

**Mosul University**

الجامعة الموصل



*Engineering College / Computer Department*

كلية الهندسة - قسم الحاسوب



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## 1. **Mission & Vision Statement**

### ***Vision Statement***

The Department of Computer Engineering be distinguished by preparing qualified engineers and researchers with modern information to meet society's needs and create scientific research that maintains pace with advances in computer engineering and its applications.

### ***Mission Statement***

Distinguished education, solid scientific research, and community service.

## 2. **Program Specification**

|                        |                       |                              |           |
|------------------------|-----------------------|------------------------------|-----------|
| <b>Programme code:</b> |                       | <b>ECTS</b>                  | 2ξ .      |
| <b>Duration:</b>       | 4 levels, 8 Semesters | <b>Method of Attendance:</b> | Full Time |

The Department of Computer Engineering was established in 1998 for the purpose of graduating engineers specialized in computer engineering. This specialization includes the following studies: designing computer circuits, circuits needed to connect the computer with external accessories, building software needed to operate external accessories, computer networks, computer control, and real-time signal processing. Master's studies began in the department in 1997-1998, while doctoral studies opened in 2001.

The Department of Computer Engineering is equipped with a number of laboratories specialized in the fields of: microprocessors, communications, electrical, computer networks, real time, computer architecture, and a control laboratory.

The Master's study period is two calendar years: It consists of two semesters to complete (24-26) credits in addition to (10-12) units for the requirements of the research year. The doctoral study period is 3 years, which includes passing two semesters to finish (20-22) credits and then passing the comprehensive exam, then completing the thesis, which is equivalent to (38-40) credits. Therefore, the total study for a doctorate degree is 60 credits.

Computer department intends to achieve the following requirements:

- 1- Basic computer requirements: The student in the Department of Computer Engineering studies computer subjects as physical components and software as well, in a way that ensures the achievement of the department's goals through theoretical and laboratory and practical subjects and through graduation projects.
2. Basic engineering requirements: The student also studies basic subjects such as electronic and general electrical circuits first, and then the design and construction of computer hardware.
3. Supporting requirements: The study period is accompanied by the identification of supportive study subjects such as primary, analytical and applied mathematics for the first three years of the study period, in addition to the humanities subjects.

### **3. Program Goals**

1. Preparing engineers with a high level of knowledge and skill capable of building computer systems, analyzing and developing them, while following up them after graduation.
2. Continuing to follow up the curricula to keep pace with scientific development in a manner that suits the needs of the labor market by adopting quality standards and using the latest methods.
3. Working to keep abreast of the latest scientific research in various specializations within the lecturers research and theses of postgraduate students.
4. Organizing seminars and holding scientific conferences and workshops with the colleges, government institutions and the private sector to solve problems and develop the work of these institutions.
5. Providing academic, technical and scientific consultations in the fields of computer engineering to all governmental and private sectors of society.
6. Guiding the students to teamwork, generating intrinsic motivation, keenness to find and understand the knowledge necessary to succeed in the tasks entrusted to them in the future, and aspiration to keep pace with the most prestigious scientific institutions in the field of computer engineering, and to adhere to professional ethics.

#### **4. Student Learning Outcomes**

Computer engineering is the study of the of all the computer fundamentals and principles. The preparation of graduates aware of the practical reality in the local and global markets is a basic requirement for the Department of Computer Engineering. The outcomes are often explained to graduates in different forms, whether theoretical or practical, as follows:

##### **Outcome 1**

The graduates will use their knowledge and abilities to grow in their employment or pursue higher

##### **Outcome 2**

The graduates will act morally and responsibly, stay informed, and be actively committed as contributors to their professions and societies.

##### **Outcome 3**

The graduates will be innovative problem solvers, competent communicators, and successful members of inclusive, diverse teams

##### **Outcome 4**

The graduates will successfully execute hardware- and/or software-related engineering projects to satisfy client business objectives and/or productively engage in research by applying the concepts and practices of computing anchored in mathematics and science.

#### **5. Academic Staff**

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## 6. Credits, Grading and GPA

### Credits

Mosul University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

### Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

| GRADING SCHEME                                                                                                                                                                                                                                                                                                                                                           |                  |                     |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|-----------|---------------------------------------|
| مخطط الدرجات                                                                                                                                                                                                                                                                                                                                                             |                  |                     |           |                                       |
| Group                                                                                                                                                                                                                                                                                                                                                                    | Grade            | التقدير             | Marks (%) | Definition                            |
| Success Group (50 - 100)                                                                                                                                                                                                                                                                                                                                                 | A - Excellent    | امتياز              | 90 - 100  | Outstanding Performance               |
|                                                                                                                                                                                                                                                                                                                                                                          | B - Very Good    | جيد جدا             | 80 - 89   | Above average with some errors        |
|                                                                                                                                                                                                                                                                                                                                                                          | C - Good         | جيد                 | 70 - 79   | Sound work with notable errors        |
|                                                                                                                                                                                                                                                                                                                                                                          | D - Satisfactory | متوسط               | 60 - 69   | Fair but with major shortcomings      |
|                                                                                                                                                                                                                                                                                                                                                                          | E - Sufficient   | مقبول               | 50 - 59   | Work meets minimum criteria           |
| Fail Group (0 - 49)                                                                                                                                                                                                                                                                                                                                                      | FX – Fail        | راسب - قيد المعالجة | (45-49)   | More work required but credit awarded |
|                                                                                                                                                                                                                                                                                                                                                                          | F – Fail         | راسب                | (0-44)    | Considerable amount of work required  |
| Note:                                                                                                                                                                                                                                                                                                                                                                    |                  |                     |           |                                       |
| Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above. |                  |                     |           |                                       |

### Calculation of the Cumulative Grade Point Average (CGPA)

- The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

$$\text{CGPA} = [ (1^{\text{st}} \text{ module score} \times \text{ECTS}) + (2^{\text{nd}} \text{ module score} \times \text{ECTS}) + \dots ] / 240$$

## 7. Curriculum/Modules

### Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

| Code  | Module                          | SSWL | USSWL | ECTS | Type | Pre-request |
|-------|---------------------------------|------|-------|------|------|-------------|
| CE101 | English Language                | 33   | 17    | 2.00 | B    |             |
| CO102 | Democracy and Human Rights      | 33   | 17    | 2.00 | B    |             |
| CO103 | Mathematics 1                   | 78   | 97    | 7.00 | C    |             |
| CO104 | Engineering Drawing by Computer | 48   | 52    | 4.00 | S    |             |
| CO105 | Electrical Circuits Analysis1   | 108  | 67    | 7.00 | C    |             |
| CO106 | Electronics Physics             | 63   | 62    | 5.00 | C    |             |
| CO107 | Computer                        | 48   | 27    | 3.00 | B    |             |

### Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

| Code  | Module                         | SSWL | USSWL | ECTS | Type | Pre-request |
|-------|--------------------------------|------|-------|------|------|-------------|
| CO108 | Programing using C++ Language  | 93   | 82    | 7.00 | C    |             |
| CO109 | Arabic Language                | 33   | 17    | 2.00 | B    |             |
| CO110 | Mathematics 2                  | 78   | 97    | 7.00 | C    |             |
| CO111 | Electrical Circuits Analysis 2 | 108  | 67    | 7.00 | C    | CO103       |
| CO112 | Digital System Fundamentals    | 93   | 82    | 7.00 | C    | CO105       |

## 8. Contact

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