**Construction methods**

**Course Description Form**

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| 1. Course Name: | | | | | | | | |
| Construction methods | | | | | | | | |
| 1. Course Code: | | | | | | | | |
| CE3103 | | | | | | | | |
| 1. Semester / Year: | | | | | | | | |
| First semester / Third year | | | | | | | | |
| 1. Description Preparation Date: | | | | | | | | |
| 1/10/2024 | | | | | | | | |
| 1. Available Attendance Forms: | | | | | | | | |
| In class | | | | | | | | |
| 1. Number of Credit Hours (Total) / Number of Units (Total) | | | | | | | | |
| The. 2 hr. Tut.1 hr. / 3 Units | | | | | | | | |
| 1. Course administrator's name (mention all, if more than one name) | | | | | | | | |
| Name: Mohammed Wassa Sabbar  Email: mohammed.w.sabbar@muc.edu.iq | | | | | | | | |
| 1. Course Objectives | | | | | | | | |
| **Course Objectives** | | | | 1. Introduce fundamental concepts of construction contracts, including estimation, specifications, and standard measurement methods. 2. Explore the types and selection criteria for construction equipment. 3. Understand soil stabilization and compaction techniques in engineering projects. 4. Examine the management and operation of construction plants and earthwork equipment. 5. Develop practical skills in excavation, tractor operations, and scraper usage for construction activities. | | | | |
| 1. Teaching and Learning Strategies | | | | | | | | |
| **Strategy** | | 1. To provide students with a comprehensive understanding of construction methods and equipment, emphasizing practical applications in plant management, earthworks, and soil stabilization to ensure proficiency in modern engineering practices. | | | | | | |
| 1. Course Structure | | | | | | | | |
| **Week** | **Hours** | | **Required Learning Outcomes** | | **Unit or subject name** | | **Learning method** | **Evaluation method** |
|  | 5 | | 1. Explain key concepts of construction contracts, including estimation and standard methods of measurement. | | Introduction | | 1. Interactive Learning 2. Collaborative Learning 3. Technology-enhanced 4. Learning Problem-based Learning | Several Ways (Exams + Assignments) |
|  | 5 | | Introduction | | Several Ways (Exams + Assignments) |
|  | 5 | | Introduction | | Several Ways (Exams + Assignments) |
|  | 5 | | Differentiate between various types of construction equipment and their applications. | | Types and Selection of Construction equipment | | Several Ways (Exams + Assignments) |
|  | 5 | | Types and Selection of Construction equipment | | Several Ways (Exams + Assignments) |
|  | 5 | | Apply soil stabilization and compaction methods effectively. | | Types and Selection of Construction equipment | | Several Ways (Exams + Assignments) |
|  | 5 | | Types and Selection of Construction equipment | | Several Ways (Exams + Assignments) |
|  | 5 | | soil Stabilization and Compaction | | Several Ways (Exams + Assignments) |
|  | 5 | | Demonstrate knowledge of excavation equipment, including tractors and scrapers. | | Tractor, | | Several Ways (Exams + Assignments) |
|  | 5 | | Scrapers | | Several Ways (Exams + Assignments) |
|  | 5 | | Excavation Equipment | | Several Ways (Exams + Assignments) |
|  | 5 | | Manage construction plants and execute earthworks operations efficiently. | | Plant Management | | Several Ways (Exams + Assignments) |
|  | 5 | | Earthworks | | Several Ways (Exams + Assignments) |
|  | 5 | | Plant Management | | Several Ways (Exams + Assignments) |
|  | 5 | | Exam | | Several Ways (Exams + Assignments) |
| 1. Course Evaluation | | | | | | | | |
| 1. Final Exam: 60% 2. Monthly Exams: 15% 3. Reports and Assignments: 10% 4. Attendance and Daily Participation: 10% 5. Oral Evaluation: 5% | | | | | | | | |
| 1. Learning and Teaching Resources | | | | | | | | |
| Required textbooks (curricular books, if any) | | | | | | Estimating Construction Costs" by Robert L. Peurifoy and Garold D. Oberlender | | |
| Main references (sources) | | | | | | "Construction Planning, Equipment, and Methods" by Robert L. Peurifoy, Clifford J. Schexnayder, and Aviad Shapira | | |
| Recommended books and references (scientific journals, reports...) | | | | | |  | | |
| Electronic References, Websites | | | | | |  | | |