**Course Specification**

(IS 415 Object Oriented Database)

|  |  |
| --- | --- |
| **University:** | Helwan University |
| **Faculty:** | Faculty of Computers & Information |
| **Department:** | Information systems |

**1. Course Data**

|  |  |
| --- | --- |
| **Code:** | **IS 415** |
| **Course title:** | Object Oriented Database |
| **Level:** | 4 |
| **Specialization:** | Information systems |
| **Credit hours:** | 3 hours |
| **Number of learning units (hours):** | (3) theoretical (2) practical |

**2. Course Objective**

The goal of this course is to introduce undergraduate students to basic concepts in object oriented database, the need to OODB, object oriented data model and object oriented database management.

**3. Intended Learning Outcomes:**

1. **Knowledge and Understanding**

A13. Apply Object oriented Analysis and Design.

1. **Intellectual Skills**

B21. Develop innovative designs.

B22. Create and justify Software different designs.

1. **Professional and Practical Skills**

C1. Design methodologies.

1. **General and Transferable Skills**

D7. Practice Learning and working both independently and in groups.

D9. Follow Logical thinking in real time problem solving.

**4. Course contents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Topic** | **No. of hours** | **Lecture** | **Tutorial/ Practical** |
| Object Oriented Concepts | 9 | 3 | 4 |
| Object Oriented Modeling: UML – Class Diagram | 9 | 3 | 4 |
| Object Oriented Modeling: Object Data Language | 8 | 2 | 3 |
| Object Oriented Modeling: Object Query Language | 8 | 3 | 3 |
| Object Oriented Database Management | 8 | 3 | 2 |

**Mapping contents to ILOs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Topic | Intended Learning Outcomes (ILOs) | | | |
| Knowledge and understanding | Intellectual Skills | Professional and practical skills | General and Transferable skills |
| Object Oriented Concepts | A13 |  |  |  |
| Object Oriented Modeling: UML – Class Diagram | A13 | B21 | C1 |  |
| Object Oriented Modeling: Object Data Language | A13 |  |  | D7, D9 |
| Object Oriented Modeling: Object Query Language | A13 |  |  | D7, D9 |
| Object Oriented Database Management | A13 | B22 | C1 | D7, D9 |

**5. Teaching and Learning Methods**

Class lectures

Exercises

Lab Work

**6. Teaching and Learning Methods for students with limited capability**

Using data show

e-learning management tools

**7. Students Evaluation**

**a) Used Methods**

Assignments

Exams

**b) Time**

Assessment 1: Test 1 Week 4

Assessment 2: Test 2 Week 7

Assessment 3: Midterm Exam Week 10

Assessment 4: final written exam Week 16

**c) Grades Distribution**

Mid-term Examination 30 %

Final-Year Examination 60 %

Semester Work 10 %

Total 100%

Any formative only assessments

**List of Books and References**

**a) Notes**

Course Notes

Handouts

**b) Mandatory Books**

**Title:** Database Systems: A Practical Approach to Design, Implementation and Management

**Author(s):** Thomas Connolly and Carolyn Begg

**Publisher:** Addison-Wesley, 1999

**c) Suggested Books**

**Title:** Modern Database Management

**Author(s):** Jeffrey A. Hoffer, Mary B. Prescott, and Fred R. McFadden

**Publisher:** Prentice Hall, 1999

**d) Other publications**

**Course Coordinator:**  Dr. Maha Hana

**Chairman of the Department:** Prof. Dr. Yehia Helmy