

## 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 Protein Crystallography</b>					
4	<b>Programme Code(s)</b>	TPCCRPRO_C					
5	<b>UCAS code</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	x
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="#"><u>QAA Benchmark Group</u></a>	N/A					

14	<b>Programme Rationale &amp; Aims</b>
	<p><b>Main Aims:</b></p> <p>Protein crystallography is no longer solely the domain of the mathematician and physicist, but that of the biologically-orientated scientist. It is a multidisciplinary technique which overlaps with biochemistry, molecular biology, bioinformatics, biophysics and organic chemistry. For a proper understanding of biological function, a detailed knowledge of the three-dimensional structure of biological macromolecules and their interactions with ligands and the aqueous environment is required.</p> <p>Protein crystallography (or structural molecular biology), is powerful in that it can identify the residues determining substrate specificity and interactions with other macromolecules at the atomic level, allowing the targeting of site-directed mutagenesis experiments and the design of selective inhibitors, so important in industry.</p> <p>This postgraduate course is an excellent introduction to protein crystallography. It is designed for those who are interested in pursuing a career in this exciting and rapidly expanding field, especially in the pharmaceutical industry, or for those who would like to expand and update their existing scientific knowledge.</p> <p>Up-to-date descriptions of the background, methods and techniques of protein crystallography are explained, and the programme gives the biologically-orientated scientist a mainly non-mathematical insight into how protein crystal structures are determined and how results should be judged.</p> <p><b>Distinctive Features</b></p> <ul style="list-style-type: none"> <li>An innovative course taught entirely using the internet. You study part-time in your own time, wherever you are in the world. Many of our students have full-time jobs or extensive family responsibilities.</li> </ul>

	<ul style="list-style-type: none"> <li>• Taught within the Department of Biological Sciences which, with University College London, is part of the leading research-based <a href="#">Institute of Structural and Molecular Biology</a>. Several of the department's world-class researchers contribute to the course.</li> <li>• May be taken as a stand-alone certificate course or as part of our acclaimed internet-based MSc Structural Molecular Biology.</li> </ul>
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>• demonstrate comprehensive knowledge of the key concepts involved in protein structure determination along with practical examples and applications</li> <li>• analyse the underlying theories frequently not found in the literature</li> <li>• engage with the principals underpinning protein crystallography and assess when they might be appropriately applied.</li> </ul>
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>Students must successfully complete both coursework and the written exam, which may be taken at an examination centre close to them. All modules are examined by a single 3 hour exam. Students are required to answer the questions for the modules they sat and spend 1.5 hours per module.</p>
18	<b>Programme Description</b>
	<p>The programme introduces up-to-date descriptions of the background, methods and techniques of protein crystallography, and the programme gives the biologically-orientated scientist a mainly non-mathematical insight into how protein crystal structures are determined and how results should be judged.</p> <p>Students will learn:</p> <ul style="list-style-type: none"> <li>• the fundamentals of protein structure</li> <li>• x-ray diffraction and symmetry</li> <li>• how to determine structures using protein crystallography</li> <li>• how to judge the quality of co-ordinates.</li> </ul>

19	Programme Structure			
Part Time 1-year programme				
Year 1				
Level	Module Code	Module Title	Credits	Status*
7	SCBS060S7	Protein Crystallography	30	Compulsory
Plus one 30 credit optional module from 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	SCBS061S7	Macromolecular and Cellular Electron Microscopy	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>Regulations</b>
	<ul style="list-style-type: none"> <li> <b>Admissions</b>            This programme adheres to the College Admissions Policy:  <a href="http://www.bbk.ac.uk/registry/policies/documents/admissions-policy.pdf">http://www.bbk.ac.uk/registry/policies/documents/admissions-policy.pdf</a> </li> <li> <b>Credit Transfer</b>            Accredited Prior Learning will be considered in line with the College Policy on Accredited Prior Learning  <a href="http://www.bbk.ac.uk/registry/policies/documents/accreditation-prior-learning.pdf">http://www.bbk.ac.uk/registry/policies/documents/accreditation-prior-learning.pdf</a> </li> <li> <b>Programme Regulations</b>            This programme adheres to the College Common Awards Scheme  <a href="http://www.bbk.ac.uk/registry/policies/regulations">http://www.bbk.ac.uk/registry/policies/regulations</a> </li> <li> <b>Programme Specific Regulations (or not applicable)</b> N/A         </li> </ul>

21	<b>Student Attendance Framework – in brief</b>
	<p>The full version of the 'Student Attendance Framework' is available  <a href="http://www.bbk.ac.uk/mybirkbeck/services/rules/Attendance-Framework.pdf">http://www.bbk.ac.uk/mybirkbeck/services/rules/Attendance-Framework.pdf</a> .</p> <p><b>Principle</b></p> <p>Consistent and regular student attendance in class (or equivalent) promotes and affords student success. Inconsistent and irregular attendance is less likely to result in student success and is consistent with lower marks and degree classifications being achieved and awarded.</p>

	<p><b>Attendance expectation</b></p> <p>Birkbeck, University of London expects you to consistently attend all timetabled sessions, including lectures, seminars, group and individual tutorials, learning support sessions, workshops, laboratories, field trips, inductions and demonstrations.</p> <p><b>E-Registers</b></p> <p>All Birkbeck students are issued with student cards. Students are expected to take them to classes and to assessment venues and to present them to a member of staff if requested. This is for the purpose of identifying Birkbeck students.</p>
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22	<b>Student Support and Guidance</b>
	All Birkbeck students have access to a range of student support services, details can be found on our website here: <a href="http://www.bbk.ac.uk/mybirkbeck/services/facilities">http://www.bbk.ac.uk/mybirkbeck/services/facilities</a>

23	<b>Methods of Enhancing Quality and Standards</b>
	<p>The College has rigorous procedures in place for the monitoring and enhancing its educational provision. This includes regular monitoring of programmes drawing on feedback from various sources including external examiner's reports, student feedback, student achievement and progression data. In addition, departments are reviewed every four to five years through the internal review process that includes external input.</p> <p>For more information please see the Academic Standards and Quality website <a href="http://www.bbk.ac.uk/registry/about-us/operations-and-quality">http://www.bbk.ac.uk/registry/about-us/operations-and-quality</a> .</p>

24	<b>Programme Director</b>	Dr Tracey Barrett
25	<b>Start Date</b> ( <i>term/year</i> )	Autumn 1997
26	<b>Date approved by TQEC</b>	Spring 1997
27	<b>Date approved by Academic Board</b>	Summer 1997
28	<b>Date(s) updated/amended</b>	August 2019 (for October 2020)