

B. S. CIVIL ENGINEERING



COLLEGE OF ENGINEERING & COMPUTER SCIENCE
DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC LEARNING COMPACT

The department maintains for each student a portfolio of assignments that received a failing grade in the courses identified for each outcome. In addition, the department maintains for each student a “flow-chart” that lists all of the coursework required and documents the overall student’s progress towards their degree. The “flow-chart” is in electronic format and is updated at the end of each semester after grades are posted.

The evaluation of the flow-chart records and the student’s portfolio is conducted in a timely manner by the Undergraduate faculty/advisor members and the Chair. Failure to maintain satisfactory progress will initiate a review by the Department.

Industry supervisors in the Cooperative Education Program evaluate students on content knowledge, communication skills, and critical thinking skills. Possible outcomes for a student who receives an unsatisfactory evaluation include repeating an industrial placement or portion of the placement, tutoring, additional coursework, or removal from the Cooperative Education Program with no credit given.

CONTENT KNOWLEDGE (Declarative Knowledge, Research Skills, Technical Skills): Students will recognize and apply concepts, principles and theories in core Civil Engineering courses (structures; civil engineering materials; hydraulics; soil mechanics; transportation; and environmental engineering).

Student portfolios will include failing grades on in-class tests, homework assignments, laboratory reports, and research projects for:

EGM 3510 or EOC 3105: Statics

EGM 3524 or EOC 3150: Strength of Materials

CGN 2402C: Civil Engineering Fundamentals

CGN 3501C: Civil Engineering Materials

CWR 3201: Applied Hydraulics

ENV 3001: Environmental Science and Engineering

CEG 3011C: Soil Mechanics

CES 3102: Analysis of Structures

TTE 4004: Transportation Engineering I

COMMUNICATION (Written Communication; Oral Communication, Team/Collaborative communication): Students will:

- Describe the interrelatedness of contemporary issues in a global and society context with Civil Engineering solutions.
- Communicate effectively in writing.
- Convey technical material through oral presentations.
- Function effectively in multidisciplinary teams.

Student portfolios will include failing grades on individual paper assignments, individual oral presentations, group papers and presentations evaluated by peer group and faculty/industry team for the following courses:

EGN 1002: Fundamentals of Engineering
CGN 4803C: Civil Engineering Design I
CGN 4804C: Civil Engineering Design II

CONTENT KNOWLEDGE (Technical Skills) and CRITICAL THINKING (Analytical Skills, Creative Skills, Practical Skills): Students will:

- Use modern engineering techniques, skills, and tools, including computer-based tools for analysis and design.
- Identify, formulate and solve novel civil engineering problems.
- Design and conduct scientific and engineering experiments including analysis and interpretation of data.
- Deliver engineering results that meet performance standards for cost, safety, and quality.
- Describe the ethical and professional responsibilities of the civil engineer.
- Make and defend ethical judgments in keeping with professional standards.

Student portfolios will include failing grades on laboratory reports, evidence of synthesis of current knowledge into new designs or products, and in-class projects and case study analyses for the following courses.

CWR 3201C: Applied Hydraulics	ENV 3001: Environmental Science and Engineering
CWR 4202: Hydrologic Engineering	ENV 4501: Water and Wastewater Technology
CEG 4012: Foundation Engineering	CGN 4803C: Civil Engineering Design I
CES 4742: Structural Design	CGN 4804C: Civil Engineering Design II
TTE 4005: Transportation Engineering II	

In addition, the students will be evaluated based on their overall performance in the National ASCE Design competition.

Approved 1-06-2006