Year of entry: 2021/22

Programme Specification

1	**Awarding body**	University of London
2	**Teaching Institution**	**Birkbeck College**
3	**Programme Title(s)**	**MSc Structural Molecular Biology**
4	**Programme Code(s)**	TMSBISCL_C (2-year programme) TMSBISC3_C (3-year programme)
5	**UCAS code**	N/A
6	**Home Department**	Biological Sciences
7	**Exit Award(s)**	PG Certificate Protein Crystallography for completion of *Protein Crystallography* plus any other module (60 credits, total). PG Certificate Macromolecular Electron Microscopy for completion of *Macromolecular Electron Microscopy* plus any other module (60 credits, total). PG Certificate Structural Molecular Biology for any other combination of two modules (60 credits, total). PG Diploma Structural Molecular Biology awarded for any 120 credits (including projects).
8	**Duration of Study** (number of years)	2 years or 3 years
9	**Mode of Study**	Part-time distance learning
10	**Level of Award (FHEQ)**	7
11	**Other teaching depts or institutions**	None
12	**Professional, Statutory Regulatory Body (PSRB) details**	N/A
13	**QAA Benchmark Statement**	N/A

14	**Programme Rationale & Aims**
	Main Aims: The programme will offer the necessary background for students to become conversant in current structural biology research. Students successfully completing the programme would be able to start laboratory-based research in the area with strong background knowledge and people working in related fields would be able to understand the current literature. **Distinctive Features:** The programme may be completed entirely by distance learning, making it accessible worldwide. For students able to attend for a brief stint, there is an option to undertake some on-site practical work toward the research project.

	For those who do not wish to undertake the full MSc, the programme offers 3 possible exit routes leading in each case to PG Certificates as well as a possible exit route to a PG Diploma. The part-time pace makes the programme particularly suitable for people in work or who wish to update their skills ready to return to work, or to retrain.

15	**Entry Criteria**
	Degree in science, computing or mathematics, or equivalent qualification, or relevant work experience.

16	**Learning Outcomes**
	The mix of learning outcomes to be met varies depending on the collection of modules selected and on the nature of the project. Per-module learning outcomes are found in the module specifications. Overall, students will be expected to have gained fluency in a selection of modern structural molecular biology methods relating to protein structure analysis generally, and will have gained facility in applying one or more of these methods to analysis of a specific protein(s).

17	**Learning, teaching and assessment methods**
	All teaching in the optional modules is internet-based. The course material is released in a number of discrete sections via a dedicated, password-protected website. Materials include self-paced worksheets/question sets that are followed up by regular online tutorials. Modules typically are assessed by a number question/problem sets and by a 1.5 h end-of-module exam. As for the optional modules, the compulsory project may be taken via distance-learning. Alternatively, the project may include a ca. 2 week stint of laboratory work at Birkbeck at a specified period during the summer vacation. Distance-learning projects are assessed by written work relating to findings from surveys of relevant literature and to directed analysis of a structural biology problem/task. Laboratory projects are assessed similarly, but also include a written report of the laboratory work.

18	**Programme Description**
	For the MSc Structural Molecular Biology, students take 4 taught (optional) modules of 30 credits each (120 credits), plus a 60-credit project, for 180 credits in total. The taught modules may be taken over one or two years. A project module may be taken only in the final year (thus, in Year 2 or Year 3). *Protein Structure* is required for any students who have not studied protein structure at all to undergraduate level. MSc students may NOT take all three of: *Protein Structure Determination*, *Protein Crystallography*, and *Macromolecular Electron Microscopy*. The PG Diploma Structural Molecular Biology may be awarded for any 120 credits (including projects).

	The PG Certificate Protein Crystallography may be awarded for completion of *Protein Crystallography* plus any other module (60 credits, total). The PG Certificate Macromolecular Electron Microscopy for completion of *Macromolecular Electron Microscopy* plus any other module (60 credits, total). The PG Certificate Structural Molecular Biology for any other combination of two modules (60 credits, total).

19	**Programme Structure**

PART-TIME PROGRAMME ONLY (2 or 3 years)

Year 1 and 2: Two modules per year from the following

Level	Module Code	Module Title	Credits	Status*
7	SCBS056S7	Principles of Protein Structure	30	Optional
7	SCBS057S7	Protein Structure Determination	30	Optional
7	SCBS058S7	Protein Expression, Purification and Biophysical Characterisation	30	Optional
7	SCBS059S7	Protein Bioinformatics	30	Optional
7	SCBS060S7	Protein Crystallography	30	Optional
7	SCBS061S7	Macromolecular and Cellular Electron Microscopy	30	Optional

Year 2 or 3

Level	Module Code	Module Title	Credits	Status*
7	SCBS062D7 or SCBS063D7	Project Structural Molecular Biology or Laboratory Project Structural Molecular Biology	60	Compulsory

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	**Programme Director**	Professor Nicholas Keep
21	**Start Date** ***(term/year)***	Autumn 2001
22	**Date approved by Education Committee**	Spring 2001
23	**Date approved by Academic Board**	Summer 2001
24	**Date(s) updated/amended**	29 Jan 2001 *(module name updated only)*