# Computer Engineering Curriculum (Summer Training)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE** | **TITLE** | **LT** | **LB** | **CR** | **COURSE** | **TITLE** | **LT** | **LB** | **CR** |
| **Preparatory Year** | | | | | | | | | |
| ENGL 001 | Prep. English I | 15 | 5 | 8 | ENGL 002 | Prep. English II | 15 | 5 | 8 |
| MATH 001 | Prep. Math I | 3 | 1 | 4 | MATH 002 | Prep. Math II | 3 | 1 | 4 |
| PYP 001 | Prep. Physical Science | 2 | 0 | 2 | PYP 002 | Prep. Computer Science | 0 | 2 | 1 |
| PYP 003 | University Study Skills | 0 | 2 | 1 | ME 003 | Prep. Eng. Technology | 0 | 2 | 1 |
| PE 001 | Prep. Health and Physical Educ. I | 0 | 2 | 1 | PE 002 | Prep. Health and Physical Educ. II | 0 | 2 | 1 |
|  | | **20** | **10** | **16** |  | | **18** | **12** | **15** |
| **Total credit hours required in Preparatory Program: 31** | | | | | | | | | |
| **First Year (Freshman)** | | | | | | | | | |
| MATH 101 | Calculus I | 4 | 0 | 4 | MATH 102 | Calculus II | 4 | 0 | 4 |
| PHYS 101 | General Physics I | 3 | 3 | 4 | PHYS 102 | General Physics II | 3 | 3 | 4 |
| ENGL 101 | Intro. to   Academic Discourse | 3 | 0 | 3 | ENGL 102 | Intro. to Report Writing | 3 | 0 | 3 |
| CHEM 101 | General Chemistry I | 3 | 4 | 4 | ICS 102 | Intro. to Computing I | 2 | 3 | 3 |
| IAS 111 | Belief and its Consequences | 2 | 0 | 2 | IAS 101 | Practical Grammar | 2 | 0 | 2 |
| PE 101 | Health and Physical Educ. I | 0 | 2 | 1 | PE 102 | Health and Physical Educ. II | 0 | 2 | 1 |
|  | | **15** | **9** | **18** |  | | **14** | **8** | **17** |
| **Second Year (Sophomore)** | | | | | | | | | |
| COE 202 | Digital Logic Design | 3 | 0 | 3 | ICS 202 | Data Structures | 3 | 3 | 4 |
| COE 203 | Digital Logic Design Lab | 0 | 3 | 1 | EE 203 | Electronics I | 3 | 3 | 4 |
| ICS 201 | Intro. to Computing II | 3 | 3 | 4 | IAS 212 | Professional Ethics | 2 | 0 | 2 |
| EE 202 | Electric Circuits I | 3 | 0 | 3 | COE 241 | Data and Comp. Communications | 3 | 0 | 3 |
| EE 212 | Electric Circuits Laboratory | 0 | 3 | 1 | STAT 319 | Prob. & Stat. for Eng. & Sci. | 2 | 3 | 3 |
| MATH 201 | Calculus III | 3 | 0 | 3 |  |  |  |  |  |
| IAS 201 | Objective Writing | 2 | 0 | 2 |  |  |  |  |  |
|  |  | **14** | **9** | **17** |  |  | **13** | **9** | **16** |
| **Third Year (Junior)** | | | | | | | | | |
| MATH 260 | Intro. to Diff. Eqs. & Lin. Alg. | 3 | 0 | 3 | COE 306 | Intro. to Embedded Systems | 3 | 3 | 4 |
| ICS 253 | Discrete Structures I | 3 | 0 | 3 | IAS 301 | Language Comm. Skills | 2 | 0 | 2 |
| ENGL 214 | Academic & Professional Comm. | 3 | 0 | 3 | COE 4xx | COE Depth Elective | 3 | 0 | 3 |
| COE 301 | Computer Organization | 3 | 3 | 4 | XE xxx | Technical Elective I | 3 | 0 | 3 |
| COE 344 | Computer Networks | 3 | 3 | 4 | COE 300 | Principles of Comp. Eng. Des. | 1 | 3 | 2 |
|  |  |  |  |  | ISE 307 | Eng. Economic Analysis | 3 | 0 | 3 |
|  | | **15** | **6** | **17** |  | | **15** | **6** | **17** |
| **Summer Session** | | | | | COE 399 | Summer Training | **0** | **0** | **0** |
| **Fourth Year (Senior)** | | | | | | | | | |
| ICS 431 | Operating Systems | 3 | 3 | 4 | COE 485 | Senior Design Project | 1 | 6 | 3 |
| COE 4xx | COE Elective I | 3 | 0 | 3 | IAS 322 | Human Rights in Islam | 2 | 0 | 2 |
| COE 4xx | COE Elective II | 3 | 0 | 3 | COE 4xx | COE Elective III | 3 | 0 | 3 |
| XE xxx | Technical Elective II | 3 | 0 | 3 | COE 4xx | COE Elective IV | 3 | 0 | 3 |
| GS xxx | GS Elective 1 | 3 | 0 | 3 | GS xxx | GS Elective II | 3 | 0 | 3 |
|  | | **15** | **3** | **16** |  | | **12** | **6** | **14** |
| **Total credit hours required in Degree Program : 132** | | | | | | | | | |

# Computer Engineering Curriculum with Coop

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE** | **TITLE** | **LT** | **LB** | **CR** | **COURSE** | **TITLE** | **LT** | **LB** | **CR** |
| **Preparatory Year** | | | | | | | | | |
| ENGL 001 | Prep. English I | 15 | 5 | 8 | ENGL 002 | Prep. English II | 15 | 5 | 8 |
| MATH 001 | Prep. Math I | 3 | 1 | 4 | MATH 002 | Prep. Math II | 3 | 1 | 4 |
| PYP 001 | Prep. Physical Science | 2 | 0 | 2 | PYP 002 | Prep. Computer Science | 0 | 2 | 1 |
| PYP 003 | University Study Skills | 0 | 2 | 1 | ME 003 | Prep. Eng. Technology | 0 | 2 | 1 |
| PE 001 | Prep. Health and Physical Educ. I | 0 | 2 | 1 | PE 002 | Prep. Health and Physical Educ. II | 0 | 2 | 1 |
|  | | **20** | **10** | **16** |  | | **18** | **12** | **15** |
| **Total credit hours required in Preparatory Program: 31** | | | | | | | | | |
| **First Year (Freshman)** | | | | | | | | | |
| MATH 101 | Calculus I | 4 | 0 | 4 | MATH 102 | Calculus II | 4 | 0 | 4 |
| PHYS 101 | General Physics I | 3 | 3 | 4 | PHYS 102 | General Physics II | 3 | 3 | 4 |
| ENGL 101 | Intro. to   Academic Discourse | 3 | 0 | 3 | ENGL 102 | Intro. to Report Writing | 3 | 0 | 3 |
| CHEM 101 | General Chemistry I | 3 | 4 | 4 | ICS 102 | Intro. to Computing I | 2 | 3 | 3 |
| IAS 111 | Belief and its Consequences | 2 | 0 | 2 | IAS 101 | Practical Grammar | 2 | 0 | 2 |
| PE 101 | Health and Physical Educ. I | 0 | 2 | 1 | PE 102 | Health and Physical Educ. II | 0 | 2 | 1 |
|  | | **15** | **9** | **18** |  | | **14** | **8** | **17** |
| **Second Year (Sophomore)** | | | | | | | | | |
| COE 202 | Digital Logic Design | 3 | 0 | 3 | ICS 202 | Data Structures | 3 | 3 | 4 |
| COE 203 | Digital Logic Design Lab | 0 | 3 | 1 | ICS 253 | Discrete Structures I | 3 | 0 | 3 |
| ICS 201 | Intro. to Computing II | 3 | 3 | 4 | EE 203 | Electronics I | 3 | 3 | 4 |
| EE 202 | Electric Circuits I | 3 | 0 | 3 | IAS 212 | Professional Ethics | 2 | 0 | 2 |
| EE 212 | Electric Circuits Laboratory | 0 | 3 | 1 | COE 241 | Data and Comp. Communications | 3 | 0 | 3 |
| MATH 201 | Calculus III | 3 | 0 | 3 | STAT 319 | Prob. & Stat. for Eng. & Sci. | 2 | 3 | 3 |
| IAS 201 | Objective Writing | 2 | 0 | 2 |  |  |  |  |  |
|  |  | **14** | **9** | **17** |  |  | **16** | **9** | **19** |
| **Third Year (Junior)** | | | | | | | | | |
| MATH 260 | Intro. to Diff. Eqs. & Lin. Alg. | 3 | 0 | 3 | COE 306 | Intro. to Embedded Systems | 3 | 3 | 4 |
| ENGL 214 | Academic & Professional Comm. | 3 | 0 | 3 | COE 4xx | COE Depth Elective | 3 | 0 | 3 |
| IAS 301 | Language Comm. Skills | 2 | 0 | 2 | GS xxx | GS Elective I | 3 | 0 | 3 |
| COE 301 | Computer Organization | 3 | 3 | 4 | COE 300 | Principles of Comp. Eng. Des | 1 | 3 | 2 |
| COE 344 | Computer Networks | 3 | 3 | 4 | ICS 324 | Database | 3 | 3 | 4 |
| ISE 307 | Eng. Economic Analysis | 3 | 0 | 3 | IAS 322 | Human Rights in Islam | 2 | 0 | 2 |
|  | | **17** | **6** | **19** |  | | **15** | **9** | **18** |
| **Summer Session** | | | | | COE 350 | Begin Cooperative Work | **0** | **0** | **0** |
| **Fourth Year (Senior)** | | | | | | | | | |
| COE 351 | Cooperative Work | 0 | 0 | 9 | COE 485 | Senior Design Project | 1 | 6 | 3 |
|  |  |  |  |  | ICS 431 | Operating Systems | 3 | 3 | 4 |
|  |  |  |  |  | COE 4xx | COE Elective I | 3 | 0 | 3 |
|  |  |  |  |  | COE 4xx | COE Elective II | 3 | 0 | 3 |
|  |  |  |  |  | GS xxx | GS Elective II | 3 | 0 | 3 |
|  | | **0** | **0** | **9** |  | | **13** | **9** | **16** |
| **Total credit hours required in Degree Program : 133** | | | | | | | | | |