**BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING**

*(Curriculum applicable to students who entered as freshmen beginning school year 2009-2010)*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 1 | 1 | DRAW021W | ENGINEERING DRAWING 1 (DRAW) | - | 3.0 | 1.0 |  |  | CAS |
| 1 | 1 | ENG011 | ENGLISH FOR ACADEMIC STUDIES 1 | 3.0 | - | 2.0 |  |  | CAS |
| 1 | 1 | IT001L | I.T. FUNDAMENTALS 1 (LAB) | - | 3.0 | 1.0 |  |  | CIT |
| 1 | 1 | MATH011 | ALGEBRA | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 1 |  | HUMANITIES 1 | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 1 |  | SOCIAL SCIENCE 1 | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 1 | NSTP011 | NATIONAL SERVICE TRAINING PROGRAM 1 | - | 6.0 | (2.0) |  |  | CSRO |
| 1 | 1 | PE021 | PHYSICAL EDUCATION 1 | - | 2.5 | (1.5) |  |  | CAS |
| 1 | 1 | VE011 | VALUES EDUCATION 1 | 1.5 | - | (1.0) |  |  | CAS |
|  |  |  | **Total** | **18.0** | **14.5** | **17.5** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 1 | 2 | DRAW022W | ENGINEERING DRAWING 2 (DRAW) | - | 3.0 | 1.0 | DRAW021W |  | CAS |
| 1 | 2 | ENG012 | ENGLISH FOR ACADEMIC STUDIES 2 | 3.0 | - | 2.0 | ENG011 |  | CAS |
| 1 | 2 | IT002L | I.T. FUNDAMENTALS 2 (LAB) | - | 3.0 | 1.0 | IT001L |  | CIT |
| 1 | 2 | MATH018 | ALGEBRA 2 | 3.0 | - | 2.0 | MATH011 |  | CAS |
| 1 | 2 | MATH012 | PLANE AND SPHERICAL TRIGONOMETRY | 4.5 | - | 3.0 | MATH011 |  | CAS |
| 1 | 2 |  | HUMANITIES 2 | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 2 |  | SOCIAL SCIENCE 2 | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 2 | NSTP012 | NATIONAL SERVICE TRAINING PROGRAM 2 | - | 6.0 | (2.0) | NSTP011 |  | CSRO |
| 1 | 2 | PE022 | PHYSICAL EDUCATION 2 | - | 2.5 | (1.5) |  |  | CAS |
|  |  |  | **Total** | **19.5** | **14.5** | **18.5** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 1 | 3 | DRAW023L | COMPUTER-AIDED DRAFTING AND DESIGN (LAB) | - | 3.0 | 1.0 | DRAW022W |  | CAS |
| 1 | 3 | ENG013 | ENGLISH FOR ACADEMIC STUDIES 3 | 3.0 | - | 2.0 | ENG012 |  | CAS |
| 1 | 3 | MATH013 | ANALYTIC GEOMETRY | 4.5 | - | 3.0 | MATH012 |  | CAS |
| 1 | 3 | MATH014 | SOLID MENSURATION | 3.0 | - | 2.0 | MATH018 |  | CAS |
| 1 | 3 | MATH021 | CALCULUS 1 | 4.5 | - | 3.0 | MATH018, , MATH012 |  | CAS |
| 1 | 3 |  | SOCIAL SCIENCE 3 | 4.5 | - | 3.0 |  |  | CAS |
| 1 | 3 | NSTP013 | NATIONAL SERVICE TRAINING PROGRAM 3 | - | 6.0 | (2.0) | NSTP012 |  | CSRO |
| 1 | 3 | PE023 | PHYSICAL EDUCATION 3 | - | 2.5 | (1.5) |  |  | CAS |
|  |  |  | Total | 19.5 | 11.5 | 17.5 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 2 | 1 | CHM021 | GENERAL CHEMISTRY 1 | 3.0 | - | 2.0 |  |  | CAS |
| 2 | 1 | CHM021L | GENERAL CHEMISTRY 1 (LAB) | - | 3.0 | 1.0 |  | CHM021 | CAS |
| 2 | 1 | FIL011 | FILIPINO 1 | 3.0 | - | 2.0 |  |  | CAS |
| 2 | 1 | MATH022 | CALCULUS 2 | 4.5 | - | 3.0 | MATH021 |  | CAS |
| 2 | 1 | PHY021 | PHYSICS 1 | 4.5 | - | 3.0 | MATH021 |  | CAS |
| 2 | 1 | PHY021L | PHYSICS 1 (LAB) | - | 3.0 | 1.0 | MATH021 | PHY021 | CAS |
| 2 | 1 |  | HUMANITIES 3 | 4.5 | - | 3.0 |  |  | CAS |
| 2 | 1 | PE024 | PHYSICAL EDUCATION 4 | - | 2.5 | (1.5) | PE023 |  | CAS |
|  |  |  | **Total** | **19.5** | **8.5** | **16.5** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 2 | 2 | CHM022 | GENERAL CHEMISTRY 2 | 3.0 | - | 2.0 | CHM021 |  | CAS |
| 2 | 2 | CHM022L | GENERAL CHEMISTRY 2 (LAB) | - | 3.0 | 1.0 | CHM021L | CHM022 | CAS |
| 2 | 2 | FIL012 | FILIPINO 2 | 3.0 | - | 2.0 | FIL011 |  | CAS |
| 2 | 2 | MATH023 | CALCULUS 3 | 4.5 | - | 3.0 | MATH022 |  | CAS |
| 2 | 2 | PHY022 | PHYSICS 2 | 4.5 | - | 3.0 | PHY021 |  | CAS |
| 2 | 2 | PHY022L | PHYSICS 2 (LAB) | - | 3.0 | 1.0 | PHY021L | PHY022 | CAS |
| 2 | 2 |  | SOCIAL SCIENCE 4 | 4.5 | - | 3.0 |  |  | CAS |
| 2 | 2 | PE025 | PHYSICAL EDUCATION 5 | - | 2.5 | (1.5) |  |  | CAS |
|  |  |  | **Total** | **19.5** | **8.5** | **16.5** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 2 | 3 | CHM023 | GENERAL CHEMISTRY 3 | 3.0 | - | 2.0 | CHM022 |  | CAS |
| 2 | 3 | CHM023L | GENERAL CHEMISTRY 3 (LAB) | - | 3.0 | 1.0 | CHM022L | CHM023 | CAS |
| 2 | 3 | FIL013 | FILIPINO 3 | 3.0 | - | 2.0 | FIL012 |  | CAS |
| 2 | 3 | MATH025 | DIFFERENTIAL EQUATIONS | 4.5 | - | 3.0 | MATH023 |  | CAS |
| 2 | 3 | MEC101 | STATICS OF RIGID BODIES | 4.5 | - | 3.0 | MATH022, PHY022, |  | CAS |
| 2 | 3 | PHY023 | PHYSICS 3 | 4.5 | - | 3.0 | PHY022 |  | CAS |
| 2 | 3 | PHY023L | PHYSICS 3 (LAB) | - | 3.0 | 1.0 | PHY022L | PHY023 | CAS |
| 2 | 3 | PE026 | PHYSICAL EDUCATION 6 | - | 2.5 | (1.5) | PE025 |  | CAS |
| 2 | 3 | VE012 | VALUES EDUCATION 2 | 1.5 | - | (1.0) | VE011 |  | CAS |
|  |  |  | **Total** | **21.0** | **8.5** | **17.5** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 3 | 1 | CHM130 | ANALYTICAL CHEMISTRY | 4.5 | - | 3.0 | CHM023, CHM023L |  | CAS |
| 3 | 1 | CHM130L | ANALYTICAL CHEMISTRY (LAB) | - | 9.0 | 2.0 |  | CHM130 | CAS |
| 3 | 1 | CHM141 | ORGANIC CHEMISTRY I | 3.0 | - | 2.0 | CHM023, CHM023L |  | CAS |
| 3 | 1 | CHM141L | ORGANIC CHEMISTRY I (LAB) | - | 4.5 | 1.0 |  | CHM141 | CAS |
| 3 | 1 | MATH115 | ADVANCED ENGINEERING MATHEMATICS | 4.5 | - | 3.0 | MATH025 |  | MITL |
| 3 | 1 | EENV101 | INTRODUCTION TO ENVIRONMENTAL ENGINEERING | 3.0 | - | 2.0 | CHM023,CHM023L |  | MITL |
| 3 | 1 | BEC198 | BASIC ENGINEERING CORRELATION | - | 3.0 | (1.0) | MATH025, PHY023, CHM023 |  | MITL |
|  |  |  | **Total** | **15.0** | **16.5** | **14.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 3 | 2 | CHE111P | ChE CALCULATIONS I (PAIRED) | 3.0 | 4.5 | 3.0 | CHM130, MATH018 |  | MITL |
| 3 | 2 | CHE121 | PHYSICAL CHEMISTRY FOR ENGINEERS I | 4.5 | - | 3.0 | CHM130, CHM130L, MATH022 |  | MITL |
| 3 | 2 | CHE121L | PHYSICAL CHEMISTRY FOR ENGINEERS I (LAB) | - | 4.5 | 1.0 |  | CHE121 | MITL |
| 3 | 2 | CHM142 | ORGANIC CHEMISTRY II | 3.0 | - | 2.0 | CHM141 |  | CAS |
| 3 | 2 | CHM142L | ORGANIC CHEMISTRY II (LAB) | - | 4.5 | 1.0 | CHM141L | CHM142 | CAS |
| 3 | 2 | CHM150 | INDUSTRIAL CHEMISTRY | 3.0 | - | 2.0 | CHM141 | CHM142 | CAS |
| 3 | 2 | CHM150L | INDUSTRIAL CHEMISTRY (LAB) | - | 4.5 | 1.0 | CHM141 | CHM142 | CAS |
| 3 | 2 | MEC102 | DYNAMICS OF RIGID BODIES | 3.0 | - | 2.0 | MEC101 |  | CAS |
|  |  |  | **Total** | **13.5** | **18.0** | **15.0** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 3 | 3 | CHE112P | ChE CALCULATIONS II (PAIRED) | 3.0 | 4.5 | 3.0 | CHE111P |  | MITL |
| 3 | 3 | CHE122 | PHYSICAL CHEMISTRY FOR ENGINEERS II | 4.5 | - | 3.0 | CHE121 |  | MITL |
| 3 | 3 | CHE122L | PHYSICAL CHEMISTRY FOR ENGINEERS II (LAB) | - | 4.5 | 1.0 | CHE121L | CHE122 | MITL |
| 3 | 3 | CHE123 | ChE THERMODYNAMICS I | 4.5 | - | 3.0 | CHE121 |  | MITL |
| 3 | 3 | CHE130 | PRINCIPLES OF TRANSPORT PROCESSES | 4.5 | - | 3.0 | CHE111P, , MATH025 |  | MITL |
| 3 | 3 | ECE121P | INTRODUCTION TO MATLAB (LAB) | 1.5 | 3.0 | 1.0 |  |  | MITL |
| 3 | 3 | VE013 | VALUES EDUCATION 3 | 1.5 | - | (1.0) | VE012 |  | CAS |
|  |  |  | **Total** | **19.5** | **12.0** | **15.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 3 | S | MATH140 | DISCRETE MATHEMATICS | 4.5 | - | 3.0 | MATH011 |  | MITL |
| 3 | S | MATH160 | NUMERICAL METHODS | 4.5 | - | 3.0 | MATH025 |  | MITL |
|  |  |  | **Total** | **9.0** | **0.0** | **6.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 4 | 1 | SAF101 | SAFETY MANAGEMENT | 1.5 | - | 1.0 | 3rd Year Standing |  | MITLL |
| 4 | 1 | CHE124 | ChE THERMODYNAMICS II | 4.5 | - | 3.0 | CHE123 |  | MITL |
| 4 | 1 | CHE131 | MOMENTUM TRANSFER | 4.5 | - | 3.0 | CHE130 |  | MITL |
| 4 | 1 | ENG031 | ENGLISH AT THE WORKPLACE: WRITING | 3.0 | - | 2.0 | ENG013 |  | CAS |
| 4 | 1 | MATH110 | PROBABILITY AND STATISTICS | 4.5 | - | 3.0 | MATH011 |  | MITL |
| 4 | 1 | MEC103 | MECHANICS OF DEFORMABLE BODIES | 4.5 | - | 3.0 | MEC101 |  | CAS |
| 4 | 1 | VE014 | VALUES EDUCATION 4 | 1.5 | - | (1.0) | VE013 |  | CAS |
|  |  |  | **Total** | **24.0** | **0.0** | **16.0** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 4 | 2 | CHE132 | INTRODUCTION TO PARTICLE TECHNOLOGY | 3.0 | - | 2.0 | CHE131 |  | MITL |
| 4 | 2 | CHE133 | HEAT AND MASS TRANSFER | 4.5 | - | 3.0 | CHE131 |  | MITL |
| 4 | 2 | CHE150 | CHEMICAL PROCESS INDUSTRIES | 4.5 | - | 3.0 | CHM142 |  | MITL |
| 4 | 2 | EE105 | BASIC ELECTRICAL AND ELECTRONICS | 3.0 | - | 2.0 | PHY023, , PHY023L |  | MITL |
| 4 | 2 | EE105L | BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (LAB) | - | 4.5 | 1.0 |  | EE105 | MITL |
| 4 | 2 | ENG032 | ENGLISH AT THE WORKPLACE: SPEAKING | 3.0 | - | 2.0 | ENG031 |  | MITL |
| 4 | 2 | RES101P | METHODS OF RESEARCH (PAIRED) | 1.5 | 4.5 | 2.0 | 4th Year Standing |  | MITL |
|  |  |  | **Total** | **19.5** | **9.0** | **15.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 4 | 3 | BIO181 | INTRODUCTION TO BIOTECHNOLOGY | 4.5 | - | 3.0 | CHM142 |  | MITL |
| 4 | 3 | CHE102 | SAFETY IN PROCESS INDUSTRIES | 3.0 | - | 2.0 | SAF101 |  | MITL |
| 4 | 3 | CHE131L | ChE LABORATORY I | - | 4.5 | 1.0 | CHE131,CHE133 |  | MITL |
| 4 | 3 | CHE134P | SEPARATION PROCESSES (PAIRED) | 3.0 | 4.5 | 3.0 | CHE124,  CHE133 |  | MITL |
| 4 | 3 | ENG033 | ENGLISH AT THE WORKPLACE: READING & LISTENING | 3.0 | - | 2.0 | ENG032 |  | CAS |
| 4 | 3 | MSE101 | FUNDAMENTALS OF MATERIAL SCIENCE AND ENGINEERING | 4.5 | - | 3.0 | CHM142 |  | MITL |
| 4 | 3 | CS101L | PROGRAMMING FUNDAMENTALS 1 (LAB) | - | 3.0 | 1.0 |  |  | CIT |
| 4 | 3 | CHE198 | ChE CORRELATION I | - | 3.0 | (1.0) | CHE112P, CHE122, CHE124, CHM130, CHM142 |  | MITL |
|  |  |  | **Total** | **18.0** | **15.0** | **16.0** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 4 | S | CHE199R | ChE INDUSTRY IMMERSION | - | 40.0 | 2.0 | 5th Year Standing |  | MITL |
|  |  |  | **Total** | **0.0** | **40.0** | **2.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 5 | 1 | CHE132L | ChE LABORATORY II | - | 4.5 | 1.0 | CHE131L |  | MITL |
| 5 | 1 | CHE141D | EQUIPMENT DESIGN | 3.0 | - | 2.0 | CHE134P |  | MITL |
| 5 | 1 | CHE171 | CHEMICAL REACTION ENGINEERING I | 4.5 | - | 3.0 | CHE124, MATH115 |  | MITL |
| 5 | 1 | EECO101 | ENGINEERING ECONOMY | 4.5 | - | 3.0 |  |  | MITL |
| 5 | 1 | EMGT101 | ENGINEERING MANAGEMENT | 4.5 | - | 3.0 |  |  | MITL |
| 5 | 1 |  | ChE ELECTIVE 1 | 4.5 | - | 3.0 | 5th Year Standing |  | MITL |
|  |  |  | **Total** | **21.0** | **4.5** | **15.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 5 | 2 | CHE142D | ChE PLANT DESIGN I | 3.0 | - | 2.0 | CHE141D, MATH130, EECO101 |  | MITL |
| 5 | 2 | CHE172 | CHEMICAL REACTION ENGINEERING II | 1.5 | - | 1.0 | CHE171 |  | MITL |
| 5 | 2 | CHE181 | BIOCHEMICAL ENGINEERING | 4.5 | - | 3.0 | BIO181, , CHE171 |  | MITL |
| 5 | 2 | CHE182 | ChE LAWS AND ETHICS | 3.0 | - | 2.0 | 5th Year Standing |  | MITL |
| 5 | 2 | EMGT102 | QUANTITATIVE METHODS IN MANAGEMENT | 4.5 | - | 3.0 | EMGT101 |  | MITL |
| 5 | 2 | CHE184L | COMPUTER APPLICATIONS IN CHE | - | 4.5 | 1.0 | 5th Year Standing |  | MITL |
| 5 | 2 |  | ChE ELECTIVE 2 | 4.5 | - | 3.0 | 5th Year Standing |  | MITL |
| 5 | 2 | CHE198-1 | ChE CORRELATION 3 | - | 3.0 | (1.0) | CHE132 , CHE134P, CHE171, EECO101, MATH110 |  | MITL |
|  |  |  | **Total** | **21.0** | **7.5** | **16.0** |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |  |
| **Year** | **Term** | **Code** | **Title** | **Lec Hrs** | **Lab Hrs** | **Total Units** | **Prerequisites** | **Co-requisites** | **Servicing College/Dept.** |
| 5 | 3 | CHE143D | ChE PLANT DESIGN II | 1.5 | - | 1.0 | CHE142D |  | MITL |
| 5 | 3 | CHE180 | PROCESS DYNAMICS AND CONTROL | 4.5 | - | 3.0 | MATH115 |  | MITL |
| 5 | 3 | CHE183F | ChE FIELD TRIPS AND SEMINARS | - | 4.5 | 1.0 | 5th Year Standing |  | MITL |
| 5 | 3 | CHE185 | INDUSTRIAL WASTE MANAGEMENT AND CONTROL | 4.5 | - | 3.0 | CHE181 |  | MITL |
| 5 | 3 |  | SOCIAL SCIENCE 5 | 4.5 | - | 3.0 |  |  | CAS |
| 5 | 3 |  | ChE ELECTIVE 3 | 4.5 | - | 3.0 | 5th Year Standing |  | MITL |
|  |  |  | **Total** | **19.5** | **4.5** | **14.0** |  |  |  |