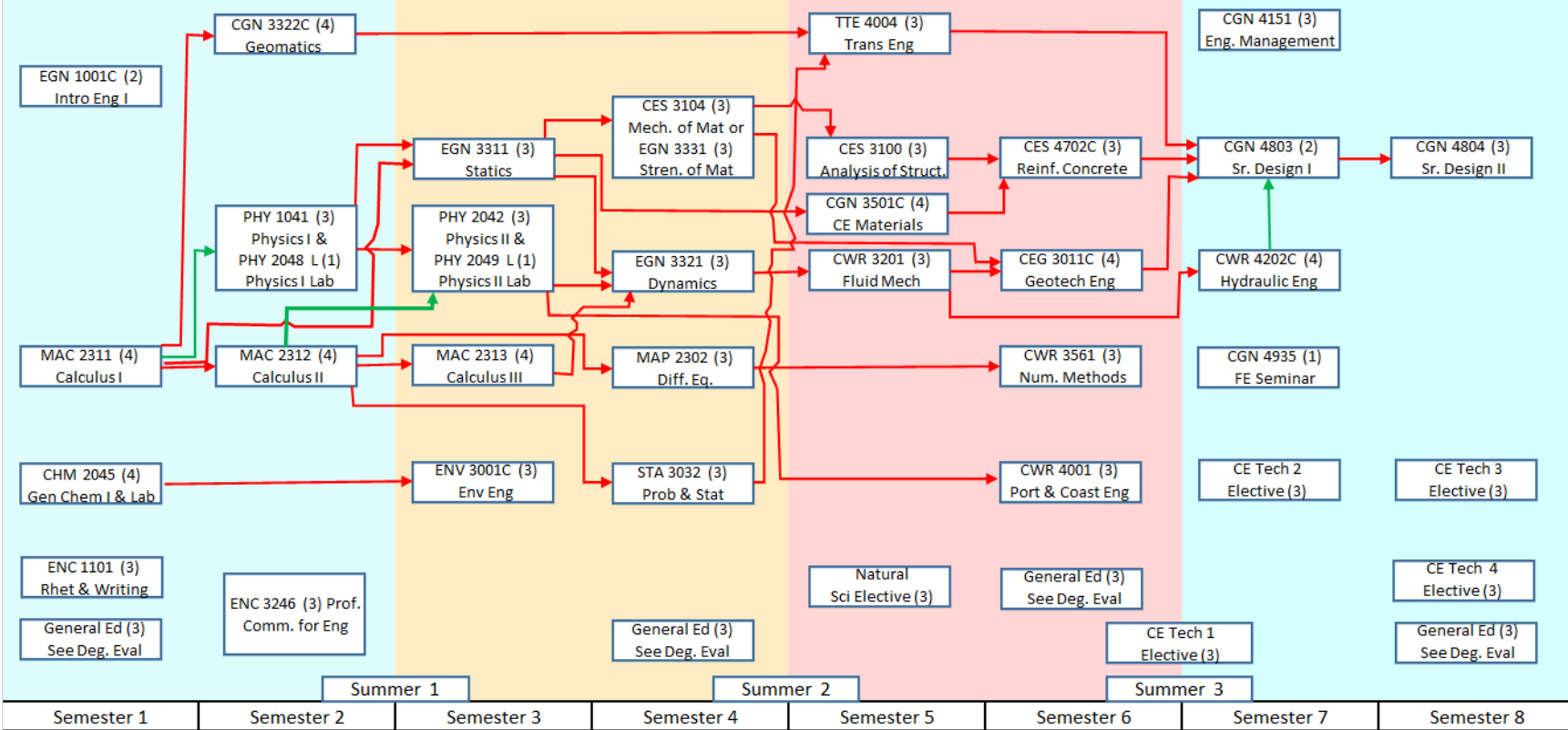


UNF **Bachelors of Science in Civil Engineering** UNF
4-Year Curriculum Map for 2020-2021

LEGEND
 Pre-requisite 
 Co-requisite 



Bachelors of Science in Civil Engineering 4-Year Curriculum Map for 2020-2021

The page presents a flowchart of required courses arranged in 4 evenly sized vertical boxes. Each vertical box represents one year of the standard four-year curriculum and contains two columns representing the two semesters within each year. Semesters are identified by number indicated by labels at the bottom of each column. From left to right:

- The first column represents Year 1 and contains 2 columns of courses for Semester 1 and Semester 2 respectively
- The second column represents Year 2 and contains 2 columns of courses for Semester 3 and Semester 4 respectively
- The third column represents Year 3 and contains 2 columns of courses for Semester 5 and Semester 6 respectively
- The fourth column represents Year 4 and contains 2 columns of courses for Semester 7 and Semester 8 respectively
- Courses staggered across two vertical boxes indicate summer semesters listed in between the colored rectangles represent summer terms (Summer 1, 2 & 3 respectively)

Each box in the flowchart represents a single course, and contains the course prefix and number, number of credit hours and an abbreviated course title. Lines between the boxes define the relationship between the courses (pre-requisite, co-requisite, or non-engineering general education courses). A legend is provided to explain how colored lines (red and green) are used to indicate a prerequisite vs co-requisite relationship. The relationship indicated by the lines and their colors is fully described below:

Courses in Year 1, Semester 1:

- EGN 1001C – Introduction to Engineering I (2 credit hours)
 - Co-requisite course MAC 1147 (Precalculus) or any higher-level MAC course (2xxx)
- CHM 2045 – General Chemistry I (3 credit hours)
 - Taught by another department
- MAC 2311 – Calculus I (4 credit hours)
 - Prerequisite MAC 1147 (Precalculus)
 - Taught by another department
- ENC 1101 – Rhetoric and Writing (3 credit hours)
 - Taught by another department
- General Education Requirement, non-engineering course (3 credit hours)
 - Taught by another department – see degree evaluation for details

Courses in Year 1, Semester 2:

- CGN 3322C – Geomatics (4 credit hours)
 - Prerequisite MAC 2311 (Calculus I)
- PHY 1041 – Physics for Engineers I (3 credit hours)
 - Co-requisite course MAC 2311 (Calculus I)
 - Taught by another department
- PHY 2048L – Calculus-based Physics I Lab (1 credit hour)
 - Co-requisite PHY 1041 (Physics for Engineers I) or PHY 2048 (Calculus-based Physics)
 - Taught by another department
- MAC 2312 – Calculus II (4 credit hours)
 - Prerequisite MAC 2311 (Calculus I)

- Taught by another department
- ENC 3246 – Professional Communications for Engineers (3 credit hours)
 - Taught by another department

Courses in Year 2, Semester 3:

- EGN 3311 – Statics (3 credit hours)
 - Prerequisite PHY 1041 (Physics for Engineers I)
 - Prerequisite MAC 2311 (Calculus I)
- PHY 2042 – Physics for Engineers II (3 credit hours)
 - Prerequisite PHY 1041 (Physics for Engineers I)
 - Co-requisite MAC 2312 (Calculus II)
 - Taught by another department
- PHY 2049L – Calculus-based Physics II Lab
 - Co-requisite PHY 2042 (Physics for Engineers II) or PHY 2049 (Calculus-based Physics II)
 - Taught by another department
- MAC 2313 – Calculus III (4 credit hours)
 - Prerequisite MAC 2312 (Calculus II)
 - Taught by another department
- ENV 3001C – Environmental Engineering (3 credit hours)
 - Prerequisite CHM 2045 (General Chemistry I),

Courses in Year 2, Semester 4:

- CES 3104 or EGN 3331 – Mechanics of Materials or Strength of Materials (Both 3 credit hours)
 - Prerequisite EGN 3311 (Statics)
- EGN 3321 – Dynamics (3 credit hours)
 - Prerequisite MAC 2313 (Calculus III)
 - Prerequisite PHY 2042 (Physics for Engineers II)
 - Prerequisite EGN 3311 (Statics)
- MAP 2302 – Ordinary Differential Equations (3 credit hours)
 - Prerequisite MAC 2312 (Calculus II)
 - Taught by another department
- STA 3032 – Probability and Statistics for Engineers (3 credit hours)
 - Prerequisite MAC 2312 (Calculus II)
 - Taught by another department
- General Education Requirement, non-engineering course (3 credit hours)
 - Taught by another department – see degree evaluation for details

Courses in Year 3, Semester 5:

- TTE 4004 – Transportation Engineering (3 credit hours)
 - Prerequisite CGN 3322C (Geomatics)
 - Prerequisite STA 3032 (Probability and Statistics for Engineers)
- CES 3100 – Analysis of Structures (3 credit hours)
 - Prerequisite CES 3104 or EGN 3331 (Mechanics of Materials or Strength of Materials)
- CGN 3501C – CE Materials (4 credit hours)
 - Prerequisite EGN 3311 (Statics)
- CWR 3201 – Fluid Mechanics (3 credit hours)
 - Prerequisite EGN 3321 (Dynamics)
- Natural Science Elective Requirement, non-engineering course (3 credit hours)
 - Taught by another department – see degree evaluation for details

Courses in Year 3, Semester 6:

- CES 4702C – Design of Reinforced Concrete (3 credit hours)
 - Prerequisite CES 3100 (Analysis of Structures)
 - Prerequisite CGN 3501C (CE Materials)
- CEG 3011C – Geotechnical Engineering (4 credit hours)
 - Prerequisite CES 3104 or EGN 3331 (Mechanics of Materials or Strength of Materials)
 - Prerequisite CWR 3201 (Fluid Mechanics)
- CWR 3561 – Numerical Methods & Computing in CE (3 credit hours)
 - Prerequisite MAP 2302 (Ordinary Differential Equations)
- CWR 4001 – Port and Coastal Engineering (3 credit hours)
 - Prerequisite PHY 2042 (Physics for Engineers II)
- General Education Requirement, non-engineering course (3 credit hours)
 - Taught by another department – see degree evaluation for details

Courses in Summer 3, Between Year 3 and Year 4:

- CGN, CWR, CES, TTE, ENV, CEG XXXX – Technical Elective 1 (3 credit hours)
 - See course catalog for details

Courses in Year 4, Semester 7:

- CGN 4151 – Engineering Management (3 credit hours)
- CGN 4803 – Senior Capstone Design I (2 credit hours)
 - Prerequisite TTE 4004 (Transportation Engineering)
 - Prerequisite CES 4702C (Design of Reinforced Concrete)
 - Prerequisite CEG 3011C (Geotechnical Engineering)
 - Co-requisite CWR 4202C (Hydraulic Engineering)
- CWR 4202C – Hydraulic Engineering (4 credit hours)
 - Prerequisite CWR 3201 (Fluid Mechanics)
- CGN 4935 – FE Exam Review Seminar (1 credit hour)
- CGN, CWR, CES, TTE, ENV, CEG XXXX – Technical Elective 2 (3 credit hours)
 - See course catalog for details

Courses in Year 4, Semester 8:

- CGN 4804 – Senior Capstone Design II (3 credit hours)
 - Prerequisite CGN 4803 (Senior Capstone Design I)
- CGN, CWR, CES, TTE, ENV, CEG XXXX – Technical Elective 3 (3 credit hours)
 - See course catalog for details
- CGN, CWR, CES, TTE, ENV, CEG XXXX – Technical Elective 4 (3 credit hours)
 - See course catalog for details
- General Education Requirement, non-engineering course (3 credit hours)
 - Taught by another department – see degree evaluation for details