

### Programme Specification

1	<b>Awarding body</b>	University of London					
2	<b>Teaching Institution</b>	<b>Birkbeck College</b>					
3	<b>Programme Title(s)</b>	<b>Postgraduate Certificate Macromolecular Electron Microscopy</b>					
4	<b>Programme Code(s)</b>	TPCMACEM_C					
5	<b>UCAS code (if applicable)</b>	N/A					
6	<b>Home Department</b>	Biological Sciences					
7	<b>Exit Award(s)</b>	N/A					
8	<b>Duration of Study (number of years)</b>	1-year					
9	<b>Mode of Study</b>	FT		PT		DL	<b>v</b>
10	<b>Level of Award (FHEQ)</b>	7					
11	<b>Other teaching depts or institution</b>	N/A					
12	<b>Professional, Statutory Regulatory Body(PSRB) details</b>	N/A					
13	<a href="#">QAA Benchmark Group</a>	N/A					

14	<b>Programme Rationale &amp; Aims</b>
	<p><b>Main Aims:</b>          There has been a revolution in Electron Microscopy in the past few years culminating in the award of the 2017 Nobel Prize in Chemistry to Richard Henderson, Joachim Frank and Jacques Dubochet. Electron microscopy can now determine the structures of proteins with near atomic resolution, revolutionising the study of large macromolecular machines.</p> <p>Birkbeck, University of London is one of the leading centres in electron microscopy in the world. The department of Biological Sciences and its forerunner have been teaching Structural Biology via the internet since 1996 and now offer a new course dealing with the latest techniques in Macromolecular Electron Microscopy. This can be taken as a standalone 30 credit CPD course, as this Postgraduate Certificate or as part of the MSc in Structural Molecular Biology.</p>

15	<b>Entry Criteria</b>
	Degree in science, computing or mathematics, or equivalent qualification, or relevant work experience.

16	<b>Learning Outcomes</b>
	<p>On successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> <li>• Describe image formation in the Electron Microscope</li> <li>• Describe how to prepare samples for Biological Electron Microscopy</li> </ul>

	<ul style="list-style-type: none"> <li>Explain the steps in processing EM image data through to a final 3D atomic model</li> </ul>
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17	<b>Learning, teaching and assessment methods</b>
	<p>All teaching is internet-based. The course material is released in several sections on a dedicated, password-protected website.</p> <p>You must successfully complete both coursework and the written exam, which may be taken at an examination centre close to you. All modules are examined by a single 3 hour exam. You are required to answer the questions for the modules you sat and spend 1.5 hours per module.</p>

18	<b>Programme Description</b>
	This programme consists of the module in Macromolecular Electron Microscopy and one other module from the MSc in Structural Molecular Biology

19	<b>Programme Structure</b>			
<b>Part Time 1-year programme</b>				
<b>Year 1</b>				
Level	Module Code	Module Title	Credits	Status*
7	SCBS061S7	Macromolecular Electron Microscopy	30	Compulsory
Plus one 30-credit option from the indicative list below:				
7	SCBS056S7	Principles of Protein Structure	30	Optional
7	SCBS057S7	Protein Structure Determination	30	Optional
7	SCBS058S7	Protein Expression and Purification	30	Optional
7	SCBS059S7	Protein Bioinformatics	30	Optional
7	SCBS060S7	Protein Crystallography	30	Optional

**Status\***

*CORE – Module must be taken and passed by student; COMPULSORY – Module must be taken, mark can be reviewed at sub-exam board; OPTIONAL – Student can choose to take this module*

20	<b>Programme Director</b>	Professor Helen Saibil
21	<b>Start Date</b> ( <i>term/year</i> )	Autumn 2020
22	<b>Date approved by TQEC</b>	Autumn 2019
23	<b>Date approved by Academic Board</b>	Spring 2019
24	<b>Date(s) updated/amended</b>	August 2019 for October 2020