**Ministry of Higher Education and Scientific Research**

**Supervision and Scientific Evaluation Body**

**Quality Assurance and Academic Accreditation Office**

**Course Description**

# Subject: operational research

|  |
| --- |
| This course description provides a brief survey of the most important characteristics, expected learning output, showing whether students have made full use f the learning opportunities. These characteristics have to be matched with the description of the program. |

|  |  |
| --- | --- |
| 1. Educational Institution | Shatt Al-Arab University College |
| 2. Department / Center | Business Administration |
| 3. Course Title /Code | Operational research |
| 4. Lecturer Name | Mohammed Abood Tahir |
| 5. Type of Teaching | Attendance |
| 6. Academic Year /Term | 3rd  BA315 |
| 7. Total No. of Teaching Hours | 45 |
| 8. Date f Preparing this Course Description | 12/11/2023 |

9. **Course Objectives**

|  |
| --- |
| a. Providing students with the most important principles and basics of operational research |
| b.Teaching students how to apply operational research |
| c. Providing graduates with the necessary knowledge on operational research job in organizations. |
| d. Improving the administrative skills in the field of operational research |
| e. Providing graduates with the skills of education and creative learning. |

10. **Course Output, Methodology and Evaluation**

(A) **Cognitive Objectives**

|  |
| --- |
| a. Enabling students to acquire knowledge and the art of operational research |
| b. Acquainting students with how to promote their personal knowledge. |
| c. Helping students to acquire knowledge in the art of operational research. |
| d. Enabling students to sharpen their skills in the dynamic work environment. |
| e. Enabling students to invest their scientific abilities in their working place in the scope of operational research. |
| f. Helping students to get the necessary knowledge to solve problems operational research |

(B) **Skill Objectives Related to the Program**:

|  |
| --- |
| a. Scientific Skills |
| b. Leadership Skills |
| c. Skills Related to Administrative Work Challenges |

**Methods of Teaching and Learning**

|  |
| --- |
| a. Using already- prepared lectures. |
| b. Using up-to-date data shows. |
| c. Homework |
| d. Adopting group discussions. |

**Methods of Evaluation**

|  |
| --- |
| a. Oral tests |
| b. Monthly tests |
| c. Daily quizzes |
| d. Students' Regular Attendance |

(C) **Sentimental and Value Objectives**

|  |
| --- |
| a. Realizing ethical objectives. |
| b. Commitment to university traditions. |
| c. Compliance with the University Instructions and the Ministry Regulations. |
| d. Promoting students' personal abilities in educational scopes and how to behave well with others. |

**Methods of Teaching and Learning**

|  |
| --- |
| a. Lectures on university instructions. |
| b. Educational guidance lectures. |
| c. Continuous directing. |
| d. Visiting State and private institutions. |
| e. Showing practical cases. |

**Methods of Evaluation**

|  |
| --- |
| a. Daily quizzes. |
| b. Classroom discussions and commitment to ethics and sublime values. |
| c. Special marks for class activities. |
| d. Monthly and quarterly evaluation. |

D) **General and Qualitative Skills (other skills related to the ability of employment and personal development)**

|  |
| --- |
| a. Enabling students to acquire the skill and art of operational research |
| b. Enabling students to apply creative thinking in operational research |
| c. Enabling students to use modern methods of analysis and conclusions. |
| d. Enabling students to operational research |

11. **Course Structure**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Week** | **No of Hours** | **Required Learning Output** | **Title of Subject** | **Teaching Method** | **Evaluation** |
| 1 | 3 | understanding the material | Introduction in operational research formulation of linear programming model | - lectures  - case study  -discussions | - oral tests  -questions |
| 2 | 3 | understanding the material | Graphical solution for solving linear programming problems | - lectures  - case study  -discussions | - oral tests  -questions |
| 3 | 3 | understanding the material | Simplex method | - lectures  - case study  -discussions | - oral tests  -questions |
| 4 | 3 | understanding the material | Duality of linear programming | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 5 | 3 | understanding the material | Transportation model | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 6 | 3 | understanding the material | Transportation model | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 7 | 3 | understanding the material | Assignment model | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 8 | 3 | understanding the material | Assignment model | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 9 | 3 | understanding the material | Network | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 10 | 3 | understanding the material | Network | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 11 | 3 | understanding the material | Game theory | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 12 | 3 | understanding the material | Game theory | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 13 | 3 | understanding the material | Queuing theory | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 14 | 3 | understanding the material | Queuing theory | - lectures  - case study  -discussions | - lectures  - case study  -discussions |
| 15 | 3 | understanding the material | Exam | - lectures  - case study  -discussions | - lectures  - case study  -discussions |

12.**Infrastructure**

|  |  |
| --- | --- |
| a. Textbooks | Operational by H Taha |
| b. References |  |
| c. Recommended books and periodicals (journals, reports, etc.) |  |
| d. Electronic references, internet websites, etc |  |

13. **The Plan of Improving the Course**

|  |
| --- |
| a. Studying labor market needs. |
| b. Be informed of the experiences of other countries in the field of ----------------. |
| c. Be informed of research work published in national and international journals in the field of ----------------. |