Western Illinois University

COURSE SYLLABUS					
COURSE	ENGR 491 – ENGINEERING INTERNSHIP				
PREREQUISITE	Senior standing and approval of coordinator/director				
TIME (DAY)	Arranged	**CLASSROOM**	Arranged	**TERM**	Arranged
CREDIT HRS	2	**LECTURE HRS**	0	**LAB HRS**	0

COORDINATOR

Rafael Obregon
Professor and Director
School of Engineering and Technology
1 University Circle/Riverfront 3300
Macomb/Moline

Office Hours:
By appointment
e-mail: r-obregon@wiu.edu

COURSE DESCRIPTION

Off-campus work experience in engineering. Written weekly reports and, with company approval, records of projects, analysis of tasks and results, and overall accomplishments. Recommend completion before entering last term on campus.

TEXTBOOK: *The Mayfield Handbook of Technical and Scientific Writing,* L. C. Perelman, J. Paradis, and E. Barrett, MIT.

REFERENCE: How to structure a college paper

OPTIONAL MATERIALS

Students will have access, on a limited basis, to reference books or some other content through the University intranet. Software, particularly for students working remotely, is available from different sources. Competency with spreadsheet software, such as Excel, and Computer Aided Design (CAD). Any additional class-related resources or consumable will be provided to students.

SCHOOL GOALS FOR STUDENT LEARNING

The School of Engineering and Technology (SET) provides learning opportunities that prepare and motivate ethical responsible leaders and professionals who can adapt and apply practical knowledge, theories, principles, processes, and problem-solving techniques in a dynamic global society.

By graduation, students should be able to:

1. Think critically and creatively
2. Understand the theoretical principles of the profession
3. Understand and apply adequate technology in the solution of technical problems
4. Organize, manage, and maintain projects
5. Develop an appreciation for ethical and professional practices
6. Develop and refine oral, written, and visual communication skills
7. Demonstrate an overall competency in the program objectives.

PROGRAM OBJECTIVES & GOALS

Engineering Program Learning Objectives and Goals (ABET Criterion 3)

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

TOPICS COVERED

- Application of knowledge of mathematics, science, and engineering to the solution of engineering problems.
- Working effectively on a team to solve a problem or design components and processes.
- Identify and document areas for self-improvement either in acquisition of knowledge, effective use of engineering tools, or performance.
- Keeping a daily journal of activities, issues, problems worked on and solutions.
- Submission of a final summary report in accordance with instructions received from coordinator.

COURSE LEARNING OBJECTIVES

Upon the completion of the course, students will be able to:

Student Outcomes	ABET Criteria 3						
	1	2	3	4	5	6	7
Identify and solve complex engineering problems	X						
Apply engineering design to produce solutions		X					
Communicate effectively with a range of audiences			X				
Recognize ethical and professional responsibilities				X			
Function effectively on a team					X		
Develop and conduct appropriate experimentation						X	
Acquire and apply new knowledge as needed							X

CONTRIBUTION OF COURSE TO PROFESSIONAL COMPONENT

This course contributes to engineering science in all of the engineering and technology degrees.

COURSE ORGANIZATION

Classroom Work

No regularly scheduled class meetings.

Attendance

MUST attend scheduled workshops and meetings. Absence without prior arrangements are not acceptable. Attendance at the place of internship employment is required and all absences must be approved through the employer.

Due Dates

Reports and other required documentation are due prior to Final Exams Week. All work is to be submitted, as a PDF file, to the Submissions Folder on the Western Online portal.

Grade

Course graded as Satisfactory/Unsatisfactory (S/U).

The internship involves completing at least 80 hours of engineering related work in an industrial, commercial, government, construction or consulting environment.

The following three artifacts are required to complete the internship:

- **Journal**: Document completion of at least 80 hours of activities
- **Summary Report**: Overview of the internship experience – objectives, proposed work, what was learned, accomplishment, etc.
- **Certificate of Completion** : Statement (letter) from supervisor of work performance

UNIVERSITY POLICIES

STUDENT RIGHTS AND RESPONSIBILITIES (http://www.wiu.edu/provost/students.php)

Academic Integrity

Academic dishonesty includes the use of illegally obtained notes and exams, submission of work completed by another person, the sharing of exam answers with others, and similar activities. Such dishonesty will not be tolerated and will lead to penalties depending on the severity of the infraction. Please see http://www.wiu.edu/policies/acintegrity.php for more information.

Accessibility Statement

Students with disabilities: In accordance with University values and disability law, students with disabilities may request academic accommodations where there are aspects of a course that result in barriers to inclusion or accurate assessment of achievement. To file an official request for disability-related accommodations, please contact Disability Resources in the Student Development and Success Center at 309-298-1884, disability@wiu.edu, or in 125 Memorial Hall. Please notify the instructor as soon as possible to ensure that this course is accessible to you in a timely manner.

Disability Resources Overview

http://www.wiu.edu/student_services/ disability_resources

Grade Appeal

http://www.wiu.edu/policies/gradeapp.php

Incomplete Grade

http://www.wiu.edu/policies/incomplete.php

Center for Career Preparation and Employer Engagement

http://www.wiu.edu/careers

Title IX

University values, Title IX, and other federal and state laws prohibit sex discrimination, including sexual assault/misconduct, dating/domestic violence, and stalking. If you, or someone you know, has been the victim of any of these offenses, we encourage you to report this to the Title IX Coordinator at 309-298-1977 or anonymously online at: http://www.wiu.edu/equal_opportunity_and_access/request_form/index.php.

If you disclose an incident to a faculty member, the faculty member must notify the Title IX Coordinator. The complete Title IX policy is available at: http://www.wiu.edu/policies/dhsm.php.

MILITARY/VETERAN SUPPORT STATEMENT

As a military-friendly institution, and in accordance with federal regulations and Illinois statutes, Western Illinois University has established policies and procedures to accommodate military service students. In addition to the supports available at WIU's Veterans Resource Center (wiu.edu/student_success/veterans / 309-298-3505), veterans, members of the National Guard or Reserves, and active-duty military personnel with military obligations (e.g., deployments, trainings, drill) are encouraged to communicate these, in advance whenever possible, to the instructor. The Military Service Policy can be found at http://www.wiu.edu/policies/military.php

RESOLUTION OF PROBLEMS

Circumstances, of any kind, interfering with a student performance for the successful completion of the course should be brought to their instructor first. If problems are not resolved, the student must seek assistance from the Director of the School of Engineering and Technology. If the problem continues to be unresolved, students are encouraged to bring the issue to the Dean of the College of Business and Technology.

Students should observe the following sequence for the resolution of problems:

Student → Instructor → Director → Dean

Syllabus subject to change upon notice