






ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Methods in Neuroscience				
Module Code	USPK76-30-3	Level	3	Version	1
Owning Faculty	Health and Applied Sciences	Field	Psychology		
Contributes towards	BSc (Hons) Psychology + Psychology combinations				
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard
Pre-requisites	USPSTY-30-2 Mind Brain and Development		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements	None	
Valid From	September 2014		Valid to	September 2020	

CAP Approval Date	28/03/2014
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate an understanding of the a variety of methods used in Cognitive Neuroscience (Component A , B) • Understand the difference in information that different neuroscience methods capture (Component A, B) • Critically evaluate methods used with models tested (Component A). • Demonstrate practical application of theoretical, psychological, behavioural, experimental timing and methodological knowledge in design and programing of neuroscience research (Component B)
Syllabus Outline	<p>The content of the module may vary from year to year to take account of the expertise of staff and developments in the field. However the list below provides a summary of the potential content for this module which focuses on <i>Practical Methods in Neuroscience</i>, including potentially:</p> <ul style="list-style-type: none"> • Nerve conduction velocity, autonomic measures, EMG, EEG, EOG and Eye-tracking; • Methodological issues within each measure including issues of timing, directness of measure, analysis, interpretation; • Practical skills: behavioural and neuropsychological testing; programming experiments.
Contact Hours	As a 30-credit module this module assumes 300 hours of study on the part of the student.

	<p>Scheduled learning for this project will be approximately 72 hours, likely delivered in 3-hour blocks over 24 weeks, and may take several forms. Contact time will be blended between in-class sessions and online sessions delivered within a virtual learning environment (e.g., asynchronous discussions, virtual classrooms, etc.)</p> <p>Independent learning – Students are expected to spend 228 hours on independent learning tasks and preparation of assessments.</p>																														
Teaching and Learning Methods	<p>Students will be expected to attend weekly timetabled sessions (72 hours across the module) which will act to guide their further reading and independent study. It is expected that students will spend 8.5 hours a week in independent study (6 hours reading + 2.5 hours coursework) and 30 hours preparation for exams and assignments working for this module.</p> <p>Scheduled learning includes lectures incorporated within practical workshops, seminars and tutorials.</p> <p>Independent learning includes hours engaged with essential reading, practical data collection and worksheet completion etc.</p> <p>TEL - Students will be enabled to use Blackboard the university supported virtual learning environment to organise and communicate their learning material. Students will be able to engage with the material, other students and members of staff through this system and make use of the various functionalities built into the Blackboard (e.g., blogs, journals, audio, video, discussion boards, wikis, etc.). Moreover, students will be able to communicate with their instructors using university sponsored tools (such as Lync).</p>																														
Key Information Sets Information	<p>Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.</p> <table border="1" data-bbox="400 1160 1310 1552"> <thead> <tr> <th>Hours to be allocated</th> <th>Scheduled learning and teaching study hours</th> <th>Independent study hours</th> <th>Placement study hours</th> <th>Allocated Hours</th> <th></th> </tr> </thead> <tbody> <tr> <td>300</td> <td>72</td> <td>228</td> <td>0</td> <td>300</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>The table below indicates as a percentage the total assessment of the module which constitutes a -</p> <p>Written Exam: Critical evaluation of a seen paper written exam = 40% of total module mark</p> <p>Coursework: Portfolio of practical data collection worksheets, mini-project write up and methodological evaluations. = 60% of total module mark</p> <p>Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:</p>	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours		300	72	228	0	300																			
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Reading Strategy	<p>All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.</p> <p>Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders.</p> <p>If further reading is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves, e.g. through use of bibliographical databases.</p>																								
Indicative Reading List	<p>The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, <i>current</i> advice on readings will be available via the module guide or through BlackBoard.</p> <p>Stein J.F, & Stoodley, C.J. (2006). <i>Neuroscience an introduction</i>, . . Chichester : Wiley.</p> <p>Senior, C. (2006) <i>Methods in mind (cognitive neuroscience)</i>.. Cambridge, MA :MIT Press,</p> <p>Bennett , M.R. and Hacker, P.M.S. (2003) <i>Philosophical foundations of neuroscience</i>. , Oxford UK: Blackwell,.</p> <p>Stuss, D.T. & Knight, R.T. (2002) <i>Principles of Frontal Lobe Function</i>. (New York: OUP.</p> <p>Zani,A & Proverbio, A. (2009) <i>The Cognitive Electrophysiology of Mind and Brain</i>.. Amsterdam: Academic Press.</p> <p>Luck, S.J. (2005) <i>An introduction to the event-related potential technique</i> Cambridge MA : MIT. ,</p>																								

Part 3: Assessment

Assessment Strategy	<p>The Assessment Strategy has been designed to support and enhance the development of both subject-based and employability skills, whilst ensuring that the modules Learning Outcomes are attained, as described below.</p> <p>Assessments are designed to underpin students' learning and skills acquisition in the module and to provide for learning beyond the material delivered in the classroom.</p>
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	<p>Controlled conditions: The Controlled Conditions component of the assessment (Component A) comprises of a 2-hour timed essay. Students will write a critical evaluation of one seen research paper, from a choice. The task is designed to assess the breadth of the students' subject knowledge and their ability to apply that understanding to specific research questions and studies as well as their capacity for critical evaluation.</p> <p>Portfolio: The Portfolio is designed to assess the extent to which students can demonstrate practical application of theoretical, psychological, behavioural, experimental timing and methodological knowledge in design and programming of neuroscience research. As such, the Portfolio will consist of 5 worksheets and a practical write up. Each lecture/practical workshop will outline either a measurement technique or a methodological issue in the collection, analysis and interpretation of neuroscience research data. Students will complete a worksheet for five of these. In addition, students will be required to identify a suitable neuroscience research question, design a research study (operationalise the question) and set up the relevant equipment (e.g. engage in programming) and collect data. The students' report of this practical activity will constitute half the portfolio.</p> <p>For the resit assessment, which occurs outside standard teaching time, it will not be possible to replicate the lab sessions and to provide participants for data collection. For this reason the resit assessments are different from those for the first opportunity.</p> <p>Assessment criteria will be made available to the students in the module guide at the start of the module.</p>
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Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	A:	B:
	40	60
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. 2-hour Timed essay	100	
Component B Description of each element	Element weighting (as % of component)	
1. Portfolio	100	
2.		

Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. 2-hour Timed essay	100	
Component B Description of each element	Element weighting (as % of component)	

1. Critique of novel/new research paper	50
2. Critique of research paper	50
If a student is permitted an EXCEPTIONAL RETAKE of the module the assessment will be that indicated by the Module Description at the time that retake commences.	