

« Declaration of BEng major
« Declaration of BBA major

| School: | | School of Engineering and School of Business Management | | | Student's Pathway | | | | | | | | | | |
|---|-------------|---|---------|-------------|-------------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-----------|---------|
| Program: | | Dual Degree Program (BEng in Bioengineering and BBA in Marketing) | | | | | | | | | | | | | |
| Course Offering Dept (course code prefix) | Course Code | Course Title / Courses List | Credits | Year 1 Fall | Year 1 Spring | Year 2 Fall | Year 2 Spring | Year 3 Fall | Year 3 Spring | Year 4 Fall | Year 4 Spring | Year 5 Fall | Year 5 Spring | Sub-total | Remarks |

BEng in Bioengineering

Major Requirements

Engineering Fundamental Courses

| | | | | | | | | | | | | | | | |
|---|-------|--|-------|---|-----|--|---|--|--|--|--|--|--|----|---|
| COMP | 1021 | Introduction to Computer Science | 3-5 | | | | | | | | | | | | |
| COMP | 1022P | Introduction to Computing with Java | 3 | | 3 | | | | | | | | | 3 | This course will also be used to substitute ISOM 2010 |
| COMP | 1029P | Python Programming Bridging Course | 1 | | | | | | | | | | | | |
| COMP | 2011 | Programming with C++ | 4 | | | | | | | | | | | | |
| ENGG | 1010 | Academic Orientation | 0 | 0 | 0 | | | | | | | | | 0 | |
| CHEM | 1010 | General Chemistry IA | 3 | 3 | | | | | | | | | | 3 | |
| CHEM | 1020 | General Chemistry IB | 3 | | | | | | | | | | | | |
| CHEM | 1050 | Laboratory for General Chemistry I | 1 | 1 | | | | | | | | | | 1 | |
| LANG | 2030 | Technical Communication I | 3 | | | | 3 | | | | | | | 3 | |
| LIFS | 1901 | General Biology I | 3 | 3 | | | | | | | | | | 3 | |
| MATH | 1012 | Calculus IA | 4-7 | | | | | | | | | | | | |
| MATH | 1013 | Calculus IB | 4 | | | | | | | | | | | | |
| MATH | 1014 | Calculus II | 3 | 3 | 3 | | | | | | | | | 6 | |
| MATH | 1020 | Accelerated Calculus | 4 | | | | | | | | | | | | |
| MATH | 1023 | Honors Calculus I | 3 | | | | | | | | | | | | |
| MATH | 1024 | Honors Calculus II | 3 | | | | | | | | | | | | |
| PHYS | 1112 | General Physics I with Calculus | 3 | 3 | | | | | | | | | | 3 | |
| PHYS | 1312 | Honors General Physics I | 3 | | | | | | | | | | | | |
| SENG | | Engineering Introduction course (If the students take an introduction course included in their major, this course can be counted towards their major requirement.) | 3-4 | | (3) | | | | | | | | | 0 | |
| Required credits for Engineering Fundamental Courses | | | 23-29 | | | | | | | | | | | 22 | |

Major Required Courses and Electives

| | | | | | | | | | | | | | | | |
|--|------|---|-------|--|---|---|---|---|---|---|---|---|---|----|--|
| BIEN | 1010 | Introduction to Biomedical Engineering | 3 | | 3 | | | | | | | | | 3 | |
| CENG | 1000 | Introduction to Chemical and Biological Engineering | 3 | | | | | | | | | | | | |
| BIEN | 2310 | Modeling for Chemical and Biological Engineering | 3 | | | 3 | | | | | | | | 3 | |
| BIEN | 2410 | Cellular and Systems Physiology for Engineers | 3 | | | | | 3 | | | | | | 3 | |
| BIEN | 2610 | Chemical Biology for Engineers | 3 | | | 3 | | | | | | | | 3 | |
| BIEN | 2990 | Academic and Professional Development I | 1 | | | 1 | | | | | | | | 1 | |
| BIEN | 3240 | Transport Phenomena in Biological Systems | 3 | | | | | | | | 3 | | | 3 | |
| BIEN | 3320 | Data Science for Biology and Medicine | 3 | | | | 3 | | | | | | | 3 | |
| BIEN | 3410 | Introduction to Bioinstrumentation and Biomedicine | 3 | | | | | | | 3 | | | | 3 | |
| BIEN | 3910 | Bioengineering Laboratory | 4 | | | | | | | 4 | | | | 4 | |
| BIEN | 4920 | Bioengineering Capstone Design | 6 | | | | | | | | 3 | | 3 | 6 | |
| BIEN | 4930 | Bioengineering Thesis Research | 6 | | | | | | | | | | | | |
| BIEN | 4940 | Bioengineering Industrial Project | 6 | | | | | | | | | | | | |
| BIEN | 4990 | Academic and Professional Development II | 1 | | | | | | | | 1 | | | 1 | |
| CENG | 2210 | Chemical and Biological Engineering Thermodynamics | 3 | | | | 3 | | | | | | | 3 | |
| CENG | 3230 | Chemical and Biological Reaction Engineering | 3 | | | | | | | 3 | | | | 3 | |
| ENGG | 2010 | Engineering Seminar Series | 0 | | | 0 | 0 | 0 | 0 | | | | | 0 | |
| LIFS | 3150 | Biostatistics | 3-4 | | | | | | | | | | | | |
| MATH | 2411 | Applied Statistics | 3 | | | 3 | | | | | | | | 3 | |
| LANG | 4035 | Technical Communication II for Chemical and Biological Engineering | 3 | | | | | | | | 3 | | | 3 | |
| SSCI/SENG | | Bioengineering Electives (5 courses from the specified elective list, of which at least 9 credits should be taken from a single specialty area (Area 1 or Area 2). Out of the 15 credits taken, at least 9 credits should be at 4000-level) | 15 | | | | | | | | 6 | 3 | 6 | 15 | |
| Required credits for Major Required Courses and Electives | | | 60-61 | | | | | | | | | | | 60 | |

BBA in Marketing

School Requirements

| | | | | | | | | | | | | | | | |
|---|------|---|-------|-----|---|---|---|---|---|---|---|---|---|----|--|
| ACCT | 2010 | Principles of Accounting I | 3 | | | 3 | | | | | | | | 3 | |
| ACCT | 2200 | Principles of Accounting II | 3 | | | | | | 3 | | | | | 3 | |
| ECON | 2103 | Principles of Microeconomics | 3 | | | 3 | | | | | | | | 3 | |
| ECON | 2113 | Microeconomics | 3 | | | | | | | | | | | | |
| ECON | 2123 | Macroeconomics | 3 | | | | | | | 3 | | | | 3 | |
| ECON | 3123 | Macroeconomic Theory I | 3 | | | | | | | | | | | | |
| FINA | 2303 | Financial Management | 3 | | | | 3 | | | | | | | 3 | |
| ISOM | 2010 | Introduction to Information Systems | 3 | - | - | - | - | - | - | - | - | - | - | 0 | Substituted by COMP 1021/1022P/COMP2011 |
| ISOM | 2020 | Coding for Business | 1 | - | - | - | - | - | - | - | - | - | - | 0 | Substituted by COMP 1021/1022P/1029P/2011 |
| ISOM | 2500 | Business Statistics | 3 | - | - | - | - | - | - | - | - | - | - | 0 | Substituted by LIFS 3150/MATH 2411 |
| ISOM | 2600 | Introduction to Business Analytics | 1 | - | - | - | - | - | - | - | - | - | - | 0 | Substituted by BIEN3320 |
| ISOM | 2700 | Operations Management | 3 | | | | | | 3 | | | | | 3 | |
| MARK | 2120 | Marketing Management | 3 | | | | 3 | | | | | | | 3 | MARK 2120 is a major pre-requisite |
| MGMT | 2010 | Business Ethics and the Individual | 2 | | | 2 | | | | | | | | 2 | |
| MGMT | 2110 | Organizational Behavior | 3 | | 3 | | | | | | | | | 3 | |
| MGMT | 2130 | Business Ethics and Social Responsibility | 2 | | | | | 2 | | | | | | 2 | |
| SBMT | 1111 | Business Student Induction | 0 | - | - | - | - | - | - | - | - | - | - | 0 | Substituted by ENGG 1010 |
| LABU | 2040 | Business Case Analyses | 3 | | | | | 3 | | | | | | 3 | |
| LABU | 2060 | Effective Communication in Business | 3 | | | | | | 3 | | | | | 3 | |
| MATH | 1003 | Calculus and Linear Algebra | 3-4 | | | | | | | | | | | | |
| MATH | 1012 | Calculus IA | 4 | | | | | | | | | | | | |
| MATH | 1013 | Calculus IB | 3 | (3) | | | | | | | | | | 0 | DDP students should take MATH 1012 or MATH 1013 or MATH 1020 or MATH 1023 to satisfy the requirements of both BEng and BBA degrees |
| MATH | 1020 | Accelerated Calculus | 4 | | | | | | | | | | | | |
| MATH | 1023 | Honors Calculus I | 3 | | | | | | | | | | | | |
| Required credits for School Requirements | | | 43-44 | | | | | | | | | | | 34 | |

Major Requirements

Major Required Courses and Electives

| | | | | | | | | | | | | | | | |
|--|------|--|----|--|--|--|--|---|---|---|---|---|---|----|--|
| MARK | 3220 | Marketing Research | 4 | | | | | 4 | | | | | | 4 | |
| MARK | 3420 | Consumer Behavior | 4 | | | | | | 4 | | | | | 4 | |
| MARK | 4210 | Strategic Marketing | 4 | | | | | | | | | | 4 | 4 | |
| MARK | | MARK 3000-level or above Electives (Any 3 courses of the subject and level as specified) | 12 | | | | | | | 4 | 4 | 4 | | 12 | |
| Required credits for Major Required Courses and Electives | | | 24 | | | | | | | | | | | 24 | |

Additional Requirements

Requirements for Dual Degree Program

| | | | | | | | | | | | | | | | |
|---|----------|---|----|---|---|---|---|---|---|---|---|---|---|----|--|
| Required Courses | | | | | | | | | | | | | | | |
| TEMG | 1010 | Technology and Management Professional Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TEMG | 3950 | Case-based Problem Solving | 3 | | 3 | | | | | | | | | 3 | |
| Required credits for Additional Requirements | | | 3 | | | | | | | | | | | 3 | |
| University CORE | | | | | | | | | | | | | | | |
| CORE | C3 - C12 | U CORE - Others | 30 | 3 | | | 3 | 9 | 3 | 3 | 9 | | | 30 | |
| CORE | C1 & C2 | U CORE - English Language | 6 | 3 | 3 | | | | | | | | | 6 | |
| Sub-total for University CORE | | | 36 | | | | | | | | | | | 36 | |
| Term load (excl. free credits) | | | | | | | | | | | | | | | |
| 19 18 18 18 18 19 20 19 17 13 | | | | | | | | | | | | | | | |
| 179## | | | | | | | | | | | | | | | |

Notes:

- () indicates the reuse of the same course to fulfill more than one requirement.
- denotes the course/requirement is either waived or substituted
- ## To graduate, students should complete all requirements specified for DDP.

**Remarks on course(s):

>> The content of this example is not necessarily equivalent to a complete list of graduation requirements of the program. Students should refer to the Program Catalog/UG Curriculum Handbook for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.