Section 2 - Module Specification

Module Title | Systems Neuroscience | Module Code | BMD265

Credit Value | 15 | Level | 5 | Mode of Delivery | On Campus | Semester | Semester 2

Pre-requisite modules	Co-requisite modules	Overlapping modules
Functional Neuroanatomy, Human Anatomy SBC102 or Cellular and Molecular Neuroscience, Biomedical Physiology I SBS022 or Brain and Behaviour SBC141		

1) Content Description
Provide a description of the module, as it will appear in the Module Directory and on the Student Information System (approx. 70-80 words).

This module aims to provide an overview of integrated systems which control cognition and behaviour. Topics include the organisation and planning of movement, visual processing, smell and taste perception, cognition, learning and memory. Students will gain understanding of techniques used in systems neuroscience including tract tracing of interacting groups of neurons, immunohistochemistry and extra-cellular electrophysiology. Practical sessions and workshops will give students experience in designing experiments, using apparatus, collecting and interpreting data.

2) Module Aims
Specify the aims of the module, i.e. the broad educational purposes for offering this module.

The module aims to develop knowledge of various functional systems in the nervous system. The neuroanatomical knowledge gained in earlier modules will be developed in context of the neurophysiology of each system. The module aims to highlight the organised nature but also the complexity of the motor, sensory, autonomic and limbic systems. Students will gain an appreciation of research approaches and techniques used to study these integrated systems of the nervous system which controlling cognition and behaviour, as studied in humans and other organisms.

3) Learning Outcomes

Identify the learning outcomes for this module, i.e. knowledge, skills and attributes to be developed through completion of this module. Outcomes should be referenced to the relevant QAA benchmark statements and the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (2008). The SEEC Credit Level Descriptors for Further and Higher Education 2003 and Queen Mary Statement of Graduate Attributes should also be used as a guiding framework for curriculum design.

Academic Content:	
A 1	Show critical understanding of different integrated systems controlling behaviour and cognition
A 2	Delineate the organisation of different functional systems
A 3	Evaluate current evidence relating structure to function of these systems
A 4	Show systematic understanding of research methodologies used to analyse functional groups of neurons

Disciplinary Skills - able to:	
B 1	Identify and appraise experimental methods used in systems-based approaches and comment on their appropriate use.
B 2	Record data accurately and carry out quantitative data analysis
B 3	Critically evaluate scientific literature and interpret findings
B 4	Identify conceptual arguments derived from scientific evidence
B 5	Display skills in synthesising information and disseminating by oral and written

Attributes:	
C 1	Acquire knowledge of scientific research methods and their application in neuroscience
C 2	Participate constructively as a member of a group/team
C 3	Communicate effectively to varied audiences by written and verbal means.
C 4	Apply knowledge of experimental design and analytic skills in research experimentation
C 5	Have intellectually curiosity to continually learn from diverse sources of information

4) Reading List

Provide an indicative reading list for the module. This should include key texts and/or journals but <u>should not</u> be an exhaustive list of materials.

The Nervous System, 2nd Ed., Churchill Livingstone Elsevier, AT Michael-Titus, PA Revest, PJ Shortland, London, 2010

Neuroscience (5th ed 2012), Purves, D., Augustine, G. J., Fitzpatrick, D., Hall, W. C., LaMantia, A.-S., McNamara, J. O. and White, L. E. Sinauer Associates, Inc., Sunderland, Massachusetts

Students will also be provided with selected review articles, classic and contemporary subject-related research articles.

5) Teaching and Learning Profile

Provide details of the method of delivery (lectures, seminars, fieldwork, practical classes, etc.) used to enable the achievement of learning outcomes and an indicative number of hours for each activity to give an overall picture of the workload a student taking the module would be expected to undertake. This information will form the Key Information Set for each undergraduate programme and will be used to populate the KIS widget found on the QMUL programme information pages. More information can be found online about KIS. You may also wish to refer to the QAA guidance on contact hours when completing this section.

Activity Type	KIS Category	Time Spent (in hours)
Lecture	Scheduled	22
Practical Classes and workshops	Scheduled	9
Guided independent study	Independent	119
Total		150

Specify the total module notional study hours. This should be a total of the hours given for each activity. The notional study hours for each academic credit point is 10. A 15 credit point module therefore represents 150 notional study hours.

Activity Type	Total Time Spent (in hours)	Percentage of Time Spent
Scheduled learning and teaching	31	20
Placement		
Independent Study	108	80
Total	139	100

Use the information provided in the box above to specify the total time spent and the percentage time spent in each category of teaching and learning activity.

6) Assessment Profile

Provide details of the assessment methods used to assess the achievement of learning outcomes.

Description of Assessment	Assessment Type	KIS Category	Duration / Length	% Weighting	Final element of assessment?	Qualifying Mark
Examination	Written Exam	Written	2.5hrs	75		40
Coursework	Practical Skills assessment	Practical	3x1000 words	25		N/A

Final element of assessment: The assessment that takes place last. There should normally be only one element of assessment marked as final unless two assessment or submission dates occur on the same day.

Qualifying mark: A specified minimum mark that must be obtained in one or more elements of assessment in order to pass a module. This is in addition to, and distinct from, the requirement to achieve a pass in the module mark to pass the module.

Reassessment

Provide details of the reassessment methods used, specifying whether reassessment is either standard reassessment or synoptic reassessment.

◯ Standard Reassessment   ◉ Synoptic Reassessment

Synoptic reassessment details (if you have indicated synoptic reassessment above, please give details)		
Brief Description of Assessment	Assessment Type	Duration / Length of Examination / Coursework
	Written Exam	2.5hrs
	Written Exam	
	Written Exam	

Section 3 - Alternative Assessment Arrangements for Associate Students

This section <u>must only </u>be completed if the module will be made available to associate students in Semester A and where the credit value of the "associate" version is the same as for the main version, and the main version is assessed by exam in May which is not available to the associate students. All other aspects of the module specification remain the same as indicated in Section 2 above. To add alternative assessment arrangements please click 'Add Alternative Assessment'.

Section 4a - Half Module for Associate Students (for a half module to be taught in Semester A)

This section must be completed if the proposed module will take place over 2 semesters but will be made available to single-semester associate students in a half-credit format in <u>Semester A. </u>Modules worth less than 30 credits taken over 2 semesters may not be made available in a half-credit format. To add details for the half module please click 'Add Half Module (Semester A)'.

Section 4b - Half Module for Associate Students (for a half module to be taught in Semester B)

This section must be completed if the proposed module will take place over 2 semesters but will be made available to single-semester associate students in a half-credit format in <u>Semester B. </u>Modules worth less than 30 credits taken over 2 semesters may not be made available in a half-credit format. To add details for the half module please click 'Add Half Module (Semester B)'.