Instructions for Degree/Major Revisions:

- Complete this form when the proposed changes will impact the words, numbers, or symbols as presented in the current catalog copy (often referred to as "changing the footprint of the catalog"). Changes to Program Admission Requirements and Additional Graduation Requirements should be included.
- Catalog copy is available at [http://www.fgcu.edu/catalog/](http://www.fgcu.edu/catalog/). Scroll down to "Academic Programs" on the left navigation bar. Select Undergraduate Programs. Select the Program. Select "Print Program Details" in the upper right corner. Copy and paste catalog copy into a Word document. Turn on the tracking function (be sure that both additions and deletions appear in the tracking). Update the catalog year and make edits. Save the document as a Word file.
- When the proposed changes are approved by the College Curriculum Team, the College Administrator will send the following to Peggy Raynor in OCI by October 31 for review by the University Undergraduate Curriculum Team (UUCT):
  - An electronic MS Word version of the tracked catalog via email.
  - A color hard copy of tracked catalog copy and the Degree/Major Revision form via campus mail.
  - An electronic MS Word version of a degree curriculum map via email (please refer to question #13 below for further explanation).
- If changes are for courses only and there is no impact on the catalog copy, this revision form is not necessary. When these "stand alone" courses have been approved by the College Curriculum Team and noted in CMS, the CMS College Administrator should send a list to Peggy Raynor in OCI. The same October 31 deadline applies.
- All changes to courses are completed via the Curriculum Management System (CMS) [https://midas.fgcu.edu/acadaff/scns/default.asp](https://midas.fgcu.edu/acadaff/scns/default.asp)
- Reminder: The prefix/number for a new course is handled one way in the catalog copy and another in CMS. In the catalog copy, identify a new course with the suggested title, suggested prefix and course level, plus XXX (e.g., ART 4XXX). When final approval for the course prefix/number is received from Statewide Course Numbering System, the catalog copy will be updated. In CMS, a new course is requested by entering the suggested title and suggested prefix/number with no XXX. See instructions in CMS for selecting an appropriate suggested prefix/number.

1. **Degree/Major Title:**
   
   Civil Engineering

2. **Contact person:** Lisa Zidek
   
   **College:** Engineering
   
   **Department/School:** Civil and Environmental
   
   **Telephone:** 239-7392

3. **Briefly describe the proposed revision(s).**

   Two courses will have the C designation removed, one course is discontinued, prerequisites are being changed for one course, one course is being added.

4. **Effective date:** Fall 2014

   Changes are effective in the fall of the year. Exceptions are approved only in unusual circumstances with adequate justification.

5. **Briefly explain the rationale for the proposed revision.**

   Link the proposed revision to assessment and institutional effectiveness activities (feedback from students, market demands, program evaluation, resource allocation, etc.).

   The "C" designation is being removed from CGN4802C and CES 4605C. The content of these two courses are such that the "C" designation is not necessary. The college started with all courses as "C" and has been modifying this designation as the programs mature and course content continues to develop.

Degree/MajorRevision Proposal – Revised – 3-26-13
CES 4106 is being added to provide additional options for program depth. This course will be a restricted elective satisfying the depth requirement of ABET.

A prerequisite change for TTE 3002C is necessary since the college changed the requirements for statistics from STA 2037 to STA 2037 OR STA 2023.

TTE 4201C is being removed from the program because the course has not been offered nor does the college have the expertise in the area.

6. **Describe additional library resources needed to support this revision? Explain rationale for response, even if answer is None.**

   No additional library resources are required to support these changes.

7. **Describe additional faculty resources needed to support this revision? Explain rationale for response, even if answer is None.**

   No additional faculty resources are required to support these changes.

8. **Describe additional technology, facility, laboratory, or other resources needed to support this revision? Explain rationale for response, even if answer is None.**

   No additional resources are required to support these changes.

9. **What impact will the proposed revision have on other colleges, units, or programs?**

   The proposed revisions will not have an impact on other colleges, units or programs.

10. **New courses:**

    - ☑️ No new courses are required.

11. **Change to existing courses:**

    - ☑️ Existing courses are being changed. List prefix/number/title below. Complete a Course Add Form for each from the Curriculum Management System - [https://midas.fgcu.edu/acadaff/scns/](https://midas.fgcu.edu/acadaff/scns/).

    - CGN 4802C Civil EnginSenior Design
    - CES 4605C Steel Design
    - TTE 3002C Transportation Engineering

12. **Termination of existing courses:**

    - ☑️ Courses are being terminated. List prefix/number/title below. Complete a Course Terminate Form for each course from the Curriculum Management System - [https://midas.fgcu.edu/acadaff/scns/](https://midas.fgcu.edu/acadaff/scns/).

    - TTE 4201C Traffic Engineering

13. **What impact will the proposed revision have on the progression or sequencing of courses in this degree program?**

    Please provide evidence in the form of a degree curriculum map, a listing of required and restricted elective courses in the major and their prerequisites or other form appropriate for your program (consult with College Curriculum Team Chair for additional information).

14. **Catalog copy:**

Degree/MajorRevision Proposal – Revised – 3-26-13
See Instructions above.

15. **Additional remarks:**

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**APPROVALS (required prior to submission)**

Department/Program Chair/Director  
Date 3/14/14

College Curriculum Committee Chair  
Date 3/14/14

College Dean  
Date 3/14/14

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Does another department or unit provide related expertise or offer similar courses?  
☐ No  ☐ Yes (If yes, have the other department complete the following. Attach a separate sheet if needed.)

Department/Unit:

☐ Supports this proposal  ☐ Does not support this proposal  ☐ Defers Recommendation

Authorizing signature: ___________________________  Date ___________________________

Comments:
Civil Engineering - B.S.C.E.

2013-2014 Catalog Year

Civil Engineering concerns the study of the conception, design, construction, and maintenance of large public and private projects. Civil engineers plan, design, and supervise the building of bridges, highways, railways, tunnels, airports, dams, water treatment and distribution systems, buildings, and many other types of structures. Environmental considerations, such as water supply, pollution control, and preservation of soil quality, are also important.

The Bachelor of Science in Civil Engineering (B.S.C.E.) focuses on the core competency areas: environmental, geotechnical, structural, transportation, and water resources engineering. This program employs a team-based interdisciplinary learning philosophy. This approach provides students with the critical thinking skills required for effective and innovative engineering practice. Students will be prepared to combine social awareness and an interest in humanity with the technical expertise of the engineering profession as they plan, design, and construct a built environment. B.S.C.E. students complete core courses common to all engineering majors as well as specialized courses in civil engineering.

The Civil Engineering Program of the Department of Environmental and Civil Engineering in the U.A. Whitaker College of Engineering at Florida Gulf Coast University will produce graduates who:

- Pursue lifelong learning through continuing education and/or advanced degrees in civil engineering or other related fields,
- Progress to professional registration, and
- Continue to develop professionally through participation in professional organizations and/or participation in professional development activities in the industry.

Program Admission Requirements

Degree-seeking students are classified as pre-majors prior to formal acceptance into a U.A. Whitaker College of Engineering (WCE) major. As pre-majors, students may enroll in:

- Lower level (1000-2999) courses to satisfy General Education and Common Program Prerequisite requirements;
- Lower level electives; and
- EGN1006L from the Engineering Common Core courses, if course pre-requisites are met.

Pre-majors may not enroll in Engineering Common Core classes beyond EGN 1006L without first being admitted to an Engineering Major or in any upper level (3000-4999) Required Courses for the Major without meeting the course pre-requisites and prior approval, where appropriate, by the WCE Academic Advisor.
Admission to Florida Gulf Coast University does not guarantee acceptance into a WCE major. Students are accepted into a WCE major upon satisfaction of the following:

1. Admission to FGCU as a degree seeking student in good academic standing.
2. Attendance at a Freshman Transition Workshop or Transfer Student Orientation session.
3. Completion of Calculus I with a grade of C or higher. Exceptions may be made for AP/IB credit with approval of the WCE Academic Advisor.
4. Submission of the U.A. Whitaker College of Engineering Application for Acceptance into a Major upon completion of the above steps 1 through 3 before the start of registration in any given semester.

Program Requirements

1. FGCU General Education Program (GEP) (36 hrs)
   Refer to the General Education Program for more information.
   
   A. Communication (6 hrs)
      1. ENC 1101 (3)
      2. ENC 1102 (3)
   B. Mathematics (6 hrs)
      1. MAC 2311 (4)
      2. STA 2037 (3) or STA 2023 (3)
   C. Humanities (9 hrs)
      1. HUM 2510 (3)
   D. Social Sciences (6-9 hrs)
   E. Natural Sciences (6-9 hrs)
      1. BSC 1010C (4) or GLY 1000C (4) or GLY 2030C (3)
      2. CHM 1046C (4)

   Note: At least one Natural Sciences course must include a laboratory or field component. Courses meeting this requirement contain a “C” or “L” in their course numbers. Each combined lecture and laboratory course (marked with a C) is equivalent to taking the lecture and laboratory separately.

2. Common Program Prerequisites (GEP +23)
   - CHM 1045C General Chemistry w/Lab I (4)
   - MAC 2311 Calculus I w/Analytical Geometry (GEP)
   - MAC 2312 Calculus II w/Analytical Geometry (4)
   - MAC 2313 Calculus III w/Analytical Geometry (4)
   - MAP 2302 Differential Equations (3)
   - PHY 2048C General Physics w/Lab I (4)
   - PHY 2049C General Physics w/Lab II (4)
3. **Engineering Common Core (10 hrs)**
   - EGN 1006L Intro to the Engineering Profession (1)
   - EGN 1041C Computational Tools for Eng (2)
   - EGM 3420C Engineering Mechanics (4)
   - EGN 3641C Engineering Entrepreneurship (3)

4. **Required Courses in the Major (54 hrs)**
   - CCE 3101C Civil Engineering Materials (3)
   - CCE 4031 Project Planning & Regulations (3)
   - CEG 3011C Geotechnical Engineering I (3)
   - CEG 4012C Geotechnical Engineering II (3)
   - CES 3100C Structural Analysis (3)
   - CGN 3323C Surveying and Geomatics (3)
   - CGN 4802C Civil Engin Senior Design (3)
   - CWR 3201C Engineering Fluid Mechanics (3)
   - CWR 3202C Hydrology and Hydraulics (3)
   - CWR 4540C Water Resources Design (3)
   - EGN 2111C Engineering Computer Graphics (3)
   - EGN 3331C Mechanics of Materials (3)
   - ENV 3006C Fundamentals of Environ Engrg (3)
   - TTE 3002C Transportation Engineering (3)
   - XXX XXXX Technical Restricted Electives (6)*

Select one:
   - CES 4702C Reinforced Concrete Design (3) OR
   - CES 4605C Steel Design (3)

Select one:
   - ENV 3502C Water Treatment Engineering (3)
   - ENV 4101C Atmospheric Pollution (3)
   - ENV 4330C Hazardous Waste Remediation (3)
   - ENV 4351 Solid Waste Management (3)
   - ENV 4509C Wastewater Engineering (3)
   - ENV 4612 Sustainability in Engineering (3)

*The Technical Restricted Electives must be approved by the College Advisor for engineering in consultation with the faculty. Restricted electives include the following courses:

- CES 4605C Steel Design (3)
- CES 4702C Reinforced Concrete Design (3)
5. **University Requirements (3 hrs)**
   
   - IDS 3920 University Colloquium (3)

6. **Unrestricted Electives (varies)**
   
   - Recommended options include ECO 2013, ECO 2023, ENC 3025, MAN 2062, MAN 3025, MAS 3105, and MAP 3161

**TOTAL SEMESTER HOURS REQUIRED:** 128 HRS

**Additional Graduation Requirements**

- A minimum of 128 credit hours.
- At least 48 of the 128 hours at the upper division (3000 and higher) level.
- A minimum of 32 of the last 60 credit hours to be taken at FGCU, including 12 credit hours in the major. Also, CGN 4802C must be taken at FGCU.
- A cumulative GPA of 2.0 for all coursework attempted at FGCU.
- A minimum grade of C for each course used to satisfy the following: ENC 1101 and ENC 1102, common prerequisites, required courses in the major and technical electives in the major.
- Satisfaction of Communication and Computation Skills and foreign language entrance requirements.
- Satisfaction of the Service Learning requirement. See [www.fgcu.edu/connect/](http://www.fgcu.edu/connect/)

**Transfer Notes and Acceptable Substitutes**

The following substitutions are acceptable for common prerequisites and must be completed with a grade of C or higher.
• MAC 2311: may substitute MAC X311 or MAC X281 (4)
• MAC 2312: may substitute MAC X312 or MAC X282 (4)
• MAC 2313: may substitute MAC X313 or MAC X283 (4)
• CHM 1045C: may substitute CHM X045C or CHM X045 and CHM X045L or CHS X440 (4)
• PHY 2048C: may substitute PHY X048C or PHY X048 and PHY X048L or PHY X043 (4)
• PHY 2049C: may substitute PHY X049C or PHY X049 and PHY X049L or PHY X044 (4)

For All Majors: Students are strongly encouraged to select required lower division electives that will enhance their general education coursework and that will support their intended baccalaureate degree program. Students should consult with an academic advisor in their major degree area.

Transfer credits will normally be accepted from regionally accredited institutions. Transfer credit received by The Office of Admissions will be evaluated for appropriate credit toward specific requirements in the students' degree program. Registration assistance will be provided at transfer orientation based on the evaluation of official transcripts and degree applicable transfer credit. Admitted students may view transfer credit and access a Degree Evaluation in the Student Records section of the Gulfline Accounts. Degree evaluation instructions may be found at this link: http://www.fgcu.edu/OCI/cappstudents.html.