**Ministry Of Higher Education and Scientific Research**





**AL-Mustansyriah University/College of Science/Department of Biology**

**(الخطة الدراسية للمساق)**

***Course Plan***

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| **Course No.: 1** | **Course Name: Secondary metabolites technology** |
| **Academic Year: 2022-2023** | **Time Division: 2 hr** |
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**Course Description**

Secondary metabolites technology provid an intensive overview on what are the seconadary metaboliets, functions; how secondary metabolites sysnthesis from diferent microogansim and plants, the significant effect and application in many field also studying the effect of different conditions on production of secondary etabolites inside the bacterial cell.

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| **Course Intended Outcomes:**  At the end of the course the students are abel to identify secondary metabolites and their functions in side the cells, what is the difference between the primary and secondary metabolites and application in biotechnology . Recogniz the catogries of secondary metabolites and their functions including the main metabolic pathais leading to creat them . |
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| **Week** | **Description depends on the Timing table(Theoretical & Practical)** |
| **1** | **Lec 1; introduction to secondary metabolites** |
| **2** | **Lec 2; Sources of secondary metabolites** |
| **3** | **Lec 3 ; Secondary metabolites of microorganisms** |
| **4** | **Lec 4; Secondary metabolites production** |
| **5** | **Lec 5; secondry metabolites applications** |
| **6** | **Lec6 ; plant secondary metabolites** |
| **7** | **Lec. 7 Bcaterial secondary metabolites** |
| **8** | **Exam**  **أمتحان شهري** |
| **9** | **Lec 8: Antibiotic as a secondary metabolites** |
| **10** | **Lec. 9: Hormones Antibiotic as a secondary metabolites** |
| **11** | **Lec. 10 Factors effect on the production of secondary metabolites** |
| **12** | **Exam** |
| **13** | **Oral presntaion** |
| **14** | **Second attempt Exam**  **أمتحان شهري** |

**Textbooks:**

Biotechnology (2005) 2nd ed

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**Suggested references:**

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| R. B harbert(1981). The biosysntehsis of secondary metabolites. 1st ed |

**Marking:**

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| **First Semester** | **Second Semester** | **Final Exam** |
| |  |  |  |  | | --- | --- | --- | --- | | **1st exam** | **2nd exam** | **Practical** | **Activity** | | **6** | **6** | **6** | **2** | | |  |  |  |  | | --- | --- | --- | --- | | **1st exam** | **2nd exam** | **Practical** | **Activity** | | **6** | **6** | **6** | **2** | | |  | | --- | |  | | 60 | |

**Assignments and/or Projects:**

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| **Assignment/Project** | **Description** | **Due Date** | **Marking** |
| Quizzes& scientific posters & reports | A scientific subject is chosen and summarized by student as a report or poster form. | First semester | 2 |
| Quizzes& scientific posters & reports | A scientific subject is chosen and summarized by student as a report or poster form. | Second semester | 2 |

**Instructor information:**

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| Lecture Room: [304] | Time: 2 hours | |
| Instructor's Name : **1-Assitant Prof. Dr.Amna Mohammad Ali**  **2- Assitant Prof. Dr. Nada Zaki Mahdi** | | Office No.:13 | | |
| E-Mail: 1- dr.amnaalahshimi2uomustansiriyah.edu.iq  2- smnk@uomustansiriyah.edu.iq  ***NOTES:***   * ***Office Hours: Other office hours are available by appointment.*** * ***The content of this syllabus not be changed during the current semester.*** | | | |  |

**Lecturer Signature Chairman Signature**