



**School of Engineering, Science, and Technology**

**Department of Manufacturing & Construction Management**

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## **TM 401: SENIOR SEMINAR AND INTERNSHIP**

### **SYLLABUS**

#### **Course Description:**

Provides students with a supervised opportunity to work in an industrial environment directly related to their program. Written technical reports and program assessments are required. Applications obtained from the department chair. Graded on a Pass/Fail basis.

**Prerequisite: Completion of 75 credits in the degree.**

#### **Purpose of the Course:**

This course is designed to provide students an opportunity to observe, participate and work in an environment directly related to their technical specialization. The internship is a program of experiences tailored for each intern within a selected company. Students must be employed in an advisor-approved internship or regular position. This also requires completion of assessments that help determine the student's preparedness for this internship and the career beyond. Grades are given on a Pass/Fail basis only.

#### **Course Learning Outcomes:**

1. Apply the knowledge learned from the student's academic program on the job, and gain experience from working in a professional environment.
2. Expand the student's knowledge of career options and direction, leading to continued employment or future employment prospects.
3. Present oneself professionally in a work environment and as a representative of the Department and University.
4. Assess how well the program has prepared the student for the internship and beyond.

## **Requirements:**

The MINIMUM requirements to earn a “P” (PASS) grade for TM 401 are as follows:

1. Provide the Student Employment Record or letter to your academic advisor (Pages 6).
2. Complete the senior seminar (Page 7).
3. Work at an approved internship for at least 480 hours.
4. Complete the narrative report (Page 8).
5. Complete TWO Technical reports
6. Arrange a site visit, meeting with your work supervisor and academic advisor, or a class field trip (Page 9).
7. Complete the ATMAE CTM Exam (Page 10).
8. Ensure work supervisor completes the Employer Survey.
9. Complete the Senior Student Survey.

All requirements shall be completed:

- Per The Internship Requirements and Schedule Checklist (Page 3),
- Submitted through the Blackboard Page (below), and
- per The Arrangement Form (Page 4).

## **Internship Blackboard Page**

The TM 401 Internship Blackboard Page will be provided by the University, and include items noted in the Internship Requirements and Schedule Checklist. This will also document and verify your submissions and completions and provide a score for the basis of final grading.

{screen shot of Blackboard Page}

## Internship Requirements and Schedule Checklist

This is the recommended task list and schedule for completing TM 401.

### **Semester Prior to Internship**

#### **Start of Semester Prior to Internship: Job Search and Eligibility**

- Resume developed and proofread.
- Prepare for job search (Page 7) if necessary.
- Verify with your Advisor:
  - a. Eligibility to take TM 401.
  - b. Eligibility of current job or jobs to which you are applying (See Page 7).

#### **Advising Week: Pre-Planning Meeting with Advisor**

- Speak with academic advisor to plan out courses along with internship.
- Complete and submit Student Internship Arrangement Form (Page 4).
- Register for TM 401 section assigned to your academic advisor.

### **Semester Break, up to First Week of Semester**

- Employed at company that meets requirements for Internship.
- Supervisor provided with Supervisor Information Sheet and Student Employment Record Form (Pages 5-6).
- Work, class, and commuting schedule finalized (with your Supervisor).

### **Semester of Internship**

#### **First Two Weeks: Employment Record and Settling in to Schedule**

- Supervisor-completed Student Employment Record form or letter submitted to your academic advisor (Pages 6).
- Begin keeping notes and preparing for upcoming requirements.

#### **Start of Semester, Up To Midterm:**

- Any site visit or field trip scheduled and arranged (Page 9).
- Any concerns with work load or schedule communicated with your academic advisor.

#### **Midterm to End of Semester:**

- Complete practice CTM exam (Page 10).

#### **End of Semester, Finals Week:**

- Complete working the required 480 hours.
- Site visit or field trip completed on date arranged (if applicable).
- Submit Report(s) as directed on Blackboard Page.
- Prepare for CTM Exam (Page 10).
- Arrange date for CTM Exam with academic advisor.
- CTM Exam taken.
- Employer Survey completed by your Supervisor: [LINK TO SURVEY](#)
- Senior Student Survey completed by yourself: [LINK TO SURVEY](#)

## TM 401 Student Internship Arrangement Form

This form is to be completed by both the student and the assigned academic advisor. Both the student and academic advisor should have a copy.

Student Name: \_\_\_\_\_

Academic Advisor: \_\_\_\_\_

Alternate PIN: \_\_\_\_\_ TM 401 CRN: \_\_\_\_\_

Name of Company or Organization: \_\_\_\_\_

Address, City, State: \_\_\_\_\_

Job Title: \_\_\_\_\_

**TM 401 Assignments:** Student assignments arranged for this internship experience: add details below or attach to this sheet. Student must sign this and submit to advisor prior to semester.

\_\_\_\_\_ Senior Seminar: \_\_\_\_\_

\_\_\_\_\_ Narrative Report

\_\_\_\_\_ Technical Report 1: \_\_\_\_\_

\_\_\_\_\_ Technical Report 2: \_\_\_\_\_

\_\_\_\_\_ Site Visit      \_\_\_\_\_ Meeting      \_\_\_\_\_ Field Trip

\_\_\_\_\_ Practice CTM Exam      \_\_\_\_\_ CTM Exam

\_\_\_\_\_ Other (add attachments if needed): \_\_\_\_\_

Student Signature \_\_\_\_\_ Date: \_\_\_\_\_



## TM 401 Internship Supervisor Information Sheet

Dear Industry Leader:

We the faculty of the Department of Manufacturing and Construction Management at Central Connecticut State University wish to thank you for your consideration in taking part in the internship for our student. This internship program not only serves the following purposes:

1. Serves as a major requirement and valuable experience for the student.
2. Provides you with the opportunity to interact with one of our students.
3. Provides you with the opportunity to evaluate the student and the academic program.
4. Allows us to evaluate both the student and our programs based on the student's assigned work and your feedback.
5. Allows the student to explore and gain experience for career options.

While this may sound time-consuming, we wish to assure you that this program was also designed to avoid disruption of your own operations and schedule, and allow you to focus on making use of the student as an intern or even a regular employee. All that we ask from you are the following:

1. Complete the attached Student Employment Record, or provide us with a memo or letter on your company letterhead with the following:
  - a. Student's name
  - b. Position title and dates employed
  - c. Work schedule – total hours or work schedule during the internship period
2. Supervise the intern's as you normally would, paying attention to things like:
  - a. Technical skills
  - b. Communication skills (written and verbal)
  - c. Work ethic, enthusiasm, and willingness to learn on the job
  - d. Quality of work
  - e. Ability to work independently and on a team
  - f. Value as a member of your organization
3. At the end of the semester, you will be provided with a link to a survey that takes no more than ten minutes to complete.

Again, we wish to thank you for taking part in this process. Do not hesitate to contact the me or the department if you have any questions, concerns, or suggestions.

Regards,



### TM 401 Internship Student Employment Record

**NOTE:** This information may alternatively be submitted with a letter on company letterhead.

**Part I – To be Completed by Student**

**Student Name:** [Click or tap here to enter text.](#) **Student ID:** [Click or tap here to enter text.](#)

**Phone Number:** [Click or tap here to enter text.](#)

**Email:** [Click or tap here to enter text.](#)

**Degree/Program:**     **B.S. Manufacturing Management**         **B.S. Industrial Technology**

**B.S. Technology Management**

**Semester:**  **Fall**         **Spring**         **Summer**    **Year:** [Click or tap here to enter text.](#)

**Advisor Name, Phone, Email:** [Click or tap here to enter text.](#)

**Part II – To be Completed by Intern/Employee Supervisor**

**Company Name:** \_\_\_\_\_

**Company Address:** \_\_\_\_\_

\_\_\_\_\_

**Supervisor Name:** \_\_\_\_\_

**Supervisor Title:** \_\_\_\_\_

**Supervisor Phone Number:** \_\_\_\_\_

**Supervisor Email Address:** \_\_\_\_\_

**Employing Department:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Start Date:** \_\_\_\_\_ **End Date:** \_\_\_\_\_

**Working Days:** \_\_\_\_\_ **Hours:** \_\_\_\_\_

## TM 401 Student Internship Job/Internship Search

The student is responsible for obtaining their own employment. Success in finding a job is an indication of initiative and employability. The University is not obligated to provide employment for the student; however, there are various resources (see list below). The student is also responsible for verifying the eligibility of the position to meet the requirements for TM 401.

The student should seek (or hold) a job that permits variety of contacts without reducing the student's value to the employer. While a skilled production job (i.e. machine operator) is satisfactory, a job associated with areas such as quality control, supply chain, and engineering would be a better learning experience. The job should provides exposure to many responsibilities, and the position should be accepted only if able to perform on the job as adequately as any other employee in that position.

- Attend a Career Fair (usually October and February): <https://www.ccsu.edu/csc/careerFairs.html>
- The CCSU Career Success Center Job Resources webpage: <https://www.ccsu.edu/csc/resources.html>
- Your academic advisor may have some leads or additional resources.

## TM 401 Student Internship Senior Seminar

This is an arranged event that you and your academic advisor agree upon to fulfill the TM 401 requirements. These may include activities designed to assist in the final semesters and/or career development, and might be arranged on or off campus. While your academic advisor may have one or more seminars to propose, you are encouraged to seek out potential seminars from various sources. Seminar offerings can include regularly scheduled or impromptu sessions, so the list below are only potential sources to search for such offerings:

1. Department (<https://www.ccsu.edu/mcm/>) or School Website (<https://www.ccsu.edu/sest/>)
2. SEST Career Services (<https://www.ccsu.edu/sest/ssc/careerservices/index.html>)
3. CCSU Career Success Center events (<https://www.ccsu.edu/csc/careerFairs.html>)
4. The Learning Center workshops (<https://web.ccsu.edu/tlc/otherServices/studySkillsWorkshops.asp>)
5. General CCSU News/Events page (<https://www2.ccsu.edu/news/?redirected>)

Also keep in mind that your academic advisor or other faculty from the department may email events that could serve as a senior seminar event.

Documentation of this shall include any emails or forms that verify your registration, attendance, and/or completion of activities.

## **TM 401 Student Internship Narrative Report**

The Narrative Report will summarize the internship experience. It will record each the student's progression through:

- Securing the job/position
- The nature of job assignments, and rotations (if any)
- Working skills, job responsibilities, comprehension of how "industry functions"
- A general review of the knowledge gained through the experience and interviews.

All reports should avoid critical references to company policies and practices.

Reports shall be 3-5 pages (excluding images), 12 point font, and double spaced, with a cover page that includes the following.

TM 401 Internship  
Narrative Report  
*(Position Name)*

*(Your Name)*  
*(Academic Program Name)*  
*(Semester/Year)*  
Advisor: *(Advisor's Name)*



## **TM 401 Student Internship Department/Technical Report**

The Department or Technical Reports are to document information obtained through observation as well as through conferences with division functions of the respective departments or divisions and the procedures set up to carry out these functions. Emphasis should not be on techniques, but instead should be on organization and procedures for carrying out the overall function.

Reports can be of any of the of the following topics:

- 1) How you feel that CCSU has prepared you for this job.
- 2) Anything that you learned on the job – technical/management skills, interpersonal skills, career expectations, etc.
- 3) Ideas that you think you do could do to improve your skills for this job and/or future jobs in your career – coursework, technical training, specific jobs to look for, etc.
- 4) Department reports, as suggested on Page 12 (your observations of other departments in the organization and how they function).

Reports shall be 3-5 pages (excluding images), 12 point font, and double spaced, with a cover page that includes the following:

TM 401 Internship  
Department/Technical Report  
*(Title or Subject of Report)*

*(Your Name)*  
*(Academic Program Name)*  
*(Semester/Year)*  
Advisor: *(Advisor's Name)*

## **TM 401 Student Internship Site Visit or Field Trip**

This can be any of the following:

- In-person, online, or teleconference meeting between your work supervisor and academic advisor, online meeting or teleconference
  - Site visit/tour by academic advisor
  - Field trip arranged for a group of students from a class or campus club.
- 1) The student is responsible for scheduling the meeting or visit.
  - 2) The student shall create applicable preparational documents such as:
    - a. Meeting or site visit agenda (for advisor site visit/meeting with supervisor)
    - b. Tour agenda – what areas to be covered and what students can expect
  - 3) The student is responsible for ensuring all preparations for the visit (security clearances, safety gear, parking, entrance location, etc.)
  - 4) All information required for the faculty advisor (and students if applicable) shall be clearly documented in an email.

### **TM 401 Student Internship Certification Exam (CTM Exam)**

The Association of Technology, Management, and Applied Engineering (ATMAE) is the accrediting body for our BS Manufacturing Management and BS Technology Management programs, and also provide certification exams such as Certified Technology Manager (CTM). The Manufacturing and Construction Management Department utilizes the ATMAE CTM exam to assess learning of our students for evaluation and improvement of our programs. This is also a valuable certification as an addition to your degree for career advancement.

Instructions and information regarding the scheduled exam session and certification process will be provided during the semester of the internship.

The requirements regarding the CTM exam for TM 401 are as follows:

- 1) Complete the CTM practice exam, to be provided on the Blackboard Page.
- 2) Complete the CTM exam on the scheduled time and day, with reasonable effort.
  - a. You do not need to pass the exam for TM 401, BUT
  - b. Your score should indicate that you tried based on the information that you know

## TM 401 Student Internship Suggested Department and Technical Reports

Market Research	Industrial Safety
Quality Assurance and Reliability	Purchasing
Program Planning	Work Scheduling
Material Control	Formal Organization
Manufacturing/Industrial Engineering	Organization Problems
Sales and Distribution	Maintenance
Research and Development	Transportation
Quality Control	Planning and Scheduling of Work
Imports and Exports	Shipping and Receiving
Personnel/Human Resources	Union Affiliation
Packaging	Disbursing
Physical Plant	Payroll
Employment Practices	Management Training
Educational, Training, Apprenticeship Programs	Historic Development of Company
Plant Layout	Bidding
Contracts	Applications of Technology
Construction	Public Relations
Advertising	Job Estimation
Environment	Pre-Press Operations Networking Administration
Computer Use	Supply Chain and Logistics
Post-Press Operation	
Information and Communication Technologies	