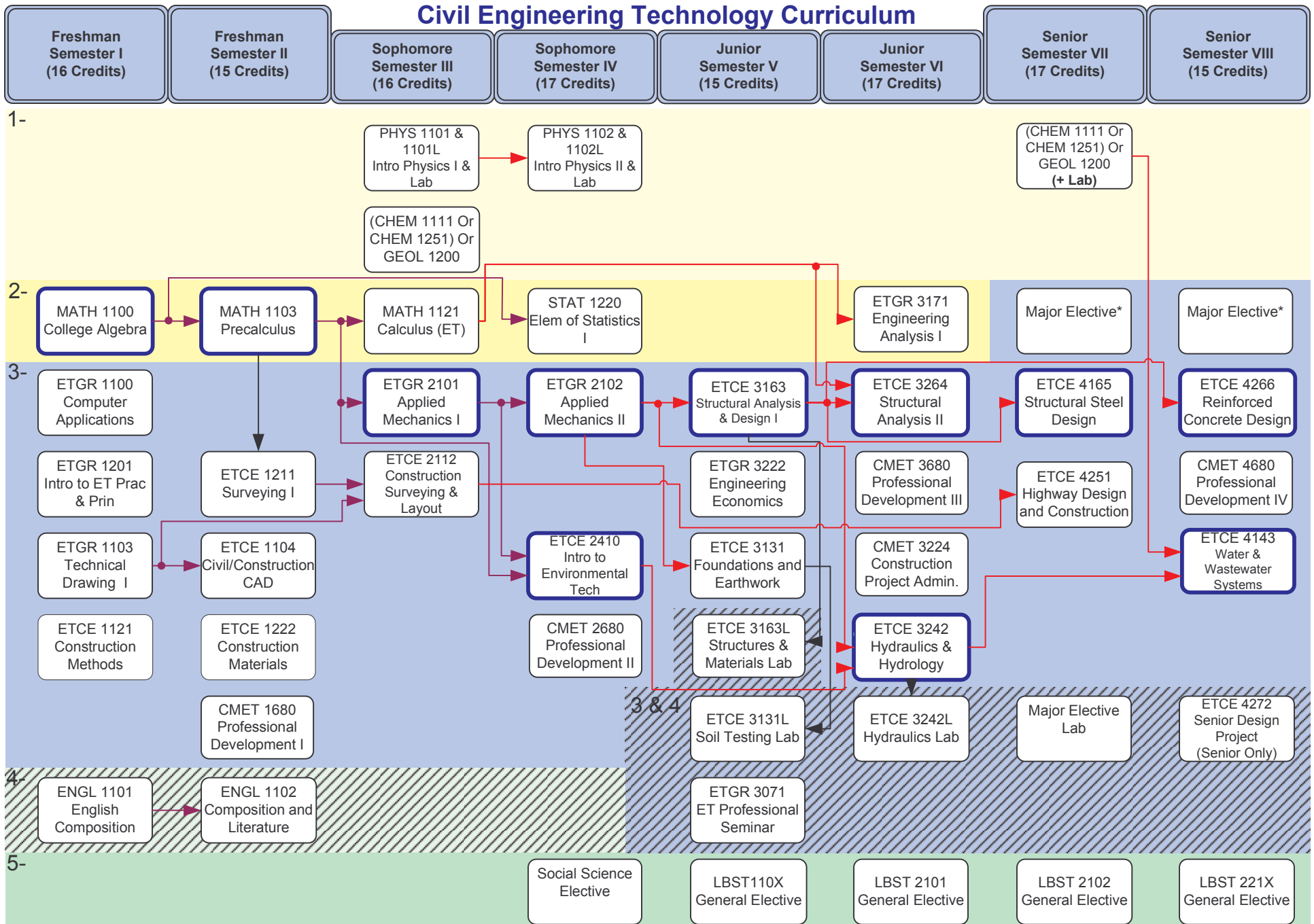


Civil Engineering Technology Curriculum



— Pre or Co Requisite
 — Firm Pre-requisite
 — Firm Pre-requisite with C or better
 * Pre-requisites as listed in catalog

Critical Path
 Writing Intensive

ABET Criterion 4 Categories
 1- Physical and Natural Sciences
 2- Mathematics
 3- Technical Content Elective
 4- Communications
 5- Social Sciences and Humanities
 Note: ETGR 3071, ETCE 3131L, 3163L, 3242L, 4272 and Major Laboratory contribute to both technical content (3) & communications (4) outcomes.

Civil Engineering Technology Curriculum

Civil Engineering Technology (CIET)

Program Outcomes and Performance Criteria (sub-outcomes)

Upon completion of the BSET program in Civil Engineering Technology, our students will be able to:

Outcome 1: Use appropriate tools to acquire data and analyze problems.

- i. Demonstrate the proper use of appropriate software to solve technical problems
- ii. Use proper resources to obtain necessary information
- iii. Operate discipline specific lab equipment

Outcome 2: Demonstrate effective skills in the development and presentation of team projects.

- i. Exhibit effective team skills
- ii. Present oral reports
- iii. Produce a written report
- iv. Complete assigned tasks in a timely manner

Outcome 3: Exhibit knowledge and skills consistent with the expectations of a practicing engineering technologist.

- i. Take part in continued education and/or training
- ii. Participate in appropriate activities or organizations, or obtain employment in a relevant position
- iii. Perform tasks in a professional manner

Outcome 4: Generate creative and realistic solutions to defined problems and projects.

- i. Solve structured technical problems
- ii. Solve technical problems to satisfy a given set of specifications
- iii. Develop alternate strategies to solve open-ended problems

Outcome 5: Recognize the value of diversity, and identify ethical and societal issues in business and technical tasks.

- i. Participate in a diverse group
- ii. Discuss ethical and societal issues related to technology

Outcome 6: Solve problems and design components, systems or processes appropriate to the discipline.

- i. Utilize graphic techniques to produce engineering documents
- ii. Conduct standardized field and laboratory testing on civil engineering/construction materials
- iii. Utilize modern surveying methods for land measurement and/or construction layout
- iv. Determine forces and stresses in elementary structural systems
- v. Estimate material quantities for technical projects
- vi. Employ productivity software to solve technical problems
- vii. Plan and prepare design and construction documents such as specifications, contracts, change orders, engineering drawings, and construction schedules
- viii. Perform economic analysis and cost estimates related to design, construction, operations, and maintenance of systems in the civil specialties
- ix. Select appropriate engineering materials and practices
- x. Apply basic technical concepts to the solution of civil problems involving 1) hydraulics, 2) hydrology, 3) geotechnics, 4) structures, 5) materials behavior, 6) transportation systems, and 7) water & wastewater systems
- xi. Perform standard analysis and design in the following sub-disciplines: 1) structures, 2) geotechnical, 3) transportation, 4) construction or environmental.