
# Department of Computer Science and Engineering Undergraduate Studies Handbook

2025-2026

Academic Year

(Revised on 3/28/2025)

# CSE Department
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# 1 Advising Information

## 1.1 Introduction

This document provides a guide to the policies and procedures for undergraduate studies in the Department of Computer Science and Engineering at the University of Notre Dame (herein after Department). It serves both to elaborate items such as contact information and advising roles, curricular requirements and options for majors and minors, and to summarize certain information of frequent interest to students. It supplements two University of Notre Dame undergraduate policy documents: 1) the Undergraduate Academic Code and 2) the Bulletin of Information.

Nothing herein is to be interpreted as contrary to the regulations of the Undergraduate Affairs and Programs. Circumstances will arise that either have not been included or will require a decision on the part of the Department. The advisor is always the first person to contact if a question should arise. If a problem cannot be resolved, then the Director of Undergraduate Studies (DUS) or the Department Chairman should be approached. Modifications to the department undergraduate program regulations are approved from time to time by the CSE Undergraduate Studies Committee and are made known by publishing a new version of the Undergraduate Studies Handbook.

## 1.2 CSE Web Page

The Undergraduate webpage is the best resource for:

- Standard major planning: degree requirements for CS and CPEG programs
- Courses satisfying minor and concentration requirements
- CSE student groups and organizations

## 1.3 The Undergraduate Academic Program Administrator

Mrs. Dian Wordinger can help if you need:

- CSE course registration overrides
- Clarification and confirmation of information on the CSE Web Page
- Graduation Progress System (GPS) adjustments pertaining to CSE major requirements

## 1.4 The Academic Advisors

Advisors Leonor Wangensteen and Cindy Cubillo can help if you have questions about:

- 4-year Academic Plans and Non-standard major planning
- Adding and dropping courses
- Switching majors, or adding programs including supplementary majors and minors
- University and College degree requirements
- Transfer student advising
- Connections to academic and other campus resources

## 1.5 The Director of Undergraduate Studies

Prof. Ramzi Bualuan is the best resource for specifics about undergraduate studies:

- Study Abroad planning and course approvals
- Dual degree program approvals
- Course substitutions
- Research credit approvals
- Advice on transfer credits for courses taken at another institution
- Graduate fellowship opportunities
- What, if anything, can be double-counted for various types of requirements
- CPT/OPT issues

## 1.6 The Associate Dean for Advising and Academic Affairs

Associate Dean Mike Ryan can help if you have:

- Issues related to academic probation, dismissal, and readmission
- Course withdrawal after drop date
- Leaves of absence from the University
- Course overload approval (19+ credit hours/semester)
- S/U grading approval
- Part-time status approvals

## 1.7 Faculty Advisors

They are the best resource for general, “big picture” discussions:

- Student and department expectations for the college experience
- Discernment: is CS or CPEG the right major?
- Choosing CSE electives
- Choosing engineering minors
- Research opportunities in CSE
- Career aspirations
- Graduate school aspirations

## 1.8 Other Resources

Registrar's Office (transcripts, enrollment verification, registration information, university calendars)

Path Class Search and NOVO Browse Classes on InsideND are the best resources for:

- Course offerings and descriptions
- Course attributes, which indicate what requirements a course satisfies, e.g., CPTE - CPEG Technical Elective, WRIT – Writing Intensive core requirement, etc.

The Graduation Progress System (GPS) on InsideND:

- The GPS degree audit report is a guide when planning progress towards completion of degree. Your academic advisor or the Office of the Registrar may be contacted for assistance in interpreting the report.

The Meruelo Family Center for Career Development is the best resource for:

- Opportunities available at specific companies
- Mock interviews, Scheduling interviews, Resume preparation, and more
- Velena Hernandez serves as Assistant Director, Engineering Careers

University Health Services

University Student Affairs

Office of Community Standards

# 2 CSE Undergraduate Curriculum

## 2.1 Why Study Computer Science (CS) or Computer Engineering (CPEG) at Notre Dame?

Graduates of our undergraduate programs are highly sought after by top companies – our placement rate has been at or near 100% for many years.

Our graduates take up careers in the computing industry, the finance industry, large engineering companies, startup companies, consulting firms, medical informatics companies, and government. Others enter doctoral programs at leading universities. Still others pursue startup opportunities, contributing to the burgeoning innovation culture surrounding computer science and engineering.

Our programs do not assume that you come to Notre Dame with any previous experience in programming. You can become an expert software engineer through your time and experience at Notre Dame.

## 2.2 Program Outcomes

Graduates of the Computer Science and Computer Engineering programs will achieve the following objectives:

(1) They will be technically qualified for practice in the profession; they will demonstrate the ability to specify, design, and implement software and/or hardware-software systems to meet customer requirements or to advance the state of the art; the ability to employ modern computer languages, environments, and platforms in such tasks; and the ability to apply knowledge of science and mathematics to such tasks;

(2) they will be effective technical communicators, orally and in writing, and effective team members capable of working effectively in groups on computing problems;

(3) they will be ethical professionals, capable of evaluating personal and professional choices in terms of codes of ethics and ethical theories and understanding the impact of their decisions on themselves, their professions, and on society;

(4) they will be successful as graduates, either through professional employment in the private or public sector, or as students in graduate study. They will also be able to employ life-long learning tools and techniques to maintain their currency in the field.

## 2.3 Program Descriptions

### We offer two undergraduate degrees

The Computer Science Bachelor of Science Program and the Computer Engineering Bachelor of Science Program in the Department of Department of Computer Science and Engineering are accredited as annotated on the departmental website and University bulletin of information.

The difference between the Computer Science and Computer Engineering degrees are quite significant in terms of the required set of core courses. Because the Computer Engineering and Computer Science programs are identical through the fourth semester, a switch from one program to the other is very easy to make until the beginning of the fifth semester.

### Program in Computer Science

The Program in Computer Science focuses on the application of computers to real problems, especially in the design, development, and use of software. The program is designed to foster an understanding of the key properties of algorithms (the mathematical statements of how problems are to be solved), and how to recognize and design good algorithms to solve real problems in efficient fashions. The program also includes developing the ability to engineer large, efficient, portable, and scalable pieces of software that implement good algorithms in ways that are useful to the end users, and to do so in ways that use modern software development tools and techniques.

### Program in Computer Engineering

The Program in Computer Engineering focuses on understanding the basic nature of the electronic devices that go into the creation of modern computers and on the detailed architecture and organization of such systems, both within the central processing unit and in how larger systems are assembled. Modern design tools and techniques are introduced very early in the program and used throughout to design, analyze, and prototype real digital computing systems. All computer engineering students are required to enroll in at least one of a prescribed set of design courses before graduation.

## 2.4 Curricular Planning

It is recommended that all CSE majors initiate a 4-year graduation plan by the end of their first year. This curricular plan should be reviewed by academic advisors or Directors of Undergraduate Studies (DUS). before the start of each new semester to ensure the student is on track to graduate on time. Planning resources include the CSE Department website, the Bulletin of Information, this CSE Undergraduate Handbook, and Grade History and the Graduation Progress System (GPS), which are both found on Inside ND.

#### Curriculum Planning Tools

For now, it is recommended to use Google Sheets when building a 4-year graduation plan, so that it may be more easily shared with advisors and DUS. Some students find it helpful to color code each type of requirement (core, college, major, and any additional courses). Additional planning tools will be shared with students as they are developed.

## 2.5 Other programs

#### B.A. in Computer Science

The Bachelor of Arts in computer science allows you to pursue a broad liberal arts education while building a strong foundation in computer science. Housed in the College of Arts and Letters, the program involves significant coursework in the College of Engineering's Department of Computer Science and Engineering. Incoming students should speak with their first-year advisor to plan courses to prepare for the major. All students interested in participating in the major should plan to apply for entry to the major during the spring of their first year. See more info at https://altech.nd.edu

**Reilly Program 5-year EG/AL Dual Degree**

The five-year dual degree program between the College of Arts and Letters and the College of Engineering enables the student to acquire degrees from both colleges. This combination program, instituted in 1952, offers students the advantages of both a liberal and a technical education. The student completing one of these combination programs has a background in the humanities and social sciences as well as a degree from one of the programs offered by the College of Engineering. Advisors for the program are available for consultation about the advisability of entering the program and about meeting the particular needs of each student pursuing this program. Qualified students are eligible to receive modest scholarship support from the John J. Reilly Endowed Scholarship program during their third, fourth, and fifth years of study. The decision to enter the program ideally should be made prior to beginning the sophomore year, although students can also enter the program at a later stage. See more info at https://reilly.nd.edu/undergraduate/dual-degree and in the Bulletin of Information.

**Dual Degree with the College of Science**

The five-year dual degree program between the College of Science and the College of Engineering enables the student to acquire degrees from both colleges—the bachelor of science from the College of Science and the bachelor of science degree in a chosen program of the College of Engineering. This combination program, instituted in 2013, offers students the advantages of the liberal arts aspects of natural science and mathematics education coupled with a strong technical education. Because a student may enter the program from either college, both colleges have agreed to a certain degree of flexibility in allowing students to meet degree requirements. See more info in the Bulletin of Information.

**Dual Degree with the Mendoza College of Business**

The five-year dual degree program between the Mendoza College of Business and the College of Engineering enables the student to earn the bachelor of science in a chosen field of the College of Engineering and the master of business administration. This program, instituted in 1991, offers students the opportunity to better integrate study in engineering and in management. The student completing this program has a background in the management sciences, as well as the first professional degree in one of the fields of engineering. See more info at https://mendoza.nd.edu/graduate-programs/mba-engineering-dual-degree/ and in the Bulletin of Information.

## 2.6 CS course plan for *entering fall 2023 and previous*

| First Year | | | | | |
|---|---|---|---|---|---|
| **Fall Semester (Credit Hours:18)** | | | **Spring Semester (Credit Hours:18)** | | |
| MATH 10550 | Calculus I | 4 | MATH 10560 | Calculus II | 4 |
| CHEM 10171 | Intro to Chemical Principles | 4 | | Technical Elective | 3 |
| EG 10117 | Engineering Design (WRIT*) | 3 | EG 10118 | Engineering Computing | 3 |
| | Core Curriculum Course | 3 | PHYS 10310 | Engineering Physics I | 4 |
| USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 | USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 |
| FYS 10101 | Moreau First Year Experience | 1 | FYS 10102 | Moreau First Year Experience | 1 |
| **Sophomore Year** | | | | | |
| **Fall Semester (Credit Hours:17.5)** | | | **Spring Semester (Credit Hours:16.5)** | | |
| MATH 20550 | Calculus III | 3.5 | MATH 20580 | Intro to Linear Algebra and Differential Equations | 3.5 |
| PHYS 10320 | Engineering Physics II | 4 | CSE 20221 | Logic Design | 3 |
| CSE 20110 | Discrete Mathematics | 3 | CSE 20289 | Systems Programming | 3 |
| CSE 20311 | Fundamentals of Computing | 4 | CSE 20312 | Data Structures | 4 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Junior Year** | | | | | |
| **Fall Semester (Credit Hours:15)** | | | **Spring Semester (Credit Hours:15)** | | |
| | CSE Elective | 3 | CSE 30151 | Theory of Computing | 3 |
| | CSE Elective | 3 | CSE 30332 | Programming Paradigms | 3 |
| | Technical Elective | 3 | CSE 30341 | Operating Systems | 3 |
| CSE 30321 | Computer Architecture | 3 | ACMS 30440 | Probability and Statistics | 3 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Senior Year** | | | | | |
| **Fall Semester (Credit Hours:15)** | | | **Spring Semester (Credit Hours:12)** | | |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | Technical Elective | 3 | CSE 40175 | Ethical and Social Issues | 3 |
| CSE 40113 | Algorithms | 3 | | Core Curriculum Course | 3 |
| | Free Elective | 3 | | Total credit hours | 127 |

* *Students who have AP credit for Writing and Rhetoric still owe a Writing Intensive course (WRIT attribute). EG 10117 has a WRIT attribute and will satisfy the WRIT requirement.*

**CS program requirements for *entering fall 2023 and previous***

To earn the BS CS, students must complete the following requirements

1. *Completion of University Core Curriculum requirements **(26 credits)**.* Note the Liberal Arts 1, 2 and 3 requirements will be covered by courses required by the College of Engineering and the Department of Computer Science Engineering. Also note that the University Seminars can double count as another core requirement.

2. *Completion of the College of Engineering requirements **(22 credits)***. Students must complete the following courses:
    - EG 10117 – Engineering Design (3 credits)
    - EG 10118 – Engineering Programming (3 credits)
    - MATH 10550 – Calculus I (4 credits)
    - MATH 10560 – Calculus II (4 credits)
    - CHEM 10171/11171 – Introduction to Chemical Principles (4 credits)
    - PHYS 10310 – General Physics I (4 credits)

    Additional College of Engineering degree requirements are covered by courses required by the Department of Computer Science and Engineering.

3. *Completion of the Computer Science (CS) degree requirements.*
    a. *CS mathematics and science requirement **(14 credits)***. In addition to the College of Engineering mathematics and science requirements, students must also complete the following courses:
        - MATH 20550 – Calculus III (3.5 credits)
        - MATH 20580 – Introduction to Linear Algebra and Differential Equations (3.5 credits)
        - ACMS 30440 – Probability and Statistics (3 credits)
        - PHYS 10320 – General Physics II (4 credits)

    b. *CS Core requirement (**35 credits**).* Students must complete the following courses:
        - CSE 20311 – Fundamentals of Computing (4 credits)
        - CSE 20110 – Discrete Math (3 credits)
        - CSE 20312 – Data Structures (4 credits)
        - CSE 20221 – Logic Design (3 credits)
        - CSE 20289 – Systems Programming (3 credits)
        - CSE 30321 – Computer Architecture (3 credits)
        - CSE 30151 – Theory of Computing (3 credits)
        - CSE 30332 – Programming Paradigms (3 credits)
        - CSE 30341 – Operating Systems (3 credits)
        - CSE 40113 – Algorithms (3 credits)
        - CSE 40175 – Ethics and Social Issues (3 credits)

    c. *CSE Electives (**18 credits**).* Students must complete 18 additional credits of CSE elective course. Students have a choice from 30+ courses offered by the

departments of Computer Science Engineering and Electrical Engineering. (Up to 9 of the aforementioned elective credits may be fulfilled by courses offered by the Department of Electrical Engineering)

d. *Technical Electives (**9 credits**).* Students must complete 9 additional credits of technical elective courses. Students can choose from numerous courses offered by the College of Engineering and the College of Science.
e. *Free Electives (**3 credits**).* Students must complete 3 additional credits of elective courses. Students can choose from courses offered by University of Notre Dame.
f. *Major Project **(as part of CSE Electives)*** Take at least one CSE elective course containing a major project. A major project requires integration and application of knowledge and skills acquired in earlier course work. A major project requires the student to design and implement a significant artifact over the course of eight or more weeks and demonstrate broad competence in computing. The CSE Elective course MUST HAVE a "CS Major Project" attribute for the course to count toward this requirement.

4. *Earn a minimum of 127 hours of course credit.* Note that if multiple requirements are met using one course, additional coursework might be required to ensure the student achieves the 127 minimum required total credits.

## 2.7 CS course plan for *entering fall 2024 and beyond*

| First Year | | | | | |
|---|---|---|---|---|---|
| **Fall Semester (Credit Hours:18)** | | | **Spring Semester (Credit Hours:18)** | | |
| MATH 10550 | Calculus I | 4 | MATH 10560 | Calculus II | 4 |
| CHEM 10171 | Intro to Chemical Principles | 4 | | Technical Elective | 3 |
| EG 10117 | Engineering Design (WRIT*) | 3 | EG 10118 | Engineering Computing | 3 |
| | Core Curriculum Course | 3 | PHYS 10310 | Engineering Physics I | 4 |
| USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 | USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 |
| FYS 10101 | Moreau First Year Experience | 1 | FYS 10102 | Moreau First Year Experience | 1 |
| **Sophomore Year** | | | | | |
| **Fall Semester (Credit Hours:17.5)** | | | **Spring Semester (Credit Hours:16)** | | |
| MATH 20550 | Calculus III | 3.5 | MATH 20580 | Intro to Linear Algebra and Differential Equations | 3.5 |
| PHYS 10320 | Engineering Physics II | 4 | CSE 20221 | Logic Design | 3 |
| CSE 20110 | Discrete Mathematics | 3 | CSE 20289 | Systems Programming | 3 |
| CSE 20311 | Fundamentals of Computing | 4 | CSE 20312 | Data Structures | 3.5 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Junior Year** | | | | | |
| **Fall Semester (Credit Hours:15)** | | | **Spring Semester (Credit Hours:15)** | | |
| | CSE Elective | 3 | CSE 30151 | Theory of Computing | 3 |
| | CSE Elective | 3 | CSE 30332 | Programming Paradigms | 3 |
| | Technical Elective | 3 | CSE 30341 | Operating Systems | 3 |
| CSE 30321 | Computer Architecture | 3 | ACMS 30440 | Probability and Statistics | 3 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Senior Year** | | | | | |
| **Fall Semester (Credit Hours:15)** | | | **Spring Semester (Credit Hours:12)** | | |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | Technical Elective | 3 | CSE 40175 | Ethical and Social Issues | 3 |
| CSE 40113 | Algorithms | 3 | | Core Curriculum Course | 3 |
| | Free Elective | 3 | | Total credit hours | 126.5 |

* *Students who have AP credit for Writing and Rhetoric still owe a Writing Intensive course (WRIT attribute). EG 10117 has a WRIT attribute and will satisfy the WRIT requiremen*

**CS program requirements for *entering fall 2024 and beyond***

To earn the BS CS, students must complete the following requirements

5. *Completion of University Core Curriculum requirements **(26 credits)**.* Note the Liberal Arts 1, 2 and 3 requirements will be covered by courses required by the College of Engineering and the Department of Computer Science Engineering. Also note that the University Seminars can double count as another core requirement.

6. *Completion of the College of Engineering requirements **(22 credits)***. Students must complete the following courses:
    - EG 10117 – Engineering Design (3 credits)
    - EG 10118 – Engineering Programming (3 credits)
    - MATH 10550 – Calculus I (4 credits)
    - MATH 10560 – Calculus II (4 credits)
    - CHEM 10171/11171 – Introduction to Chemical Principles (4 credits)
    - PHYS 10310 – General Physics I (4 credits)

    Additional College of Engineering degree requirements are covered by courses required by the Department of Computer Science and Engineering.

7. *Completion of the Computer Science (CS) degree requirements.*
    a. *CS mathematics and science requirement **(14 credits)***. In addition to the College of Engineering mathematics and science requirements, students must also complete the following courses:
        - MATH 20550 – Calculus III (3.5 credits)
        - MATH 20580 – Introduction to Linear Algebra and Differential Equations (3.5 credits)
        - ACMS 30440 – Probability and Statistics (3 credits)
        - PHYS 10320 – General Physics II (4 credits)

    b. *CS Core requirement (**34.5 credits**).* Students must complete the following courses:
        - CSE 20311 – Fundamentals of Computing (4 credits)
        - CSE 20110 – Discrete Math (3 credits)
        - CSE 20312 – Data Structures (3.5 credits)
        - CSE 20221 – Logic Design (3 credits)
        - CSE 20289 – Systems Programming (3 credits)
        - CSE 30321 – Computer Architecture (3 credits)
        - CSE 30151 – Theory of Computing (3 credits)
        - CSE 30332 – Programming Paradigms (3 credits)
        - CSE 30341 – Operating Systems (3 credits)
        - CSE 40113 – Algorithms (3 credits)
        - CSE 40175 – Ethics and Social Issues (3 credits)

    c. *CSE Electives (**18 credits**).* Students must complete 18 additional credits of CSE elective course. Students have a choice from 30+ courses offered by the departments of Computer Science Engineering and Electrical Engineering. (Up to

9 of the aforementioned elective credits may be fulfilled by courses offered by the Department of Electrical Engineering)

d. *Technical Electives (**9 credits**).* Students must complete 9 additional credits of technical elective courses. Students can choose from numerous courses offered by the College of Engineering and the College of Science.
e. *Free Electives (**3 credits**).* Students must complete 3 additional credits of elective courses. Students can choose from courses offered by University of Notre Dame.
f. *Major Project **(as part of CSE Electives)*** Take at least one CSE elective course containing a major project. A major project requires integration and application of knowledge and skills acquired in earlier course work. A major project requires the student to design and implement a significant artifact over the course of eight or more weeks and demonstrate broad competence in computing. The CSE Elective course MUST HAVE a CS Major Project "CSMP" attribute for the course to count toward this requirement.

8. *Earn a minimum of 126.5 hours of course credit.* Note that if multiple requirements are met using one course, additional coursework might be required to ensure the student achieves the 126.5 minimum required total credits.

## 2.8 CPEG course plan for *entering fall 2023 and previous*

| First Year | | | | | |
|---|---|---|---|---|---|
| **Fall Semester (Credit Hours: 18)** | | | **Spring Semester (Credit Hours: 18)** | | |
| MATH 10550 | Calculus I | 4 | MATH 10560 | Calculus II | 4 |
| CHEM 10171 | Intro to Chemical Principles | 4 | | Technical Elective | 3 |
| EG 10117 | Engineering Design* | 3 | EG 10118 | Engineering Computing | 3 |
| | Core Curriculum Course | 3 | PHYS 10310 | Engineering Physics I | 4 |
| USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 | USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 |
| FYS 10101 | Moreau First Year Experience | 1 | FYS 10102 | Moreau First Year Experience | 1 |
| **Sophomore Year** | | | | | |
| **Fall Semester (Credit Hours: 17.5)** | | | **Spring Semester (Credit Hours: 16.5)** | | |
| MATH 20550 | Calculus III | 3.5 | MATH 20580 | Intro to Linear Algebra and Differential Equations | 3.5 |
| PHYS 10320 | Engineering Physics II | 4 | CSE 20221 | Logic Design | 3 |
| CSE 20110 | Discrete Mathematics | 3 | EE 20223 (spring only) | Intro to Electric Circuits | 3 |
| CSE 20311 | Fundamentals of Computing | 4 | CSE 20312 | Data Structures | 4 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Junior Year** | | | | | |
| **Fall Semester (Credit Hours: 15)** | | | **Spring Semester (Credit Hours: 15)** | | |
| CSE 20289 | Systems Programming | 3 | CSE 30341 | Operating Systems | 3 |
| | Free Elective | 3 | ACMS 30440 | Probability and Statistics | 3 |
| CSE 30342 (fall only) | Digital Integrated Circuits | 3 | | CSE Elective | 3 |
| CSE 30321 | Computer Architecture | 3 | CSE 30353 (spring only) | Signal Processing Fundamentals | 3 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| **Senior Year** | | | | | |
| **Fall Semester (Credit Hours: 13)** | | | **Spring Semester (Credit Hours: 12)** | | |
| CSE 40522 (fall only) | CPEG Capstone Design | 4 | CSE 40175 | Ethical and Social Issues | 3 |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | CSE Elective | 3 | | CSE Elective | 3 |
| | CSE Elective | 3 | | Core Curriculum Course | 3 |
| | | | | Total credit hours | 125 |

* *Students who have AP credit for Writing and Rhetoric still owe a Writing Intensive course (WRIT attribute). EG 10117 has a WRIT attribute and will satisfy the WRIT requirement.*

**CPEG program requirements for *entering fall 2023 and previous***

To earn the BS CPEG, students must complete the following requirements

1. *Completion of University Core Curriculum requirements **(26 credits)**.* Note the Liberal Arts 1, 2 and 3 requirements will be covered by courses required by the College of Engineering and the Department of Computer Science Engineering. Also note that the University Seminars can double count as another core requirement.

2. *Completion of the College of Engineering requirements **(22 credits)***. Students must complete the following courses:
    - EG 10117 – Engineering Design (3 credits)
    - EG 10118 – Engineering Programming (3 credits)
    - MATH 10550 – Calculus I (4 credits)
    - MATH 10560 – Calculus II (4 credits)
    - CHEM 10171/11171 – Introduction to Chemical Principles (4 credits)
    - PHYS 10310 – General Physics I (4 credits)

    Additional College of Engineering degree requirements are covered by courses required by the Department of Computer Science and Engineering.

3. *Completion of the Computer Engineering (CPEG) degree requirements.*
    a. *CPEG mathematics and science requirement **(14 credits)***. In addition to the College of Engineering mathematics and science requirements, students must also complete the following courses:
        - MATH 20550 – Calculus III (3.5 credits)
        - MATH 20580 – Introduction to Linear Algebra and Differential Equations (3.5 credits)
        - ACMS 30440 – Probability and Statistics (3 credits)
        - PHYS 10320 – General Physics II (4 credits)

    b. *CPEG Core requirement (**39 credits**).* Students must complete the following courses:
        - CSE 20311 – Fundamentals of Computing (4 credits)
        - CSE 20110 – Discrete Math (3 credits)
        - CSE 20312 – Data Structures (4 credits)
        - CSE 20221 – Logic Design (3 credits)
        - EE 20223 – Intro to Electric Circuits (new course) (3 credits)
        - CSE 30342 – Digital Integrated Circuits (new course) (3 credits)
        - CSE 30321 – Computer Architecture (3 credits)
        - CSE 20289 – Systems Programming (3 credits)
        - CSE 30341 – Operating Systems (3 credits)
        - CSE 30353 – Signal Processing Fundamentals (new course) (3 credits)
        - CSE 40522 – CPEG Capstone Design (4 credits)
        - CSE 40175 – Ethics and Social Issues (3 credits)

    c. *CSE Electives (**18 credits**).* Students must complete 18 additional credits of CSE elective course. Students have a choice from 30+ courses offered by the

departments of Computer Science Engineering and Electrical Engineering. (Up to 9 of the aforementioned elective credits may be fulfilled by courses offered by the Department of Electrical Engineering)

d. *Technical Electives (**3 credits**).* Students must complete 3 additional credits of technical elective courses. Students can choose from numerous courses offered by the College of Engineering and the College of Science.
e. *Free Electives (**3 credits**).* Students must complete 3 additional credits of elective courses. Students can choose from courses offered by University of Notre Dame.

4. *Earn a minimum of 125 hours of course credit.* Note that if multiple requirements are met using one course, additional coursework might be required to ensure the student achieves the 125 minimum required total credits.

## 2.9 CPEG course plan for *entering fall 2024 and beyond* SEE ALSO CPEG HANDBOOK

| First Year | | | | | |
|---|---|---|---|---|---|
| Fall Semester (Credit Hours: 18) | | | Spring Semester (Credit Hours: 18) | | |
| MATH 10550 | Calculus I | 4 | MATH 10560 | Calculus II | 4 |
| CHEM 10171 | Intro to Chemical Principles | 4 | | Technical Elective | 3 |
| EG 10117 | Engineering Design* | 3 | EG 10118 | Engineering Computing | 3 |
| USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 | PHYS 10310 | Engineering Physics I | 4 |
| | Core Curriculum Course | 3 | USEM or WR 13100 | University Seminar or Writing & Rhetoric* | 3 |
| FYS 10101 | Moreau First Year Experience | 1 | FYS 10102 | Moreau First Year Experience | 1 |
| Sophomore Year | | | | | |
| Fall Semester (Credit Hours: 17) | | | Spring Semester (Credit Hours: 17) | | |
| EE 20100 | Intro to ECE | 3 | MATH 20580 | Intro to Linear Algebra and Differential Equations | 3.5 |
| PHYS 10320 | Engineering Physics II | 4 | New # | Logic and Processor Design | 4 |
| CSE 20110 | Discrete Mathematics | 3 | EE 20221 | Signal & Information Systems | 3 |
| CSE 20311 | Fundamentals of Computing | 4 | CSE 20312 | Data Structures | 3.5 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| Junior Year | | | | | |
| Fall Semester (Credit Hours: 15) | | | Spring Semester (Credit Hours: 15) | | |
| | CPEG Core Elective | 3 | | CPEG Core Elective | 3 |
| | CPEG Core Elective | 3 | ACMS 30440 | Probability and Statistics | 3 |
| CSE 30321 | Computer Architecture | 3 | | CPEG Elective | 3 |
| | Free Elective | 3 | | CPEG Elective | 3 |
| | Core Curriculum Course | 3 | | Core Curriculum Course | 3 |
| Senior Year | | | | | |
| Fall Semester (Credit Hours: 12) | | | Spring Semester (Credit Hours: 12) | | |
| New # | CPEG Capstone Design I | 3 | New # | CPEG Capstone Design II | 3 |
| | CPEG Elective | 3 | | CPEG Elective | 3 |
| | CPEG Elective | 3 | | CPEG Elective | 3 |
| | Technical Elective | 3 | | Core Curriculum Course | 3 |
| | | | | Total credit hours | 124 |

* *Students who have AP credit for Writing and Rhetoric still owe a Writing Intensive course (WRIT attribute). EG 10117 has a WRIT attribute and will satisfy the WRIT requirement.*

**CPEG program requirements for students entering the college as sophomores in fall 2025 and beyond**

To earn the BS CPEG, students must earn a minimum of **124 hours of course credit**. Note that if multiple requirements are met using one course, additional coursework might be required to ensure the student achieves the 124 minimum required total credits.

To earn the BS CPEG, students must complete the following requirements:

**University Core Curriculum requirements (26 credits)**

Details can be found in the University Core requirement section above and in the following additional notes:

- Liberal Arts 1, 2 and 3 requirements will be covered by math and science courses required by the College of Engineering and CPEG Requirements.
- Depending on the University Seminar course taken, this course will also cover one of Liberal Arts 4, Liberal Arts 5, Theology 1 or Philosophy 1 requirements.
- Students who earned AP or IB credit for the Writing & Rhetoric course will be required to complete a Writing Intensive course at some point during their course of study. Most of you will complete this requirement through the first year Engineering Design course, EG 10117 since the course carries a WRIT attribute. Those of you who did not take this course, mainly students who did not start ND Engineering their first year, this course can be a separate course, or there are many Writing Intensive courses that will also cover one of Liberal Arts 4, Liberal Arts 5, Theology 1/2 or Philosophy 1/2 requirements.
- AP credit cannot be used to satisfy any other University Requirement. More information can be found at https://advising.nd.edu
- ROTC students can have one of their 40000 level ROTC courses count towards either a History or Social Sciences (Liberal Arts 5) University Core requirement and another 40000 level ROTC course count as a technical elective.

**College of Engineering requirements (22 credits)**

Students must complete the following courses:

- EG 10117 – Engineering Design (3 credits)
- EG 10118 – Engineering Programming (3 credits)
- MATH 10550 – Calculus I (4 credits)
- MATH 10560 – Calculus II (4 credits)

- CHEM 10171/11171 – Introduction to Chemical Principles (4 credits)
- PHYS 10310 – General Physics I (4 credits)

**Computer Engineering (CPEG) mathematics and science requirement (13.5 credits)**

In addition to the College of Engineering mathematics and science requirements, students must also complete the following courses:

- CSE 20110: Discrete Math (3 credits)
- MATH 20580: Introduction to Linear Algebra and Differential Equations (3.5 credits)
- ACMS 30440: Probability and Statistics or EE 30210 Random Phenomena (3 credits)
- PHYS 10320: General Physics II (4 credits)

**CPEG Core requirement (26.5 credits)**

Students must complete the following CPEG core courses:

- CSE 20311: Fundamentals of Computing (4 credits)
- EE 20100: Introduction to Electrical and Computer Engineering (3 credits)
- CSE 20xxx: Logic and Processor Design (4 credits)
- CSE 20312: Data Structures (3.5 credits)
- EE 20221: Signal & Information Systems (3 credits)
- CSE 30321: Computer Architecture (3 credits)
- NEW XXXX: CPEG Capstone Design I (3 credits)
- NEW XXXX: CPEG Capstone Design I (3 credits)

**CPEG Core Electives (9 credits)**

Students are required to take at least three (3 courses) CPEG Core Electives from the following list:

- EE 30122: System Theory and Application (3 credits)
- EE 30132: Applied Embedded System Design (3 credits)
- EE 30062: Fundamentals of Semiconductors (3 credits)
- CSE 20289: Systems Programming (3 credits)
- CSE 30341: Operating System Principles (3 credits)
- CSE 30342: Digital Integrated Circuits (3 credits)
- CSE 30151: Theory of Computing (3 credits)

**CPEG Electives (18 credits)**

Students must complete eighteen (18 cr.) additional credits of CPEG elective courses from the following options. Please note that courses cannot double count within the CPEG major.

- Any 30000+ EE or CSE course that is not used to fulfill the CPEG Core Requirements.
- EE 20231: Digital Design for Smart Interconnected Systems (3 credits)
- CSE 20289: Systems Programming (3 credits)
- EE 20241: Electronic Devices and Systems (3 credits)

**Technical Electives (6 credits)**

Students must complete six (6 cr.) additional credits of technical elective courses. Please note that courses cannot double count within the CPEG major.

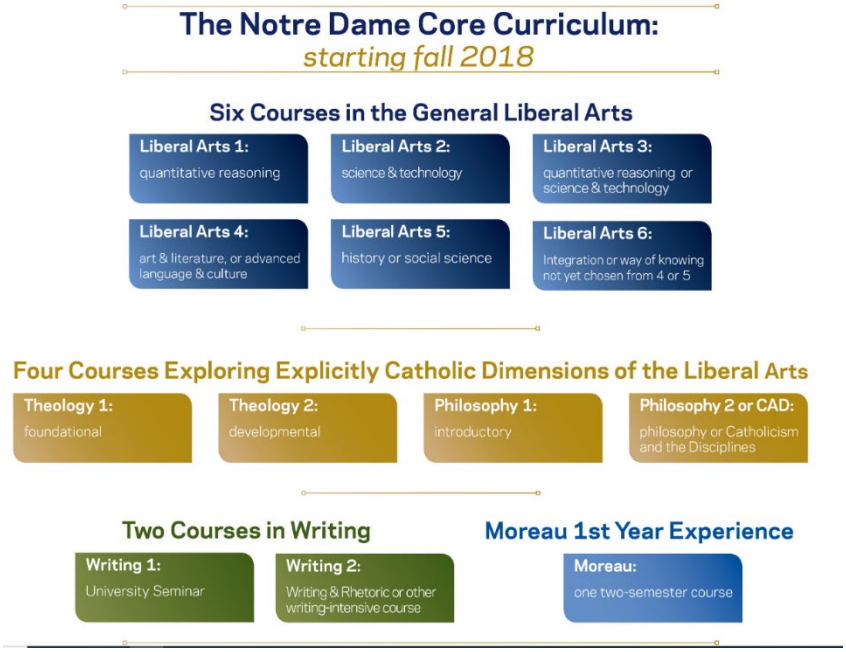
- Any 20000+ College of Engineering course
- Any 30000+ College of Science course
- MATH 20550 Calculus III (3.5 credits)
- EE 10200 Introduction to Embedded Systems (3 credits)
- Other First Year Technical Elective Engineering Courses (ie: EE 10200, CE 10115)
- BIO/CHEM pre-med classes

**Free Electives (3 credits)**

Students must complete three (3 cr.) additional credits of elective courses. Students can choose from courses offered by University of Notre Dame.

## 2.10 The Notre Dame Core Curriculum

Central to undergraduate education at the University of Notre Dame is the core curriculum, a set of requirements that apply to all students, regardless of major. While the approach to the core will necessarily evolve over time, the goal is always the same: to provide students with a common foundation in learning that will make a unique contribution to their intellectual and personal development as well as their lives after Notre Dame. See full description at https://corecurriculum.nd.edu/




**Six Courses in the General Liberal Arts**

- Liberal Arts 1: Quantitative Reasoning
- Liberal Arts 2: Science & Technology
- Liberal Arts 3: Quantitative Reasoning or Science & Technology
- Liberal Arts 4: Art & Literature, or Advanced Language & Culture
- Liberal Arts 5: History or Social Science
- Liberal Arts 6: Integration or Way of Knowing not yet chosen from 4 or 5

**Four Courses Exploring Explicitly Catholic Dimensions of the Liberal Arts**

- Theology 1: Foundational
- Theology 2: Developmental
- Philosophy 1: Introductory
- Philosophy 2 or CAD: Philosophy elective or Catholicism and the Disciplines

**Two Courses in Writing**

- Writing 1: University Seminar[1]
- Writing 2: Writing & Rhetoric or Other Writing-Intensive Course[2]

**Moreau First Year Experience**

- Moreau: One two-semester course

*1 A University Seminar (USEM) course may be double-counted to fulfill both the USEM requirement and one of the other university core requirements.*

*2 Students who have AP credit for Writing and Rhetoric still owe a Writing Intensive core (WRIT attribute). Beginning fall 2023, EG 10117 has a WRIT attribute.*

# 3 CSE and Technical Electives

## 3.1 CSE Electives

A CSE elective includes any CSE and EE 30000 level and above course that are not requirements of the major. Special requests for CSE Electives should be brought to brought to the Director of Undergraduate Studies.

To find these, go to class search (classsearch.nd.edu) and select the subject *CSE - Computer Science and Engr* or *EE – Electrical Engineering.* Students should make sure to read through registration restrictions for each course including pre-requisites, enrollment level limitations, and special approvals by department or instructor.

Please note that CS majors must choose one CSE Elective that completes a major project requirement. A major project requires integration and application of knowledge and skills acquired in earlier course work. A major project requires the student to design and implement a significant artifact over the course of eight or more weeks and demonstrate broad competence in computing. The CSE Elective course MUST HAVE a CS Major Project "CSMP" attribute for the course to count toward this requirement. CPEG majors do not have this Major Project requirement since the CPEG curriculum already includes the CPEG Capstone Design requirement.

## 3.2 Technical Electives

One 10000-20000 level technical elective (ie: EE 10200, CE 10115, CHEM 10172) is accepted if taken as a First-Year student. Otherwise, technical electives are usually non-freshman courses in engineering or science at the 30000 and above level, or some selective courses from other departments, provided that the content does not mostly overlap with one of your other courses.

Technical electives can be taken anytime, not necessarily during the semester indicated on the curriculum schedule. Special requests for technical electives should be brought to the Director of Undergraduate Studies.

**Engineering and science departments**

Engineering:

AME - aerospace and mechanical engineering

CE - civil engineering

CBE - chemical and biomolecular engineering

CSE - computer science and engineering

EE - electrical engineering

EG - non-departmental engineering

Science:

ACMS-applied & comp math and stats

BIOS- biological sciences

CHEM- chemistry

MATH-mathematics

PHYS-physics

SC-non-departmental sciences

**Other departments, subject to approval**

ARCH (Architecture)

DESN (Design)

CDT (Comp & Digital Technology)

FTT (Film, Television, & Theater)

MUS (Music)

One ROTC 40000 course

STV (Science/Technology/Values)

TEC (Technology Ethics)

## 3.3 Free Electives

A free elective can include any graded course that is not already counting towards University / College / Major requirements. Free electives can double count towards minors, 2nd majors, 2nd degrees, and the ROTC programs.

## 3.4 Medical School

Engineering is the fifth most common major for Notre Dame Students applying to medical school. The Center for Health Sciences Advising can provide you with advice on choosing courses as an engineering student planning to attend medical school.

Most medical schools require applicants to have taken the MCAT (Medical College Admission Test), and to have completed:

- One year of Biology (Recommend BIOS 10171/11173: Biological Sciences I and lab, BIOS 10172/11174: Biological Sciences II and lab)
- Two years of Chemistry (10171, 10172, 20273, 20274 with labs)
- One year of Physics
- Biochemistry

Many schools recommend courses in:

- Writing intensive courses
- Psychology and Sociology/Anthropology

Note that some medical schools (e.g. Harvard) require the biology courses to be taken in college (not satisfied by AP credits). If you have AP credit, you must take higher level biology courses with lab components. There are similar restrictions on AP chemistry and physics. Other schools accept credits awarded through AP testing (at Notre Dame this usually requires a score of 5). If you are interested in a specific medical school you should verify their policy on AP credits early in the program.

Hence, in addition to the CSE degree requirements, students must take additional courses. In addition to the courses, the Notre Dame preprofessional programs generally require a 1 credit lab component with each course. Students with an interest in preparing for medical school should consult with personnel in the Center for Health Sciences Advising for curricular planning advice, as they have prepared course plans for engineering students interested in medical school.

For CSE majors, only ONE 10000-20000 level science course may be used to satisfy a General Technical Elective requirement. All other Technical Electives must be at the 30000+ level. Students should consult with the Director of Undergraduate Studies for approval of any General Technical Electives that are not currently listed in GPS.

## 3.5 ROTC

ROTC courses can count toward satisfying engineering degree requirements as follows:

**Navy ROTC**

An NCSI 40000 level course can be applied to satisfy a University core requirement where the course has the necessary attribute or has been approved to meet the requirement. For example, NSCI 40402 has the WKSP attribute assigned and so it may count as the second philosophy and a technical elective course. A second NSCI 40000 level course can be used to satisfy either the HISTORY or SOCIAL SCIENCE (not both) requirement.

**Army ROTC**

An MSL 40000 level course can be used to satisfy either the HISTORY or SOCIAL SCIENCE (not both) requirement. A second MSL 40000 level course can be used to satisfy a technical elective requirement. For engineering majors with free electives, other MSL graded courses (usually 30000-level) can be used to satisfy free electives.

**Air Force ROTC**

An AS 40000 level course can be used to satisfy either the HISTORY or SOCIAL SCIENCE (not both) requirement. An AS 40000 level course can be used to satisfy a technical elective requirement. For engineering majors with free electives, other AS graded courses (usually 30000-level) can be used to satisfy free electives.

# 4 Study Abroad

Students who study abroad in the academic year generally do it during the fifth or sixth semester; a few go for the entire junior year. Below are the requirements to participate in the programs. Any student who is not behind in the program is eligible to participate. However, in certain cases students must register for the correct courses during their sophomore year to attend the program, and if they do not do so, then they are not eligible to attend.

## 4.1 Academic Year Program Locations

If a student needs to take CSE courses abroad, these locations may work for them:

- London (UK) - Spring semester only
- Dublin (Ireland) - UCD and DCU
- Hong Kong (China) - HKUST and HKU
- Perth (Australia) – max of 4 courses due to credit hour difference
- Sydney (Australia) – max of 4 courses due to credit hour difference
- St. Andrews (Scotland) – max of 4 courses due to credit hour difference
- Singapore
- Alcoy (Spain) Spring semester only – students need to have the equivalent of 2 semesters of college-level Spanish (Beginning I/II) by the time they go abroad to Alcoy, or test out of that level via AP/SAT II/IB credit. If a student has not taken a Spanish class at Notre Dame, they can request a meeting with the DUS in the Spanish department who can submit the language reference on their behalf.

If a student does not need to take a course in their major during their semester abroad, they are welcome to study in any program that interests them.

Students with program specific questions should schedule an appointment with the Notre Dame International Study Abroad Team. Each location has a specific program director, which you can find at https://studyabroad.nd.edu/programs/program-advising/

For additional information on a specific program, please speak with your adviser or the DUS and visit the Notre Dame International Study Abroad website: **https://international.nd.edu/education-abroad/study-abroad/**.

## 4.2 Summer Study Abroad Programs

International Programs offered by the College of Engineering feature courses taught by Notre Dame faculty, so you can enjoy time abroad and still graduate in four years. Most engineering students choose to go abroad the summer after their first or second year (leaving later years open for internships).

The **College of Engineering** offers summer programs in:

- Alcoy (Spain)
- London (England)
- Dublin (Ireland)
- Kitakyushu (Japan)
- Rome (Italy)
- Berlin (Germany)

Other summer programs offered through Notre Dame International Study Abroad

# 5 Minors

The College of Engineering offers seven minors, open to all University students who have taken the appropriate pre-requisite courses for upper-level engineering and science courses.

A student seeking an engineering degree is allowed to count a course to satisfy a university requirement, a college/major requirement, and one additional program requirement (dual degree, supplementary major, minor, etc). Note that if multiple requirements are met using one course, additional coursework might be required to ensure the student achieves the minimum required total credits to earn the CS and CPEG engineering degrees.

Because multi counting exceptions pertain to the degree and may affect a student's ability to graduate, students should consult with their advisor or DUS to ensure that they will continue to meet graduation requirements.

The department who manages the minor should be consulted for the rules. Students in other colleges should consult their own program department for similar restrictions.

- Bioengineering
- Computational Engineering
- Energy Engineering
- Energy Studies
- Engineering Corporate Practice
- Environmental Earth Sciences
- Resiliency and Sustainability of Engineering Systems

Across the University many Departments and Colleges offer minors that are open to Computer Science and Engineering Students. Visit Departmental and College webpages to find available lists of minors. Some good places to start your search include:

College of Science Minors

College of Arts and Letters Minors

Mendoza College of Business Minors

# 6 Undergraduate Research and Projects

## 6.1 Undergraduate Research and Engineering Projects

Most students benefit greatly from becoming involved in research projects and participating in the Department's research activities. CSE students may do research for either course credit or as a paid research aide. Please note: students cannot receive credit and be paid for the same research position.

**Applying for Credit Research Projects on STRAND**

To apply for credit-bearing research opportunities, students are required to use the STRAND (Student Research at Notre Dame) platform. STRAND.nd.edu provides a central web-based location for researchers to post and students to apply for research projects at set times throughout the year using a clear and equitable platform.

**Research as a Paid Position**

The supervising faculty member will determine if the research can be done as a paid position. Once this decision is made, the student should come to the Department office and complete the necessary employment paperwork with CSE Undergraduate Academic Program Administrator.

**Research and Projects for Credit**

CSE 28901/48901 are the variable credit Undergraduate Research courses.

A maximum of 3 credits of CSE research at the 30000+ level can count toward CSE elective credits and another 3 credits of CSE or any other engineering and science department research at the 20000+ level can count as general technical elective credits.

CSE 20600/30660/40600 CSE Service Projects

CSE Service Projects are engineering projects based within community service. For more information on how to become involved in CSE Service Projects, students should directly contact the professor on record.

A maximum of 3 credits of CSE Service Projects at the 30000+ level can count toward CSE elective credits and another 3 credits of CSE Service Projects at the 20000+ level can count as general technical elective credits.

## Summer Research Experience for Undergrads (REUs)

Approximately 300 undergraduate students from around the world participate in research at Notre Dame in the summer. All students doing research in the summer must be registered for a course in the summer and complete the ND Roll Call process. Current Notre Dame students must get department approval in order to register through insideND. More info at https://summersession.nd.edu/programs/reu

## iTREDS Program

Interdisciplinary Traineeship for Socially Responsible and Engaged Data Scientists (iTREDS) program trains undergraduate students at the University of Notre Dame and Saint Mary's College in data science through a lens of social responsibility and community engagement, including rigor and responsibility, ethics, society, and policy.

Through the 15-credit program, iTREDS scholars develop an in-depth data science background as well as communication, critical thinking, teamwork, and other skills necessary for professional development. The program also includes experiential learning opportunities, via a capstone project and summer internship, in which students learn how to effectively engage with stakeholders, understand their needs, assess societal impact, and incorporate utility and value. More info at https://lucyinstitute.nd.edu/education/itreds-program

**Eligibility:**

- Notre Dame sophomores in the Department of Computer Science and Engineering
- Notre Dame sophomores pursuing a Data Science Minor
- St. Mary's sophomores who will have completed a calculus course and Introduction to Programming (CPSC 207) prior to beginning the program.
- To join the two-year program, students must apply their sophomore year to participate as a junior.

# 7 Student Organizations and Activities

## 7.1 Professional and Honors Societies

### 7.1.1 Engineering Leadership Council

The Engineering Leadership Council of Notre Dame exists as a student government body within the College of Engineering which supports all CoE clubs via working with the Dean's Office. ELC members are provided with excellent leadership development opportunities while serving the CoE student body with professional development and community outreach. More info contact elc@nd.edu or visit https://elc.nd.edu/

### 7.1.2 Women in Engineering

Notre Dame Women in Engineering encourages women to pursue engineering as an exciting and fulfilling educational and career choice. We bring together women at all levels — undergraduate, graduate, faculty, and alumni — to create a community of support and opportunities for women to thrive.

The Society of Women Engineers (SWE) gives support, guidance and recognition to women engineers and engineering students. Today, SWE is a nationally recognized professional, educational, non-profit, service organization. Its student section membership includes graduate and undergraduate female and male engineers. More info at https://engineering.nd.edu/student-experience/women-in-engineering/

### 7.1.3 ELITE Engineers

ELITE (Enhancing Leadership through Intentional and Transformational Experiences) engineers is a program designed to help students develop their identity as engineers and support their success inside and outside of the classroom. Programming offered through the program is centered around the pillars of career/professional development, academic excellence, community building, and wellness. Although open to anyone, this program may be of special interest to first gen and/or students from underrepresented backgrounds in STEM. Click here to join the mailing list.

### 7.1.4 Society of Hispanic Professional Engineers (SHPE)

The purpose of this student chapter is to: 1. Increase the number of underrepresented students in the fields of science, technology, engineering, and mathematics (STEM) at the University of Notre Dame. 2. Promote the advancement of underrepresented STEM students in employment and education. 3. Improve the retention of underrepresented students enrolled in STEM majors. 4. Provide a forum for the exchange of information pertinent to underrepresented STEM students enrolled at the University of Notre Dame. 5. Develop a working network with local schools to encourage pre-college, underrepresented students to enter the STEM fields. 6. Promote professional advancement for underrepresented STEM students by fostering cooperation among industry, government, academic, and professional leaders to improve educational and employment opportunities. 7. Provide counseling and financial assistance to underrepresented students in STEM. For more information, please contact us at shpe@nd.edu

### 7.1.5 National Society of Black Engineers (NSBE)

Founded in 1975, The National Society of Black Engineers has strived to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally, and positively impact the community. The objective of the National Society of Black Engineers shall be to stimulate and develop student interest in engineering; to strive to increase the number of students studying engineering at both the undergraduate and graduate levels; and to endeavor in the advancement of the ethnic minority engineer in professional industry. For more information, please contact nsbe@nd.edu

### 7.1.6 TAU BETA PI

In 1960, the Indiana Gamma Chapter of Tau Beta Pi was installed at Notre Dame to foster a spirit of liberal culture in the engineering college and to recognize those who have conferred honor upon Notre Dame by distinguished scholarship and exemplary character as undergraduates in engineering or by their attainment as alumni in the field of engineering. Seniors in the top fifth of their class and juniors in the top eighth of their class are eligible for election under rigid standards of scholarship, character, leadership, and service. More info at https://sites.google.com/a/nd.edu/tbp/home

### 7.1.7 Eta Kappa Nu, Sigma Chapter

The purpose of Eta Kappa Nu is to bring closer together those students at the University of Notre Dame who excel at computer and electrical engineering while showing leadership and exemplary character. For more information, please contact us at hkn@nd.edu

### 7.1.8 Engineers Without Borders (EWB)

Engineers Without Borders - Notre Dame strives to live out the mission of EWB-USA: "EWB-USA builds a better world through engineering projects that empower communities to meet their basic human needs." In accordance with the mission of Engineers Without Borders-USA, EWB-ND strives to bring necessary changes to international communities in order to improve the quality of living. EWB-ND works with the community to implement and maintain the given project. More info at https://ewbnotredame.weebly.com/the-team.html

## 7.2 CSE Related Clubs

### 7.2.1 Notre Dame Computer Club

The University of Notre Dame Computer Club is a student chapter of the Association for Computing Machinery. The purpose of this club is to facilitate the needs and interests of the computer science and engineering students on campus as well as anybody with an interest in the subject matter. More info at https://www3.nd.edu/~cseclub/

### 7.2.2 Notre Dame Linux Users Group

The mission of the Linux Users Group of Notre Dame (NDLUG) is to promote the use and awareness of open source projects, including but not limited to Linux. We aim to provide a welcoming community for any and all open source enthusiasts and help promote the Hacker Ethic, whose tenets are central to the open source environment. More info at https://ndlug.org/

### 7.2.3 CS for Good

CS for Good is a student club focused on the intersection of computing and social good. The purpose of CS for Good shall be to use computing technology as a tool to create a positive social impact and a culture of social engagement. CS for Good will work toward its goals by: A. creating infrastructure for student teams to work on computing projects for community partners in need, B. organizing events to encourage the use of computing technology for good, such as thematic hackathons or speaker events with exemplary individuals, and C. engaging in outreach events to help South Bend residents. For more information, please email us at cs4good@nd.edu or visit http://sites.nd.edu/cs4good/

### 7.2.4 Women in Computer Science (WICS)

Women In CS (WICS) is a social and professional club for all women in Computer Science and Computer Engineering at the University of Notre Dame. We use this group to host events, build community and share valuable resources related to careers, academics and opportunities. More info at https://sites.google.com/nd.edu/ndwics/home