**THE UNIVERSITY OF HONG KONG**

**Faculty of Dentistry**

**Master of Science in Dental Materials Science**

**Credit Unit Statement**

The one-year Master of Science in Dental Materials Science [MSc(DMS)] is a course of advanced study designed to develop a broad knowledge of the principles underlying the mechanical, physical, and chemical properties of dental biomaterials and other materials in dentistry; structure at molecular, microscopic, and macroscopic levels; mechanisms of reaction and mechanical failure; and behaviour in all relevant aspects of each class of material used in dentistry, in relation to their function, application handling, safety and service. The course/modules are assigned with credits at a multiple of 3 credits as summarized below. The curriculum includes *Faculty Core Courses, Discipline Courses and Research Component.* Total contact hours and total study load have a minimum of 339 and 1630, respectively.

**1. Faculty Core Courses (3 credits per course)**
These courses introduce the scientific method and aim to help the students develop advanced scientific skills, including competences required to critically evaluate research outcomes as well as design and execute biomedical research. Furthermore, these courses will help the student to develop a thorough understanding of biomaterials and material science. The use of the current data search strategies and information technologies will be taught and fully utilized.

*Assessment: 100% written examination and active attendance; no limit in number of words*

**2. Discipline Courses (3 or 15 credits per course)**
Emphasis is placed on the explicability of materials-related phenomena from structure-property relationships, in the context of clinical teaching, on the universality and applicability of the ideas to materials in general (as opposed to products), and on the means by which dental practitioners may make knowledge-based rational decisions concerning treatment.

The theoretical course is reinforced by practical experience of the design, execution, interpretation, and reporting of experimental investigation of aspects of properties or behaviour of selected materials, thereby encouraging deeper exploration of general and particular principles.

*Assessment: 100% Coursework/ 100% seminar presentation/ 100% written examination and active attendance; no limit in number of words*

**3. Research Component and Capstone Experience (18 credits per course)**
Under the guidance of supervisors, students are also required to carry out a research project, involving collection of relevant information or original data and data analysis, and to submit a dissertation, research paper or project report in a publication format.

*Assessment: 100% Coursework and a written report of no less than 20,000 words*