*(For students admitted in 2011-12 under the 3-year degree)*

# Curriculum for BEng in Chemical and Bioproduct Engineering and BBA in General Business Management

## *General Requirements*

Students are required to complete the following general requirements for graduation in addition to program specific requirements:

*Required Courses in English Communication*
*Common Core Requirements*
*Required Course in Physical Education*

For details please refer to the section "General Requirements" on this website.

## *Program Specific Requirements*

Credit(s)

Required courses

| | | | | |
|---|---|---|---|---|
| | | CENG 1500 | A First Course on Materials Science and Applications | 3 |
| | or | CENG 1600 | Biotechnology and Its Business Opportunities | 3 |
| | or | CENG 1700 | Introduction to Environmental Engineering | 3 |
| (1) | | CENG 1980 | Industrial Training | 0 |
| | | CENG 2010 | Chemical Process Principles | 3 |
| | | CENG 2030 | Products and Processes | 3 |
| | | CENG 2210 | Chemical Engineering Thermodynamics | 3 |
| | | CENG 2220 | Process Fluid Mechanics | 3 |
| | | CENG 3120 | Process Design and Integration | 3 |
| | | CENG 3210 | Separation Processes | 3 |
| | | CENG 3220 | Heat and Mass Transfer | 3 |
| | | CENG 3230 | Reaction and Reactor Engineering | 3 |
| | | CENG 3910 | Chemical Engineering Laboratory I | 3 |
| | | CENG 3926 | Bioproduct Engineering Laboratory** | 3 |
| | | CENG 4120 | Process Dynamics and Control | 3 |
| | | CENG 4130 | Plant Design and Economics | 3 |
| | | CENG 4620 | Bioproducts and Processing | 3 |
| | | CENG 4640 | Biomolecular Engineering | 3 |
| | | CENG 4913 | Chemical and Bioproduct Engineering Project | 6 |
| | | COMP 1022Q | Introduction to Computing with Excel VBA | 3 |
| | | IELM 2200 | Engineering Management | 3 |
| | | IELM 4110 | Engineers in Society | 1 |
| | | ACCT 2010 | Principles of Accounting I | 3 |
| (2) | | ECON 2103 | Principles of Microeconomics | 3 |
| (2) | or | ECON 2113 | Microeconomics | 3 |
| (2) | or | ECON 2913 | Honors Microeconomics | 3 |

| | | | |
|---|---|---|---|
| | FINA 2303 | Financial Management | 3 |
| | ISOM 2500 | Business Statistics | 3 |
| | ISOM 2700 | Operations Management | 3 |
| | MARK 2120 | Marketing Management | 3 |
| | MGMT 2110 | Organizational Behavior | 3 |
| | MGMT 2120 | Business, Society and the Individual | 1 |
| | CHEM 2411 | Physical Chemistry: Fundamentals and Applications | 3 |
| (3) | LANG 1112 | Chinese Business Communication I | 3 |
| | LIFS 2030 | Nature of Biochemistry and Biotechnology | 3 |
| | LIFS 2040 | Cell Biology | 3 |
| (4) | MATH 1018 | Concise Calculus | 4 |
| | MATH 2011 | Introduction to Multivariable Calculus | 3 |
| | MATH 2111 | Matrix Algebra and Applications | 3 |
| | MATH 2351 | Introduction to Differential Equations | 3 |
| | MATH 3311 | Introduction to Numerical Methods | 2 |

Elective courses

| | Elective types | | Minimum no. of courses | Minimum total credits |
|---|---|---|---|---|
| (5) | CENG | Chemcial Engineering Elective | 1 | 3 |
| (6) | SB&M | Business and Management Elective | 9 | 29 |

Other Requirements

| | | | |
|---|---|---|---|
| | CENG 1010 | Academic and Professional Development I | 0 |
| or | CENG 2000 | Introduction to Chemical and Biomolecular Engineering | 1 |
| | CENG 4020 | Academic and Professional Development II | 0 |
| | TEMG 1010 | Technology and Management Professional Activities | 0 |

***Remarks on course(s):*

- CENG 3926: The course title will be changed to "Biomolecular Engineering Laboratory" starting from Fall, 2014-15.

Notes:

(1) Students are required to complete and pass a prescribed training program within the normal length of study. Details of the program, its requirements and schedule will be announced on the website of the Industrial Training Center (http://www.ust.hk/itc) or website of the department in the first year Fall term. Training normally takes place in the Winter and Summer terms starting from the first year of study. For recording the overall training results, students are normally registered for the course in their last term of study.

(2) Students entering with AL Economics take ECON 2113; however, those with grade B or above in HKAL Economics will take ECON 2913. All other students without AL Economics background, including those entering with AL Business and Economics, take ECON 2103.

(3) Students cannot replace this course by LANG 1110 (prior to 2012-13)/1111 (prior to 2011-12) for graduation purposes. Students recruited from Mainland China will replace this course by a free elective. For international students who are assessed as having inadequate Chinese background to take LANG 1112, they will replace this course by LANG 1120.

(4) Students who have grade E or better in AL Pure Mathematics or in AL Applied Mathematics are not required to take MATH 1018.

(5) Chemical Engineering electives are to be chosen from CENG courses at 4000-level or above. ENGG 4950 can be used to count toward the CENG elective requirement.

(6) ISOM 2010 cannot be used to count toward the SB&M elective requirement. Of these 29 credits, at least 9 credits must be at 4000-level or above; at least 9 credits must be at 3000-level or above; and at least 12 credits (3 courses) of business elective courses must be offered by HKUST School of Business and Management.

A minimum of 147 credits is required for the BEng program in Chemical and Bioproduct Engineering and BBA program in General Business Management. For students who are required to take MATH 1018, the minimum total required is 151 credits.