Capstone Design (EGR4402)  
Spring 2020

Coordinator: Dr. Yassine SALIH-ALJ  
Office location: Room 105, Building 7  
Phone: Ext. 2101  
Email: Y.Alj@aui.ma

INFORMATION

<table>
<thead>
<tr>
<th>Prerequisite</th>
<th>Last semester, exit test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-requisite</td>
<td></td>
</tr>
<tr>
<td>Offered in Semester</td>
<td>Spring 2020</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>4</td>
</tr>
<tr>
<td>Contact Hours</td>
<td>1</td>
</tr>
</tbody>
</table>

CATALOGUE DESCRIPTION

A project design course to consolidate the information gathered in all previous courses. The content will vary and will take into account the technical electives and engineering optional courses selected.

COURSE GOALS AND OUTCOMES

This is a project-design course to consolidate information and skills gained in previous courses. Students will work on joint or individual projects from initial specification to implementation. Specific requirements will differ depending on the nature of the project.

The course also prepares students to enter the job market, through exposure to industry speakers. Attendance will be required at a number of presentations by industry professionals to be offered throughout the semester that will focus on current industrial issues.

Students successfully completing the course will be able to:

- Plan and implement a challenging project applying the material learned in courses.
- Communicate and coordinate effectively with a project client.
- Report results of project work in a professional manner.
- Describe their-own values and preparedness for the job market.
TOPICAL OUTLINE

<table>
<thead>
<tr>
<th>Wk.</th>
<th>Dates</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20-24/1</td>
<td>Project selection</td>
</tr>
<tr>
<td>2</td>
<td>27/1-31/1</td>
<td>Project Initial Specification(*) and Email (if any; see assignments details below) due: 31/1</td>
</tr>
<tr>
<td>3</td>
<td>3/1-7/1</td>
<td>The Feasibility Study and Analysis(*) is due: 7/2</td>
</tr>
<tr>
<td>4-7</td>
<td></td>
<td>First Capstone Diary(*) is due: 10/2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capstone diaries are due by Monday of each week following this.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interim Report(*) due: 6/3</td>
</tr>
<tr>
<td>8-12</td>
<td></td>
<td>Continuous work on project (reporting progress)</td>
</tr>
<tr>
<td>13</td>
<td>13-17/4</td>
<td>Final Report and Professional CV(**) due: 17/4 (Firm Deadline)</td>
</tr>
<tr>
<td>14</td>
<td>20-24/4</td>
<td>Project defense due: Mon.-Fri. 20-24/4</td>
</tr>
<tr>
<td>15</td>
<td>27/4-6/5</td>
<td>Any corrections to report/project implementation finished.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Updated Final Report is due: 6/5</td>
</tr>
</tbody>
</table>

ASSIGNMENTS

The project part of this course relies heavily on the initiative and professionalism of the individual student. Each student will be guided through a specific individual project by a supervisor, or by co-supervisors, depending on the topic and client for the project. The capstone coordinator will validate the scope and supervision of individual projects, and monitor progress regularly through the semester. After selecting a project in agreement with a supervisor(s), specific project related duties of all capstone students include:

1. Meeting with the supervisor(s) weekly to discuss progress as described in the Capstone Diary.
2. Submitting weekly Capstone Diaries (which have been approved by the supervisor) to the Capstone Coordinator before Monday of the following week.
3. Submitting the Initial Specification (to be approved by the supervisor): a one page overall description of the project with emphasis on its societal and ethical implications, including specific deliverables with a general timeline. Also, students willing to reserve a school computer should send an Email to the SSE Dean’s Assistant, Mrs. Bouchra Saad (B.Saad@aui.ma) with CCing the Capstone Coordinator.
4. Submitting the Feasibility Study (to be approved by the supervisor): an initial analysis of the feasibility and any additional computing resources needed for the project. Indeed, the use of a selected software tool (e.g., introduced in one of the courses taken by the student) is perceived as a requirement for Capstone Design.
5. Submitting the Interim Report (to be approved by the supervisor): a midterm progress report on the project as a whole that should include a section addressing societal and ethical implications of the work (STEEPLE analysis).
6. Submitting the Final Report (to be approved by the supervisor): a complete description of the problem, the approaches used in solving it, and the results and the implications.
7. Presenting a Public Defense of the project: an oral presentation of the project work.
8. Submitting the Updated Final Report(*) (Corrected), signed by the supervisor, after the Defense to validate the corresponding Report Grade. These reports will be later on posted on the web in the URL: http://www.aui.ma/sse-capstone-repository after plagiarism checking. A Similarity Rate of 40% or higher will systematically mean an F in the course! In case of a Similarity Rate of 20% or higher - but lower than 40% - the student will be invited to timely rewrite and submit a revised report for which the corresponding assessment will be downgraded if this rate is accordingly (***)

(*) Soft copies for online submission as PDF only!
(**) Hard copies for project’s defense scheduling.
brought below 20%. otherwise the student will receive a zero in the Report Assessment.
All of these items are electronically submitted through Jenzabar on a SINGLE (PDF) file. Email submissions are not considered in any circumstance. Except for the Final Report and the Updated Final Report where the Supervisor’s signature cannot be substituted by any means for approving these documents, in case the student could not meet with his/her Supervisor for having this latter signature approving his/her other deliverables, a simple email exchange with the Supervisor could be reported on the corresponding document (as an electronic signature) to substitute the missing signature. Each of the above reports MUST be strictly compliant to the provided format and each of the corresponding (PDF) files’ names MUST be accurately labeled using the Capstone Title and properly formatted by capitalizing each word in the title.
Specific project evaluation will be given by each supervisor to the Interim Report, the Final Report and to the Defense. The Interim Report evaluation measures the student’s attention to regular progress in the work. The Final Report evaluation includes a component to measure how the student has performed throughout the semester, and how well the report reflects the actual results achieved. This includes an evaluation of the process applied as well as the product. The Defense evaluation measures the student’s ability to present professionally the work accomplished.
One of the key parts of the Capstone Design course is the Capstone Lecture Series. This lecture series gives capstone students the chance to interact with current industry professionals, to discuss the specifics of the current Moroccan market as it relates to their degree programs.
Coordination of the capstone design course will be through meetings as required and announced in advance. Missing a meeting will count as an absence from the course, and normal university policy regarding absences will be applied. Many of these meetings will be replaced by specific industry presentations that will be scheduled throughout the semester. Failure to attend these presentations and participate, without a valid excused absence, will result in a reduction of the final grade.

GRADING

Your final grade will be a combination of the above elements, as follows:

Overall work evaluation: 50 %
Final Report evaluation: 25 %
Defense evaluation: 25 %
(Minus grade reduction penalties—see below)

Besides these evaluated components, students will have their grade reduced by not meeting regular requirements of the course in a timely way. These include submitting the Initial Specification statement, Feasibility Study, Interim Report, Final Report and regular meeting with the supervisor(s) as indicated by the regular submission of approved Capstone Diaries. Students who submit fewer than 7 diaries – out of 9 – will lose one point per diary missed from their final grade.

Late, Incomplete or Noncompliant Submissions of other documents cost the student one point per day from the final grade. Furthermore, missing any meeting/presentation costs one point per absence. Also, missing three (3) meetings (or more) with the Supervisor will result in a WF Grade for the Course.

PLAGIARISM

Students are reminded that cheating, whether by fabrication, falsification of data, or plagiarism, is an offence subject to University disciplinary procedures. Plagiarism in oral, written or visual presentations is the presentation of the work, idea or creation of another person, without appropriate referencing, as though it is one’s own. Plagiarism is not acceptable. The use of another person’s work or ideas must be acknowledged. Failure to do so may result in charges of academic misconduct, which carry a range of penalties including cancellation of results and exclusion from your course.