

DEPARTAMENT OF COMPUTER SCIENCE AND ENGINEERING

BS Computer Science and Engineering



First Semester

First Year

Second Semester

| Course Code | Course Title | Prerequisites | Cr | Course Code | Course Title | Prerequisites | Cr |
|-------------|----------------------------------|--|----|-------------|----------------------|---|----|
| *MATE 3031 | Calculus I | MATE 3005 or MATE 3143 or MATE 3172 or MATE 3174 | 4 | MATE 3032 | Calculus II | MATE 3031 | 4 |
| QUIM 3131 | General Chemistry I | | 3 | QUIM 3132 | General Chemistry II | QUIM 3131 and (QUIM 3133 or QUIM 3001) | 3 |
| QUIM3133 | Gen Chemistry Lab I | | 1 | QUIM 3134 | Gen Chemistry Lab II | QUIM 3133 and (QUIM 3131 or QUIM 3001) QUIM 3132(corequisite) | 1 |
| **INGL 3--- | English First Year | | 3 | **INGL 3--- | English First Year | | 3 |
| **ESPA 3101 | Spanish I Basic | | 3 | **ESPA 3102 | Spanish I Basic II | ESPA 3101 | 3 |
| CIIC 3011 | Intro. to Computer Programming I | | 3 | CIIC 4010 | Advanced Programming | CIIC 3011 or INGE 3016 | 4 |
| | | Total Credits | 17 | | | Total Credits | 18 |

First Semester

Second Year (BS)

Second Semester

| Course Code | Course Title | Prerequisites | Cr | Course Code | Course Title | Prerequisites | Cr |
|-------------|--------------------------|--|----|-------------|-------------------------------|--|----|
| MATE 3063 | Calculus III | MATE 3032 | 3 | CIIC 4020 | Data Structures | (CIIC 4010 or ICOM4015) and (CIIC 3075 or ICOM 4075) and MATE 3031 | 4 |
| FISI 3171 | Physics I | Mate 3031 or Mate 3144 | 4 | FISI 3172 | Physics II | FISI 3171 | 4 |
| FISI 3173 | Physics Lab I | FISI 3171 (corequisite) | 1 | FISI 3174 | Physics Lab II | FISI 3173 FISI 3172-(corequisite) | 1 |
| INGE 3011 | Engineering Graphics | | 2 | INEL 3105 | Electrical Systems Analysis I | MATE 3032 Coreq: FISI 3172 and MATE 3063 | 3 |
| CIIC 3075 | Foundations of Computing | CIIC 3011 or INGE 3016 Coreq: MATE3031 | 3 | INEL 4115 | Electrical Measurements Lab | INEL 3105 (corequisite) | 1 |
| **INGL 3--- | English Second Year | | 3 | **INGL 3--- | English Second Year | | 3 |
| | | Total Credits | 16 | | | Total Credits | 16 |

First Semester

Third Year (BS)

Second Semester

| Course Code | Course Title | Prerequisites | Cr | Course Code | Course Title | Prerequisites | Cr |
|-------------|---|---|----|-------------|--|--|----|
| INSO 4101 | Intro to Software Engineering | CIIC 4020 or ICOM 4035 | 3 | CIIC 4025 | Algorithm Design and Analysis | CIIC 4020 or ICOM 4035 | 3 |
| CIIC 3081 | Computer Archietcture I | INEL 3105 & (CIIC 4010 or ICOM 4015) | 3 | CIIC 4082 | Computer Archietcture II | CIIC 3081 | 3 |
| MATE 4145 | Lineal Algebra and Differential Equations | MATE 3063 and (CIIC 3011 or INGE 3016) | 4 | INGE 3045 | Engineering Materials | (QUIM 3002 or QUIM 3132) and QUIM 3134 and FISI 3172 | 3 |
| INGE 3035 | Engineering Mechanics | MATE 3031 or MATE 3144 or MATE 3183 FISI3171(coreq) | 3 | ININ 4010 | Engineering Probability and Statistics | INGE 3016 and MATE 3032 | 3 |
| ---- | Socio-Humanistic Elective | | 3 | ---- | Socio-Humanistic Elective | | 3 |
| | | Total Credits | 16 | | | Total Credits | 15 |

First Semester

Fourth Year (BS)

Second Semester



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BS Computer Science and Engineering

| Course Code | Course Title | Prerequisites | Cr | Course Code | Course Title | Prerequisites | Cr |
|-------------|--------------------------------------|---|-----------|------------------------|-------------------------------|--|-----------|
| CIIC 4050 | Operating Systems | (ICOM 4035 or CIIC 4020) and (CIIC 4082 or INEL 4206) | 4 | CIIC 4060 | Database Systems | (ICOM 4035 or CIIC 4020) Co-Req. (ICOM 5007 or CIIC 4050) | 3 |
| CIIC 4030 | Programming Languages | CIIC 4020 or ICOM 4035 | 3 | CIIC 4070 | Computer Networks and the WWW | ICOM 5007 or CIIC 4050 | 3 |
| CIIC 5045 | Formal Languages and Automata Theory | CIIC 4025 or ICOM 4038 | 3 | CIIC 5xxx INSO 5xxx | Technical Elective*** | | 3 |
| ININ 4015 | Engineering Economics | MATE 3032 | 3 | INME 4045 | Thermodynamics | FISI 3172 and QUIM 3002 or QUIM 3132 and QUIM 3134 | 3 |
| ---- | Socio-Humanistic Elective | | 3 | ---- | Socio-Humanistic Elective | | 3 |
| | | Total Credits | 16 | | | Total Credits | 15 |

First Semester

Fifth Year¹ (BS)

Second Semester

| Course Code | Course Title | Prerequisites | Cr | Course Code | Course Title | Prerequisites | Cr |
|------------------------|-----------------------------|----------------------|-----------|------------------------|-----------------------------|----------------------|-----------|
| CIIC 5xxx | CIIC Capstone | | 3 | CIIC 5xxx INSO 5xxx | Technical Elective*** | | 3 |
| CIIC 5xxx INSO 5xxx | Technical Elective*** | | 3 | INSO 5xxx CIIC 5xxx | Technical Elective*** | | 3 |
| ----- | Free Elective | | 3 | ----- | Free Elective | | 3 |
| ----- | Free Elective | | 3 | ----- | Free Elective | | 3 |
| EDFI ----- | Physical Education Elective | | 1 | EDFI ----- | Physical Education Elective | | 1 |
| | | Total Credits | 13 | | | Total Credits | 13 |

Total Credits BS: 155

*** Approved Technical Electives

| | | | |
|-----------|-------------------------------------|-----------|--|
| INSO 4115 | Software Requirements | CIIC 5018 | Cryptography and Network Security |
| CIIC 4019 | High Performance Computing | CIIC 5015 | Artificial Intelligence |
| INSO 4118 | Software Project Management | CIIC 5017 | Operating Systems and Network Administration and Security |
| INSO 4111 | Intro to Computer Human Interaction | CIIC 5029 | Compiler Design |
| INSO 4115 | Software Engineering Requirements | CIIC 4998 | Undergraduate Research in Computer Science and Engineering |
| INSO 4116 | Software Design | INSO 4998 | Undergraduate Research in Software Engineering |
| INSO 4117 | Software Testing | CIIC 5995 | Selected Topics in Computer Science and Engineering |