

A) Program Study Plan for Computer Engineering Concentration

| Semester 1 | | | |
|--------------|--|-----------------------|-----------------|
| Course no. | Course title | Credits | Prerequisite(s) |
| GENG 131 | Advanced English Language Skills and Critical Thinking | None | 3-0-3 |
| GMTH 181E | Pre-Calculus for Engineering | None | 3-0-3 |
| GCS 182 | Principles of Computing, Data and Algorithms | None | 2-2-3 |
| GPHY 171 | Foundation in Physics | None | 2-2-3 |
| CHEM 113L | Principles of Chemistry | None | 2-3-3 |
| TOTAL | | 15 | |
| Semester 2 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | English Language II | GENG 131 | 3-0-3 |
| GSTA 181 | Introductory Statistics | None | 3-0-3 |
| ECE 106L | Introduction to ECE | None | 1-2-2 |
| ECE 102L | Programming I | GCS 182 | 2-3-3 |
| MATH 101 | Calculus for Engineers I | GMTH 181E | 3-0-3 |
| PHYS 113L | Principles of Electricity and Magnetism | GPHY 171 | 2-3-3 |
| TOTAL | | 17 | |
| Semester 3 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| GISL 121 | Islam and Civil Society | None | 3-0-3 |
| ECE 109L | Programming II | ECE 102L | 2-2-3 |
| ECE 202L | Electric Circuits Analysis I | PHYS113L | 3-2-4 |
| ECE 251L | Digital Logic Design | ECE 106L | 3-2-4 |
| MATH 201 | Calculus for Engineers II | MATH 101 | 3-0-3 |
| TOTAL | | 17 | |
| Semester 4 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| ECE 203 | Electric Circuits Analysis II | ECE 202L | 3-0-3 |
| ECE 210L | Electronics I | ECE 202L | 3-2-4 |
| ECE 254L | Microprocessor Systems | ECE 251L | 2-2-3 |
| MATH 202 | Calculus for Engineers III | MATH 201 | 3-0-3 |
| MATH 225 | Differential Equations | MATH 201 | 3-0-3 |
| TOTAL | | 16 | |
| Semester 5 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| GSEM 100 | Research Seminar | None | 1-2-2 |
| ECE 205 | Signals and systems | ECE 202L and MATH 225 | 3-0-3 |
| ECE 213L | Electronics II | ECE 210L | 2-3-3 |
| MATH 307 | Linear Algebra | GSTA 181, MATH 201 | 3-0-3 |
| STAT 321 | Probabilistic Methods in Engineering | GSTA 181 and MATH 202 | 3-0-3 |
| TOTAL | | 14 | |
| Semester 6 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | Creative Arts and Cultural Studies | None | 3-0-3 |
| GSEM 201 | Research and Innovation and Intellectual Property | GSEM 100 | 3-0-3 |
| ECE 320L | Communication Systems | ECE 205 | 2-3-3 |
| ECE 342L | Analog Control Systems | ECE 205 | 2-2-3 |
| ECE 356 | Computer Organization and Architecture | ECE 254L | 3-0-3 |
| TOTAL | | 15 | |

| Summer 1 | | | |
|--------------|---|---|-----------------|
| Course no. | Course title | Credits | Prerequisite(s) |
| ECE 388 | Summer Internship I | Department approval and Completion of 65 Credit Hours | 0-0-2 |
| TOTAL | | 2 | |
| Semester 7 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | Arabic Language | None | 3-0-3 |
| ECE 333 | Introduction to Artificial Intelligence | GSTA 181 and ECE102L | 2-2-3 |
| ECE 362L | Basic Electrical Machines and Transformers | PHYS 113L and ECE 210L | 2-2-3 |
| ECE 370L | Introduction to Electromagnetic Fields | MATH 307 | 2-2-3 |
| MATH 203 | Discrete Mathematics | MATH 201 | 3-0-3 |
| TOTAL | | 15 | |
| Semester 8 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | Social Structure and Global Awareness | | 3-0-3 |
| ECE 323 | Engineering Economics | GSTA 181 | 3-0-3 |
| ECE 363L | Digital Signal Processing | ECE 205 | 2-2-3 |
| ECE 460 | Power Systems Analysis | ECE 362L | 3-0-3 |
| MATH 310 | Numerical Analysis | MATH 201 and (CS 1131 or ECE102L) | 3-0-3 |
| TOTAL | | 15 | |
| Summer 2 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| ECE 488 | Summer Internship II | ECE 388 and Dept. approval | 0-0-2 |
| TOTAL | | 2 | |
| Semester 9 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | Social Structure and Global Awareness | None | 3-0-3 |
| Choice | Foreign Languages and Communication | | 1-2-2 |
| ECE 491 | ECE Capstone Design Project 1 | Senior standing and Dept. approval | 1-2-2 |
| | Computer Engineering Concentration Elective 1 | | 3 |
| | ECE Concentration Elective 2 | | 3 |
| TOTAL | | 13 | |
| Semester 10 | | | |
| Course no. | Course title | Credits | Prerequisite(s) |
| Choice | Foreign Languages and Communication | None | 1-2-2 |
| ECE 492 | ECE Capstone Design Project II | ECE 491 | 1-2-2 |
| | Computer Engineering Concentration Elective 3 | | 3 |
| | Computer Engineering Concentration Elective 4 | | 3 |
| | Computer Engineering Concentration Elective 5 | | 3 |
| TOTAL | | 13 | |