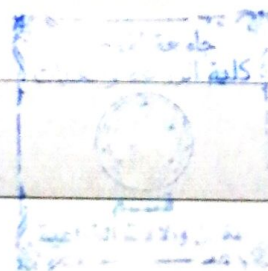


Course Description Form

| | |
|--|--|
| 1. Course Name: | |
| Mathematic -2 | |
| 2. Course Code: | |
| MATH133 | |
| 3. Semester / Year: | |
| second course 2023-2024 | |
| 4. Description Preparation Date: | |
| 1/2/2024 | |
| 5. Available Attendance Forms: | |
| presence | |
| 6. Number of Credit Hours (Total) / Number of Units (Total) | |
| 45 hours /3 units | |
| 7. Course administrator's name (mention all, if more than one name) | |
| Name: Shamil Mohammed Saleh Hassan Email: eng.sh.hassn@uomosul.edu.iq | |
| 8. Course Objectives | |
| Course Objectives | <ul style="list-style-type: none">• The student uses understanding and of the basic concepts of engineering mathematics• So that the student can develop his mental abilities when solving exercises and making connections with information to reach a solution and benefit from it in other transactions. |
| 9. Teaching and Learning Strategies | |
| Strategy | <ul style="list-style-type: none">- Interactive lecture- Brainstorming- Dialogue and discussion- Assigning tasks |
| 10. Course Structure | |



| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
|------|--------------|---|--|--|-------------------|
| 1 | 3Theoretical | a1: Knowing the idea of then in target and the non-specific | Introduction to Definite and indefinite integration | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 2 | 3Theoretical | a2: Identify the basic rules of integration | Integration properties | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 3 | 3Theoretical | a3: Know the rules for solving the integration of exponential and logarithmic functions | Integration of exponential and logarithmic functions | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 4 | 3Theoretical | a4: Know the rules for solving the integral of homogeneous functions | Integration of trigonometric functions | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 5 | 3Theoretical | a5: Know the laws of solving the inverse integral trigonometric functions | Integration of inverse trigonometric function | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 6 | 3Theoretical | a6: Solve additional problems for types of integrals | Solve problems | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 7 | 3Theoretical | a7: Knowledge of the integration rule by algebraic substitution and types of functions | Integration methods (integration by algebraic substitution | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 8 | 3Theoretical | a8: Knowledge of the law of integral by parts and | Integration by parts | Interactive lecture, brainstorming, dialogue and | Quiz discussion |

كلية الزراعة والبيوت
 2022

مركز الأبحاث الزراعية
 2022

| | | | | | |
|----|--------------|--|---|--|-----------------|
| | | its application to different types of functions | | discussion, self-learning | |
| 9 | 3Theoretical | a9: Knowing how to convert a function to partial fractions and how to integrate with partial fractions | Integration with partial fractions | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 10 | 3Theoretical | c1: Integration with partial fractions | Integration with partial fractions | Interactive lecture, brainstorming, dialogue and discussion, self-learning | Quiz discussion |
| 11 | 3Theoretical | a10: know how to find the area under the curve by the approximate method | calculate area using the approximate method | Interactive lecture, brainstorming, dialogue and discussion, self-learning | quiz discussion |
| 12 | 3Theoretical | c2: know how to calculate the area under the curve for various functions | calculate the area under the curve by integration | Interactive lecture, brainstorming, dialogue and discussion, self-learning | quiz discussion |
| 13 | 3Theoretical | a11: know how to find the area between the curves | calculate the area between two curves | Interactive lecture, brainstorming, dialogue and discussion, self-learning | quiz discussion |
| 14 | 3Theoretical | c3: knowing how to find the volume off a rotating body using a pointer and a disc using both coordinates | calculating the volume of a rotating body | Interactive lecture, brainstorming, dialogue and discussion, self-learning | quiz discussion |
| 15 | 3Theoretical | a12: knowing the method of numerical integration | integration by approximate method (numerical) | Interactive lecture, brainstorming, | quiz discussion |

| | | | | |
|--|--|--------------|------------------------------------|--|
| | and comparing it to the usual method and for various functions | integrative) | discuss and discuss, self-learning | |
|--|--|--------------|------------------------------------|--|

11. Course Evaluation

5% short test
5% short test
15% for the first semester exam
15% second semester exam
Total 40%
Final exam 60%
Final grade 100%

12. Learning and Teaching Resources

| | |
|--|---|
| Required textbooks (curricular books, if any) | . Mathematics for the first grades , administration and economics 1980, Dr. Ali Aziz Ali/Assistant Professor of Mathematics, University of Mosul And Dr. Ali Al-Hasswan/Assistant Professor of Mathematics /Al-Mustansir Iya University |
| Main references (sources) | Engineering Mathematics, fourth edition, John Bird |
| Recommended books and references (scientific journals, reports...) | |
| Electronic References, Websites | |



رئيس القسم

أ.م. نوفل عيسى محييد

مدرس المادة

م. انبال محمد صالح حسن

رئيس اللجنة العلمية

أ.د. أركان محمد امين صديق