

|             |             | I         | H                                  | Course #                       | Course Title                                      | Min. Grade   | GEC  | Prerequisite   | Additional Notes  |   |  |
|-------------|-------------|-----------|------------------------------------|--------------------------------|---|--|--|--|---|---|--|
| FIRST YEAR  | FALL        | 3         |                                    | Choose 1                       | Communication (Core)                              | C  | 010  | For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.  | See General Education Core for more details<br>Option: ENGL 1301  |   |  |
|             |             | 4         |                                    | MATH 2413                      | Calculus I (Core)                                 | C  | 020  | MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.  | See General Education Core for more details.  |   |  |
|             |             | 1         |                                    | CMPE 1101                      | Introduction to Computer Engineering              | C  |  |  |   |   |  |
|             |             | 3         |                                    | POLS 2305                      | U.S. Federal Govt & Politics                      |  |  | 070  |   |   |  |
|             |             | 3         |                                    | Choose 1                       | Integrative and Experiential Learning (Core)      |  |  | 090  | Complete three credit hours from the approved core curriculum, except PHIL 2326, in addition to the required labs. See degree plan. |   |  |
|             |             |           |                                    |                                | UNIV  | 1301 Learning Framework<br>1101 Academic and Career Success<br>1001 Living and Working by Design |  |  |   | As required, based on credit hours earned, TSI status, High School rank, major declaration. |  |
|             |             |           |                                    | <b>14 Semester Total Hours</b> |   |  |  |  |   |   |  |
| FIRST YEAR  | SPRING      | 3         |                                    | Choose 1                       | Communication (Core)                              | C  | 010  | For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.  | See General Education Core for more details<br>Options: ENGL 1302 or ENGL 1305.   |   |  |
|             |             | 4         |                                    | MATH 2414                      | Calculus II                                       | C  |  | MATH 2413 with a grade of 'C' or better.   |   |   |  |
|             |             | 3         |                                    | CSCI 1370                      | Computer Science I for Majors                     | C  |  | Grade of 'C' or better in any of the following: MATH 1314, MATH 1414 or placement in a higher level Math course (MATH 2412, MATH 2413) and credit for or concurrent enrollment in CSCI 1101 or CMPE 1101. Co-requisite: CSCI 1170. |   |   |  |
|             |             | 1         |                                    | CSCI 1170                      | Computer Science I Laboratory for Majors          | C  |  | Co-requisites: CSCI 1370   |   |   |  |
|             |             | 4         |                                    | PHYS 2425                      | Physics for Scientists and Engineers I (Core)     |  |  | 030  | MATH 2413 and concurrent enrollment in MATH 2414.   | 1 hour of lab for Core 090. See General Education Core for more details.                    |  |
|             |             |           |                                    | <b>15 Semester Total Hours</b> |   |  |  |  |   |   |  |
| SECOND YEAR | FALL        | 3         |                                    | MATH 2346                      | Mathematics for Electrical and Computer Engineers | C  |  | CSCI 1380 (or CSCI 1387) or CMPE 1170/1370 (or CMPE 1378/1178) with a grade of 'C' or better, and MATH 2413 with a grade of 'C' or better.   |   |   |  |
|             |             | 3         |                                    | CSCI 2380                      | Computer Science II                               | C  |  | Grade of C or better in: [CSCI 1370 or CMPE 1370] and [CSCI 1170 or CMPE 1170].  |   |   |  |
|             |             | 3         |                                    | Choose 1                       | Social and Behavioral Sciences (Core)             |  |  | 080  | See General Education Core for course options.  |   |  |
|             |             | 3         |                                    | Choose 1                       | American History (Core)                           |  |  | 060  | See General Education Core for more details.<br>Options: HIST 1301 or HIST/MASC 2327  |   |  |
|             |             | 3         |                                    | CMPE 2330                      | Digital Systems Engineering I                     | C  |  | Credit/registration in CMPE 1101, ELEE 1101, or CSCI 1101.   |   |   |  |
|             |             | 1         |                                    | CMPE 2130                      | Digital Systems Engineering I Lab                 | C  |  | Credit/registration for CMPE/ELEE 2330.  |   |   |  |
|             |             |           |                                    |                                | <b>16 Semester Total Hours</b>                    |  |  |  |   |   |  |
|             | SECOND YEAR | SPRING    | 3                                  |                                | CSCI 3333   | Algorithms and Data Structures   | C  |  | Grade of C or better in: [CSCI 3310 or MATH 2346 or MATH 2305] and [CSCI 2380 or CMPE 2380].  |   |  |
|             |             |           | 4                                  |                                | PHYS 2426   | Physics for Scientists and Engineers II (Core)   |  |  | 030   | PHYS 2425.  | 1 hour of lab for Core 090. See General Education Core for more details. |
|             |             |           | 3                                  |                                | CMPE 2320   | Electric Circuits I  | C  |  | Grade of 'C' or better in MATH 2414 and CMPE 1101/ELEE 1101 and credit/registration for PHYS 2426.                                  |   |  |
| 1           |             |           |                                    | CMPE 2120                      | Electric Circuits I Lab                           | C  |  | Credit/registration for CMPE 2320 or ELEE 2305.  |   |   |  |
| 3           |             |           |                                    | POLS 2306                      | Texas Government & Politics                       |  |  | 070  |   |   |  |
| 3           |             | CHEM 1309 | Chemistry for Engineers            |                                |   |  | MATH 1314, MATH 1414, MATH 2412 or MATH 2413 with a grade of "C" or higher | OR CHEM 1311   |   |   |  |
| 1           |             | CHEM 1109 | Chemistry for Engineers Lab (Core) |                                |   | 090  | Credit/registration in CHEM 1309   | OR CHEM 1111   |   |   |  |
|             |             |           |                                    | <b>18 Semester Total Hours</b> |   |  |  |  |   |   |  |

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|--------------------------------|--------|--------------------------------|---|------------------------|---|------------|-----|---|--|
| THIRD YEAR                     | FALL   | 3                              |   | CSCI 3340              | Software Engineering I  | C          |     | Grade of C or better in: [3 advanced hours in CSCI or CMPE] and [CSCI 2380 or CMPE 2380].   |  |
|                                |        | 3                              |   | Choose 1               | Microprocessor Systems (CMPE 3437) or Comp. Org. and System (CSCI 2333) | C          |     | <b>For CMPE 3437:</b> CMPE/ELEE 2330; and CMPE/CSCI 1370 (or CMPE/CSCI 1378). <b>For CMPE 2333:</b> Grade of C or better in: [CSCI 1370 or CSCI 1378 or CMPE 1370 or CMPE 1378] and [CSCI 1170 or CSCI 1178 or CMPE 1170 or CMPE 1178]. | Select either CMPE 3437 (4 hours) or CSCI 2333 (3 hours)   |
|                                |        | 3                              |   | MATH 3341              | Differential Equations  | C          |     | MATH 2414 with a grade of 'C' or better   |  |
|                                |        | 3                              |   | CSCI 3334              | Systems Programming   | C          |     | Grade of C or better in: [CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388] and [CSCI 2333 or CMPE 2333 or ELEE 3435 or CMPE 3437].   |  |
|                                |        | 4                              |   | CMPE 3403              | Electronics for Computer Engineering                                    | C          |     | [CMPE 2320 or ELEE 2305] and [CMPE 2330 or ELEE 2330] and [ELEE 2105 or CMPE 2120] with a grade of C or better.   |  |
|                                |        | <b>16 Semester Total Hours</b> |   |                        |   |            |     |   |  |
| THIRD YEAR                     | SPRING | 3                              |   | CMPE 3331              | Microcontroller and Embedded Systems Lab                                | C          |     | CMPE 3437 or ELEE 3435.   |  |
|                                |        | 3                              |   | PHIL 2326              | Ethics, Technology, and Society (Core)                                  |            | 040 |   |  |
|                                |        | 3                              |   | Choose 1               | General Concentration   | C          |     |   | See Degree Plan for courses.   |
|                                |        | 3                              |   | Choose 1               | General Concentration   | C          |     |   | See Degree Plan for courses.   |
|                                |        | 3                              |   | CMPE 4335              | Computer Architecture   | C          |     | Grade of C or better in: [CSCI 2333 or CMPE 2333] and [CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388].   |  |
|                                |        | 3                              |   | CMPE 4303              | Digital Systems Engineering II  | C          |     | Grade of C or better in: CMPE/ELEE 2330 or consent of instructor.   |  |
| <b>18 Semester Total Hours</b> |        |                                |   |                        |   |            |     |   |  |
|                                |        | I                              | H | Course #               | Course Title  | Min. Grade | GEC | Prerequisite  | Additional Notes   |
| FOURTH YEAR                    | FALL   | 3                              |   | CMPE 3343 or STAT 3337 | Probability and Statistics  | C          |     | MATH 2414 with a grade of 'C' or better.  |  |
|                                |        | 3                              |   | Choose 1               | American History (Core)   |            | 060 |   | See General Education Core for more details. Options: HIST 1302 or HIST/MASC 2328.                               |
|                                |        | 3                              |   | Choose 1               | Prescribed Elective   | C          |     |   | See Degree for course options. 5 hours required - may take one (2) credit and one (3) credit technical elective. |
|                                |        | 3                              |   | Choose 1               | Communications Networks (CMPE 4390) or Computer Networks (CSCI 4345)    | C          |     | For CMPE 4390: CMPE 3437 or ELEE 3435. For CMPE 4345: Grade of C or better in: [CSCI 2333 or CMPE 2333] and [CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388].   |  |
|                                |        | 3                              |   | Choose 1               | Senior Design I (CMPE 4371 or 4373)                                     | C          |     | [Grade of C or better in: CSCI 3340 or CMPE 3340] and Consent of instructor.  |  |
|                                |        | <b>15 Semester Total Hours</b> |   |                        |   |            |     |   |  |
| FOURTH YEAR                    | SPRING | 3                              |   | Choose 1               | Creative Arts (Core)  |            | 050 |   | See General Education Core for course options.   |
|                                |        | 3                              |   | Choose 1               | General Concentration   | C          |     |   | See Degree Plan for courses.   |
|                                |        | 3                              |   | CSCI 4334              | Operating Systems   | C          |     | Grade of C or better in: [CSCI 2333 or CMPE 2333] and [CSCI 2380 or CSCI 2388 or CMPE 2380 or CMPE 2388].   |  |
|                                |        | 2                              |   | Choose 1               | Prescribed Elective   | C          |     |   | See Degree for course options. 5 hours required - may take one (2) credit and one (3) credit technical elective. |
|                                |        | 3                              |   | Choose 1               | Senior Design II (CMPE 4372 or 4374)                                    | C          |     | CMPE 4371 or CMPE 4373  |  |
| <b>14 Semester Total Hours</b> |        |                                |   |                        |   |            |     |   |  |

### Major Graduation Requirements

- All students must complete a two-semester capstone senior design project, represented by CMPE 4371 and CMPE 4372 or CMPE 4373 and CMPE 4374 in the degree plan. This project must be of substantial scope and complexity, demonstrate competencies from across the curriculum (in particular, the ability to design computer software, electronic hardware and integrate the two in systems) and address the social, economic and ethical consequences of the project.
- All courses in the major requirements including the concentration must be completed with a grade of 'C' or better

**CORE: The 2021-2022 list of core courses can be found in the 2021-2022 Undergraduate Catalog: [www.utrgv.edu/catalog](http://www.utrgv.edu/catalog) > See 'Core Curriculum'**

### Symbols Key

**Critical (!):** sequence sensitive course.  
**Minimum Grade:** A - Excellent; B - Good; C - Satisfactory; D - Below Average;  
 CR - Credit; P - Passing; S - Satisfactory.

**General Education Core (GEC) Sections:** 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary ; 090 - Technologies; 090 - Language Diversity & Writing.