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| **Student’s Name:** | | | | | | **UFID:** | | |
| \**REQUIRES A GRADE OF “C” OR BETTER* | | | | | | | | |
| Date | Grade | Course | Cr | Title | Sem | | Pre-Req | Co-Req |
| Semester 1 | | (14 Credits) |  |  |  | |  |  |
|  |  | GE-S **(D or N)** | 3 | Social Sciences **W/6000 words** | F S Su | |  |  |
|  |  | GE- H **(N or D)** | 3 | Humanities  **W/6000 words** | F S Su | |  |  |
|  |  | MAC 2311\* | 4 | Analytical Geometry & Calc 1 | F S Su | | Passing Score – Readiness Assessment Test |  |
|  |  | CHM 2095\* | 3 | General Chemistry 1 | F S Su | | Passing Score – Readiness Assessment Test |  |
|  |  | CHM 2045L | 1 | General Chemistry Lab 1 | F S Su | |  |  |
| Semester 2 | | (14 Credits) |  |  |  | |  |  |
|  |  | CHM 2096\* | 3 | General Chemistry 2 | F S Su | | CHM 2095 & CHM 2045L |  |
|  |  | CHM 2046L | 1 | General Chemistry Lab 2 | F S Su | |  |  |
|  |  | ABE2062 | 3 | Biology for Engineers | F | |  |  |
|  |  | Or BSC2010 |  | **or** Integrated Principles of Biology 1 | F S Su | |  |  |
|  |  | MAC 2312\* | 4 | Analytical Geometry & Calc 2 | F S Su | | MAC 2311 |  |
|  |  | IDS1161 (Quest 1) | 3 | What is The Good Life (GE-H) or Quest 1 | F S Su | |  |  |
| Semester 3 | | (14 Credits) |  |  |  | |  |  |
|  |  | PHY 2048\* | 3 | Physics with Calculus 1 | F S Su | | MAC 2311 | MAC 2312 |
|  |  | PHY 2048L | 1 | Physics Lab 1 | F S Su | |  | PHY 2048 |
|  |  | MAC 2313\* | 4 | Analytical Geometry & Calc 3 | F S Su | | MAC 2312 |  |
|  |  | ABE 2012C\* (2K words) | 3 | Intro to Biological Engineering | F | |  | MAC 2311 |
|  |  | State Core -S or H | 3 | Social Sciences or Humanities **(D or N if needed)** |  | |  |  |
| Semester 4 | | (15 Credits) |  |  |  | |  |  |
|  |  | PHY 2049\* | 3 | Physics with Calculus 2 | F S Su | | PHY 2048, MAC 2312 | MAC 2313 |
|  |  | PHY 2049L | 1 | Physics with Calculus Lab 2 | F S Su | |  |  |
|  |  | MAP 2302 | 3 | Elementary Differential Equations | F S Su | | MAC 2312 |  |
|  |  | EGM 2511\* | 3 | Engineering Mechanics-Statics | F S Su | | PHY 2048 | MAC 2313 |
|  |  | EML 3007 | 3 | Elements of Thermodyn. and Heat Transfer | F S | | CHM 2095, MAC 2313 & PHY 2048 |  |
|  |  | EGN 2020C | 2 | Engineering Design and Society | F S Su | |  |  |
| Semester 5 | | (12 Credits) |  | **THIS IS A SUMMER SEMESTER** |  | |  |  |
|  |  | EGM3520\* | 3 | Mechanics of Materials | F S Su | | EGM 2511, MAC 2313 |  |
|  |  | EML 2023 or  CGN 2328 | 3 | Computer Aided Graphics and Design or Technical Drawing and Visualization | F S, Su | | 2 EG or > |  |
|  |  | GE-**C** (6K words) | 3 | ENC1101 or ENC1102 | F S Su | |  |  |
|  |  | CHM 2200 (F,Su) (or 2210) or BCH3023\* | 3 | Organic Chemistry (or Organic Chem 1) or Elem Organic and Biological Chemistry | F S Su | | CHM 2096 & CHM 2046L or equiv. |  |
| Semester 6 | | (14 Credits) |  |  |  | |  |  |
|  |  | CGN 3710 or  EEL 3003 | 3 | Experimentation and Instrumentation in Civil Engineering or Elements of Elec. Eng. | F S Su | | PHY 2049 |  |
|  |  | ENV 3040C | 3 | Computer Methods in Environmental Eng | F | | MAC 2313, MAP 2302MAM MAC 2313 | MAP2302 |
|  |  | EGM 3400\* | 2 | Elements of Dynamics | F S | | EGM 2511, MAC 2313 |  |
|  |  | ENC 3246 (6K words) | 3 | Professional Communication for Engineers | F S | | ENC 1101 |  |
|  |  | SUR 3103C\* | 3 | Geomatics | F | | MAC2311 |  |
| Semester 7 | | (15-16 Credits) |  |  |  | |  |  |
|  |  | ABE 3212C\* | 4 | Land & Water Resources Engineering | S | | ENV 3040C (Fall), COP2271 & lab, or CGN3421 | CWR 3201 or  EGN 3353 |
|  |  | ABE 3000C\* | 3 | Applications in Biological Engineering | S | | BSC 2010 or equiv. |  |
|  |  | ABE3652C or CGN3501C\* | 3 | Physical and Rheolog Prop of Bio Materials or Civil Engineering Materials (4) | S  FS | | CHM 2045, MAC 2313 & PHY 2048 | EGM3520 |
|  |  | EGS4034, EML2920 or ECH4934\* | 1 | Engineering Professionalism and Ethics course | F S | |  |  |
|  |  | CWR 3201\* | 4 | Hydrodynamics | F S Su | | EGM 3400, MAP 2302 EGM EGM 3400, MAP 2302 |  |
| Semester 8 | | (16 Credits) |  |  |  | |  |  |
|  |  | ABE 3612C\* | 4 | Heat & Mass Transfer in Biological Systems | F | |  | CGN 3421 or ENV3040c |
|  |  | ABE 4171\* | 3 | Power and Machines for Biological Systems | F | | EGM 3520 & EML 3007 |  |
|  |  | ABE 4042C\* | 2 | Biological Engineering Design 1 | F | | 4 EG |  |
|  |  | ABE 4231c\* | 4 | Irrigation & Drainage Engineering | F | |  |  |
|  |  |  | 3 | Department elective |  | |  |  |
| Semester 9 | | (14 Credits) |  |  |  | |  |  |
|  |  | ABE 4043C\* | 2 | Biological Engineering Design 2 | S | | ABE 4042C, 4 or 5 EG |  |
|  |  | CWR 4202\* | 3 | Hydraulics | F S | | CWR 3201 |  |
|  |  | CEG 4011\* | 4 | Soil Mechanics | F S | | EGM 3520 |  |
|  |  |  | 5 | Technical and/or Engineering electives |  | |  |  |

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| TECHNICAL SCIENCE ELECTIVES | | | | |
| Date | GR | Course # | Course | CR |
|  |  | AEB 3413 | Economics of Environmental Policy | 3 |
|  |  | AEB 4434 | Land and Water Economics | 3 |
|  |  | ALS 3133 | Agricultural & Environmental Quality | 3 |
|  |  | AOM4434 | Precision Agriculture | 3 |
|  |  | EES4050 | Environmental Planning and Design | 3 |
|  |  | EES4102 | Wastewater Microbiology | 3 |
|  |  | EES4200 | Environmental Chemistry of Carbon Compounds | 2 |
|  |  | EES4201 | Water Chemistry | 3 |
|  |  | PLS 3004C | Principles of Plant Science | 3 |
|  |  | AOM/PKG 3000 or above | **As approved by advisor** |  |
|  |  |  | ***Note: Pre-med and Pre-vet science courses may count toward technical electives. Check with your advisor.*** |  |
| DEPARTMENTAL ELECTIVES | | | | |
| Date | GR | Course # | Course | CR |
|  |  | ABE 4034 | Remote Sensing in Engineering: Science, Sensor & Applications | 3 |
|  |  | ABE 4812 | Food and Bioprocess Engineering Unit Operations | 4 |
|  |  | ABE 4413C | Post Harvest Operations Engineering | 3 |
|  |  | ABE 4033 | Fundamentals & Applications of Biosensors | 3 |
|  |  | One AOM/PKG 3000 or above | **As approved by advisor** |  |
|  |  | ABE5xxx or | Any ABE Graduate Level Course |  |
|  |  | ABE6xxx |  |  |
| **ENGINEERING ELECTIVES** | | | | |
|  |  | CGN4101 | Civil Engr Cost Analysis | 3 |
|  |  | CEG 4012 | Geotechnical Engineer | 3 |
|  |  | CEG 4104 | Retain Wall Embank | 3 |
|  |  | CEG 4111 | Foundations Engr Design | 3 |
|  |  | CES 3102 | Mechanics of Eng Structure | 3 |
|  |  | CES 4141 | Stress Analysis | 3 |
|  |  | CES 4605 | Analysis/Design Steel | 3 |
|  |  | EML 4450 | Energy Conversion | 3 |
|  |  | EML 4600 | Refrigeration & Air Fundamentals | 3 |
|  |  | EML 4601 | Heat Air Sys Design |  |
|  |  | CWR 4111 | Engineering Hydrology | 3 |
|  |  | CWR 4114 | Surface Hydrology | 3 |
|  |  | CWR 4306 | Urban Stormwater Systems Design | 3 |
|  |  | CWR 4542 | Water Resources Engineering | 3 |
|  |  | ENV 5601 | Environmental Resources Management | 2 |
|  |  | ENV4041C | Environmental Analysis | 3 |
|  |  | ENV 4405 | Nutrient Control and Water Reuse | 3 |
|  |  | ENV4514C | Water and Wastewater Treatment | 3 |
|  |  | EGN4641 | Engineering Entrepreneurship | 3 |
|  |  | EGN4643 | Engineering Innovation | 3 |
| The above electives have been identified as appropriate for your specialization area but you are not limited to this list. Other technical, departmental, or engineering courses at the 3000 level or approve may count if approved in advance by your advisor. **Other** **ABE courses count toward any elective area.** |  | EGN4038 | Engineering Leadership | 3 |