Module (Course Syllabus) Catalogue

2022-2023

College/ Institute	Engineering technical college	
Department	Highway And Bridges	
Module Name	Construction Method & Equipment	
Module Code	MCE504	
Degree	Technical Diploma ☐ Bachelor OK High Diploma ☐ Master ☐ PhD ☐	
Semester	5 th	
Qualification		
Scientific Title	Assistant professor	
ECTS (Credits)	6	
Module type	Prerequisite ☐ Core OK Assist. ☐	
Weekly hours	4	
Weekly hours (Theory)	(2)hr Class	(2)Total hrs Workload
Weekly hours (Practical)	(2)hr Class	(2)Total hrs Workload
Number of Weeks	12	
Lecturer (Theory)	Ass. Pro. Dr. FARIS M. JASIM	
E-Mail & Mobile NO.	Faris.jasim@epu.edu.iq....07507587248	
Lecturer (Practical)	Dr. Faris ,,,Mr. Karzan, Mr.M.Dhiae.	
E-Mail & Mobile NO.		
Websites		

Course Book

Course Description	This course introduces students to construction equipment and selected construction methods. This includes economy, selection, and productivity of common construction equipment and construction procedures for industrial , Mixtures production plants , and heavy civil construction used in Highway , tunnels and bridges .
Course objectives	Upon the completion of the course students will demonstrate the ability to: 1. Understand terminology and units of measurements related to equipment usage in industrial and heavy civil projects; 2. Understand standard designations, sizes, and graduations of equipment; 3. Perform comparative cost analysis for owning and operating heavy equipment; 4. Perform the proper selection, applications, utilization and productivity of heavy equipment; 5. Understand general processes/methods for asphalt plants and PCC plants , 6. Understand general processes/methods for constructing industrial and heavy civil Projects; and 7. Show awareness of construction Safety (OSHA regulations for excavation, inspection and protection). In addition to the learning objectives above, this course emphasizes Ethics, Safety, and oral/Written Communication

<table>
<tr><td>Student's obligation</td><td colspan="5">Student's obligation
a. To attend the classes regularly with minimum absence.
b. To participate actively in the class discussion and Q&A session
c. Study on daily basis to digest the class material
d. To write note off-handouts
e. Prepared for sudden Quizzes
f. Vet through the references provided by the lecturer and to solve as much as possible of homework and exercises for the subjective materials.
Prepare the assignment and the seminar as instructed by the lecturer.</td></tr>
<tr><td>Required Learning Materials</td><td colspan="5"></td></tr>
<tr><td rowspan="11">Evaluation</td><td colspan="2">Task</td><td>Weight (Marks)</td><td>Due Week</td><td>Relevant Learning Outcome</td></tr>
<tr><td colspan="2">Paper Review</td><td></td><td></td><td></td></tr>
<tr><td rowspan="6">Assignments</td><td>Homework</td><td>5</td><td></td><td></td></tr>
<tr><td>Class Activity</td><td>2</td><td></td><td></td></tr>
<tr><td>Report</td><td>10</td><td></td><td></td></tr>
<tr><td>Seminar</td><td>10</td><td></td><td></td></tr>
<tr><td>Essay</td><td></td><td></td><td></td></tr>
<tr><td>Project</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Quiz</td><td>8</td><td></td><td></td></tr>
<tr><td colspan="2">Lab.</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Midterm Exam</td><td>25</td><td></td><td></td></tr>
<tr><td colspan="2">Final Exam</td><td>40</td><td></td><td></td></tr>
<tr><td colspan="2">Total</td><td></td><td></td><td></td></tr>
<tr><td>Specific learning outcome:</td><td colspan="5">1- Become familiar with construction equipment and their capabilities
2-Learn how to best utilize construction equipment on site work and heavy civil projects.
3- Understand standard terminology, designations, sizes, and gradations of equipment.
4- Properly select heavy equipment based on applications, utilization, productivity, and other factors.</td></tr>
</table>

	5- Understand the elements of equipment cost and evaluating investment alternatives
Course References:	**1-SORB (2007)** **2- Construction Methods And Equipment by ,,Layla Ali Ghalib,, (2013-2014)** **3- AASHTO Standard Tests (2012)**

Course topics (Theory)	**Week**	**Learning Outcome**
Introduction	1	
Setting out , preparation of site	3	
BOQ , Contracts types , Tendering	3	
Stage of highway constructions	3	
equipment types and different uses , factors affecting ,	5	
Earth works	5	
Soil Stabilization Techniques	5	
Compaction and Leveling Techniques	7	
Formwork Types	7	
Bridges Construction types	7	
Tunnel Construction types	9	
Airport Construction types	10	
Practical Topics	**Week**	**Learning Outcome**
Building construction site visit (different structures)	2	

Building construction site visit(finishing items)	4	
Highway project (150 m ring road) and Asphalt plant visit	6	
PCC plant visit	8	
Bridge site visit	10	
Tunnel project construction visit	12	

Questions Example Design

No Example Cause , the lecturer is in his first year of the article.

Extra notes:

External Evaluator