

Programme Specification

Awarding Body/Institution	Queen Mary, University of London
Teaching Institution	Queen Mary, University of London
Name of Final Award and Programme Title	MSc in Dental Materials
Name of Interim Award(s)	PG Certificate / PG Diploma
Duration of Study / Period of Registration	1 calendar year
QM Programme Code / UCAS Code(s)	J5S1
QAA Benchmark Group	Masters degrees
FHEQ Level of Award	Level 7
Programme Accredited by	
Date Programme Specification Approved	
Responsible School / Institute	School of Engineering & Materials Science

Schools which will also be involved in teaching part of the programme

Institute of Dentistry

Institution(s) other than Queen Mary that will provide some teaching for the programme

Programme Outline

The MSc in Dental Materials is an advanced study programme designed to develop a significantly broad knowledge of the principles underlying the mechanical, physical and chemical properties of dental materials. Furthermore the structural properties of materials both at micro and macro levels are taught at postgraduate level. Special emphasis is placed on materials – structure property correlations in the context of both the clinical and non clinical aspects. The theoretical courses are reinforced by practical research experience. The MSc in Dental Materials provides students with the necessary tools and principles of Dental Materials that are currently used in Clinical Dentistry and covers the underlying principles of bioactivity and biocompatibility. The taught courses are complimented by a 60 credit research project based on both the student's and staff's research interests.

Aims of the Programme

The overall aims of the programme are:

- to provide a materials education of a standard recognised to be amongst the highest in UK institutions
- to enable all our students to achieve their academic potential by providing a stimulating, friendly and supportive environment
- to prepare our graduates with discipline-specific knowledge and transferable skills that will equip them for employment and continued professional development through self-learning.

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- provide an understanding of the basic science underlying dental materials for undertaking research in this field
- develop research skills and methods relevant to dental materials
- provide a suitable entry qualification for PhD programmes in Materials, Dental Materials and related areas

Specific aims include:

- analytical, creative, organisational, practical and communication skills,
- problem-recognition and solving abilities
- competence in discipline-specific topics which contribute to the solution of problems applied to materials science
- an appreciation of how theoretical and practical approaches can be synthesized to arrive at optimal solutions
- an understanding of the relationship between their discipline and social, economic and environmental issues and constraints
- the detailed skills needed to undertake a research, development or design project in depth, understanding the technical, financial and time limitations.

This programme aspires to produce the type of highly skilled, motivated, creative and team-work oriented graduates which the related industry needs.

What Will You Be Expected to Achieve?

Students who complete this programme will be trained to work in the dental materials industry, in dental materials research and development. Students returning to an academic environment will be trained to provide up-to-date knowledge for teaching of dental materials to clinical dental students or dental technology students in dental schools. In addition students will have been given an ideal preparation for undertaking a PhD in a related discipline.

Academic Content:

A 1	Gain in-depth knowledge of natural and replacement materials found and used in the oral cavity
A 2	Gain in-depth knowledge of the oral cavity in its healthy and diseased state
A 3	Gain in-depth knowledge of international regulatory requirements and governance

Disciplinary Skills - able to:

B 1	Undertake independent research on a topic relating to dental materials
B 2	Design and evaluate the selection of materials to solve specific clinical problems
B 3	Critically analyse and assess scientific papers, the basis of the methods of study and the significance of results
B 4	Evaluate data and present it coherently in a variety of formats

Attributes:

C 1	Take an investigational approach to problem solving
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C2	Undertake independent research using state of the art processing, characterisation and testing facilities.
C3	Understand the application and use of dental materials in related clinical situations.
C4	Report information in written and verbal form at a professional level

How Will You Learn?

Through a wide range of different interactions including lectures, tutorials, laboratory classes, exercise classes and project supervisions. It is expected that the programme will demand between 1800 and 2000 hours in total to complete. About 10% of this time will be in scheduled lectures. A significant amount of independent personal study is anticipated as part of this degree.

How Will You Be Assessed?

The taught modules will be assessed through both coursework and examinations. The details are as outlined in the individual module specifications. The examinations will take place in the standard college examination periods in January and May for taught modules taken in SEMS and in January and June for taught modules taken in the Institute of Dentistry. The final project thesis will be assessed in September and the student will also complete a presentation as well as an oral examination.

How is the Programme Structured?

60 credits of taught modules will be taught in the first semester from September until December and a further 60 credits of taught modules will be taught in the second semester from January until April. 30 credits of taught modules will be delivered by each of SEMS and the IoD in each semester. Overall 120 credits of taught modules have to be taken. The taught module examinations will take place during the college examination periods in January and May for modules taken in SEMS and in January and June for modules taken in the Institute of Dentistry.

A 60 credit Dental Materials research project will be completed after the examination period in semester 3 (from June - September). Preparation for this research project will begin in the module on Research Methods taken in the first semester.

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Dental Materials 1	DIN7008	15	7	Core	1	Semester 1
Introduction to Oral Biology 1	DIN7156	15	7	Core	1	Semester 1
Research Methods/Experimental Techniques	DENM014	15	7	Core	1	Semester 1
Surfaces and Interfaces in Dental Materials	MTRM211	15	5	Core	1	Semester 1
Dental Materials 2	DIN7009	15	7	Core	1	Semester 2
Biomimeticisation and Biomimetics	DIN7154	15	7	Core	1	Semester 2
Medical Ethics and Regulatory Affairs	DENM702	15	7	Core	1	Semester 2
Advanced Biocompatibility Science	MAT7313	15	7	Core	1	Semester 2
Research Project	MTRM005/ DIN7003/ DIN71	60	7	Core	1	Semesters 1-3

What Are the Entry Requirements?

Students will be admitted typically with:

IELTS 6.5

BSc/ BEng/ BDS or equivalent at 2i level or above, or 2ii with appropriate work experience

How Do We Listen and Act on Your Feedback?

The Staff-Student Liaison Committee provides a formal means of communication and discussion between schools/institutes and its students. The committee consists of student representatives from each year in the school/institute together with appropriate representation from staff within the school/institute. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. Staff-Student Liaison Committees meet regularly throughout the year.

Each school/institute operates a Learning and Teaching Committee, or equivalent, which advises the School/Institute Director of Taught Programmes on all matters relating to the delivery of taught programmes at school level including monitoring the application of relevant QM policies and reviewing all proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in the committee's work in a number of ways, such as through student membership, or consideration of student surveys.

All schools/institutes operate an Annual Programme Review of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Taught Programmes Action Plan (TPAP) which is the summary of the

school/institute's work throughout the year to monitor academic standards and to improve the student experience. Students' views are considered in this process through analysis of the NSS and module evaluations.

Academic Support

During induction the students will be welcomed to the college by the programme organisers. Early on in the programme the students will select a project supervisor based upon a wide choice of different project areas. This academic will then also act as a personal tutor. Many of the modules are taught to small classes and so a high level of personal support will also be available from the course coordinators in the majority of the taught modules.

Programme-specific Rules and Facts

The programme follows the standard QMUL guidelines for MSc delivery.

Specific Support for Disabled Students

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites.

Students can access advice, guidance and support in the following areas:

- Finding out if you have a specific learning difficulty like dyslexia
- Applying for funding through the Disabled Students' Allowance (DSA)
- Arranging DSA assessments of need
- Special arrangements in examinations
- Accessing loaned equipment (e.g. digital recorders)
- Specialist one-to-one "study skills" tuition
- Ensuring access to course materials in alternative formats (e.g. Braille)
- Providing educational support workers (e.g. note-takers, readers, library assistants)
- Mentoring support for students with mental health issues and conditions on the autistic spectrum.

Links With Employers, Placement Opportunities and Transferable Skills

The improvement of existing dental materials and the development of new materials for use in the dental area is an expanding field in the healthcare sector. There are numerous healthcare companies both nationally and internationally dealing specifically with dental materials that are eager to recruit specialists with the necessary combination of skills that our MSc in Dental Materials provide. There are also opportunities for fundamental research both in universities and industry to help bring innovative technologies to life.

Programme Specification Approval

Person completing Programme Specification

Dr A.J.Bushby

Person responsible for management of programme

Dr A.J Bushby & Prof R.Hill

**Date Programme Specification produced/amended
by School Learning and Teaching Committee**

**Date Programme Specification approved by
Taught Programmes Board**