

Course Description Form

| 1. Course Name: | | | | | |
|---|-------|---|---|----------------------------------|---|
| Programming | | | | | |
| 2. Course Code: | | | | | |
| COMP252 | | | | | |
| 3. Semester / Year: | | | | | |
| 1 st semester/2 nd Year | | | | | |
| 4. Description Preparation Date: | | | | | |
| 23/3/2024 | | | | | |
| 5. Available Attendance Forms: | | | | | |
| Presences | | | | | |
| 6. Number of Credit Hours (Total) / Number of Units (Total) | | | | | |
| 60 hours (30 theoretical + 30 practical)/ 3 units | | | | | |
| 7. Course administrator's name (mention all, if more than one name) | | | | | |
| Name: Ass. Lect. Mohammed Qasim Ali | | | | | |
| Email: mohammed.q.ali@nahrainuniv.edu.iq | | | | | |
| 8. Course Objectives | | | | | |
| Course Objectives | | | <ul style="list-style-type: none"> the student learns to write program code for solving mathematical problem or any other problems. The usage MATLAB functions to write the program code Solve calculus problems | | |
| 9. Teaching and Learning Strategies | | | | | |
| Strategy | | <ol style="list-style-type: none"> 1. Lectures 2. Practicality 3. Exercises (homework) | | | |
| 10. Course Structure(theoretical) | | | | | |
| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
| 1,2 | 4 | Understanding the course requirements | Flowcharts and Algorithms | Lectures, practical and homework | Quizzes, midte exams, homework, attendance and participate during lecture |
| 3 | 2 | | Programming Using Script Files | | |
| 4 | 2 | | Input & Output Commands | | |
| 5 | 2 | | Relational And Logical Operators | | |
| 6 | 2 | | Conditional Statements | | |
| 7,8 | 4 | | Conditional Loops | | |
| 9,10 | 4 | | User-Defined Functions Anonymous Functions | | |
| 11 | 2 | | Subfunctions | | |
| 12,13 | 4 | | Symbolic Math Programming | | |
| 14,15 | 4 | | Calculus Programming | | |

10. Course Structure(practical)

| Week | Hours | Required Learning Outcomes | Unit or subject name | Learning method | Evaluation method |
|-------|-------|---------------------------------------|---|------------------------------------|---|
| 1,2 | 4 | Understanding the course requirements | Create m-file and its properties "input" & "disp" Statements | Lectures, practical homework | Quizzes, midterm exams, homework, attendance and participate during lecture |
| 3 | 2 | | "fprintf" statement and its properties | | |
| 4 | 2 | | Relational Operators and Logical ("and", "or" ... statements) in MATLAB | | |
| 5 | 2 | | {if - elseif - else - end} and {switch} statements | | |
| 6 | 2 | | {for loop} and {while loop} statements with {break} statement usage | | |
| 7,8 | 4 | | Write User-Defined Functions and Anonymous Functions in MATLAB | | |
| 9,10 | 4 | | MATLAB Subfunctions | | |
| 11 | 2 | | 1) Symbolic Variables and Expressions with "sym" and "syms" statements 2) Simplification Functions | | |
| 12,13 | 4 | | Solving Expressions and Equations with {solve} statement | | |
| 14,15 | 4 | | Calculus programming using {limit, diff, and int} statements | | |

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

12. Learning and Teaching Resources

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| Required textbooks (curricular books, if any) | |
| Main references (sources) | MATLAB® An Introduction with Applications (4th.ed Amos Gilat @ 2011 |
| Recommended books and references (scientific journals, reports...) | College library |
| Electronic References, Websites | MATLAB Documentation (mathworks.com) |