Section 1. Course Title and Description

Prefix & No.  Course Title                                      Credits
CEE 282          Civil Engineering Computer-Aided Design        3

Course Description:
Basic drawing techniques will be presented using an industry standard civil engineering software program. Computer-aided design techniques for civil engineers will be presented including topics such as input of surveying data for boundary and topography, creation of a digital terrain models, roadway alignments, earthwork, grading plans, plans and profiles and cross section drawings as they relate to the civil engineering. A notebook computer is required for this course. P, GE 109 and CEE 106.

Section 2. Review of Course

Will this be a common or unique course? (select the appropriate option below)

X  This course will be a unique course. (Go to Section 3.)

Section 3. Other Course Information

1. Are there instructional staffing impacts?
   X  No, schedule management. Explain:
   The CEE department has reorganized the schedule of course offerings by reducing some required courses to a once per year offering and moving some technical electives to every third semester. These changes will permit the offering of CEE 282 without instructional staffing impacts.

2. Existing program in which course will be offered: Civil Engineering Bachelor of Science

3. Proposed instructional method: R-Lecture
   (may be found at http://www.sdbor.edu/services/academics/AAC/guidelines.htm)
   Provide a brief justification: This course will be highly dependent on the students’ mastery of a complex software program for Civil Engineering drafting of final design applications.

4. Proposed primary delivery: 001 Face to Face Term Based Instruction
   (may be found at http://www.sdbor.edu/services/academics/AAC/guidelines.htm)
5. Term in which change will be effective: Fall 2012

6. Can this course be repeated for additional credit?
   _______ Yes, total credit limit: _______ _______ X No.

7. Will the grade for this course be limited to S/U (pass/fail)? _______ Yes _______ X No

8. Will section enrollments be capped?
   _______ Yes, maximum per section _______ _______ X No

9. Will this course be equated (i.e. considered the same course for degree completion) with any other unique or common course in the course database? _______ Yes _______ X No

10. Is this prefix already approved for your university? _______ X Yes _______ No

Section 4. To be completed by Academic Affairs

1. University department code: SCEE

2. Proposed CIP code: 140801
   _______ Yes _______ X No

   Is this a new CIP code for this university?
NEW COURSE REQUEST  
Supporting Justification for On-Campus Review

Bruce Berdanier
Request Originator

Bruce W. Berdanier
Signature 09/01/2011

Bruce Berdanier
Department Chair

Bruce W. Berdanier
Signature 09/01/2011

School/College Dean

Signature

Date

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.

The Civil Engineering Program currently requires the series of Engineering Design Graphics courses (GE121, 122, 123) which will be replaced by this one three hour course at the sophomore level taught within the department of Civil and Environmental Engineering. The GE Design Graphics series is taught from a historical perspective with 2/3 of the series content requiring students to complete hand drawn graphic projections. The 1/3 of the series which make use of computer aided drafting only introduces Civil Engineering software products used in the Civil Engineering profession. Additionally, the current course series does not address the needs of the Civil Engineering industry constituents or the needs of the CE program students in their program of study or their careers as the focus is on 2D graphics and solid modeling. The proposed course will provide a deeper introduction to and application of Civil 3D Computer Aided drafting within practical project experiences for the Civil Engineering profession. This course will address the three dimensional computer aided experience expected within the CE professional community for accreditation and for employment.

2. Note whether this course is:  
   X Required  
   _____ Elective

3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?  
   None

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made.  
   NA

5. Desired section size  
   50

6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).

   Allen Jones, Associate Professor, PhD, MS, BS. Dr. Jones has been teaching computer aided drafting and design both as a professional and academician for the last 24 years. He has previously developed curriculum for computer aided design for use both in the classroom and as focused training.

7. Note whether adequate facilities are available and list any special equipment that will be needed for the course. Adequate facilities are available for offering this course. The CEE department will purchase several stand alone computer software licenses which allow faculty and students to use

Course Form #5

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the software on campus computers in the CEE department. Additionally, students with an SDSU email will be allowed by the software manufacturer to download the complete suite of software components to their personal computers for no additional cost.

8. Note whether adequate library and media support are available for the course. NA

9. Will the new course duplicate courses currently being offered on this campus?
   _______ Yes    _______ X Yes   No

   If yes, provide justification.

10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined. NA

11. Add any additional comments that will aid in the evaluation of this request.