to apply the four basic concepts in a lesson plan.
- Practice teaching natural numbers up to the fourth grade of primary school with their classmates.
- Conclude how to teach natural numbers through sets.
- Prepare an annual lesson plan for one of the basic education mathematics textbooks.
- Express their opinion on the model daily plans presented by classmates.

BED-QA-QU26-2

V1-2022/10/2

| -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                                       |   |                                                                                                                                                        |    |
|-----------------------------------------------------------------|-----------------|-------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                             |                 |                                                       |   |                                                                                                                                                        |    |
| First: Theoretical Aspect                                       |                 |                                                       |   |                                                                                                                                                        |    |
| Actual Hours                                                    | Number of Weeks | Course Units Detailed Topics                          |   | We expect the student, after : completing the course, to be able to                                                                                    | NO |
| 3                                                               | 1               | Teaching natural numbers up to fourth grade           | 3 | To learn how to teach natural numbers .up to fourth grade<br>To infer how to teach natural numbers .through sets                                       | 1  |
| 3                                                               | 1               | Teaching addition (concept, facts, and algorithms)    | 3 | To learn how to teach the concept of addition<br>To deduce how to teach addition facts<br>To present a lesson to teach the addition algorithm          | 2  |
| 3                                                               | 1               | Teaching subtraction (concept, facts, and algorithms) | 3 | To learn how to teach the concept of subtraction<br>To deduce how to teach subtraction facts<br>To present a lesson to teach the subtraction algorithm | 3  |



|    |    |                                                                                 |                                            |                                                                                                                                                                                                                                      |    |
|----|----|---------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 3  | 1  | Teaching division<br>(concept, facts, and<br>algorithms)                        | 3                                          | To learn how to teach the concept of<br>multiplication<br>To deduce how to teach multiplication<br>facts<br>To present a lesson to teach the<br>multiplication algorithm                                                             | 4  |
| 3  | 1  | Teaching<br>multiplication<br>(concept, facts and<br>algorithms)                | 3                                          | To learn how to teach the concept of<br>division<br>To deduce how to teach division facts<br>To present a lesson to teach the division<br>algorithm                                                                                  | 5  |
| 3  | 1  | Teaching common<br>fractions (1/8, 1/<br>concept, fractions 2,<br>1/6, 1/3)     | 3                                          | To learn how to teach the concept of<br>.fractions<br>The regular fractions are half, third,<br>.sixth, and eighth<br>To formulate a daily life problem about<br>the concept of fractions such as half,<br>third, sixth, and eighth. | 6  |
| 6  | 2  | Teaching common<br>fractions<br>(quadruplets,<br>triangles, circles)            | 3                                          | To learn how to teach fractions through<br>.shapes<br>To design a lesson on the concept of<br>regular fractions using geometric<br>.shapes                                                                                           | 7  |
| 3  | 1  | Using games in<br>teaching mathematics                                          | 3                                          | To learn how to use educational games<br>in teaching. To explain the types of<br>.educational games                                                                                                                                  | 8  |
| 6  | 2  | Annual plan                                                                     | 3                                          | To prepare an annual plan for one of<br>the basic education mathematics books.<br>To express an opinion on one of the<br>annual plans presented in the lesson by<br>.his classmates                                                  | 9  |
| 6  | 2  | Daily plan                                                                      | 3                                          | To prepare a daily plan for a subject in<br>basic mathematics. To evaluate the<br>daily plans presented in the lesson by<br>.their classmates                                                                                        | 10 |
| 6  | 2  | Content analysis of<br>primary mathematics<br>curricula and their<br>components | 3                                          | To analyze the mathematics content for<br>the primary education stage according<br>.to Bloom's taxonomy                                                                                                                              | 11 |
| 45 | 15 |                                                                                 | Total Weeks and Hours Total Weeks and Hour |                                                                                                                                                                                                                                      |    |



|                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Teaching Strategy:</b><br>- Relying on a discussion prep model and assigning students to explain specific sections of the course material.<br>- Relying on the main reference for the material, using PowerPoint slides.<br>-Lecture and presentation<br>-Discussion method<br>-Problem-solving method<br>-Interrogation method |
| <b>-Learning Resources:</b><br><b>-A-. Main References: (No more than two references)</b><br>1. Faraj Allah, Abdul Karim Musa: Methods of Teaching Mathematics.<br>2. Sibatan, Fathi Diab (2012): Methods and Approaches to Teaching Mathematics for the Primary Stage.                                                            |
| <b>B-Supporting References</b><br>- Al-Mashhadani, Abbas Naji - Educational Methods and Models in Teaching Mathematics.<br>-Abu Hadid, Fatima Abdul Salam (2013) - Methods of Teaching Mathematics and the History of Its Development.                                                                                             |
| <b>C. Books and Enrichment References (Scientific Journals, etc.</b>                                                                                                                                                                                                                                                               |
| <b>D. Electronic Resources and Websites, etc</b>                                                                                                                                                                                                                                                                                   |
| <b>-Course Policy and Regulations:</b><br><b>-Attendance Policy for Educational Activities:</b> In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.   |
| <b>-Lateness:</b> If a student is repeatedly late to educational activities, they will be considered absent from the lecture                                                                                                                                                                                                       |
| <b>-Exam Controls:</b> If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.                                                                                                                                                                   |
| <b>-Assignments and Projects:</b> Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.                                                                                                                                                                           |
| <b>-Cheating:</b> If a student cheats on an exam, a memo will be submitted to the department head for necessary action.                                                                                                                                                                                                            |
| <b>Plagiarism:</b> If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.                                                                                                                                                                                  |



**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2022/10/2

**Course Professor**

**Assit.Lect.Marwa Hashim Adnan**



## ...Course Description...

Department: .....Mathematics.....Academic Year: 2024–2025

| I. :General information about the course ( Measurement and Evaluation) |          |           |         |                                                          |     |
|------------------------------------------------------------------------|----------|-----------|---------|----------------------------------------------------------|-----|
| Measurement and evaluation                                             |          |           |         | : Course name                                            | .1  |
|                                                                        |          |           |         | :Course code and number                                  | .2  |
| Total                                                                  | training | practical | Seminar | a<br>lecture                                             | .3  |
| 2                                                                      |          |           |         | 2                                                        |     |
| Stage: Third Semester: Sixth                                           |          |           |         | :Level and semester                                      | .4  |
| Review the previous concepts and prepare the tools                     |          |           |         | Course prerequisites                                     | .5  |
| Preparing plans and providing means and activities                     |          |           |         | Course requirements                                      | .6  |
| Bachelor of Education in Mathematics                                   |          |           |         | The program(s) in which the course is taught             | .7  |
| Arabic                                                                 |          |           |         | Course language of instruction                           | .8  |
| College of Basic Education - Department of Mathematics                 |          |           |         | Course teaching location                                 | .9  |
| Asst. Prof. Dr. Nidal Taha Khalifa Al-Khazraji                         |          |           |         | Course Specifications Preparer Name                      | .10 |
| - Department of Mathematics - Scientific Committee                     |          |           |         | Authority and date of approval of program specifications | .11 |



## II. Course : description

It aims to introduce students to the basic concepts of measurement and evaluation, their types, what is meant by tests and evaluation, the difference between measurement and evaluation, how to prepare achievement tests based on the specifications table, the conditions for applying the test, what are the types of tests, how to analyze test items, whether the test is objective or essay, and how to find the validity and reliability of the test

## II. outcomes Course

- .The learner should be familiar with measurement and evaluation
- .To distinguish between measurement and evaluation
- .To determine the steps followed in applying the test
- .To explain the types of tests and their advantages and disadvantages
- .To calculate the difficulty and ease index and distinguish the test items
- To show the conditions of a good test

V1-2022/10/2

## IV. writing Course topics and their alignment with learning outcomes

### Writing course content units/topics

### :Firstly The theoretical aspect

| Actual hours | Number of weeks | Detailed topics                                                                                                                                                                                                                                    | Units The course | Learning outcomes                                                                                                                                                                                                                                                       | The number |
|--------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4            | 2               | Definition of measurement and its types, characteristics, definition of testing and evaluation and characteristics of evaluation, the difference between measurement , and evaluation criterion-referenced tests, norm-referenced, characteristics | 2                | Basic concepts in measurement and evaluation <ul style="list-style-type: none"> <li>- To know the concept of measurement, evaluation and tests</li> <li>- Distinguish between evaluation and measurement</li> <li>- List the characteristics of the calendar</li> </ul> | 1          |



|    |   |                                                                                                                     |  |                                                                                                                                                                                                                                                              |   |
|----|---|---------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    |   | of criterion-referenced tests                                                                                       |  |                                                                                                                                                                                                                                                              |   |
| 4  | 2 | Steps of the specification table, its benefits, conditions for applying the test, pilot and basic experiments       |  | Steps for preparing achievement tests <ul style="list-style-type: none"> <li>- To prepare a detailed plan for a test map</li> <li>- To mention the benefits of the specification table</li> <li>- To mention the conditions for applying the test</li> </ul> | 2 |
| 10 | 5 | Oral tests, their types, advantages and disadvantages, and written tests, their types, advantages and disadvantages |  | Types of tests <ul style="list-style-type: none"> <li>- Among the types of tests</li> <li>- To mention the disadvantages of each type of test</li> <li>- To mention the advantages of each type of test</li> </ul>                                           | 3 |
| 4  | 2 | Calculating the difficulty and ease index and distinguishing paragraphs                                             |  | Test paragraph analysis<br>To find the paragraph difficulty factor<br>To find the paragraph discrimination coefficient                                                                                                                                       | 4 |
| 8  | 4 | Types of validity and reliability of the test and how to calculate the coefficient                                  |  | Good test requirements<br>To show the types of validity of tests<br>To show the types of test reliability<br>To distinguish between types of stability<br>To clarify the conditions of a good test                                                           | 5 |
|    |   |                                                                                                                     |  |                                                                                                                                                                                                                                                              |   |
|    |   |                                                                                                                     |  |                                                                                                                                                                                                                                                              |   |

## :secondly :Practical side

### Writing practical experiences (topics)

| Learning outcomes | Actual hours | Number of weeks | Laboratory experiments           | The number |
|-------------------|--------------|-----------------|----------------------------------|------------|
|                   | 4            | 2               | Design a test map                | .1         |
|                   | 4            | 2               | Statistical analysis application | .2         |
|                   | 4            | 2               | Extract stability                | .3         |
|                   |              |                 |                                  | .4         |
|                   |              |                 |                                  | .5         |



|                                                                                                 |  |  |                       |  |
|-------------------------------------------------------------------------------------------------|--|--|-----------------------|--|
|                                                                                                 |  |  |                       |  |
|                                                                                                 |  |  |                       |  |
|                                                                                                 |  |  | Total weeks and hours |  |
| V. :Teaching strategy                                                                           |  |  |                       |  |
| Lecture and delivery                                                                            |  |  |                       |  |
| Discussion method                                                                               |  |  |                       |  |
| Interrogation method                                                                            |  |  |                       |  |
| VI. :Learning resources                                                                         |  |  |                       |  |
| (Author, Year, Title, Place of Publication and Publisher)                                       |  |  |                       |  |
| ١. (not more than two references) : Main references                                             |  |  |                       |  |
| 1.Awda, Ahmed (2004): Measurement and Evaluation in the Teaching Process                        |  |  |                       |  |
| 2. Alam, Salah El-Din (2007): Educational Measurement and Evaluation in the Teaching Process    |  |  |                       |  |
| ٢. Supporting references                                                                        |  |  |                       |  |
| .Razouki, Abdul Han and Yassin Hamid (2012): Measurement and Evaluation for University Students |  |  |                       |  |
| ٣. :Enrichment books and references (scientific periodicals, etc.)                              |  |  |                       |  |
|                                                                                                 |  |  |                       |  |
| ٤. .Electronic sources and websites...etc                                                       |  |  |                       |  |

BED-QA-QU26-2  
V1-2022/10/2

|                                                                                                                                                                                                                                                                                   |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>II. :Course policy and regulations</b>                                                                                                                                                                                                                                         |    |
| <b>Educational Events Attendance Policy</b> : In the event of a student's absence, he/she will be given an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered expelled for absence | .1 |
| If a student is late for a lecture, he will not be allowed to enter <b>late arrival</b> the lecture except for the first hour                                                                                                                                                     | .2 |
| : <b>Examination controls</b> If a student is late for an exam, he will not be allowed to take the same questions and at the same time                                                                                                                                            | .3 |
| <b>Assignments and Projects</b>                                                                                                                                                                                                                                                   | .4 |
| <b>Cheating</b> : If a student cheats on exams, a memo will be submitted to the department head to take the necessary action                                                                                                                                                      | .5 |
| <b>Plagiarism</b> : If a student is found to be impersonating another person, a report will                                                                                                                                                                                       | .6 |



|                                                                                                                      |    |
|----------------------------------------------------------------------------------------------------------------------|----|
| .be submitted to the department head immediately                                                                     |    |
| <b><u>Other Policies</u></b> : Any other policies related to course privacy, or according to .university regulations | .7 |

Stamp and signature of the head of the department

BED-QA-QU26-3  
V1-2022/10/2



## ...Course Description...

Department: .....Mathematics..... Academic Year: 2023–2024

| I. :General information about the course ( Watching)   |          |           |         |                                                          |     |
|--------------------------------------------------------|----------|-----------|---------|----------------------------------------------------------|-----|
| Watching                                               |          |           |         | : Course name                                            | .1  |
|                                                        |          |           |         | :Course code and number                                  | .2  |
| Total                                                  | training | practical | Seminar | a<br>lecture                                             | .3  |
| 4                                                      |          |           |         | 4                                                        |     |
| Stage: Fourth Semester: First                          |          |           |         | :Level and semester                                      | .4  |
| Review the previous concepts                           |          |           |         | Course prerequisites                                     | .5  |
| Preparing plans and providing means and activities     |          |           |         | Course requirements                                      | .6  |
| Bachelor of Education in Mathematics                   |          |           |         | The program(s) in which the course is taught             | .7  |
| Arabic                                                 |          |           |         | Course language of instruction                           | .8  |
| College of Basic Education - Department of Mathematics |          |           |         | Course teaching location                                 | .9  |
| Asst.Lec.Shaimaa Abdul Hamza                           |          |           |         | Course Specifications Preparer Name                      | .10 |
| - Department of Mathematics - Scientific Committee     |          |           |         | Authority and date of approval of program specifications | .11 |



## II. Course : description

training The student The teacher on How to planning And implementation And calendar Lessons in material Specialization identification The student The teacher on Positions Educational And educational specific And work on Analyze it And its treatment in correlation Document With his knowledge Theory acquired during His studies in College identification The student The teacher on Duties and rights The teacher And development His position positive Towards profession the future And towards The student Watching purposeful To walk The process The teacher And awareness Its components and factors Influential In it development The position positive For students The teacher from study Courses Study For education And science self and methods teaching And the impact in level His education Scientific In the picture General

## II. outcomes Course

- 1- To learn the methods teachers in phase Preparation And the preparation To guide . students about goal The lesson
- 2- To know the procedures The teacher To motivate students on learning And acquisition Knowledge
- 3- To know the time Preparation And guidance students about goal The lesson
- 4- To know the connection Knowledge Some of them And connect it With knowledge sciences Other And life students
- 5- To know the review Summary oral after all step And in end to explain The lesson
- 6- . To know the terms And founded situation Estimates And the signs
- 7- To know the role And the impact a personality The teacher in the line , His acquaintances , His appearance External His language , His relationship By the student etc

## IV. writing Course topics and their alignment with learning outcomes

### Writing course content units/topics

### :Firstly The theoretical aspect

| Actual hours | Number of weeks | Detailed topics | Units The course | Learning outcomes                                                                                                                                                                                                                    | The number |
|--------------|-----------------|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 6            | 3               |                 | 4                | Teacher's organizational procedures at the beginning and end of the class                                                                                                                                                            | 1          |
| 6            | 3               |                 |                  | possibility content The lesson from Okay formation lesson fun Interesting And clear As a necessity Objectivity To develop position conscious And the doer from learning And more effectiveness acquisition Knowledge I have students | 2          |
| 6            | 3               |                 |                  | how It is done Dealing with students The                                                                                                                                                                                             | 3          |



|                                        |   |  |  |                                                                                                                                                                                                                                                                                                                                                           |    |
|----------------------------------------|---|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|                                        |   |  |  | retarded on performance Duties                                                                                                                                                                                                                                                                                                                            |    |
| 6                                      | 3 |  |  | investigation discipline during to implement Tasks ( such as exercises) The answer on .. Questions Tests                                                                                                                                                                                                                                                  | 4  |
| 6                                      | 3 |  |  | role component suspense and link The lesson In life And use means educational in more effectiveness learning                                                                                                                                                                                                                                              | 5  |
| 6                                      | 3 |  |  | Rising Students In the picture Individual or Shared Prepared by And planning And implementation Lessons Typical in area Specialization                                                                                                                                                                                                                    | 6  |
| 6                                      | 3 |  |  | Recognition on problems teaching in material or My material Specialization and analysis And calendar Its . curricula                                                                                                                                                                                                                                      | 7  |
| 6                                      | 3 |  |  | review and discussion Reports Calendar For application School in years previous And guidance Students To read books References essential Help in to implement Tasks Application School                                                                                                                                                                    | 8  |
| 6                                      | 3 |  |  | Watching Groups Student number from Lessons in the school Accompanied by supervisor College The specialist                                                                                                                                                                                                                                                | 9  |
| 6                                      | 3 |  |  | It is considered all individual from individuals The group Student Report on all to watch And it is done While after Discuss it collectively with supervisor College In the presence of The teacher Collaborator                                                                                                                                          | 10 |
| 6                                      | 3 |  |  | analysis results Watching And connect it With knowledge Theory acquired from Okay Install it And development Their experiences For application Self For knowledge in Their activity Instructor The future from during meetings Shared between all group Student and Supervisor responsible About them or from during Seminars complexity For this Purpose | 11 |
| 6                                      | 3 |  |  | Watching Safiya Direct For activities education and learning And its evaluation Self-directed                                                                                                                                                                                                                                                             | 12 |
| <b>:secondly :Practical side</b>       |   |  |  |                                                                                                                                                                                                                                                                                                                                                           |    |
| Writing practical experiences (topics) |   |  |  |                                                                                                                                                                                                                                                                                                                                                           |    |



| Learning outcomes | Actual hours | Number of weeks | Laboratory experiments | The number |
|-------------------|--------------|-----------------|------------------------|------------|
|                   |              |                 |                        | .1         |
|                   |              |                 |                        | .2         |
|                   |              |                 |                        | .3         |
|                   |              |                 |                        | .4         |
|                   |              |                 | Total weeks and hours  |            |

## V. :Teaching strategy

### Lecture and delivery

### Discussion method

### Interrogation method

## VI. :Learning resources

(Author, Year, Title, Place of Publication and Publisher)

### ١. (not more than two references) : Main references

1. slave Al-Wahhab Awad Quiran (2004) : Introduction to Methods teaching , house university Aden For printing and publishing 2nd ed. Aden

### ٢. Supporting references

1. Lectures from the instructor and sources from the Internet
2. Mohammed Ziad Hamdan (1982) : Education The process . Field , institution message , Beirut

### ٣. :Enrichment books and references (scientific periodicals, etc.)

### ٤. .Electronic sources and websites...etc

## II. :Course policy and regulations

|                                                                                                                                                                                                                                                                                    |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Educational Events Attendance Policy</b> : In the event of a student's absence, he/she will be given an initial warning, then a second warning, then a final warning. A memo will then be submitted to the department, and the student will be considered .expelled for absence | .1 |
| If a student is late for a lecture, he will not be allowed to enter <b>late arrival</b> .the first hour's lecture                                                                                                                                                                  | .2 |
| : <b>Examination controls</b> If a student is late for an exam, he will not be allowed to .take the same questions and at the same time                                                                                                                                            | .3 |
| Preparing the homework book - preparing the topic <b>Assignments and Projects</b>                                                                                                                                                                                                  | .4 |



|                                                                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| for each lecture                                                                                                                                    |    |
| <b><u>Cheating</u></b> : If a student cheats on exams, a memo will be submitted to the .department head to take the necessary action                | .5 |
| <b><u>Plagiarism</u></b> : If a student is found to be impersonating another person, a report will .be submitted to the department head immediately | .6 |
| <b><u>Other Policies</u></b> : Any other policies related to course privacy, or according to .university regulations                                | .7 |

Asst. Prof. Dr. Talat Jassim Mahmoud

Seal and signature of the department head



## Course Description

Department: Mathematics

Academic Year: 2024-2025

| <b>General Course Information</b>                                              |                 |                  |                |                                                  |                                      |
|--------------------------------------------------------------------------------|-----------------|------------------|----------------|--------------------------------------------------|--------------------------------------|
| <b>Linear programming</b>                                                      |                 |                  |                |                                                  |                                      |
|                                                                                |                 |                  |                | <b>Course Title: Linear programming</b>          | <b>1.</b>                            |
| MABO3LA213                                                                     |                 |                  |                | <b>Course Code and Number</b>                    | <b>2.</b>                            |
| <b>total</b>                                                                   | <b>training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecture:</b>                                  | <b>Lecture: 3 hours</b><br><b>3.</b> |
| 4                                                                              |                 | 1                |                | 3                                                |                                      |
|                                                                                |                 |                  |                | <b>Level and Semester: fourth Stage –</b>        | <b>4.</b>                            |
| <b>Understanding the general concepts of linear programming</b>                |                 |                  |                | <b>Prerequisites:</b>                            | <b>5.</b>                            |
| <b>Knowledge of how to formulate optimal solution</b>                          |                 |                  |                | <b>Co-requisites</b>                             | <b>6.</b>                            |
| <b>Bachelor of Education in Mathematics</b>                                    |                 |                  |                | <b>program(s) in which the course is taught:</b> | <b>7.</b>                            |
| <ul style="list-style-type: none"> <li><b>English and Arabic</b></li> </ul>    |                 |                  |                | <b>Course Language:</b>                          | <b>8.</b>                            |
| <b>College of Basic Education – Department of Mathematics</b>                  |                 |                  |                | <b>Place of Instruction:</b>                     | <b>9.</b>                            |
| <ul style="list-style-type: none"> <li><b>Ban Alaa Abdul Majeed</b></li> </ul> |                 |                  |                | <b>Course Specification Preparer:</b>            | <b>10.</b>                           |
| <b>Department of Mathematics – Scientific Committee – 2024-2025</b>            |                 |                  |                | <b>Approval Authority and Date:</b>              | <b>11.</b>                           |



### Course Description:

#### 1. Teaching Students:

- Understanding the concepts and applications of linear programming.
- Learning how to formulate and solve linear programming models.

#### 2. Student Learning:\*

- Methods for solving linear programming problems, including graphical and simplex methods.
- Techniques for finding optimal solutions to real-world problems.

### Course Learning Outcomes:

Ability to apply linear programming to practical scenarios.

- Proficiency in using algorithms to solve optimization problems.

#### Student Awareness

- Recognizing the importance of linear programming in decision-making and resource allocation.

BED-QA-QU26-1

V1-2022\10\2

### Course Topics and Alignment with Learning Outcomes

#### Theoretical Component

| Actual hours | weeks | Detailed topics                                                                    | Course unite | Learning outcomes                | N |
|--------------|-------|------------------------------------------------------------------------------------|--------------|----------------------------------|---|
| 4            | 1     | Building a linear programming model<br>  Steps to formulate a                      | 2            | mathematical model               | 1 |
| 4            | 1     | Graphical method for solving linear programming                                    | 2            | Learning solution algorithms     | 2 |
| 12           | 3     | simplex method for optimal solutions<br> Exploring other linear programming models | 4            | Understanding the simplex method | 3 |



|   |   |                                     |   |                                         |   |
|---|---|-------------------------------------|---|-----------------------------------------|---|
| 4 | 3 |                                     | 3 | Learning advanced transportation models | 4 |
|   | 4 | Learning advanced assignment models | 2 | Assignment problem                      |   |
|   |   |                                     |   |                                         |   |

### Practical component

To be completed with laboratory experiments and specific exercises

| Learning outcomes | Actual hours | weeks | Laboratory experiments | n |
|-------------------|--------------|-------|------------------------|---|
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       |                        | . |
|                   |              |       | Total weeks and hours  |   |

### Teaching Strategies:

#### Lecturing

#### Discussion method

#### Inquiry-based learning

### Learning Resources:

#### Primary References:

- Operations Research: Concepts and Applications by Dr. Hamid Al-Shammari
- Advanced Operations Research by Dr. Hussein Mahmoud Al-Janabi

#### Secondary References:

- Schaum's Outline of Linear Programming

#### Supplementary Resources:

- Scientific journals and online resources

#### Electronic Resources:

- Relevant websites and e-books



BED-QA-QU26-2  
V1-2022\10\2

| Course Policies and Regulations                                                                                                                                                                                                                                                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Attendance Policy:</p> <p>In case of student absence: First, a warning is issued, followed by a first, second, and final warning. If absences persist, a formal report will be submitted to the department, and the student will be considered dismissed due to absence.</p> |  |
| <p>Late Attendance:</p> <p>Latecomers may be denied entry, with occasional leniency based on circumstances</p>                                                                                                                                                                  |  |
| <p>Exam Regulations:</p> <p>Students arriving late for exams are not allowed to take the exam at the same time with the same questions.</p>                                                                                                                                     |  |
| <p>Assignments and Projects:</p> <p>Assignments and projects must be submitted by the deadlines set by the instructor. Late submissions will not be accepted.</p>                                                                                                               |  |
| <p>Cheating:</p> <p>In case of cheating, a formal report will be submitted to the department head for necessary action.</p>                                                                                                                                                     |  |



|                                                                                                                                      |  |
|--------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Impersonation:</p> <p>In case of student impersonation, a formal report will be immediately submitted to the department head.</p> |  |
| <p>Other Policies:</p> <p>Any additional policies related to the specific nature of the course or university regulations.</p>        |  |

:Prepared by

Asst. Prof. Dr. Talaat Jassim Mahmoud

Head of Department Seal and Signature



**Mustansiriyah University – College of Basic Education–Department of Mathematics**

**Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b> |                                                                     |                                                                |                |                  |                 |
|-------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|----------------|------------------|-----------------|
| <b>1.</b>                                       | <b>Course Name:</b>                                                 | <b>Topology</b>                                                |                |                  |                 |
| <b>2.</b>                                       | <b>Course Code and Number:</b>                                      | <b>MAB03T412</b>                                               |                |                  |                 |
| <b>3.</b>                                       | <b>Credit Hours:</b>                                                | <i>Lecture</i>                                                 | <i>Seminar</i> | <i>Practical</i> | <i>Training</i> |
|                                                 |                                                                     | <b>4</b>                                                       | <b>/</b>       | <b>/</b>         | <b>/</b>        |
| <b>4.</b>                                       | <b>Level and Semester:</b>                                          | <b>Stage Four - (Chapter seven)</b>                            |                |                  |                 |
| <b>5.</b>                                       | <b>Prerequisites for the Course</b>                                 | <b>Foundations 1+2</b>                                         |                |                  |                 |
| <b>6.</b>                                       | <b>Co-requisites for the Course</b>                                 |                                                                |                |                  |                 |
| <b>7.</b>                                       | <b>The Program(s) in Which the Course Is Taught</b>                 | <b>Bachelor of Education in Mathematics</b>                    |                |                  |                 |
| <b>8.</b>                                       | <b>Language of Instruction for the Course</b>                       | <b>English</b>                                                 |                |                  |                 |
| <b>9.</b>                                       | <b>Place of Course Instruction</b>                                  | <b>College of Basic Education – Department of Mathematics</b>  |                |                  |                 |
| <b>10.</b>                                      | <b>Name of the Course Specifications Preparer</b>                   | <b>Ass. Prof. Dr. Ali Karem + Dr. Saif Zuhair Hameed</b>       |                |                  |                 |
| <b>11.</b>                                      | <b>Authority and Date of Approval of the Program Specifications</b> | <b>Department of Mathematics – Scientific Committee – 2024</b> |                |                  |                 |



## **II. Course description**

- 1- Basic Concepts in Set Theory.**
- 2- Topological Spaces - Definition of Topology - Open Sets – Examples.**
- 3- Closed Sets - Examples and Theorems.**
- 4- Closure - Various Examples - Properties – Limit points - Derived Sets.**
- 5- Topological Subspaces – Bases - Subbases.**
- 6- Interior of a Set – Exterior of a Set - Boundaries of a Set  
- Properties and Examples.**
- 7- Continuity and Topological Homeomorphisms.**

## **III. Course outcomes**

**This course aims to provide graduates with the following knowledge:**

- 1. *The student should understand the concept of topology and topological space.***
- 2. *The student should understand the difference between a topological space and a metric space.***
- 3. *The student should understand open sets and closed sets.***
- 4. *The student should understand how to find closure and limit points.***
- 5. *The student should understand Topological Subspaces – Bases - Subbases***
- 6. *The student should understand interior, exterior, and boundary points and how to find them.***
- 7. *The student should understand the concept of continuity and Topological Homeomorphisms..***



| <b>VI. Writing Course Topics and Aligning Them with Learning Outcomes</b> |                                                                                              |                                                                                          |                        |                     |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------|---------------------|
| <b>Writing Course Content Units/Topics</b>                                |                                                                                              |                                                                                          |                        |                     |
| <b>First: The Theoretical Aspect</b>                                      |                                                                                              |                                                                                          |                        |                     |
| <b>NO.</b>                                                                | <b>Learning outcomes</b>                                                                     | <b>Detailed Topics</b>                                                                   | <b>Number of Weeks</b> | <b>Actual Hours</b> |
| 1.                                                                        | The student should understand the concept of Basic Concepts in Set Theory.                   | Basic Concepts in Set Theory.                                                            | 1                      | 4                   |
| 2.                                                                        | The student should understand the concept of topology and topological space.                 | Topological Spaces - Definition of Topology                                              | 2                      | 8                   |
| 3.                                                                        | The student should understand the difference between a topological space and a metric space. | Topological space and a Metric space.                                                    | 1                      | 4                   |
| 4.                                                                        | The student should understand open sets and closed sets.                                     | Open Sets – Examples-Closed Sets - Examples and Theorems                                 | 2                      | 8                   |
| 5.                                                                        | The students should understand how to find closure and limit points.                         | Closure - limit points -Various Examples – Properties                                    | 2                      | 8                   |
| 6.                                                                        | The student should understand Topological Subspaces – Bases - Subbases                       | Topological Subspaces -Bases - Subbases                                                  | 2                      | 8                   |
| 7.                                                                        | The student should understand interior, exterior, and boundary points and how to find them.  | Limit points - Derived Sets. Interior of a Set – Exterior of a Set - Boundaries of a Set | 3                      | 12                  |
| 8.                                                                        | The student should understand the concept of continuity and Topological Homeomorphisms.      | continuity -Topological Homeomorphisms                                                   | 2                      | 8                   |



**V. Main References: (No more than two references)**

**Introduction to General Topology, First edition- Paul E. Long, Charles E. Merrill- Company-1986**

**Supporting References**

**1- Topology- James R. Munkres- Prentice Hall, Inc.-2000**

**2- Foundations of General Topology- William J. Pervin- Academic press-1964**

**VI-Course Policy and Regulations:**

**Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

**Ass. Prof. Dr. Talat Jassim  
Head of Department**

**College of Basic Education  
Assurance Quality Division and  
University Performance**





College of Basic Education  
Division of Quality Assurance

Performance, performance, and university perfusion.

### ... Course Description ...

Section:..... Math.....

Academic Year : 2024- 2025

#### I. General Information about the course: ( Course )

|     |                                                           |                                                        |         |           |          |
|-----|-----------------------------------------------------------|--------------------------------------------------------|---------|-----------|----------|
| 1.  | Course Title:complex Analysis                             |                                                        |         |           |          |
| 2.  | Course Code and Number:MAB03CA413                         |                                                        |         |           |          |
| 3.  | Credits:4                                                 | Lecture                                                | Seminar | practical | training |
|     |                                                           | 4                                                      | 0       | 0         | 0        |
| 4.  | Level and Semester:                                       | Stage: Fourth Semester: First                          |         |           |          |
| 5.  | Prerequisites for the course                              | Foundations and Linear Algebra                         |         |           |          |
| 6.  | Course Requirements                                       | Assignments at the end of each topic                   |         |           |          |
| 7.  | Program(s) in which the course                            | Bachelor of Education in Mathematics                   |         |           |          |
|     | is taught                                                 |                                                        |         |           |          |
| 8.  | Language of instruction                                   | Arabic + English                                       |         |           |          |
| 9.  | Place of instruction                                      | College of Basic Education - Department of Mathematics |         |           |          |
| 10. | Course specification preparer name                        | .dr Aseel Hamid Abdul Sada                             |         |           |          |
| 11. | Entity and date of approval of the program specifications | Department of Mathematics-Scientific Committee- 2024   |         |           |          |



## College of Basic Education

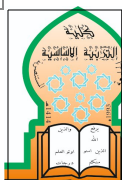
### Division of Quality Assurance

II. Writing course topics and aligning them with learning outcomes  
Performance, performance, and university perfusion.

#### Writing Course Content Units/Topics

#### First: the theoretical aspect

| figure | Learning Outcomes                                                                                                                          | Course Modules | Detailed Topics                                                                               | Number of weeks | Actual Hours |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------|-----------------|--------------|
| 1      | Basic concepts of preparation DThe compound                                                                                                |                | define a complex number and some properties of a concomitant number,                          | 4               | 16           |
| 2      | Calcareous qualities of complex number                                                                                                     |                | Algebraic properties of a complex number<br>Definition of absolute value                      | 4               | 16           |
| 3      | Geometric and polar representation                                                                                                         |                | Introduce the student to the methods of geometric and polar representation of complex numbers | 3               | 12           |
| 4      | Continuity - definition and examples - continuity theorems - Cauchy- Riemann equations - trigonometric functions, hyperbolic functions and |                | Know the concept of continuity, identify continuity theories, and                             | 4               | 12           |



Division  
Performance

regions in complex analysis

be able to  
use the  
definition of  
  
Continuity  
and its  
theories on  
complex  
functions and  
the study of  
the  
properties of  
trigonometric  
and  
hyperbolic  
functions and  
regions in  
complex  
analysis

Total weeks and hours

15

56

Second: The practical aspect: None

Write practical experiments (topics)

| figure                | Laboratory experiments | Number of weeks | Actual Hours | Learning Outcomes |
|-----------------------|------------------------|-----------------|--------------|-------------------|
| 1.                    |                        |                 |              |                   |
| 2.                    |                        |                 |              |                   |
| 3.                    |                        |                 |              |                   |
| 4.                    |                        |                 |              |                   |
| 5.                    |                        |                 |              |                   |
|                       |                        |                 |              |                   |
|                       |                        |                 |              |                   |
| Total weeks and hours |                        |                 |              |                   |

III. Teaching Strategy:

Lecture and Presentation

Discussion method

College of Basic Education  
Division of Quality Assurance

Performance, performance, and university perfusion.

#### IV. Learning Resources:

(Author, year, title, place of publication and publisher)

##### I. Main references: (no more than two references)

1-Elements of real analysis, Shanti Narayan, 2012

2-Complex Variables and application by Rule V. Churchill and James Ward Brown

##### II. Supporting References

LecturesLecture in Complex Analysis - A.Dr. Abdulrahman Salman Jumaa – Anbar University  
-2017

##### III.Enrichment books and references (scientific periodicals,... etc.):

d.Arbabab Ibrahim: University of Khartoum

Zaher Abdulhadi: University of Babylon

##### IV.Electronic resources and websites... etc

BED-QA-QU26-2  
V1-2024/10/2

#### V. Course Policy and Controls:

1.

Educational Event Attendance Policy:



College of Basic Education  
Division of Quality Assurance

Performance, performance, and university perfusion.

|    |                                                                                                                                                                                                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. | <p><u>Late attendance:</u> The student is alerted in case the student is late to attend educational events and in cases of repetition, the student is prevented from entering the lecture</p>    |
| 3. | <p><u>Exam controls:</u> The exam is not postponed without an official excuse and a zero grade is given in case of absence from the exam without an official excuse or an acceptable excuse.</p> |
| 4. | <p><u>Assignments and Projects</u> There should be specific deadlines for the submission of assignments or projects</p>                                                                          |
| 5. | <p><u>Cheating:</u> In the event that the student cheats in the exams, a memorandum shall be submitted to the department presidency to take the necessary action</p>                             |
| 6. | <p><u>Plagiarism:</u> In the event that the student is discovered impersonating another personality, a memorandum shall be submitted to the department presidency immediately</p>                |
| 7. | <p><u>Other policies:</u> Any other policies related to the privacy of the course, or according to the university's regulations.</p>                                                             |

Stamp and signature of the head of the department



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course:</b>                |                 |                  |                |               |                                                                     |
|----------------------------------------------------------------|-----------------|------------------|----------------|---------------|---------------------------------------------------------------------|
| <b>Curricula and textbooks</b>                                 |                 |                  |                |               | <b>: Course Name:</b>                                               |
|                                                                |                 |                  |                |               | <b>1</b>                                                            |
|                                                                |                 |                  |                |               | <b>Course Code and Number:</b>                                      |
|                                                                |                 |                  |                |               | <b>2</b>                                                            |
| <b>Total</b>                                                   | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | <b>: Credit Hours:</b>                                              |
| <b>2</b>                                                       | <b>/</b>        | <b>/</b>         | <b>/</b>       | <b>2</b>      | <b>3</b>                                                            |
| <b>Stage Three -(Chapter Six)</b>                              |                 |                  |                |               | <b>Level and Semester:</b>                                          |
|                                                                |                 |                  |                |               | <b>4</b>                                                            |
|                                                                |                 |                  |                |               | <b>Prerequisites for the Course</b>                                 |
|                                                                |                 |                  |                |               | <b>5</b>                                                            |
|                                                                |                 |                  |                |               | <b>Co-requisites for the Course</b>                                 |
|                                                                |                 |                  |                |               | <b>6</b>                                                            |
| <b>Bachelor of Education in Mathematics</b>                    |                 |                  |                |               | <b>The Program(s) in Which the Course Is Taught</b>                 |
|                                                                |                 |                  |                |               | <b>7</b>                                                            |
| <b>Arabic</b>                                                  |                 |                  |                |               | <b>Language of Instruction for the Course</b>                       |
|                                                                |                 |                  |                |               | <b>8</b>                                                            |
| <b>college of Basic Education – Department of Mathematics</b>  |                 |                  |                |               | <b>Place of Course Instruction</b>                                  |
|                                                                |                 |                  |                |               | <b>9</b>                                                            |
| <b>Asst. Prof. Taghreed Khudhair Hathal</b>                    |                 |                  |                |               | <b>Name of the Course Specifications Preparer</b>                   |
|                                                                |                 |                  |                |               | <b>10</b>                                                           |
| <b>Department of Mathematics – Scientific Committee – 2014</b> |                 |                  |                |               | <b>Authority and Date of Approval of the Program Specifications</b> |
|                                                                |                 |                  |                |               | <b>11</b>                                                           |



## II. وصف المساق: (Course description)

This course aims to introduce students specializing in mathematics to information about the subject of curricula and textbooks in terms of its definition, objectives, and philosophical, social, cognitive, and psychological foundations. It also focuses on the types of curricula and an analysis of the curriculum content that the student will need in his work as a mathematics teacher in the future.

## II. مخرجات تعلم المساق: (Course outcomes)

### A - Cognitive Objectives

By the end of the lesson, we expect the student to be able to:

A1 - Understand the concept of curricula.

A2 - Identify the types of curricula.

A3 - List the foundations for curriculum development.

A4 - Mention the types of curricula.

A5 - List the characteristics of a textbook.

A6 - Explain the difference between curricula and textbooks.

### B - Course Skill Objectives

B1 - The student will write about the concept of curriculum.

B2 - The student will draw a diagram illustrating the difference between the traditional and modern concepts of curriculum.

B3 - The student will read a report to the class about curriculum tasks.

BED-QA-QU26-1

V1-2022/10/2

| . -Writing Course Topics and Aligning Them with Learning Outcomes |                 |                                        |  |                                                                     |    |
|-------------------------------------------------------------------|-----------------|----------------------------------------|--|---------------------------------------------------------------------|----|
| Writing Course Content Units/Topics                               |                 |                                        |  |                                                                     |    |
| First: Theoretical Aspect                                         |                 |                                        |  |                                                                     |    |
| Actual Hours                                                      | Number of Weeks | Course Units Detailed Topics           |  | We expect the student, after completing : the course, to be able to | NO |
| 4                                                                 | 2               | Criticisms of the Traditional Approach |  | The Traditional Approach                                            | 1  |
| 8                                                                 | 4               | Foundations of                         |  | Modern Curriculum                                                   | 2  |



|           |           |                                |  |                                                       |          |
|-----------|-----------|--------------------------------|--|-------------------------------------------------------|----------|
|           |           | <b>Curriculum Development</b>  |  |                                                       |          |
| <b>4</b>  | <b>2</b>  | <b>Content Evaluation</b>      |  | <b>Elements of the School Curriculum</b>              | <b>3</b> |
| <b>8</b>  | <b>4</b>  | <b>Textbook</b>                |  | <b>Types of Separate and Interconnected Curricula</b> | <b>4</b> |
| <b>6</b>  | <b>3</b>  | <b>Textbook specifications</b> |  | <b>Conditions for Preparing the Book</b>              | <b>5</b> |
| <b>30</b> | <b>15</b> |                                |  |                                                       |          |
|           |           |                                |  |                                                       |          |

**Teaching Strategy:**

- Relying on a discussion prep model and assigning students to explain specific sections of the course material.
- Relying on the main reference for the material, using PowerPoint slides.
- Lecture and presentation
- Discussion method
- Problem-solving method
- Interrogation method

**-Learning Resources:**

- . Methodology and Book Analysis: Awad Jassim, 2009
- . Curriculum and Textbook: Kazem Karim, 2011
- .

**-. Main References: (No more than two references)**

**A. Supporting References**

**B. Books and Enrichment References (Scientific Journals, etc.**

**C. Electronic Resources and Websites, etc.**

**A. Enrichment books and references (scientific journals, etc.):**

**B. Electronic sources and websites, etc.**



**-Course Policy and Regulations:**

**-Attendance Policy for Educational Activities:** In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.

**-Lateness:** If a student is repeatedly late to educational activities, they will be considered absent from the lecture

**-Exam Controls:** If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.

**-Assignments and Projects:** Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.

**-Cheating:** If a student cheats on an exam, a memo will be submitted to the department head for necessary action.

**Plagiarism:** If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.

**Other Policies:** Any other policies related to course privacy, or according to university regulations.

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**

Assistant Professor: Taghreed Khudhair Hathal



**-Mustansiriya University – College of Basic Education  
Department of Mathematics  
Course Description for the Academic Year (2024/2025)**

| <b>I. General Information about the Course: Environment and Health</b> |                 |                  |                |               |                                                              |    |
|------------------------------------------------------------------------|-----------------|------------------|----------------|---------------|--------------------------------------------------------------|----|
| Environment and Health                                                 |                 |                  |                |               | : Course Name:                                               | 1  |
|                                                                        |                 |                  |                |               | Course Code and Number:                                      | 2  |
| <b>Total</b>                                                           | <b>Training</b> | <b>Practical</b> | <b>Seminar</b> | <b>Lecter</b> | : Credit Hours:                                              | 3  |
| 2                                                                      | /               | /                | /              | 2             |                                                              |    |
| Stage the fourth -(Chapter the seventh)                                |                 |                  |                |               | Level and Semester:                                          | 4  |
| See the previous concepts and prepare the tools                        |                 |                  |                |               | Prerequisites for the Course                                 | 5  |
| Preparing plans and preparing means and activities                     |                 |                  |                |               | Co-requisites for the Course                                 | 6  |
| Bachelor of Education in Mathematics                                   |                 |                  |                |               | The Program(s) in Which the Course Is Taught                 | 7  |
| Arabic                                                                 |                 |                  |                |               | Language of Instruction for the Course                       | 8  |
| college of Basic Education – Department of Mathematics                 |                 |                  |                |               | Place of Course Instruction                                  | 9  |
| Asst. Lec. Rafah Riyadh khazaal                                        |                 |                  |                |               | Name of the Course Specifications Preparer                   | 10 |
| Department of Mathematics – Scientific Committee – 2014                |                 |                  |                |               | Authority and Date of Approval of the Program Specifications | 11 |



## II. وصف المساق: (Course description)

It aims to introduce students to the concept of public health, its components, how to analyze it, its fields, what is meant by health education, what are its objectives, fields, methods and methods of health education, what is school health, in addition to the elements of food, what are some malnutrition diseases that affect individuals, vaccinations that children must take, and some diseases that affect children, in addition to identifying the harmful habits spread among young people of smoking, alcohol and drugs, how to control them, and identifying first aid and what is a home pharmacy

## II. مخرجات تعلم المساق: (Course outcomes)

- The learner should learn about the concept of public health.
- The learner should learn about school health
- To distinguish between public health and health education.
- To determine the elements of food.
- To compare malnutrition diseases.
- To enumerate compulsory vaccines for children.
- To show the reasons for addiction to drugs

BED-QA-QU26-1  
V1-2022/10/2

| Writing Course Content Units/Topics |                 |                                                                                      |  |                                                                     |    |
|-------------------------------------|-----------------|--------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|----|
| First: Theoretical Aspect           |                 |                                                                                      |  |                                                                     |    |
| Actual Hours                        | Number of Weeks | Course Units Detailed Topics                                                         |  | We expect the student, after : completing the course, to be able to | NO |
| 2                                   | 1               | The concept of health, public health, components of public health, levels of health, |  | The concept of public health                                        | 1  |



|          |          |                                                                                                                                                                                                                                           |  |                         |          |
|----------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------|----------|
|          |          | <b>health awareness, areas of public health</b>                                                                                                                                                                                           |  |                         |          |
| <b>8</b> | <b>4</b> | <b>Definition of health education, the objectives of health education, the fields of health education and their fields, the methods and methods of health education</b>                                                                   |  | <b>Health Education</b> | <b>2</b> |
| <b>4</b> | <b>2</b> | <b>The concept of school health, the importance of school health, reasons for attention to school health, school health goals</b>                                                                                                         |  | <b>School Health</b>    | <b>3</b> |
| <b>2</b> | <b>1</b> | <b>Nutritional representation, nutritional education, nutrition, carbohydrates, their sources, classification and functions, proteins, their sources, classification and functions, fats, their sources, classification and functions</b> |  | <b>Food items</b>       | <b>4</b> |



|   |   |                                                                                                                                                                                                                        |  |                               |   |
|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------|---|
| 2 | 1 | Obesity, its causes, factors and risks to the body, methods of treatment and prevention, wasting, its causes, symptoms and treatment, anemia is the worst, exposed and treatment                                       |  | Malnutrition diseases         | 5 |
| 2 | 1 | Vaccines, their belongings, disease, symptoms and impact                                                                                                                                                               |  | Vaccination                   | 6 |
| 2 | 1 | Some diseases that affect children with methods of treatment                                                                                                                                                           |  | Diseases that affect children | 7 |
| 4 | 2 | Smoking and alcohol and its effects on the health of the advantages of getting rid of drinking and smoking habits, drugs are the causes of addiction symptoms and the effects of addiction complications. How does the |  | Some harmful habits           | 8 |



|    |    |                                                                                                                                                               |  |                                                |    |
|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------|----|
|    |    | family know that it has an addict, addiction prevention, addiction treatment                                                                                  |  |                                                |    |
| 2  | 1  | Duties of the paramedic, suffocation and twig, fire, poisoning, wounds, bleeding, trauma, fractures, insect bites, dog bite, snake bite and ambulance methods |  | First aid                                      | 9  |
| 2  | 1  | Medicines that must be available in the home pharmacy, first aid kit, tips for using the home pharmacy                                                        |  | Home pharmacy                                  | 10 |
| 30 | 15 | Total Weeks and Hours<br>Total Weeks and Hours<br>2*15                                                                                                        |  | Total Weeks and Hours<br>Total Weeks and Hours |    |
|    |    |                                                                                                                                                               |  |                                                |    |



|                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Teaching Strategy:</b><br>- Relying on a discussion prep model and assigning students to explain specific sections of the course material.<br>- Relying on the main reference for the material, using PowerPoint slides.<br>-Lecture and presentation<br>-Discussion method<br>-Problem-solving method<br>-Interrogation method |
| <b>-Learning Resources:</b><br>. 1. Qurman, Abdel Fattah (2018): Health and Environment<br>. 2. Marei, Abdul Karim (2015): Fundamentals of Nutrition<br>-. Main References: (No more than two references)                                                                                                                          |
| i. <b>A. Supporting References</b><br><br><b>B. Books and Enrichment References (Scientific Journals, etc.</b><br><b>C. Electronic Resources and Websites, etc.</b>                                                                                                                                                                |
| <b>A. Enrichment books and references (scientific journals, etc.):</b><br><b>B. Electronic sources and websites, etc.</b>                                                                                                                                                                                                          |
| <b>-Course Policy and Regulations:</b><br><b>-Attendance Policy for Educational Activities:</b> In the event of a student's absence, they will receive an initial warning, a second warning, and then a final warning. A note will then be submitted to the department, and the student will be considered expelled for absence.   |
| <b>-Lateness:</b> If a student is repeatedly late to educational activities, they will be considered absent from the lecture                                                                                                                                                                                                       |
| <b>-Exam Controls:</b> If a student is absent without an excuse, they will be given a zero. If they are late, they will be tested with students in another room.                                                                                                                                                                   |
| <b>-Assignments and Projects:</b> Assignments or projects must be submitted by the deadline specified by the teacher. Late submissions will be rejected.                                                                                                                                                                           |
| <b>-Cheating:</b> If a student cheats on an exam, a memo will be submitted to the department head for necessary action.                                                                                                                                                                                                            |
| <b>Plagiarism:</b> If a student is discovered to be impersonating another person, a report will be immediately submitted to the department chair.                                                                                                                                                                                  |



**Other Policies: Any other policies related to course privacy, or according to university regulations.**

**Stamp and Signature of the Head of Department"**

BED-QA-QU26-3  
V1-2024/09/16

**Course Professor**

Hind Abdulrazzaq:Assistant Professor