



**AUM**

# American University of Madaba

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Faculty of Engineering

Department of Civil Engineering

Course Curriculum 164 Credit Hours

## I: University Requirements: 25 Credit Hours

**A. Remedial Requirements (0 Credit Hours):** Students must sit for placement tests in English, Arabic, and Computer. Students who fail any of these tests are required to take the corresponding remedial course 0900099, 0900097, or 0900096, respectively.

## B. University Compulsory Course Requirements: 12 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab	
0900101	Sports (1)	1	0	3	-
0900103	Swimming	1	0	2	-
0900110	Cultural Development (1)	1	0	2	-
0900111	Military Science*	3	3	0	-
0900130	English Communication Skills (1)	3	3	0	0900099**
0900131	English Communication Skills (2)	3	3	0	0900130

\* Non-Jordanian students may take a university elective course instead.

\*\* Or passing the placement test.

## C. University Elective Course Requirements: 13 Credit Hours

### Humanities: 7 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab	
0900113	Interpersonal and Intercultural Communication	3	3	0	-
0900117	Civic Awareness	3	3	0	-
0900120	Arabic Communication Skills	3	3	0	0900097*
0900140	Appreciation of Art	3	3	0	-
0900141	Appreciation of Music	3	3	0	-
0900163	Modern life skills	3	3	0	-
0900164	Creativity and Innovation	3	3	0	-
0900201	Sports (2)	1	0	3	0900101
0900202	Sports (3)	1	0	3	0900201
0900210	Cultural Development (2)	1	0	2	0900110
0900211	Cultural Development (3)	1	0	2	0900210

\* Or passing the placement test.

### Social and Economic Sciences: 3 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab	
0900114	Civilization and Thought	3	3	0	-
0900115	Social Ethics	3	3	0	-
0900150	Introduction to Economics*	3	3	0	-
0900160	Entrepreneurship and Enterprises	3	3	0	-

\* Not for Business and Finance Students

### Science, Technology, Agriculture and Health: 3 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab	
0900116	Bio-Ethics	3	3	0	-
0900170	Energy and the Environment	3	3	0	-
0900171	Science and Society	3	3	0	-
0900180	Computer Skills*	3	2	2	0900096**

\* Not for Information Technology Students.

\*\* Or passing the placement test.

## II. Faculty Requirements: 27 Credit Hours

### Compulsory Requirements: 27 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab.	
0102200	Engineering Drawing	2	0	3	-
0102460	Engineering Economics	2	2	0	0903281
0104100	Engineering Workshops	1	0	3	-
0104400	Topics in Engineering Profession	2	2	0	0900130
0903101	Calculus (1)	3	3	0	-
0903102	Calculus (2)	3	3	0	0903101
0904101	General Physics (1)	3	3	0	-
0904102	General Physics (2)	3	3	0	0904101
0904107	General Physics Lab (1)	1	0	3	0904101*
0904108	General Physics Lab (2)	1	0	3	0904102*
0401222	Introduction to C++ programming	3	3	0	-
0903381	Numerical Analysis	3	3	0	0903102

(\*) denotes that the prerequisite can be taken concurrently.

## III. Department Requirements: 106 Credit Hours

### A. Compulsory Requirements: 83 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab.	
0102100	Introduction to Civil Engineering	2	2	0	-
0102201	Statics	3	3	0	0903101+0904101
0102231	Engineering Geology	3	3	0	-
0102251	Surveying	3	3	0	0903101
0102252	Surveying Lab	1	0	3	0102251
0102271	Construction Materials	3	3	0	0104212
0102311	Structural Analysis (1)	3	3	0	0104212
0102312	Structural Analysis (2)	3	3	0	0102311
0102313	Structural Lab	1	0	3	0102312
0102321	Transportation Engineering	3	3	0	0102251
0102322	Highway Geometric Design	3	3	0	0102321
0102331	Geotechnical Engineering	3	3	0	0104212
0102341	Fluid Mechanics	3	3	0	0102201
0102342	Hydraulics	3	3	0	0102341
0102343	Fluid Mechanics and Hydraulics Lab	1	0	3	0102342
0102372	Construction Materials Lab	1	0	3	0102271
0102411	Reinforced Concrete (1)	3	3	0	0102311+0102271
0102412	Reinforced Concrete (2)	3	3	0	0102411
0102413	Steel Structures	3	3	0	0102312
0102421	Pavement Design	3	3	0	0102322
0102422	Highway Engineering Lab	1	0	3	0102421
0102432	Geotechnical Engineering Lab	1	0	3	0102331
0102433	Foundation Engineering	3	3	0	0102331
0102441	Environmental Engineering	3	3	0	0102342
0102442	Environmental Engineering Lab	1	0	3	0102441
0102461	Specifications and Quantity Surveying	2	2	0	0102411
0102470	Civil Engineering Practical Training	3	-	-	Completion of 99 Cr.Hrs
0102514	Earthquake Engineering	3	3	0	0102411
0102515	Advanced Structural Analysis and	3	3	0	0102412
0102521	Traffic Engineering	3	3	0	0102321
0102543	Design of Environmental and	3	3	0	0102441
0102561	Construction Engineering Management	3	3	0	0102461
0102571	Graduation Project (1)	1	-	-	Completion of 120 Cr.Hrs
0102572	Graduation Project (2)	2	-	-	0102571

## B. Electives Requirements: 6 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab.	
0102511	Pre-Stressed Concrete Design	3	3	0	0102412
0102542	Hydrology	3	3	0	0102342
0102573	Special Topics in Structural Engineering	3	3	0	0102312
0102574	Special Topics in Transportation	3	3	0	0102321
0102575	Special Topics in Water / Environmental Engineering	3	3	0	0102441
0102576	Special Topics in Geotechnical Engineering	3	3	0	0102331

## C. Ancillary Requirements: 17 Credit Hours

Course No	Course Title	Credit Hours	Contact Hours		Prerequisite
			Lecture	Lab.	
0104211	Dynamics	3	3	0	0102201
0104212	Mechanics of Materials	3	3	0	0102201
0104316	Mechanics of Materials Lab	1	0	3	0104212
0902101	General Chemistry (1)	3	3	0	-
0902107	General Chemistry Lab (1)	1	0	3	0902101*
0903201	Applied Math for Engineering (1)	3	3	0	0903102
0903281	Probability and Statistics	3	3	0	-

(\*) denotes that the prerequisite can be taken concurrently.

## IV. Free Electives: 6 Credit Hours

Students may choose any course(s) offered by the University in accordance with University regulations.