Course description:
This is a senior level course that integrates curriculum content from previous courses to create a capstone experience with a focus on project management and professional communications. Students will use project management and professional communication techniques to select, complete, and report on an individual or team project that demonstrates achievement at the application and syntheses level. Students are expected to contact the professor and have a project approved before the beginning of the course.

Prerequisites: ITP 210, ITP 230, graduating senior status, and permission of advisor or instructor. Offered fall and spring semesters. Cr 3.

https://usm.maine.edu/tech/course-descriptions

Outcomes:
The goal of the course is to integrate technical and professional components of the student's degree program and to have student demonstrate their ability to plan, manage, complete, and report on a significant project. By the end of the course the students will have demonstrated:

1. Demonstrate behaviors representative of successful learners and professionals in their specialized fields of knowledge in technology major with respect to developing and articulating response to a significant theme, topic, issue or problem;
   a. In the process of executing your capstone projects, it is in your best interest to demonstrate: effective time management, effective planning and communication, skill in following directions, attention to detail, accuracy, information resource use, and meeting responsibilities.

2. The ability to integrate curriculum content from several upper-division courses to create a capstone experience that involves the design and generation of a significant (oral, written, creative or simulation) final project that relates to the management of technical systems.

3. The ability to use research and project management techniques to analyze, apply, and integrate multiple sources of information and specialized perspectives to complete a project plan, the project, and the final report.

4. The ability to draw on learning from both your core education and other courses to reflect on and critically interrogate learning within the capstone and the major:
   a. To effectively communicate the project plans and results at a professional level in the form of reports, presentations and/or posters;
   b. And effectively work independently, or in groups as designated.
Text:
There is no text required for this course. Students are expected to use the resources linked to the course web site and other resources related to their project.

Contacting the professor:

Dr. Carl Blue [carl.blue@maine.edu]
Office phone: 207-780-5391
Cell: 919-815-7930
John Mitchell Center; Room #211
Gorham, ME 04038
Office Hours: See Blackboard

Course requirements:

• Identify and obtain approval for the capstone project concept before enrollment.
• At the first-class meeting, you be instructed to submit a formal proposal for your Capstone Project by second/third -class meeting.
• You will develop a project plans, flowcharts, SWOT Analysis tools, and any additional management documents needed to design and accomplish the project.
• Seek-out and consult with the course instructors, mentors, and other professionals as needed to successfully complete the course project.
• Seek-out and apply new information as needed to successfully complete the course activities.
• Complete the project according to the project plan.
• Present the project results in a final formal report, presentation, poster, and any artifacts and materials that were a result of the project.

Attendance and late or incomplete work:

Unless the professor allows an exception, there are no Academic Incompletes for Capstone course. Late work will result in lowering the final grade for the course grade. Unless the professor allows an exception on a case-by-case basis, attendance is required for all scheduled classes as proposed on the course schedule posted on Blackboard.
Tentative Course Schedule: Subject to change, consult Blackboard site for updates.

<table>
<thead>
<tr>
<th>Week</th>
<th>Mondays</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(H) 1/21</td>
<td>MLK</td>
</tr>
<tr>
<td>2</td>
<td>1/29</td>
<td>Class meets</td>
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<tr>
<td>3</td>
<td>2/4</td>
<td>Class meets</td>
</tr>
<tr>
<td>4</td>
<td>2/11</td>
<td>Class meets</td>
</tr>
<tr>
<td>5</td>
<td>(H) 2/18 (H)*</td>
<td>* First Quarter: Formal project proposals due ONLINE</td>
</tr>
<tr>
<td></td>
<td>2/22</td>
<td>* The abstract submission deadline for Thinking Matters 2019 is Friday</td>
</tr>
<tr>
<td>6</td>
<td>2/25</td>
<td>Available to meet one-on-one – please schedule</td>
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<tr>
<td>7</td>
<td>3/4</td>
<td>Available to meet one-on-one – please schedule</td>
</tr>
<tr>
<td>8</td>
<td>(6) 3/11*</td>
<td>* Midterm Review – Status Report</td>
</tr>
<tr>
<td>9</td>
<td>(H) 3/18</td>
<td>(Holiday) Spring Break</td>
</tr>
<tr>
<td>10</td>
<td>3/25</td>
<td>Available to meet one-on-one – please schedule</td>
</tr>
<tr>
<td>11</td>
<td>4/1</td>
<td>Available to meet one-on-one – please schedule</td>
</tr>
<tr>
<td>12</td>
<td>4/8*</td>
<td>*Third Quarter: Status Report – Poster draft due</td>
</tr>
<tr>
<td>13</td>
<td>4/15</td>
<td>Poster Printing and Mounting Demonstrations</td>
</tr>
<tr>
<td></td>
<td>4/19</td>
<td>Thinking Matters (optional for extra credit)</td>
</tr>
<tr>
<td>14</td>
<td>4/22</td>
<td>Poster Printing and Mounting Assistance</td>
</tr>
<tr>
<td>15</td>
<td>4/29</td>
<td>Poster Presentations in JMC</td>
</tr>
<tr>
<td>16</td>
<td>5/6</td>
<td>All Final Reports due by 5/10/19 noon</td>
</tr>
</tbody>
</table>

* Opportunity for extra credit by representing the Department of Technology at the USM Thinking Matters. Requires working within a tighter schedule.

Withdrawal from the course:

The University provides specific dates for students wishing to withdraw from courses each semester, please consult the University of Southern Maine Academic calendar for more information. [https://usm.maine.edu/registration-services/academiccalendar](https://usm.maine.edu/registration-services/academiccalendar)

Role of the instructor:

As a senior level capstone course, it is the students responsibility to demonstrate their ability to apply what they have learned in previous courses and to demonstrate individual initiative in solving problems, working in teams (in some cases), and seeking out additional information as necessary to complete the course activities.

The primary role of the instructor in this course is to be a mentor (guide) as the individuals and teams develop their plans and complete their projects. Think of the role of the instructor as the "high level manager" who maintains the overall schedule.
of the course, track team and individual activities, and evaluate the success of individual efforts and the project. The instructor will provide specific information when appropriate, but will expect the students to apply concepts and skills they developed in previously taken courses and to seek-out new information as needed.

The project:

The project’s preliminary concept is to be identified and approved by the instructor before enrolling into Capstone. By Week Two/Three you would need to submit a formal proposal paper and supporting documents. Your project should represent your area of technical or professional education and/or professional interests.

Projects are expected to include activities that go beyond what has been learned in the degree courses, require investigation before implementation, require creativity, and are to be completed at a level expected of a university graduate.

The students are responsible for their projects and for completing them with minimal direction from the course instructor. This means that the students take ownership of the projects and are directly responsible for the projects' success or failure.

Projects can be done by small teams consisting of two or three individuals, but they must represent a scope and depth appropriate for the number of individuals on the team. In the case of team projects, each student must have a "work package" that includes all phases of the course and can be evaluated independent of the other team member efforts.

Deliverables:

A project management plan for the approved project is due within the first four weeks of the beginning of the course as specified on the course schedule.

The project plan should contain the following in the order listed below:

1. A description of the project.
2. Background information about the project including, but not limited to:
   a. How the project was identified
   b. The goals of the project
   c. A description of how the project brings together several courses taken
in the degree program

d. Any work done on the project so far, how it relates to other projects, or your employment.

e. Who has been and will be involved with the project

f. A summary of discussions with the client (for projects done with a client)

g. A review of the literature (books, journals, Web, etc) to investigate the definition and scope of the project and methods to be used.

   i. There will be a separate library-internet research paper due by midterm outlining three resources that corroborate the focus of your project.

h. Preliminary list of required resources

   i. Any additional supporting information.

3. A detailed workflow and/or Gant Chart. (Visual)

   a. A description of tasks to be done including a schedule/time line

   b. A description of benchmark activities and events

4. A risk management and safety plan relating risks to the tasks in the work breakdown

5. A list of all resource requirements to ensure the successful completion of project.

   a. These should be two categories:

      i. Crucial

      ii. Doable

6. A quality management plan – how will you ensure quality of your project?

   a. List all applicable (ie) Beta testing

7. Description of deliverables including and completed projections by:

   a. progress reports

   b. final report

   c. formal poster design/presentation

   d. and other materials as appropriate.

8. Refer back to your Project Management course, or other project planning and management resources and methods are to conform to the Project
Management Institute Body of Knowledge and documents provided in class or listed on the course website. Site Resources.

**Progress reports:** Progress reports are to be submitted using the form provided as noted on the course schedule in Blackboard.

**Final report:** The final report is to be a formal, professional quality report on the project using appropriate technical report format for projects. The report is to present the project management process used as well as the outcome of the project.

**Formal Poster presentation:** The formal poster presentation is to be scheduled the last week of classes. Guests of academia and industry will be invited to review your work.

- The poster presentation will be a significant portion of your grade. The posters will align to “Thinking Matters” specifications with appropriate modifications for the nature of the project. Posters designs need to be completed prior to printing and mounting. Please note due dates that are posted on Blackboard.

**Intellectual property, privacy laws, and plagiarism:**

Students are required to adhere to intellectual property and privacy laws throughout the course and avoid plagiarism.

**Grading:**
All points will be cumulative and be totaled, ranked and graded according to the following scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
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<tbody>
<tr>
<td>A</td>
<td>97-100</td>
</tr>
<tr>
<td>A-</td>
<td>93-96</td>
</tr>
<tr>
<td>B+</td>
<td>89-92</td>
</tr>
<tr>
<td>B</td>
<td>85-88</td>
</tr>
<tr>
<td>B-</td>
<td>81-84</td>
</tr>
<tr>
<td>C+</td>
<td>77-80</td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>69-72</td>
</tr>
<tr>
<td>D+</td>
<td>65-68</td>
</tr>
<tr>
<td>D</td>
<td>61-64</td>
</tr>
<tr>
<td>D-</td>
<td>57-60</td>
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<tr>
<td>F</td>
<td>56 and below.</td>
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</tbody>
</table>

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Students final grade will be based on the policies and requirements stated in this syllabus and will use the following criteria:

A - All requirements completed at a high level of quality demonstrating an exceptional effort.
B - All requirements completed at a high level of quality demonstrating a high level of effort.
C - All requirements successfully completed demonstrating acceptable effort.
D - Requirements completed at a low level demonstrating a minimum effort.

F - Requirements not successfully completed or completed at an unacceptable level.

I - (Incomplete) Legitimate extraordinary circumstances prevent the student from completing course requirements. Students must complete the course requirements within one month of receiving an incomplete grade. Only a legitimate and documented request for an incomplete is acceptable.

The relative weight of the requirements in the final grade will be:

<table>
<thead>
<tr>
<th>Items</th>
<th>Assignments</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial Project management plan (Proposal)</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>Progress Reports (2)</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>Research Report</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Poster and Poster Presentation</td>
<td>20%</td>
</tr>
<tr>
<td>5</td>
<td>Final Report</td>
<td>20%</td>
</tr>
</tbody>
</table>

100%

NOTE: Failure to submit and participate in the Poster and Presentation is substantial 20% of grade.

Cancellations and Emergencies:

Cancellations due to inclement weather are announced on the radio or may be obtained by calling the University of Southern Maine’s hotline: 780-4800.

- Emergency Response:  [http://www.usm.maine.edu/emergency/](http://www.usm.maine.edu/emergency/)
- Sign up for Emergency Response Alerts:  [http://usm.maine.edu/usmalert/](http://usm.maine.edu/usmalert/)

Course Evaluations:

End of the semester course evaluations are administered electronically. During the last week of classes, students will receive an email notice that asks them to complete a course evaluation online. That email will include a direct link to the course evaluation, and students
will log in by using their Mainestreet ID and password. Student ratings on the evaluation are very important to instructors and it is important that students answer thoughtfully and honestly. The responses are confidential and will be collected by the Office of Academic Assessment. After the final grades are posted, instructors will receive a summary report of the student responses. All student feedback is valued and will be used for course and program improvement purposes.

**Academic integrity policy:**

Everyone associated with the University of Southern Maine is expected to adhere to the principles of academic integrity central to the academic function of the University. Any breach of academic integrity represents a serious offense. Each student has a responsibility to know the standards of conduct and expectations of academic integrity that apply to academic tasks. Violations of student academic integrity include any actions that attempt to promote or enhance the academic standing of any student by dishonest means. Cheating on an examination, stealing the words or ideas of another (i.e., plagiarism), making statements known to be false or misleading, falsifying the results of one’s research, improperly using library materials or computer files, or altering or forging academic records are examples of violations of this policy which are contrary to the academic purposes for which the University exists.

Acts that violate academic integrity disrupt the educational process and are not acceptable. Evidence of a violation of the academic integrity policy will normally result in disciplinary action. A copy of the complete policy may be obtained from the Office of Community Standards (780-5242).

**Students with disabilities:**

Students requiring accommodations should identify themselves and meet with their instructor to discuss any requirements as soon as the course commences so that arrangements for accommodations can be addressed. Additionally, if you need course accommodations because of a disability, please make an appointment with me or with the Office of Support for Students with Disabilities (780-4706) or (TTY:780-4396) as soon as possible.