DETAILED COURSE DESCRIPTION
ERE 630 Computer Applications in Construction Management

COURSE DEFINITION:
ERE 630, Computer Applications in Construction Management (Shared Resource with WPE 430)
Course format: Guided individual study
1-3 credit hours—Fall semester and Spring semester
Prerequisite: Permission of instructor

SCOPE:
Level of Instruction:
ERE 630 is a graduate level course sharing resources with WPE 430. Students in ERE 630 do additional work for graduate credit as described below.

Content:
Major Concepts:
1. To provide in-depth comprehension of the selected software.
2. To develop a project entirely utilizing construction-related software utilizing the concepts learned in related coursework.
3. To explore technology as a tool of the industry.
4. Understand and identify the software, its application and its utilization.

ERE 630 is a guided individual study course that allows for individually tailored study in the area of construction related software. The student and the instructor will develop an in-depth study plan. This course allows for in-depth investigation of the following software: Microsoft Office, Quest Earthworks, Quest for Contractors, Timberline Precision Estimating, Primavera Project Planner, SureTrak Project Manager and Expedition by Primavera, accomplished through the selection of an appropriate project and then applying the software as a tool to meet the study plan requirements. Many of the software packages offer information exchange; will be included whenever possible. The trend in the industry is to utilize these software packages for project management at multiple physical locations. This course allows the student to develop the skills necessary to enter the industry as a productive member of the construction team. A final report or other evidence of competence as appropriate is expected to successfully complete course requirements. A paper of 10 or more pages on a relevant technology issue, including an annotated bibliography of relevant books and papers and a presentation of their outcome to the Construction Management and Wood Products Faculty through an appropriate classroom setting are required.

Relation to curriculum or to other ESF or Syracuse University courses:
ERE 630 provides a platform to further explore technology relevant to the construction industry by working with construction related software as previously listed. This course may be of interest to several ESF disciplines as well as several Syracuse University disciplines. The course is open to all students at ESF and SU subject to permission of the instructor.

OBJECTIVES:
After completing this course the student should be able to:
1. Define and identify the selected software, its function and features.
2. Provide a completed project reflecting the output capabilities of the selected software.
3. Define the advantages and disadvantages of the selected software in relation to existing methods of delivery of similar products (estimates, schedules, project management, etc.)
4. Explain the process undertaken to develop the final output (ie.- the estimate, schedule, etc.).
5. Explain how the software enhances Construction Project Management and its duties.
6. Articulate the relevance of the chosen topic with respect to technology and its impact upon the construction industry.
7. Develop and support of an appropriate poster.
INSTRUCTIONAL FORMAT AND MATERIALS:
Format: Guided individual study with individual plan approved by instructor.

Materials: Required software, suggested readings and it is suggested the students have access to the World Wide Web.

INSTITUTIONAL RESOURCES REQUIRED (INSTITUTIONAL IMPACT):
Duplication of handouts will be required. Students shall require access to the Construction Management computer facility for approximately 10-12 hours per week on the average. Software packages in the Construction Management computer facility include Microsoft Office, Quest Earthworks, Quest for Contractors, Timberline Precision Estimating, Primavera Project Planner, SureTrak Project Manager and Expedition by Primavera as a minimum. Internet access is recommended. Enrollment is estimated between 5 to 10 students per offering.

HEALTH AND SAFETY CONSIDERATIONS:
Health and Safety Considerations to be Specifically Addressed.

<table>
<thead>
<tr>
<th>Conditions or situations present in association with the course?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Will substances with any of the following properties be used during instruction: flammability, toxicity, corrosivity, reactivity, registered pesticide, legally controlled, or other characteristics with the potential to cause harm or injury?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>2. Will any physical hazards be present during instruction? (e.g., machines that need safety guards; razor blades or syringes; compressed gases, etc.).</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>3. Will any biological hazards be present during instruction? (e.g., handling animals (rabies or hantavirus); cultures or stocks of infectious agents (fungal spores, viruses, bacteria, etc.).)</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>4. Will any radiation hazards be present during instruction? (e.g., radioisotopes, X-rays, ultraviolet rays, lasers, etc.).</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>5. Will any electrical equipment that, due to its design, location, or method of use, pose any threat to safety during instruction? (Give considerable thought to electrical use outdoors, or any potentially wet location.).</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>6. Will there be any personal safety issues related to the class? (e.g., due to time of day or location, at the end of any organized class exercise, will students be in danger of physical assault, etc.).</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>7. Will any students be driving official State or research sponsored land or water vehicles during any class or instructional exercise?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>8. Will any type of personal protective equipment be necessary during class exercises? (e.g., hard-hats, eye/face protection, hearing protection, hand/foot protection, lab coat, visibility clothing, etc.)</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Health and Safety Considerations Narrative: This is an indoor, lecture class. No hazardous or health and safety issues are anticipated in the classroom.

CATALOG DESCRIPTION:
ERE 630 Computer Applications in Construction Management (1-3)
Projects that will be estimated, scheduled or managed exclusively by industry-standard, construction-related software, including Timberline Precision Estimating, Quest Earthworks, Quest for Contractors, Primavera Project Planner, SureTrak Project Manager by Primavera and Expedition by Primavera. A final report with annotated bibliography is required. Fall and Spring.

Prerequisite: Permission of instructor.
Note: Credit will not be granted for both ERE 630 and WPE 430.

COURSE HISTORY:
New course November 2000.