PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: Course Content Change and Prerequisite Changes

Initiating Unit or Individual: Construction Technology and Management
Contact Person's Name: Brayton  e-mail: braytone@ferris.edu  phone: x2370
Date or Term of Proposal Implementation: Fall 2010
☐ Group I - A – New degree/major or major, redirection of a current offering, or elimination of a degree, major or minor
☐ Group I - B – New minors or concentrations
☒ Group II - A – Minor curriculum clean-up and course changes
☐ Group II - B – New Course
☐ Group III - Certificates
☐ Group IV – Off-Campus Programs

<table>
<thead>
<tr>
<th>Group/Individual</th>
<th>Signature</th>
<th>Date</th>
<th>Vote/Action</th>
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<tr>
<td>Program Faculty</td>
<td>Edward Brayton</td>
<td>3/25/10</td>
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<td>School Curriculum Department Faculty</td>
<td>John Schilt</td>
<td>4/12/10</td>
<td>☒ Support</td>
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<td>Ron McKean</td>
<td>4/23/10</td>
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<td>Dean</td>
<td>Glenn Ecker</td>
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* Support with Concerns or Not Support must include a list of specific concerns. Votes must be shown for faculty groups. Administrators check appropriate action taken.

To be completed by Academic Affairs

President (Date Approved)  Board of Trustees (Date Approved)  President’s Council (Date Approved)
1. Proposal Summary
(Summary is generally less than one page. Briefly state what is proposed with a summary of rationale and highlights. Additional rationale may be attached.)

First, this proposal changes the focus of CONM 423 titled Construction Management Professional Methods. This course was established in 1993 to cover current issues in construction. The current issues in the construction industry are sustainability and quality management methods and this revision reflects these changes. This revised course will focus on the projects sustainability requirements so that the project can obtain LEED (Leadership in Energy Efficiency and Design) certification. It will also focus on management techniques at the job site to ensure that the construction meets the sustainability and quality standards specified. The content of this revised course was developed by the CTM Construction Advisory Committee at their October 2009 meeting. The CONM 423 will remain as an alternative (or) course with CONM 430 on the check sheet. Therefore, the construction ethics required for our ACCE accreditation was added to CONM 430 because it is an alternative (or) course to CONM 423.

Second, the MATH prerequisites have been clarified and updated for each course in the Associate degree programs and the Bachelor of Science in Construction Management with an emphasis from Architectural Technology program.

Third, change the course title and course content for CETM 215 to Construction Equipment and Operations.

2. Summary of All Course Action Required*

a. Newly Created Courses to FSU:
Prefix Number Title

b. Courses to be Deleted From FSU Catalog:
Prefix Number Title

c. Existing Course(s) to be Modified:
Prefix Number Title
CONM 423 Construction Management Professional Methods

d. Addition of existing FSU courses to program
Prefix Number Title

e. Removal of existing FSU courses from program
Prefix Number Title

*Contact Senate Secretary or UCC Chair if spaces for additional courses are needed.
3. Summary of All Consultations

Form Sent (B or C)  Date Sent  Responding Dept.  Date Received & by Whom

4. Will External Accreditation be Sought? (For new programs or certificates only)

___________  Yes  ___________  No

If yes, name the organization involved with accreditation for this program.

5. Program Check sheets affected by this proposal.

   Associate in Building Construction Technology

   Associate in Civil Engineering Technology

   Bachelor of Science in Construction Management – Emphasis Architectural Technology
Ron, Bob, and others:

I will ask for an additional reply to your comments from Ed Brayton, the initiator of the curriculum package. He may wish to expand upon my responses, shown below in blue italics. (You may need to expand Bob Burtch's comments in Lotus Notes by clicking on the ">") next to his name.) Ed is tied up with Advisory Board meeting for the remainder of this day but should respond shortly.

I appreciate Bob's comments and understand the difficulty in communicating via email. Bob makes some interesting comments - almost proposals - for more interdisciplinary collaboration that I think warrant discussion. The need at this time to see if we can move forward with the proposals on the table so the course descriptions can hit the registration screens next Fall, in time for Spring registration. Please see my notes below.

- John

Dr. John R. Schmidt, Director
School of Built Environment
Ferris State University
605 S. Warren - GRN 227
Big Rapids, MI 49307
231-591-5283

Ronald A Mckean

Robert C Burtch

Following are my votes for the two proposals that circulated last week:

#1 CDT Certification Preparation Proposal
- Support with concerns
- Date of implementation is given as the Spring Semester 2010, which we are almost over with. This should be changed in my opinion
  The course began as an experimental course during the current semester, CONM 290. It can only be offered as such for two semesters, therefore, approval of this course is necessary to continue it beyond the Fall 2010 semester. The date could (or should) be modified to reflect Spring 2011 as the permanent course implementation.
Proposal Summary indicates that other College of Engineering Technology students might be interested in this course and I think that could be true, especially if other programs understood the benefits of CDT certification. Unfortunately, students would need to take CONM 112 or ARCH 102. I do not understand the necessity for the prerequisite. Did the initiator seriously consider offering the course to the CET students without the prerequisite.

I believe that the course prerequisites were based on the initiator’s perception of necessary skills and knowledge for success. As Director, I believe we can relax the requirements. However, an understanding of contract documents would be beneficial. The two courses listed are basic topics in plans and specifications that would provide some knowledge to which the students’ can relate. I would suggest that, if other programs decide this is a course that would benefit their students, they let the program know of any courses that their students take that sets such a groundwork and the prerequisite list can be expanded. I believe that this course is important for many more than construction -- in particular architecture, facility management, and HVAC -- but welding, mechanical, and many other areas may find benefit. The CDT program is recommended for architects, engineers, contractors, contract administrators, manufacturer representatives, specifiers, and all others concerned with preparing, enforcing, interpreting, or managing any aspect of construction documentation. Anybody who finds that there is benefit in knowing the standard for specifications development (MasterFormat) and project operations related to construction would benefit from this course and potential certification.

#2 Construction - Course Content Change and Prerequisite Changes

- Support with concerns
- I do not understand the pedagogy with putting ethics in the CONM 430 course. Why not take an existing ethics course? Even though ethics could easily be a part of any, or every, course, this course seems to concentrate on topics of construction and engineering design of power plants and then suddenly changes direction.

The reason for inclusion of ethics in this course is "history" and "accreditation". Ethics, as a topic, has been an issue that the CTM program has been grappling with for some time. The accrediting body (American Council for Construction Education, ACCE) maintains prescriptive requirements for number of hours of ethics taught in the curriculum, as well as a requirement for number of course throughout the curriculum in which it is included. CONM 430 (Power and Process Plant Construction) is being offered as an option (or alternate) against CONM 423 (Construction management Professional Methods). Ethics has been a topic embedded within CONM 423. Given the opportunity for a student to take CONM 430, students would miss the topic and the program would violate accreditation requirements. The program has considered the addition of a one-credit course in ethics that would eliminate the need to teach the topic within these courses all together. However, that would require an unacceptable addition of one credit to the curriculum. Requiring the students take the Surveying class on ethics has not been acceptable to the faculty for reasons of content and reduction of general education options.

- I really like the direction of CONM 423 on Construction Management Professional Methods. I think LEED principles are very important and impact a number of disciplines. I wish the initiator would have looked at the possibility of opening this course up to more students on campus where LEED principles impact their students professional lives. What would be nice is if one of the program areas in CET would initiate a course dedicated to LEED principles, life cycle analysis (beyond the constructed environment), sustainability design, quality assurance, quality control, and quality management, that would be taken by all students on campus, recognizing more generic prerequisite skills instead of specific classes.

The addition of a cross-disciplinary course on the subject is interesting and in line with the desires of many to create a more collaborative educational environment. However, in my opinion, such an initiative needs to come from the CET more generally (the Dean’s office, perhaps - with a new designator) and some discussion regarding how this concept is required and applied across the college is worthy of our time. This specific course looks at the topics from the role of the constructor. I don’t believe it would be beneficial in its present form to those from other disciplines.

Please note that my concerns are really questions that I would have liked to have addressed at a meeting.
where answers could be given. I feel that a simple support would mean that I endorse the two proposals without any issue and I do not.

Bob

Robert Burch PS, CP  
Professor  
Surveying Engineering Department  
Ferris State University  
915 Campus Drive, Swan 314  
Big Rapids, MI 49307-2291  

phone: 231.591.2634  
fax: 231.591.2082  
email: burtchr@ferris.edu  
web page: http://www.ferris.edu/faculty/burtchr

Donna J Schmidt  Committee: I messed up!! I forgot to put the upd...  04/21/2010 02:57:56 PM
# Associate in Applied Science Degree

## Building Construction Technology

### Course Sequence Guide

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<td>ISYS 105</td>
<td>Intro to Microcomputers</td>
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<td>English 1</td>
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<td>Industrial and Career Writing (ENG 116)</td>
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**Total:** 18

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Submit Application for Graduation.

Apply for Entry into the Bachelor of Science Degree in Construction Management

Entry to the BS in Construction Management program requires successful completion of MATH 120 or MATH 126 with a C- or higher grade, passed PHYS 211, completed all CONM/BCTM 100 and 200 level courses and have a minimum overall GPA of 2.50.
### FORM D PROPOSED CHECKSHEET

**Associate in Applied Science Degree in Building Construction Technology**

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Apply for Entry in the Bachelor of Science Degree in Construction Management

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FORM D BCTM CHECKSHEET PROPOSED1.doc 3/23/2010
# Ferris State University

## Associate in Applied Science Degree

### Civil Engineering Technology

#### Course Sequence Guide

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### YEAR 1 - FALL SEMESTER

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### Associate in Applied Science Degree in Civil Engineering Technology

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#### YEAR 1 - FALL SEMESTER CREDIT HOURS

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#### YEAR 1 - SPRING SEMESTER

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#### YEAR 1 - SPRING SEMESTER CREDIT HOURS

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<td>Construction Surveying &amp; Layout</td>
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</tr>
<tr>
<td>CONM</td>
<td>211</td>
<td>Construction Quantity Estimating</td>
<td></td>
</tr>
<tr>
<td>PHYS</td>
<td>211</td>
<td>Introductory Physics 1</td>
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</tr>
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</table>

#### YEAR 2 - FALL SEMESTER CREDIT HOURS

16

#### YEAR 2 - SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CETM</td>
<td>226</td>
<td>Highway Technology</td>
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<tr>
<td>CETM</td>
<td>230</td>
<td>MDOT Certification Prep (Optional)</td>
<td></td>
</tr>
<tr>
<td>CETM</td>
<td>327</td>
<td>Hydraulics and Hydrology</td>
<td></td>
</tr>
<tr>
<td>CONM</td>
<td>212</td>
<td>Soil &amp; Foundations</td>
<td></td>
</tr>
<tr>
<td>CONM</td>
<td>221</td>
<td>Statics and Structures</td>
<td></td>
</tr>
<tr>
<td>CONM</td>
<td>222</td>
<td>Construction Administration</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Awareness Elective</td>
<td></td>
</tr>
</tbody>
</table>

#### YEAR 2 - SPRING SEMESTER CREDIT HOURS

18/19
### Bachelor of Science Degree

#### Construction Management

**Course Sequence Guide**

**Application must be made for Pre-Construction Management upon completion of AAS Architectural Technology degree prior to completing the following prerequisites for admission into Construction Management.**

#### YEAR 3 - FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONM 122</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Surveying and Layout (C. in MATH 110 or MATH 120)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 211</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Estimating (ARCH 101 or COMM 101; ARCH 110 or COMM 111; ARCH 131 or COMM 132; MATH 120 or MATH 121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 212</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Soil and Foundations (ARCH 112 or COMM 112, MATH 120 or MATH 121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 222</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Administration (ARCH 101 or COMM 101; ARCH 110 or COMM 111; ARCH 120 or COMM 120; COMM 210; MATH 120 or MATH 121)</td>
<td></td>
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<tr>
<td>ISYS 105</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Intro to Micro Systems Software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 126</td>
<td>4</td>
<td></td>
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<tr>
<td>Algebra and Analytic Trigonometry (24 ACT or C. in MATH 110)</td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td></td>
</tr>
</tbody>
</table>

I have passed Ferris' MATH 120 or MATH 126 or its equivalent with a C- or better and have passed PHYS 211; I also have a 2.5 GPA or above. I have completed all of my CONM and ARCH 100 and 200 level courses for entry into the Construction Management Bachelor degree program prior to taking and CONM 300 or 400 level courses. Finally, I have applied and I have a letter of approval from the Construction Department that I have been accepted into the program.

#### YEAR 3 - SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONM 311</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Formwork and Temporary Structures (COMM 220)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 312</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Scheduling (COMM 221)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 321</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Cost Estimating (COMM 215)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 324</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Advanced Construction Computer Technique (ENV 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 311</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Advanced Technical Writing (ENGL 211 or 250)</td>
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<td><strong>Total</strong></td>
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</table>

**Submit Application for Graduation.**

#### YEAR 4 - FALL SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CONM 413</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Economics (MATH 120)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 423</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Management Prof. Methods (ENG 211 or 250; COMM 222) OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 430</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Power and Process Plant Construction (ENG 211; COMM 330, BCTM 220; MATH 331)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCT 221</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Construction Accounting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 132</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Calculus for Business (24 ACT or C. in MATH 120 or 121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab SCIENCE (choose from Chemistry, Geology, Physics or Physical Geography; GEOS 110)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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#### YEAR 4 - SPRING SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
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<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONM 422</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Supervision/Safety (ENG 211 or 250; COMM 220)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLAW 301</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Legal Environment of Business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGMT 321</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Management Elective (300 level or above)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKTG 331</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Enrichment Elective</td>
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<tr>
<td><strong>Total</strong></td>
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#### YEAR 5 - FALL SEMESTER

<table>
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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>CONM 412</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Contracts (ENG 211 or 250; COMM 222)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONM 499</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Construction Project Management (COMM 313, 321, 324)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Enrichment Elective (300 level or above)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECON 221</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Economics 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Awareness Elective</td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

These are Writing Intensive Courses. A minimum of 2.5 GPA and C- in MATH 120/121 is required of all students entering the junior year CONM courses. Students must complete 40 credits or above the 200 level in the bachelor programs.
FORM D PROPOSED CHECKSHEET

BACHELOR OF SCIENCE IN CONSTRUCTION MANAGEMENT FROM AT

Application must be made for Pre-Construction management upon completion of AAS Architectural Technology degree prior to completing the following prerequisites for admission into Construction Management.

YEAR 3 - FALL SEMESTER

<table>
<thead>
<tr>
<th>CONM</th>
<th>Credit</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>3</td>
<td>Construction Surveying and Layout</td>
<td>C- in MATH 116 or 120</td>
</tr>
<tr>
<td>211</td>
<td>3</td>
<td>Construction Estimating</td>
<td>CONM 111, 112, 116 Or ARCH 101, 102, 115, C- in MATH 120 or 116</td>
</tr>
<tr>
<td>212</td>
<td>3</td>
<td>Soil &amp; Foundations</td>
<td>CONM 121 or ARCH 112, C- in MATH 120 or 116</td>
</tr>
<tr>
<td>222</td>
<td>3</td>
<td>Construction Administration</td>
<td>CONM 211; CONM 111, 112, 116 or ARCH 101, 102, 115; C- in MATH 120 or 116 co-</td>
</tr>
<tr>
<td>ISYS</td>
<td>105</td>
<td>Intro to Micro Systems Software</td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>126</td>
<td>Algebra and Analytic Trigonometry</td>
<td>MATH 116 C- or +</td>
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<tr>
<td></td>
<td>19</td>
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</tr>
</tbody>
</table>

Apply for Entry into the Bachelor of Science Degree in Construction Management

I have passed Ferris’ MATH 120 or MATH 126 or its equivalent with a C- or better and have passed PHYS 211; I also have a 2.50 GPA or above. I have completed all of my CONM and ARCH 100 and 200 level courses for entry into the Construction Management Bachelor degree program prior to taking an CONM 300 or 400 level courses. Finally, I have applied and I have a letter or approval from the Construction Department that I have been accepted into the program.

YEAR 3 - SPRING SEMESTER

<table>
<thead>
<tr>
<th>CONM</th>
<th>Credit</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>311</td>
<td>3</td>
<td>Formwork and Temporary Structures</td>
<td>CONM 221</td>
</tr>
<tr>
<td>312</td>
<td>3</td>
<td>Construction Scheduling</td>
<td>CONM 222</td>
</tr>
<tr>
<td>321</td>
<td>3</td>
<td>Construction Cost Estimating</td>
<td>CONM 211</td>
</tr>
<tr>
<td>324</td>
<td>3</td>
<td>Adv. Const. Computer Techniques</td>
<td>ISYS 105</td>
</tr>
<tr>
<td>ENGL</td>
<td>3</td>
<td>Advanced Technical Writing</td>
<td>ENGL 311</td>
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<tr>
<td>CONM</td>
<td>1</td>
<td>CDT Certification Prep (Optional)</td>
<td>CONM 112 or ARCH 102</td>
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## YEAR 4 - FALL SEMESTER

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<th>Prerequisites</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CONM</td>
<td>413</td>
<td>Construction Economics</td>
<td>MATH 120 or 126</td>
<td>3</td>
</tr>
<tr>
<td>CONM</td>
<td>423</td>
<td>Construction Management Professional Methods OR</td>
<td>ENGL 311, CONM 222, MATH 120 OR 126</td>
<td>3</td>
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<tr>
<td>CONM</td>
<td>430</td>
<td>Power and Process Plant Construction</td>
<td>ENGL 311, CONM 311</td>
<td>3</td>
</tr>
<tr>
<td>ACCT</td>
<td>221</td>
<td>Principles of Construction Accounting</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>132</td>
<td>Calculus for Business</td>
<td>26 ACT or C- in MATH 120 or 126</td>
<td>3</td>
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<tr>
<td>LAB/S</td>
<td></td>
<td>Choose One Laboratory Science from: Chemistry, Geology, Physics or Physical Geography (GEOG 111)</td>
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## YEAR 4 - SPRING SEMESTER

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<th>Course</th>
<th>Code</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CONM</td>
<td>422</td>
<td>Construction Supervision &amp; Safety</td>
<td>ENGL 311, CONM 222</td>
<td>3</td>
</tr>
<tr>
<td>BLAW</td>
<td>301</td>
<td>Legal Environment of Business</td>
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<td>3</td>
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<td>MGMT</td>
<td>3___</td>
<td>Elective 300 or Above</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MKTG</td>
<td>321</td>
<td>Principles of Marketing</td>
<td></td>
<td>3</td>
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<td></td>
<td></td>
<td>Cultural Enrichment Elective</td>
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## FIFTH YEAR - FALL SEMESTER

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<th>Description</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONM</td>
<td>412</td>
<td>Construction Contracts</td>
<td>ENGL 311, CONM 222</td>
<td>3</td>
</tr>
<tr>
<td>CONM</td>
<td>499</td>
<td>Construction Project Management</td>
<td>CONM 311,312,321,324</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>200+</td>
<td>Cultural Enrichment Elective (200+)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ECON</td>
<td>221</td>
<td>Principles of Economics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Awareness Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

|        |      | Cultural Enrichment Elective | | 3 |
|        |      | Cultural Enrichment Elective | | 3 |

15
MODIFY COURSE
Course Data Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix: BCTM
b. Number: 213

c. Enter Contact Hours per week in boxes.
   Lecture: 2  Lab: 3  Independent Study – Check (x) □
   Practicum: □  Seminar: □

d. Course Title: Wood/Steel Framing and Finishes

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix: □
b. Number: □
c. Enter Contact Hours per week in boxes.
   Lecture: □  Lab: □  Independent Study – Check (x) □
   Practicum: □  Seminar: □

d. Course Title: □ (Limit to 30 characters/spaces.)

e. College Code: □
f. Department Code: □

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: □ Variable  □ Fixed  h. Maximum Credit Hours □  i. Minimum Credit Hours □

j. May Be Repeated for Added Credit: Check (x) □ Yes □ No

k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

l. Grade Method: Check (x) □ Normal Grading □ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: □ (See instructions for listing.)  o. Max. Section Enrollment: □

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
    CONM 111, 112, 116; C – in MATH 115 or 116

UCC Chair Signature/Date: __/__/____  Academic Affairs Approval Signature/Date: __/__/____

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
[ ] Basic Skill (BS)  [ ] General Education (GE)  [ ] Occupational Education (OC)  [ ] G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: ____ Date Completed: ____ Entered: SCACRSE ___ SCADTL___ SCARRES ___ SCAPREQ ___
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): 

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.
a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
BCTM 223 Lecture 2 Lab 2 Independent Study – Check (x) □ Practicum: □ Seminar: □
d. Course Title: Mechanical/Electrical Plans

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.
a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.

LEcTure □ Lab □ INDependent Study – Check (x) □ Practicum: □ Seminar: □
d. Course Title: (Limit to 30 characters/spaces.)
e. College Code: f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.
g. Type: □ Variable □ Fixed h. Maximum Credit Hours □ i. Minimum Credit Hours □
j. May Be Repeated for Added Credit: Check (x) □ Yes □ No
k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional
l. Grade Method: Check (x) □ Normal Grading □ Credit/No Credit only (Pass/Fail)
m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 112, C – in MATH 115 or 116

UCC Chair Signature/Date: ___________________ / / __________ Academic Affairs Approval Signature/Date: ___________________ / / __________

To be completed by Academic Affairs Office: □ Standard & Measures Coding and General Education Code
□ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □ G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: ____ Date Completed: ____ Entered: SCACRSE ____ SCADETL ____ SCARRES ____ SCAPREQ ____
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008  Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
   BCTM  225  LEcTure  LAB  INDependent Study – Check (x) □
   Practicum: □  Seminar: □

d. Course Title: Field Engineering

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
   □  □  LEcTure  LAB  INDependent Study – Check (x) □
   Practicum: □  Seminar: □

   d. Course Title: □  (Limit to 30 characters/spaces.)

   e. College Code: □  f. Department Code: □

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: □ Variable  □ Fixed  h. Maximum Credit Hours □
   □ Minimum Credit Hours □

j. May Be Repeated for Added Credit: Check (x) □ Yes  □ No

k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

l. Grade Method: Check (x) □ Normal Grading  □ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
   □

n. Term(s) Offered: □  (See instructions for listing.)  o. Max. Section Enrollment: □

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
   CONM 122, ISYS 105, C – in MATH 120

UCC Chair Signature/Date: __________/__________

Academic Affairs Approval Signature/Date: __________/__________

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
□ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □  G.E. Codes

Office of the Registrar use ONLY

Date Rec’d:  Date Completed:  Entered: SCACRSE  SCADETL  SCARRES  SCAPREQ

15
MODIFY COURSE

Course Data Entry Form

FORM F

Modify Course
Rev. 07/23/07

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
CETM 214
LECture 2  LAB 3  INDependent Study – Check (x)  □
Practicum: □  Seminar: □

d. Course Title: Advanced Materials Properties & Testing

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
□ □
LECture □  LAB □  INDependent Study – Check (x) □
Practicum: □  Seminar: □

d. Course Title: □ (Limit to 30 characters/spaces.)

e. College Code: □  f. Department Code: □

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: □ Variable  □ Fixed  h. Maximum Credit Hours □  i. Minimum Credit Hours □  
j. May Be Repeated for Added Credit: Check (x) □ Yes  □ No

k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

l. Grade Method: Check (x) □ Normal Grading  □ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: □ (See instructions for listing.)  o. Max. Section Enrollment: □

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 121; □ – in MATH 120

UCC Chair Signature/Date: _____________/____/____  Academic Affairs Approval Signature/Date: _____________/____/____

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
□ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □ G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: _____  Date Completed: _____ Entered: SCACRSE  SCADETL  SCARRES  SCAPREQ

16
# Modify Course Data Entry Form

**I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE**

Notes:

1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Course Title, Catalog Description and Prerequisites

b. Term Effective (6 digit code only): **201008** Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

**II. CURRENT: Include information that is in the current course database.**

a. Course Prefix: CETM
b. Number: 215

c. Enter Contact Hours per week in boxes.

<table>
<thead>
<tr>
<th>Lect</th>
<th>Lab</th>
<th>Independent Study</th>
<th>Practicum</th>
<th>Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


d. Course Title: Pavement Design & Construction

**III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.**

a. Course Prefix:  
b. Number: 215  
c. Enter Contact Hours per week in boxes.

<table>
<thead>
<tr>
<th>Lect</th>
<th>Lab</th>
<th>Independent Study</th>
<th>Practicum</th>
<th>Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

d. Course Title: Construction Equipment & Operations (Limit to 30 characters/spaces.)

e. College Code:  
f. Department Code:  

g. Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

d. Type: Variable  
Fixed

h. Maximum Credit Hours:  
i. Minimum Credit Hours:  

j. May Be Repeated for Added Credit: Check (x) Yes  
No

k. Levels: Check (x) Undergraduate  
Graduate  
Professional

l. Grade Method: Check (x) Normal Grading  
Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

A study of the heavy equipment most often used on a construction project. Includes detailed information on equipment capabilities, limitations, and performance data. Equipment evaluation based on operational capabilities, costs, and schedule considerations is also discussed.

n. Term(s) Offered:  
(See instructions for listing.)

o. Max. Section Enrollment:  

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces. CONM 121; C – in MATH 115

<table>
<thead>
<tr>
<th>UCC Chair Signature/Date:</th>
<th>Academic Affairs Approval Signature/Date:</th>
</tr>
</thead>
</table>

**To be completed by Academic Affairs Office:** - Standard & Measures Coding and General Education Code

- Basic Skill (BS)
- General Education (GE)
- Occupational Education (OC)  
- G.E. Codes

Office of the Registrar use ONLY

Date Rec'd:  
Date Completed:  
Entered: SCACRSE  
SCADETL  
SCARRES  
SCAPREQ  

17
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
   Notes:
   1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
   2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

   a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

   b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
      Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.
   a. Course Prefix  
   b. Number  
   c. Enter Contact Hours per week in boxes.

   CETM  
   226  

   d. Course Title: Highway Technology

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.
   a. Course Prefix  
   b. Number  
   c. Enter Contact Hours per week in boxes.

   
   d. Course Title:  
      (Limit to 30 characters/spaces.)

   e. College Code:  
   f. Department Code:  

   Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: □ Variable □ Fixed  
   h. Maximum Credit Hours  
   i. Minimum Credit Hours  

   j. May Be Repeated for Added Credit: Check (x) □ Yes  
      □ No

   k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

   l. Grade Method: Check (x) □ Normal Grading  
      □ Credit/No Credit only (Pass/Fail)

   m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

   n. Term(s) Offered:  
      (See instructions for listing.)  
   o. Max. Section Enrollment:  

   p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.

CONM 122; ISYS 105; C – in MATH 120

UCC Chair Signature/Date: ___________________________________________________________________________ 
   /___/  

Academic Affairs Approval Signature/Date: ___________________________________________________________________________ 
   /___/  

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code 
   □ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □ G.E. Codes

Office of the Registrar use ONLY

Date Rec'd:  
Date Completed:  
Entered: SCACRSE _SCADETL _SCARRES _SCAPREQ _
MODIFY COURSE
Course Data Entry Form

FORM F
 Modify Course
Rev. 07/23/07

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix

b. Number

c. Enter Contact Hours per week in boxes.

CETM 230

LECture [ ] LAB [ ] INDependent Study – Check (x) [ ]

Practicum: [ ] Seminar: [ ]

d. Course Title: MDOT Certification Preparation (Optional)

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix

b. Number

c. Enter Contact Hours per week in boxes.

LECture [ ] LAB [ ] INDependent Study – Check (x) [ ]

Practicum: [ ] Seminar: [ ]

d. Course Title: (Limit to 30 characters/spaces.)

e. College Code: [ ] f. Department Code: [ ]

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: [ ] Variable [ ] Fixed  h. Maximum Credit Hours [ ] i. Minimum Credit Hours [ ]

j. May Be Repeated for Added Credit: Check (x) [ ] Yes [ ] No

k. Levels: Check (x) [ ] Undergraduate [ ] Graduate [ ] Professional

l. Grade Method: Check (x) [ ] Normal Grading [ ] Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment: [ ]

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 121; CETM 214; Co-requisite CONM212

UCC Chair Signature/Date: ______/______ Academic Affairs Approval Signature/Date: ______/______

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
[ ] Basic Skill (BS) [ ] General Education (GE) [ ] Occupational Education (OC) [ ] G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: ______ Date Completed: ______ Entered: SCACRSE SCADETL SCARRES SCAPREQ

19
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix

b. Number

c. Enter Contact Hours per week in boxes.

LECTure 2  LAB 2  INDependent Study – Check (x) □

Practicum: □  Seminar: □

d. Course Title: Hydraulics and Hydrology

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix

b. Number

c. Enter Contact Hours per week in boxes.

LECTure □  LAB □  INDependent Study – Check (x) □

Practicum: □  Seminar: □

d. Course Title: □ (Limit to 30 characters/spaces.)

e. College Code:

f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: □ Variable  □ Fixed  h. Maximum Credit Hours □  i. Minimum Credit Hours □

j. May Be Repeated for Added Credit: Check (x) □ Yes  □ No

k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

l. Grade Method: Check (x) □ Normal Grading □ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: □ (See instructions for listing.)  o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.

PHYS 211 co-requisite; C – in MATH 120

UCC Chair Signature/Date: _/_/ Academic Affairs Approval Signature/Date: _/_/

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Rec’d:  Date Completed:  Entered: SCACRSE  SCADTL  SCARRES  SCAPREQ

20
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix
b. Number

CONM
111

LECture 2  LAB 3  INDependent Study – Check (x)
Practicum: ______ Seminar: ______

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix
b. Number
c. Enter Credit Hours per week in boxes.
LECture ______ LAB ______ INDependent Study – Check (x)
Practicum: ______ Seminar: ______

d. Course Title: Construction Practices (Limit to 30 characters/spaces.)

e. College Code:
f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Maximum Credit Hours
i. Minimum Credit Hours

j. May Be Repeated for Added Credit: Check (x) Yes No

k. Levels: Check (x) Undergraduate Graduate Professional

l. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: (See instructions for listing.)

o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 116; C – in MATH 115 or 116

UCC Chair Signature/Date: ______/____/____

Academic Affairs Approval Signature/Date: ______/____/____

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: ______ Date Completed: ______ Entered: SCACRSE SCADETL SCARRES SCAPREQ
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008  Examples: 200801 (Spring), 200805 (Summer), 200808 (Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix: CONM  
b. Number: 112  
c. Enter Contact Hours per week in boxes.

LECTure 2  LAB  INDependent Study – Check (x)  
Practicum:  Seminar:

d. Course Title: Plans and Specifications

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix:  
b. Number:  
c. Enter Contact Hours per week in boxes.

LECTure  LAB  INDependent Study – Check (x)  
Practicum:  Seminar:

d. Course Title:  (Limit to 30 characters/spaces.)

e. College Code:  
f. Department Code:  

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: Variable  Fixed  
h. Maximum Credit Hours  
i. Minimum Credit Hours

j. May Be Repeated for Added Credit: Check (x) Yes  No

k. Levels: Check (x) Undergraduate  Graduate  Professional

l. Grade Method: Check (x) Normal Grading  Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered:  (See instructions for listing.)  

o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.

CONM 116; C – in MATH 115 or 116

UCC Chair Signature/Date:  

Academic Affairs Approval Signature/Date:  

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS)  General Education (GE)  Occupational Education (OC)  G.E. Codes

Office of the Registrar use ONLY

Date Rec’d:  Date Completed:  Entered: SCACRSE  SCADETL  SCARRES  SCAPREQ

22
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
   Notes:
   1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
   2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

   a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

   b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
   Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.
   a. Course Prefix
   b. Number
   c. Enter Contact Hours per week in boxes.
   CONM 116
   LECTure [ ] LAB [ ] INDependent Study – Check (x) [ ]
   Practicum: [ ] Seminar: [ ]
   d. Course Title: Construction Graphics

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.
   a. Course Prefix
   b. Number
   c. Enter Contact Hours per week in boxes.
   LECTure [ ] LAB [ ] INDependent Study – Check (x) [ ]
   Practicum: [ ] Seminar: [ ]
   d. Course Title: (Limit to 30 characters/spaces.)
   e. College Code
   f. Department Code

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: [ ] Variable [ ] Fixed
   h. Maximum Credit Hours
   i. Minimum Credit Hours

j. May Be Repeated for Added Credit: Check (x) [ ] Yes [ ] No

k. Levels: Check (x) [ ] Undergraduate [ ] Graduate [ ] Professional

l. Grade Method: Check (x) [ ] Normal Grading [ ] Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

   n. Term(s) Offered: (See instructions for listing.)
   o. Max. Section Enrollment:

   p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
   C – on MATH 110 or MATH ACT 19

UCC Chair Signature/Date: __/__/__

Academic Affairs Approval Signature/Date: __/__/__

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
[ ] Basic Skill (BS) [ ] General Education (GE) [ ] Occupational Education (OC) [ ] G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: _____ Date Completed: _____ Entered: SCACRSE__ SCADETL__ SCARRES__ SCAPREQ__

23
MODIFY COURSE
Course Data Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix
b. Number

c. Enter Contact Hours per week in boxes.

CONM 121

LECTure 2 LAB INDe
dependent Study – Check (x)

Practicum: Seminar:


d. Course Title: Materials Properties & Testing

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix
b. Number
c. Enter Contact Hours per week in boxes.

LECTure LAB INDe

Practicum: Seminar:

d. Course Title: (Limit to 30 characters/spaces.)

e. College Code:
f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: Variable Fixed 

h. Maximum Credit Hours

i. Minimum Credit Hours

j. May Be Repeated for Added Credit: Check (x) Yes No

k. Levels: Check (x) Undergraduate Graduate Professional

I. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.

C – in MATH 110 or MATH ACT 19

UCC Chair Signature/Date: / / 

Academic Affairs Approval Signature/Date: / / 

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: Date Completed: Entered: SCACRSE SCADETL SCARRES SCAPREQ

24
MODIFY COURSE FORM F

Course Data Entry Form

Modify Course
Rev. 07/23/07

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

   a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

   b. Term Effective (6 digit code only): Examples: 200801(Spring), 200805(Summer), 200808(Fall)
   Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

   a. Course Prefix: CONM
   b. Number: 122
   c. Enter Contact Hours per week in boxes.
      LECTure: 
      LAB: 
      INDependent Study – Check (x) 
      Practicum: 
      Seminar: 

   d. Course Title: Construction Surveying and Layout

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

   a. Course Prefix: 
   b. Number: 
   c. Enter Contact Hours per week in boxes.
      LECTure: 
      LAB: 
      INDependent Study – Check (x) 
      Practicum: 
      Seminar: 

   d. Course Title: (Limit to 30 characters/spaces.)

   e. College Code: 
   f. Department Code: 

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: Variable 
   h. Maximum Credit Hours: 
   i. Minimum Credit Hours: 

   j. May Be Repeated for Added Credit: Check (x) Yes 
   k. Levels: Check (x) Undergraduate 
   l. Graduate 
   m. Professional

I. Grade Method: Check (x) Normal Grading 
   Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

   n. Term(s) Offered: (See instructions for listing.)
   o. Max. Section Enrollment: 

   p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces. C – in MATH 120 or 116

| UCC Chair Signature/Date:       | / / | Academic Affairs Approval Signature/Date:    | / / |

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
- Basic Skill (BS) - General Education (GE) - Occupational Education (OC) - G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: __ Date Completed: ___ Entered: SCACRSE __ SCADTL __ SCARRES __ SCAPREQ ___

25
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
   Notes:
   1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
   2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

   a. List the changes to be made (See Proposed Changes a through p below):

   b. Term Effective (6 digit code only): 201008  Examples: 200801(Spring), 200805(Summer), 200808(Fall)
      Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.
   a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
      CONM   211   LECTure [ ]  LAB [ ]  INDependent Study – Check (x) [ ]
      Practicum: [ ]  Seminar: [ ]

   d. Course Title: Construction Quantity Estimating [ ]

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.
   a. Course Prefix  b. Number  c. Enter Contact Hours per week in boxes.
      [ ]  [ ]  LECTure [ ]  LAB [ ]  INDependent Study – Check (x) [ ]
      Practicum: [ ]  Seminar: [ ]

   d. Course Title: [ ] (Limit to 30 characters/spaces.)

   e. College Code: [ ]  f. Department Code: [ ]

   Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: [ ] Variable  [ ] Fixed  h. Maximum Credit Hours [ ]  i. Minimum Credit Hours [ ]

   j. May Be Repeated for Added Credit: Check (x) [ ] Yes  [ ] No

   k. Levels: Check (x) [ ] Undergraduate  [ ] Graduate  [ ] Professional

   l. Grade Method: Check (x) [ ] Normal Grading  [ ] Credit/No Credit only (Pass/Fail)

   m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
      [ ]

   n. Term(s) Offered: [ ] (See instructions for listing.)  o. Max. Section Enrollment: [ ]

   p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
      CONM 111, 112, 116 or ARCH 101, 102, 115; C – in Math 120 or 116

UCC Chair Signature/Date: _______________ / __ / __

Academic Affairs Approval Signature/Date: _______________ / __ / __

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
   [ ] Basic Skill (BS)  [ ] General Education (GE)  [ ] Occupational Education (OC)  [ ] G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: [ ]  Date Completed: [ ]  Entered: SCACRS GSCADETL  SCARRES  SCAPREQ  SCAPREQ
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
CONM 212 LECTure 2 LAB 2 INDependent Study – Check (x) ☐
Practicum: ☐ Seminar: ☐

d. Course Title: Soil & Foundations

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
☐ ☐ ☐ LECTure ☐ LAB ☐ INDependent Study – Check (x) ☐
Practicum: ☐ Seminar: ☐

d. Course Title: ☐ (Limit to 30 characters/spaces.)

e. College Code: ☐ f. Department Code: ☐

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: ☐ Variable ☐ Fixed h. Maximum Credit Hours ☐ i. Minimum Credit Hours ☐

j. May Be Repeated for Added Credit: Check (x) ☐ Yes ☐ No

k. Levels: Check (x) ☐ Undergraduate ☐ Graduate ☐ Professional

l. Grade Method: Check (x) ☐ Normal Grading ☐ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: ☐ ☐ (See instructions for listing.) o. Max. Section Enrollment: ☐

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 121 or ARCH 112; ☐ in MATH 120 or 116

UCC Chair Signature/Date: ____________________________ 1/7/10

Academic Affairs Approval Signature/Date: ____________________________ 1/7/10

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
☐ Basic Skill (BS) ☐ General Education (GE) ☐ Occupational Education (OC) ☐ G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: ____ Date Completed: ____ Entered: SCACRSE ___ SCADETL ___ SCARRES ___ SCAPREQ ___
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
   Notes:
   1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
   2. If either prefix or number is being changed, use ‘Delete Course’ and ‘Create New Course’ forms rather than this form.
      a. List the changes to be made (See Proposed Changes a through p below): Prerequisites
      b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
         Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.
   a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
      CONM 221 LECTure LAB INDependent Study – Check (x) ☐
      Practicum: Seminar: ☐
   d. Course Title: Statics and Structures

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.
   a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
      Lecture Lab INdependent Study – Check (x) ☐
      Practicum: Seminar: ☐
   d. Course Title: (Limit to 30 characters/spaces.)
   e. College Code: f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: ☐ Variable ☐ Fixed h. Maximum Credit Hours ☐ i. Minimum Credit Hours ☐
   j. May Be Repeated for Added Credit: Check (x) ☐ Yes ☐ No
   k. Levels: Check (x) ☐ Undergraduate ☐ Graduate ☐ Professional
   l. Grade Method: Check (x) ☐ Normal Grading ☐ Credit/No Credit only (Pass/Fail)
   
   m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
   
   n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment:

   p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
   PHYS 211 co-requisite; C – in MATH 120

   UCC Chair Signature/Date: Academic Affairs Approval Signature/Date:
   ___________________________ / / ___________________________ / /

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
☐ Basic Skill (BS) ☐ General Education (GE) ☐ Occupational Education (OC) ☐ G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: Date Completed: Entered: SCACRSE SCADETL SCARRES SCAPREQ
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Prerequisites

b. Term Effective (6 digit code only): 201008 Examples: 200801(Spring), 200805(Summer), 200808(Fall)

Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
CONM 222 LECTure 3 LAB 0 INDependent Study – Check (x) □ Practicum: □ Seminar: □

d. Course Title: Construction Administration

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in
Section I. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
□ □ LECTure □ LAB □ INDependent Study – Check (x) □ Practicum: □ Seminar: □

d. Course Title: (Limit to 30 characters/spaces.)

e. College Code: □ f. Department Code: □

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: □ Variable □ Fixed h. Maximum Credit Hours □ i. Minimum Credit Hours □

j. May Be Repeated for Added Credit: Check (x) □ Yes □ No

k. Levels: Check (x) □ Undergraduate □ Graduate □ Professional

l. Grade Method: Check (x) □ Normal Grading □ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.
CONM 211; CONM 111, 112, 116 or ARCH 101, 102, 115; C - in MATH 120 or MATH 126 co-requisite

UCC Chair Signature/Date: / / Academic Affairs Approval Signature/Date: / /

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
□ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □ G.E. Codes

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Date Rec’d: Date Completed: Entered: SCACRSE SCADETL SCARRES SCAPREQ

29
MODIFY COURSE

Course Data Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Course Content [Course Content Distribution and emphasis]

b. Term Effective (6 digit code only): 201008 (Fall)

II. CURRENT: Include information that is in the current course database.

a. Course Prefix: CONM
b. Number: 423
c. Enter Contact Hours per week in boxes.
   LECTure 3
   LAB 0
   INDependent Study – Check (x) ☐
   Practicum: ______
   Seminar: ______

d. Course Title: Construction Management Professional Methods

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix: ______
b. Number: ______
c. Enter Contact Hours per week in boxes.
   LECTure ______
   LAB ______
   INDependent Study – Check (x) ☐
   Practicum: ______
   Seminar: ______

d. Course Title: ______ (Limit to 30 characters/spaces.)

e. College Code: ______
f. Department Code: ______

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

g. Type: ☐ Variable ☐ Fixed
h. Maximum Credit Hours: ______
i. Minimum Credit Hours: ______

j. May Be Repeated for Added Credit: Check (x) Yes ☐ No ☐

k. Levels: Check (x) ☐ Undergraduate ☐ Graduate ☐ Professional

l. Grade Method: Check (x) ☐ Normal Grading ☐ Credit/No Credit only (Pass/Fail)

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
   Study sustainability and quality management principles utilized in design and construction. Review sustainable energy, materials, and water management methods. Examine pros and cons of “green” rating systems, including LEED and Life Cycle analysis. Understand quality assurance, control, and management. Review ethics in construction management

n. Term(s) Offered: ______ (See instructions for listing.)
   o. Max. Section Enrollment: ______

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces.

UCC Chair Signature/Date: ___________________________ Academic Affairs Approval Signature/Date: ___________________________

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
   ☐ Basic Skill (BS) ☐ General Education (GE) ☐ Occupational Education (OC) ☐ G.E. Codes

Office of the Registrar use ONLY

Date Rec’d: ______ Date Completed: ______ Entered: SCACRSE __ SCADETL __ SCARRES __ SCAPREQ __
Course: CONM 423  Construction Management Professional Methods

Credits: 3 Hours

Contacts: 3 Lecture, 0 Lab Hours per Week

Course Description: Study sustainability and quality management principles utilized in design and construction. Review sustainable energy, materials, and water management methods. Examine pros and cons of "green" rating systems, including LEED and Life Cycle Analysis. Understand quality assurance, control, and management. Review ethics in construction management.

Course Prerequisites: CONM 222, ENGL 311, MATH 120 with a grade of C- or better.

Engineering Ethics by Fleddermann

Required Materials: Calculator with trigonometric functions.
Architectural and Engineering Scales

Student Learning Outcomes

Students satisfactorily completing this course will understand and be able to:

1. Explain why sustainable design and construction is critical to future commercial success, covering basic sources of renewable and non-renewable energy and construction; conservation construction methods, water management; material use and selection; and interior space health and safety.

2. Examine the business of legitimately marketing "green" by identifying basic sustainable materials, methods, and their cost to a project.

3. Analyze various sites and evaluate the requirements of typical sustainable construction methodologies. Attention will be paid to brownfield construction, urban construction considerations, and the high value and conservation of "pristine" ecologically sensitive building sites.

4. Understand the principles of different rating systems and LEED.

5. Prepare Quality Control and Quality Assurance plans that incorporate best management practices to produce the highest quality product.

6. Develop and evaluate ethical business decisions and how they affect relationships with clients, subcontractors, suppliers, and employees.
### Instructional Unit Topic Descriptions and Time Allocations

<table>
<thead>
<tr>
<th>NO.</th>
<th>UNIT TOPIC DESCRIPTION SUMMARY</th>
<th>LECTURE HOURS</th>
<th>LAB HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Introduction &amp; Orientation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>II.</td>
<td>Sustainable Energy Sources and Energy Conservation</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>III.</td>
<td>Sustainable Building Materials</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>IV.</td>
<td>Water Management</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>V.</td>
<td>Sustainability Rating Systems</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>VI.</td>
<td>LEED-NC</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>VII.</td>
<td>Green Building/Renovation/Facility Management</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>VIII.</td>
<td>Life Cycle Analysis</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>IX.</td>
<td>Marketing Green/Sustainability for Profit and Reputation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>X.</td>
<td>The Cost of Building Green</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>XI.</td>
<td>Marketing Sustainability: Ethics and the Law</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>XII.</td>
<td>Site and Building Management/Scheduling with Sustainable Systems</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>XIII.</td>
<td>Quality Methods and Management</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>XIV.</td>
<td>Construction Ethics: Regulations vs. Obligation</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>XV.</td>
<td>Field Trips</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>XVI.</td>
<td>Guest Speakers</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Lecture Hours</td>
<td>45</td>
<td>0</td>
</tr>
</tbody>
</table>
Learning Outcomes for Each Instructional Unit

Upon Completion of each instructional unit noted, the student will be able to satisfactorily:

| I. Introduction | A. Understand the course syllabus and grading  
|                 | B. Explain the assignment procedures  
|                 | C. Explain the relevance of construction sustainability including measureables |
| II. Types of Sustainable Renewable and Non-Renewable Energy Sources and Construction Conservation Methods | A. List the different sources for sustainable energy  
|        | B. Understand how each system functions  
|        | C. Compare the selection energy sources depending upon the geographic location. |
| III. Sustainable Building Materials | A. Identify what constitutes a sustainable building material  
|         | B. List different sustainable building materials and applications |
| IV. Water Management | A. Identify different methods for addressing water quality and conservation  
|         | B. Understand the importance of water conservation and scarcity trends |
| V. Rating Systems | A. Identify different rating systems and their individual requirements |
| VI. LEED – New Construction | A. Describe the requirements for individual points in the rating system  
|        | B. Application and implementation of LEED rating system  
|        | C. Identify different submittal requirements for a LEED point  
|        | D. Determine requirements to become and maintain eligibility as a LEED Accredited Professional |
| VII. Green Building/Renovation/Facility Management | A. Identify different methods to address existing buildings for sustainable improvements |
| VIII. Life Cycle Analysis | A. Analyze the principles and effort to conduct a life cycle analysis for a building |
| IX. Marketing Green/Sustainability for Profit and Reputation | A. Determine why Owners want green  
|        | B. Identify how to “green” office practices including both the home office and the jobsite |
| X. The Cost of Green Construction | A. Explain the “bottom line” as it relates to green construction  
|        | B. Discuss the value of LEED certification |
| XI. Marketing Sustainability: | A. Analyze the risks and liabilities of building green  
|        | B. Identify the regulatory issues that add to construction risk |
| XI. | Site and Building Management/Scheduling with Sustainable Systems  
|     | A. Identify special requirements for sustainable material handling and installation  
|     | B. Identify site logistics to address sustainable system installations  
|     | C. Interpret submittals for sustainability compliance and complete necessary information retrieval  
| XII. | Quality Methods and Management  
|     | A. Define the principles of TQM in practice.  
|     | B. Identify the Statistical Process control charts as QA/QC management tools.  
|     | C. QA/QC procedures in construction.  
| XIV. | Ethics  
|     | A. Identify some ethical theories  
|     | B. Discuss what defines Professional Ethics  
|     | C. Compare Professional Organizations Ethical Statements  
|     | C. Discuss the proper ethical conduct based upon case study situations  
| XV.  | Field Trips  
|     | A. Observe actual "Green" construction practices  
|     | B. Document and evaluate lessons learned from field trips  
| XVI. | Guest Speakers  
|     | A. Assess impact of information received |
I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE
Notes:
1. Complete all parts of Sections I and II; complete only those items in Section III that represent changes.
2. If either prefix or number is being changed, use 'Delete Course' and 'Create New Course' forms rather than this form.

a. List the changes to be made (See Proposed Changes a through p below): Catalog Description and Prerequisites

b. Term Effective (6 digit code only): 20100808 Examples: 200801(Spring), 200805(Summer), 200808(Fall)
Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.
CONM 430 LECTure 3 LAB 0 INDependent Study – Check (x) □ Practicum: □ Seminar: □

d. Course Title: Construction Management Professional Methods

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes identified in Section I. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes.

LECTure □ LAB □ INDependent Study – Check (x) □ Practicum: □ Seminar: □

d. Course Title: (Limit to 30 characters/spaces.)

e. College Code: f. Department Code:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

m. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
Study of the construction and basic engineering design of power generating plants and process plants. Review of major equipment and facility requirements with plant layout and arrangement. Emphasis on construction of power and process plants including field construction, materials and methods as well as on-site management of the construction process. The study of professional ethics as it relates to the US construction industry. Explores the role of professionalism and discusses historical construction industry ethical cases.

n. Term(s) Offered: (See instructions for listing.) o. Max. Section Enrollment:

p. Prerequisites/Co-requisites/Restrictions: Limited to 100 spaces. CONM 311, ENGL 311

UCC Chair Signature/Date: ____________________________ Academic Affairs Approval Signature/Date: ____________________________

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
[ ] Basic Skill (BS) [ ] General Education (GE) [ ] Occupational Education (OC) [ ] G.E. Codes

Office of the Registrar use ONLY
Date Rec’d: _____ Date Completed: _____ Entered: SCACRSE __ SCADETL __ SCARRES __ SCAPREQ __
Course: CONM 430  

Power and Process Plant Construction

Credits: 3 Hours

Contacts: 3 Lecture, 0 Lab Hours per Week

Course Description: Study of the construction and basic engineering design of power generating plants and process plants. Review of major equipment and facility requirements with plant layout and arrangement. Emphasis on construction of power and process plants including field construction, materials and methods as well as on-site management of the construction process. The study of professional ethics as it relates to the US construction industry. Explores the role of professionalism and discusses historical construction industry ethical cases.

Course Prerequisites: CONM 311, ENGL 311

Required Textbooks: To be determined

Required Materials: Calculator with exponential functions  
Architectural and Engineering Scales  
Project plans and specifications

Student Learning Outcomes

Students satisfactorily completing this course will be able to demonstrate the following:

1. Describe the demands and difficulties of construction large plant facilities.
2. Explain the basic sources of energy and types of power generation plants.
3. Identify the basic plant engineering principles.
4. Name the types of power plant equipment and piping systems.
5. Prepare a list of large scale construction activities.
6. Develop a large scale site and construction project management plan.
7. Summarize major ethical theories and their ethical foundations.
8. Evaluate historical ethical issues in the US construction industry.
### Instructional Unit Topic Descriptions and Time Allocations

<table>
<thead>
<tr>
<th>NO.</th>
<th>UNIT TOPIC DESCRIPTION SUMMARY</th>
<th>LECTURE HOURS</th>
<th>LAB HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Introduction and Orientation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>II.</td>
<td>Basic Plant Engineering</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>III.</td>
<td>Sources of Energy</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>IV.</td>
<td>Power Systems</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>V.</td>
<td>Conventional Power Plants</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>VI.</td>
<td>Auxiliary Equipment</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>VII.</td>
<td>Process Plants</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>VIII.</td>
<td>Process Plants</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>IX.</td>
<td>Structural Systems</td>
<td>2</td>
<td>0</td>
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<tr>
<td>X.</td>
<td>Construction Erection</td>
<td>3</td>
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</tr>
<tr>
<td>XI.</td>
<td>Site Management</td>
<td>2</td>
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<tr>
<td>XII.</td>
<td>Ethics</td>
<td>9</td>
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<tr>
<td>XII.</td>
<td>Field Trips</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>XIII.</td>
<td>Guest Speakers</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>XIV.</td>
<td>Examinations</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>XV.</td>
<td>Holidays</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>45</td>
<td>0</td>
</tr>
</tbody>
</table>
Learning Outcomes for Each Instructional Unit

Upon Completion of each instructional unit, the learner will be able to satisfactorily:

<table>
<thead>
<tr>
<th>I. Introduction and Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Explain course goals, objectives and policies</td>
</tr>
<tr>
<td>B. Describe course requirements and assessment</td>
</tr>
<tr>
<td>C. Compare relevance of the course to the construction industry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Basic Plant Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Describe the companies of power transmission</td>
</tr>
<tr>
<td>B. Calculate power transmission needs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Sources of Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. List the types of fuels used in power generation facilities</td>
</tr>
<tr>
<td>B. Name the types of alternate mechanisms used in power generation</td>
</tr>
<tr>
<td>C. Describe the relative attributes of fuels used</td>
</tr>
<tr>
<td>D. Calculate heating value of fuels</td>
</tr>
<tr>
<td>E. Describe broad environmental concerns</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Power Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Name the types of power plant operating systems.</td>
</tr>
<tr>
<td>B. Identify Major components of power generating systems.</td>
</tr>
<tr>
<td>C. Interpret the power plant diagrams.</td>
</tr>
<tr>
<td>D. Interpret process and instrumentation diagrams.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V. Conventional Power Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Identify the functions of major power generating equipment.</td>
</tr>
<tr>
<td>B. Explain the characteristics of major power generating equipment.</td>
</tr>
<tr>
<td>C. Describe the operation of major power generating equipment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VI. Auxiliary Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Name the types of auxiliary power generating equipment.</td>
</tr>
<tr>
<td>B. Identify the best use of different piping materials and valve types.</td>
</tr>
<tr>
<td>C. Calculate fan and pump horsepower.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VII. Process Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Identify the layout and major components of municipal treatment plants.</td>
</tr>
<tr>
<td>B. Identify the layout and major components of pharmaceutical plants.</td>
</tr>
<tr>
<td>C. Identify the layout and major components of food processing plants.</td>
</tr>
<tr>
<td>D. Identify the layout and major components of manufacturing plants.</td>
</tr>
<tr>
<td>E. Interpret site layout drawings.</td>
</tr>
<tr>
<td>F. Develop a site logistics and lifting plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIII. Process Piping and Valves</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. List materials and methods of pipe joining, installation, and testing.</td>
</tr>
<tr>
<td>B. Explain materials and methods of valve installation and testing.</td>
</tr>
<tr>
<td>C. Describe appropriate installation and testing techniques.</td>
</tr>
<tr>
<td>D. Evaluate pipe testing records.</td>
</tr>
<tr>
<td>E. Develop piping subcontract work.</td>
</tr>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>IX</td>
</tr>
<tr>
<td></td>
</tr>
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