

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

**COURSE NUMBER – COURSE NAME
MECH 477 - CAPSTONE**

Created by: Dr. Lucas Craig

Updated by:

Canino School of Engineering Technology

Department: MET

Semester/Year: Spring 2019

- A. **TITLE:** Capstone
- B. **COURSE NUMBER:** MECH 477
- C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

Credit Hours: 3
Lecture Hours: 3 per week
Lab Hours: per week
 Other: per week

Course Length: 15 Weeks

- D. **WRITING INTENSIVE COURSE:** Yes No
- E. **GER CATEGORY:** None: Yes: GER
If course satisfies more than one: GER
- F. **SEMESTER(S) OFFERED:** Fall Spring Fall & Spring

G. **COURSE DESCRIPTION:**

This course provides a learning experience that allows a student to propose, design, and implement a project. This could be a study of a problem and solution of specific equipment, new product design, improvement of an existing product, or many others. Course faculty must approve all projects. A minimum of 120 hours of work is required for this course (8 hours per week).

- H. **PRE-REQUISITES:** None Yes If yes, list below:

MECH 377

CO-REQUISITES: None Yes If yes, list below:

I. STUDENT LEARNING OUTCOMES: (see key below)

By the end of this course, the student will be able to:

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>Program Student Learning Outcome</u> <u>[PSLO]</u>	<u>GER</u> <i>[If Applicable]</i>	<u>ISLO & SUBSETS</u>	
Perform basic research	1-12,14-15		3-Found Skills 3-Found Skills ISLO	IM QTR Subsets Subsets
Demonstrate ability to project design and implementation.	1-15		2-Crit Think 5-Ind, Prof, Disc, Know Skills 4-Soc Respons	PS Subsets ER Subsets
Identify and propose a solution to a specific engineering technology problem	1-12,14-15		2-Crit Think 2-Crit Think ISLO	IA PS Subsets Subsets
Prepare a standard project report	1-12,14-15		1-Comm Skills ISLO ISLO	W Subsets Subsets Subsets
Demonstrate classroom presentation skills	1-12,14-15		1-Comm Skills ISLO ISLO	O Subsets Subsets Subsets
Propose a standard project	1-12,14-15		2-Crit Think 4-Soc Respons ISLO	PS T Subsets Subsets

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KEY	<u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA] , Inquiry & Analysis [IA] , Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

*Include program objectives if applicable. Please consult with Program Coordinator

J. **APPLIED LEARNING COMPONENT:** Yes No

If YES, select one or more of the following categories:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Classroom/Lab | <input type="checkbox"/> Civic Engagement |
| <input type="checkbox"/> Internship | <input checked="" type="checkbox"/> Creative Works/Senior Project |
| <input type="checkbox"/> Clinical Placement | <input checked="" type="checkbox"/> Research |
| <input type="checkbox"/> Practicum | <input type="checkbox"/> Entrepreneurship |
| <input type="checkbox"/> Service Learning | (program, class, project) |
| <input type="checkbox"/> Community Service | |

K. **TEXTS:**

N/A

L. **REFERENCES:**

N/A

M. **EQUIPMENT:** None Needed:

N. **GRADING METHOD:** A-F

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**

Faculty Bi-Weekly Assessments	10%
Student Weekly Assessments	10%
Final Project Report:	20%
Final Project Presentation (Oral)	20%
Final Project Presentation (Oral – Eng. Comp)	20%
Portfolio	10%
Scholarly Activity Presentation	10%

P. **DETAILED COURSE OUTLINE:**

1. Project proposal

A. Team project

B. Must meet a standard established by faculty

C. Must be submitted within the first two weeks of classes

D. One week extra time given to rejected proposal for resubmission

* Project proposal must meet the standard which provides the student an experience of defining a problem, analyzing the problem, designing solution for the problem, and implementing the solution for the problem within the scope of Engineering Technology. The students should use the learned skills from the first seven semesters in the program, and apply them to the proposed project comprehensively.

2. Project update

A. Team project updates every week/bi-weekly

B. There also will be multiple meetings with the department faculty members

3. Project report

A. During mid-term, an initial design report is due

B. During finals week, a final design report is due

4. Presentation

A. There will be multiple presentations throughout the semester (i.e., for different audiences)

5. Project portfolio

A. A portfolio will be due at the end of the semester

6. Faculty and Student assessments

A. Faculty (Dr. Craig) will assess each groups progress throughout the semester. Students are required to hand in a student assessment at the end of each week. Failure to hand in assessments on time will result in loss of points.

7. Scholarly Activity Presentation

A. Your group will be required to sign-up and participate in the scholarly activities. Poster or oral presentation – either option.

Q. LABORATORY OUTLINE: None Yes