

[**INTERNSHIP GUIDELINES**]

This document addresses the content, requirements, and administration of the Professional Experience Course at the LAU School of Engineering.

Preamble

This document addresses the content, requirements, and administration of the Internship Course at the LAU School of Engineering. The relevant courses in the school are: CIE498, CHE498, COE498, ELE498, INE498, MCE498, MEE498, and PTE498.

Course Learning Outcomes

The course learning outcomes are listed below. Learning outcomes are statements that describe what the student is expected to acquire, learn, or be able to do by completing this internship.

1. Knowledge of contemporary/engineering practice
2. Use of acquired techniques, skills, and modern engineering tools necessary for engineering practice
3. Exposure to professional and ethical responsibility
4. Understanding the impact of engineering solutions in a global, economic, environmental, and societal context
5. Ability to work on multi-disciplinary teams.

The course learning outcomes have been added to the course syllabus and tied to the student outcomes as shown in the sample course syllabus in Appendix C.

Assessment of Student Learning

The following assessment tools will be used in assessing student learning in the course

1. Internship Employer Survey (as provided in Appendix B). This survey will be administered on a yearly basis after the conclusion of the course.
2. Internship Student Survey (as provided in Appendix C). This survey will be administered on a yearly basis after the conclusion of the course.
3. Student Report in which they summarize the learning experience during internship. The content and format requirements are provided in Appendix E.

The grade for the course is: Pass/No Pass

Course Administration

The quality of the internship experience depends heavily on the choice of the employer at which the training will be received. Therefore, it is vital to regulate the choice of the hosting companies by providing the students with a list of pre-approved or pre-selected companies to choose from. The school shall establish and maintain contact with companies (locally and abroad) in order to secure/procure internship positions on a regular basis. The school shall maintain a recommended list of employers where students can do their internship. However, it is the responsibility of the student to secure an appropriate company for their internship.

The instructor is in charge of the administration of the course. The tasks performed by the instructor shall include: (1) final approval of employer selection, (2) follow-up on students in their internship, and (3) evaluation of the student report at the conclusion of the internship according to item 8 under the section: Instructions to Students. The instructor may enlist the help of the Engineering Career Placement Officer to follow-up on students.

Instructions to Students

Students should be aware and make sure that they follow all instructions listed below. All documents related to the internship are available on the school website <http://soe.lau.edu.lb/> through the Student & Faculty Login link.

1. The professional experience is registered as 6 credits in the last Summer term before the student's graduation. With the exception of the Final Year Project, the student cannot register for any courses during that Summer term (irrespective of what times the classes start, etc.).
2. The professional experience is graded as Pass/Fail; no letter grade is assigned.
3. The professional experience is to normally last a *minimum* of the equivalent of eight *uninterrupted* weeks, where each week of work should consist of a minimum of 40 work hours.
4. Once the student secures an internship opportunity with a company, he/she needs to print out the "Professional Experience form" provided in Appendix A, fill out the information, get it signed by the company, and return it to the instructor for final approval before work can begin.
5. At the end of the internship the student should:
 - a. Provide the instructor with a certificate from the company that includes the following information: (a) declaration of the completion of the internship, (b) duration of work, (c) number of daily work hours, and (d) summary of duties assigned to intern. Students are expected to submit the certificate during first week of the fall semester.
 - b. Secure "Student Internship Survey" as provided in Appendix C and follow instructions.
 - c. Secure "Employer Internship Survey" as provided in Appendix B and follow instructions.
 - d. Submit the Student Report not later than the first week of the fall semester.
6. The content and format of the Student Report should be according to Appendix E.
7. The performance criteria that the student is graded on:
 - a. Personal initiative in undertaking tasks assigned.
 - b. Responsiveness and willingness to carry out tasks assigned.
 - c. Technical competence in carrying out tasks assigned (engineering knowledge, computing skills, knowledge of modern techniques / tools).
 - d. Student contribution to solving day-to-day problems or running day-to-day operations.
 - e. Efficiency of using work time.
 - f. Presence as required by the company.
 - g. Overall performance.

Appendix A: Professional Experience Form

This form should be finalized before starting the internship. It is the responsibility of the student to get this form filled by the company representative and secure signature of instructor before starting the internship.



Dear Prospective Employer

The student whose name appears below is enrolled in the Bachelor of Engineering Degree Program at LAU in the following

Major: _____

As part of their program requirements, students are required to work during one summer term at a company that offers a professional engineering practice in their field of specialization.

The work period should cover a minimum of the equivalent of 8 weeks of full-time work [approximately 320 work hours]. Students may not begin their practice before having this form filled out and signed by your company.

We appreciate your assistance in providing a working opportunity for our students, and would be interested to hear your comments at the end of their training. Your input and evaluation are crucial for the improvement of the education of our graduates.

Student Information [to be filled out by the student]

Student Name: _____ LAU ID # _____ Phone Number _____

Company Information and Approval [to be filled out by the company representative]

Company Name: _____

Address: _____

Phone Number: _____ Website: _____

Contact Person: _____

Phone Number: _____ Email: _____

By signing this sheet, I, the above named, on behalf of the company outlined above, testify that Mr./Ms. _____ has been officially accepted to do their internship practice at our company during the summer of _____, and would be given an official letter to certify this at the end of their internship.

Contact Person Signature: _____ Date: _____

Instructions

1. Student is responsible for having this form completed and signed by the course instructor before beginning the internship.
2. Student is responsible for observing the course requirements as outlined in the "Internship Guidelines" document.
3. The company is expected to monitor and evaluate the students work, and report to the course instructor any violation of the students work commitments.
4. Students will not be given credit for this course unless these criteria are all met.
5. For any additional information please contact the course instructor listed below.

Course Instructor

Name: _____ Department: _____ Phone Number: (09) 547 254 ext. _____

Instructor Signature: _____ Date: _____

Appendix B: Internship Employer Survey

Student should give this survey to their Supervisor at the end of the internship. The supervisor should fill it and place it in a sealed and stamped envelope. Student should collect it from Supervisor and submit it by hand to the instructor of the course.

Assessment of Student Professional Experience

EMPLOYER Evaluation of student Intern

General:

Date:

Student name:

Company name:

Company Address:

Phone

Company main product/service:

Name of supervisor:

Title:

Email Address:

Time period covered by this training:

Work schedule/day:

Work schedule/week:

Student Preparation/Skills:

In an effort to assess our student academic preparation in undertaking this internship, please evaluate the extent to which the student intern has demonstrated the following skills and abilities during the internship period:

	N/A	Unsatisfactory	Developing	Satisfactory	Exemplary
Analytical skills Ability to translate academic knowledge into practical applications using appropriate techniques/tools					
Ability to communicate effectively (orally and in writing)					
Ability to work in teams Ability to listen and cooperate with others, share information and reconcile differences					
Research Skills Effective use of information resources for an appropriate collection and interpretation of data needed for the development and completion of projects and experiments					
Problem solving abilities Development of many potential solutions to problems, ability to design components and conduct experiments					

Student Performance during training:

Please assess the student performance/attitude in the following areas while at your facility:

	N/A	Unsatisfactory	Developing	Satisfactory	Exemplary
Personal initiative in undertaking tasks assigned					
Responsiveness and willingness to carry out tasks assigned					
Technical competence in carrying out tasks assigned (engineering knowledge, computing skills, knowledge of modern techniques/tools)					
Student contribution to solving day-to-day problems or running day-to-day operations					
Efficiency of using work time					
Presence as required by the company					
Overall performance					

Assessment of Student Learning:

The following are statements that describe what the student is expected to acquire, learn, or be able to do by completing this internship. Please rate how well these outcomes were met through this internship.

	N/A	Unsatisfactory	Developing	Satisfactory	Exemplary
Knowledge of contemporary engineering practice					
Use of engineering skills, and modern engineering tools necessary for engineering practice					
Exposure to professional and ethical responsibility					
Understanding of the impact of engineering solutions in a global, economic, environmental, and societal context					
Ability to work on multi-disciplinary teams					

Appendix C: Internship Student Survey

Student should fill this survey at the end of the internship and should submit it by hand to the instructor of the course.

Assessment of Student Professional Experience

STUDENT Evaluation of Internship Learning Outcomes

General:

Date:

Student name:

Email address:

Phone:

Company name:

Company Address:

Phone:

Company main product/service:

Name of supervisor:

Title:

Time period covered by this training:

Work schedule/day:

Work schedule/week:

Assessment of employer/facility

Please assess the trainer and the premises at which you conducted your internship:

	N/A	Unsatisfactory	Developing	Satisfactory	Exemplary
Quality of tasks assigned and relevance to your degree of study					
Level of technical difficulty of the tasks assigned					
Mentorship and guidance provided by your supervisor					
Adequacy of workplace safety measures (if applicable)					
Degree of independence in carrying out tasks					
Degree of professional and ethical responsibility assigned to you					
Overall satisfaction with training experience					

Assessment of Learning Outcomes:

The following are statements that describe what you are expected to acquire, learn, or be able to do by completing this internship. Please rate how well these outcomes were met through this internship.

	N/A	Unsatisfactory	Developing	Satisfactory	Exemplary
Knowledge of contemporary engineering practice					
Use of engineering skills, and modern engineering tools necessary for engineering practice					
Exposure to professional and ethical responsibility					
Understanding of the impact of engineering solutions in a global, economic, environmental, and societal context					
Ability to work on multi-disciplinary teams					

Appendix D: Required Content in the Course Syllabus

The items provided below are per ABET requirements for Syllabi. The instructor can change the format and add more items as he/she sees fit, provided all items are included verbatim and not to exceed the two page limit.

Department, course number, and title

Civil Engineering, CIE498, Professional Experience

Designation as a Required or Elective

Required

Course Description

This course covers the professional experience, through training in the execution of real life engineering projects.

Prerequisites

Course must be taken during the last summer preceding graduation.

Textbook(s) and/or other required material

Internship Guidelines, Forms, and Instructions should be downloaded from the School website through the faculty & student Login link.

Student Learning Outcomes

On the successful completion of this course, students will attain the following outcomes:

1. Knowledge of contemporary engineering practice.
2. Use of acquired techniques, skills, and modern engineering tools necessary for engineering practice.
3. Exposure to professional and ethical responsibility.
4. Understanding the impact of engineering solutions in a global, economic, environmental, and societal context.
5. Ability to work on multi-disciplinary teams.

Topics covered

As per work assignments by the workplace supervisor

Class/laboratory Schedule

Internship covers a minimum of 8 continuous weeks of full time work (approximately 320 hours) during the Summer term.

Contribution of course to meeting the requirements of Criterion 5

Credit distribution of subject areas appropriate to engineering are:

Mathematics and Basic Sciences	0 credits
Engineering Topics	6 credits
General Education	0 credits

Relationship of course to Student Outcomes

This course is related to the following program outcomes:

- (d) an ability to function on multidisciplinary teams
- (f) an understanding of professional and ethical responsibility
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Person(s) who prepared this description and date of preparation

Caesar Abi Shdid, Ph.D., P.E., S.E.; March 18, 2016

Appendix E: Student Report (Content and Format)

The Student Report should contain all the sections listed below and in the order shown. There is no minimum number of pages for the Report; however, it should be written completely in the student's own words (no "cut-and-paste" allowed!). The Report should have the following format: 11-point, Arial font, with 1.5 spacing.

Lebanese American University

School of Engineering

“Replace by Department Name”

“Replace by Internship Title”

Professional Experience

“Replace by Course Name and Number”

Student Name & Student ID

Date Report Presented

Overview of company including:

1. Size of company
2. Number of employees
3. Main projects / products
4. Countries of operation

For each project / task assigned, include:

1. Description of project / task
2. Tasks student performed in project / task

For each week of work, state the exact engineering tasks performed that are related to the student's major of studies, as well as other performed tasks.

(8) Summary of Learning Experience

Relate the work performed to each learning outcome listed below. For each learning outcome student should provide a section with related information as experienced in their internship.

1. Knowledge of contemporary architecture/engineering practice
2. Use of acquired techniques, skills, and modern engineering tools necessary for engineering practice
3. Exposure to professional and ethical responsibility
4. Understanding the impact of engineering solutions in a global, economic, environmental, and societal context
5. Ability to work on multi-disciplinary teams.

Technical Writing Guidelines:

The following guidelines should be strictly followed in writing and formatting your report:

1. Use only the indicated font, size and spacing (Arial, 11-point, 1.5 line spacing). Do not use any other fonts or formatting variations in the same document, unless for an equation or other specific purpose.
2. Do not exceed the maximum total of 40 pages, including the cover page and appendices. If absolutely necessary to go over the limit, check with the faculty advisor for prior approval. No report under 20 pages will be accepted for any reason.
3. All figures and tables should have a caption and be numbered consistently.
4. Never paste a table as an image; always recreate tables in Microsoft Word and summarize large data sets to include only relevant data/information from the original source.
5. Use figures only to illustrate a point or to graph data and convey relevant information; do not add images for visual appeal only.
6. Never paste a figure with its original title or numbering from another source; always crop the image to remove original headings, and recreate the title/number in Microsoft Word to fit your purpose and format.
7. Always refer to your figures and tables in the text to introduce or explain them, even if briefly. For example, “The calculations are presented in Table 2 below”, or “as shown in Figure 5”.
8. Edit figures/images which are not clear; use color saturation, sharpening/softening and other basic image editing tools (available in Microsoft Word) as necessary.
9. Do not copy/paste entire pages from work manuals or any document that is not your own; You can quote “...” some sentences or a small paragraph as long as you reference the original source and use the quoted text to help explain your point in your own words. Using work that is not your own without proper referencing is plagiarism, and will result in a zero grade for the report.
10. To reference documents or individuals in your report, list the name/title and date in parentheses before or after the quoted text, for example: John Doe (2015) reported that “the quality problem is due to human error”; or “The quality problem is due to human error” (Doe, 2015). Note that it is not always necessary to quote a reference; you can also simply refer to it in your own words, without the need for quotes, for example: The quality problem was reported to be due to human error (Doe, 2015).
11. Spell-out acronyms on first use; for example, when first mentioning LAU, spell it out as “Lebanese American University”, and then you can use the acronym “LAU” in the rest of the report.
12. Do not overuse abbreviations. You can use e.g. when you mean “for example”, and use i.e. when you mean “in other words”. Avoid using etc., instead use the words “and so forth” or “and similar” or “and related issues...”
13. For numbers less than 10, use text: one, two, three...; for numbers 10 and above, use numerals: 10, 11, 12...; for any number with units, use numerals: 2 minutes; 15 kilograms or 15 kg ...
14. Your report didn’t do the internship, you did; the report merely documents your activities and results, so avoid making it the actor, for example: “This report analyzes” should be “This report documents the analysis of”. The same applies to tables and figures, for example: “Table 9 calculates” should be “Table 9 shows the calculations”.
15. Your report should comprehensively document your professional experience, so it should itself be written in a professional way; use spell-check and re-read your final draft to make sure it is easy to read and understand; write the report as a story that is interesting to read, rich in description, and is well connected from start to finish