**THE UNIVERSITY OF HONG KONG**

**Bachelor of Engineering Degree in Biomedical Engineering**

**Credit Unit Statement**

The Biomedical Engineering curriculum offers five types of courses, namely introductory courses, advanced courses, projects, engineering training and internship. The majority of courses are 6-credit courses which are taught through lectures, tutorials, and laboratory sessions aiming at equipping students with professional skills and knowledge in mathematics, engineering and life sciences. The programme also has one 6-credit Integrated project and one 12-credit Final Year Project, with the Final Year Project classified as a Capstone Experience component of the curriculum. 120 hours of student learning activity (including both contact hours and all other forms of student learning activity) will be the norm for a 6-credit course, whereas 240 hours of student learning activity will be the norm for a 12-credit course, and the contact hours and expected learning outcomes for different groups of courses vary according to the learning modes adopted. Most courses are assessed through practical work and continuous assessment (10% - 60%) and written examination (40% - 90%), with a few courses to be assessed through 100% continuous assessment. The five categories of biomedical engineering courses are summarized as follows:

**Introductory Courses (6 credits)**

These courses aim at providing students with a solid foundation in mathematics, engineering, life sciences, communication skills and complementary studies including economics, management, legal environment, engineering ethics, etc.

The total contact hours of introductory courses are normally 52 hours consisting of a combination of lectures, tutorials and laboratories. The assessment is generally based on assignments, quizzes, course projects, mid-term tests, oral presentation, practical work, laboratory reports (totaling 1,000 to 2,000 words) and written examination. The written examination is normally 3 hours.

The number of and level of assignments, mathematical calculations, course projects and quizzes shall be appropriate for assessing the learning outcome of the students but in all cases written output shall not exceed 3,000 words (laboratory reports not included).

**Advanced Courses (6 credits)**

These courses aim at providing students with a breadth of knowledge in a broad range of technical courses, in-depth knowledge in selective subjects with special emphasis on topics related to biomedical engineering, effective communication skills and complementary studies including economics, management, legal environment, engineering ethics, etc.

The total contact hours of advanced courses are normally 52 hours consisting of a combination of lectures, tutorials and laboratories. The assessment is generally based on assignments, quizzes, course projects, mid-term tests, oral presentation, practical work, laboratory reports (totaling 1,000 to 2,000 words) and written examination. The written examination is normally 3 hours.

The number of and level of assignments, mathematical calculations, course projects and

quizzes shall be appropriate for assessing the learning outcome of the students but in all cases written output shall not exceed 3,000 words (laboratory reports not included).

**Projects (6 or 12 credits)**

Project courses are under the category of Capstone Experience and may consist of individual or group project over a period of one year to enable students to integrate and consolidate the knowledge gained in various courses, and apply the knowledge to implement a practical system. There are two types of projects: Integrated project and Final Year Project. Students are required to take the Integrated project at their third year of study whereas the Final Year Project are to be taken in their final year of study.

The integrated project (6 credits) consists of 30-39 hours of timetable work, comprising lectures (4-6 hours) and laboratories (26-33 hours). Students will need to spend additional time in the laboratory beyond the timetabled hours to complete their practical implementation. For the Final Year Project (12 credits), students are generally expected to spend one-fifth of their work hours on the project over a period of two semesters. The assessment of these courses are based on assignments, project presentations and written reports. The maximum length of an Integrated project report should be no more than 5,000 words while that of a Final Year Project report should be no more than 35,000 words.

**Engineering Training (6 credits)**

The engineering training provides students with hands-on workshop training aiming at reinforcing their practical engineering skills. The course consists of 120 hours of tutorials, laboratories and practical work sessions. The assessment is based on continuous assessment and the student's log-book report totaling approximately 1,000 words.

**Internship/ Professional Training (6 credits)**

The internship (Professional Training) aims at immersing students into work environment where their practical engineering knowledge in biomedical engineering (such as biomedical sciences, biomedical instrumentation, medical engineering, and healthcare technology) can be reinforced in applied situations. The summer internship consists of a minimum of 6 weeks of placement in biomedical companies, tertiary institutions, government departments and hospitals. Alternatively, students are given the option of joining a one-year Integrated Study-Work Programme on a full-time basis to work in the biomedical industry between their third and final year of studies. Students are required to submit a training report after the summer internship or the integrated study-work placement. The assessment is based on the employer's feedback and the training report totaling not more than 1,000 words.

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