

## Neuroscience (PN) Modules

PN3312 Neuropharmacology				
<b>SCOTCAT Credits:</b>	20	SCQF Level 9	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Planned timetable:</b>	Lectures: 11.00 am Mon, Tue and Wed Practicals: to be arranged.			
	<p>This module assumes that students are familiar with the material covered in BL2101. The basic principles of pharmacology will be covered, including evidence to support the modern concept that drugs act via specific receptors present on target tissues and our present understanding of laws governing drug-receptor interactions. The concept of agonists, competitive and non-competitive antagonists and the interactions between such classes of drugs will be discussed. The effects of drugs upon the peripheral and central nervous systems and the cardiovascular system will be covered. How these drugs can be used to understand the function of these systems and to correct their malfunctioning in various disease states will be explained. The practical component will cover the principles of drug action and receptor theory and illustrate the use of bioassays in pharmacological investigations. These practical sessions aim to help students build a working knowledge of drug names and actions as well as pharmacological concepts.</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass at least 2 modules from {BL2301, BL2302, BL2305, BL2306}			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL3312			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Lectures and tutorials: 27 hours in total, Usually 3 lectures or tutorials (x 11 weeks) Practicals: 2 x 3 hours during the semester.			
	<b>Scheduled learning:</b> 33 hours		<b>Guided independent study:</b> 167 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	<b>As used by St Andrews:</b> 3-hour Written Examination = 60%, Coursework = 40%			
<b>Re-assessment pattern:</b>	3-hour Written Examination = 100%			
<b>Module teaching staff:</b>	Prof A Butler, Dr G Doherty, Dr W Li, Prof G B Miles, Prof KT Sillar, Dr M Zwart			
PN3313 Neuroscience				
<b>SCOTCAT Credits:</b>	20	SCQF Level 9	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Planned timetable:</b>	Lectures: 12.00 am Mon, Tue and Wed Practicals: to be arranged.			
	<p>This module covers biochemical, cellular and behavioural aspects of the nervous system in health and disease. It starts with the basic biochemistry of neural membrane proteins such as receptors and channels, and considers the cellular mechanisms of action potential generation and propagation, and synaptic transmission. The physiology of sensory perception is illustrated by examining the visual system, while motor control is considered in terms of vertebrate locomotion. Selected aspects of learning and memory processes are also examined. Students are given extensive hands-on experience of computer simulation as a learning tool in this course. The associated practical work illustrates the lecture course through experiments on the nerve impulse, and mechanisms of neuronal cell loss.</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass BL2301 and pass BL2305			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL3313			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 29 hours of lectures or tutorials in total, 3 x 3-hour practicals and 4 hours of computer simulation labs during the semester.			
	<b>Scheduled learning:</b> 42 hours		<b>Guided independent study:</b> 158 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	<b>As used by St Andrews:</b> 3-hour Written Examination = 60%, Coursework = 40%			
<b>Re-assessment pattern:</b>	3-hour Written Examination = 100%			
<b>Module coordinator:</b>	Dr W Li			
<b>Module teaching staff:</b>	Prof K Sillar, Dr S Pulver, Dr G Miles, Dr W Heitler, Dr W Li, Dr G Doherty			
PN3321 Advanced Critical Analysis Reading Party				

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b>	Summer before start of session
<b>Academic year:</b>	2019/0			
<b>Planned timetable:</b>	To be arranged			
An introductory residential module to Honours study for students studying Neuroscience, Psychology and Biology degrees held at the Burn (or equivalent location) between the resit diet and the start of semester 1. This module introduces students to the skill of critically analysing scientific literature and the methodology behind preparing research proposals. Students will work in groups to analyse and assess a grant proposal and present their ideas to a mock research grant panel. In response to detailed feedback students can improve their skills and finally submit an extended referees report on a real grant proposal.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 5 day residential course, 8 hours per day			
	<b>Scheduled learning:</b> 16 hours		<b>Guided independent study:</b> 84 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Prof G B Miles			
<b>Module teaching staff:</b>	Dr G Miles, Dr S Pulver , Dr E Robbins, Dr G Doherty, Dr W Li, Dr M Zwart, Prof K Sillar			

### PN4230 Maladaptive changes in the nervous system

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	BSc Hons Neuroscience students have priority on this module, and numbers are capped at 24 due to the size of the teaching laboratory used for delivery.			
<b>Planned timetable:</b>	tbc			
In this module, students will develop a detailed understanding of the molecular neuroscience of maladaptive changes in the nervous system. Work will focus at the cellular and molecular level allowing in-depth understanding of the events underpinning nervous system diseases and disorders. The module concentrates on key areas relating to maladaptive processes including but not limited to age-related change and neurodegeneration. In addition, students will learn about the empirical models that are used to study these processes through laboratory classes and structured seminars.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313 and pass BL3303			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4230			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hr Seminars (9 weeks), 6-hr Practicals (1 week)			
	<b>Scheduled learning:</b> 24 hours		<b>Guided independent study:</b> 126 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 66%, Practical Examinations = 0%, Coursework = 34%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 66%, Coursework = 34%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 100%			
<b>Module teaching staff:</b>	Team taught			

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

PN4231 Neuromodulation			
<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b> 2
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	BSc Hons Neuroscience students have priority on this module		
<b>Planned timetable:</b>	Lectures: 11.00 am - 12.00 noon Tue and 10.00 am - 11.00 am Fri. Practicals to be arranged.		
<p>Until recently the nervous system was viewed as a black and white world in which neuronal networks carried out tasks using fast chemical synaptic transmission to produce an appropriate network output. However the output of neuronal networks is not fixed but instead is modifiable under different behavioural or developmental circumstances. A major source of flexibility in the output neuronal networks derives from neuromodulation; a process in which the basic operation of the networks remains the same but the strengths of synaptic connections and the integrative electrical properties of neurons in the networks are changed by the actions of a range of neuromodulators. This module explores the diverse range of neuromodulatory mechanisms and outlines their importance in information processing in the nervous system.</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313		
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4231		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2 seminars.		
	<b>Scheduled learning:</b> 24 hours	<b>Guided independent study:</b> 126 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 25%, Coursework = 25%		
	<b>As used by St Andrews:</b> 1.5-hour Written Examination = 50%, Coursework = 50%		
<b>Re-assessment pattern:</b>	1.5-hour Written Examination = 100%		
<b>Module coordinator:</b>	Dr S Pulver		
<b>Module teaching staff:</b>	Dr S Pulver, Prof K Sillar, Dr G Miles, Dr W Li, Dr W Heitler		

PN4232 Neuroethology			
<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b> 1
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	BSc Hons Neuroscience students have priority on this module		
<b>Planned timetable:</b>	Lectures: Week(s) 1- 5 & 7, 10 & 11 Fri 2-4pm. Practical 1 Week 2 Thu 11-1pm. Practical 2 Week 8 Thu 2-5pm. Practical 3 Week 9 Fri 2-5pm		
<p>Predators and their prey are locked in an evolutionary arms race which continuously refines and improves the abilities of predators to locate and capture prey and of prey to detect and evade predators. The resulting selective pressure has produced spectacular adaptations in both the nervous systems and the anatomy of the animals concerned. This, combined with the usually unambiguous motivation of the animals involved in predator-prey interactions (eat or starve, escape or be eaten) has made such adaptations favoured targets for study by neuroscientists, behavioural scientists and bio-mechanicists. Students on this course will undertake a sense of guided case studies researching the primary literature, and the course will also include some hands-on laboratory demonstrations. The aim is both to uncover some general principles of neural and biomechanical organisation, and also to reveal the variety and ingenuity with which evolution has found different solutions to shared problem</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass BL2101		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Up to six hours of one-to-one or small group tuition.		
	<b>Scheduled learning:</b> 39 hours	<b>Guided independent study:</b> 110 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%		
	<b>As used by St Andrews:</b> 50% Course Work, 50% Written Exam		
<b>Re-assessment pattern:</b>	50% Course Work, 50% Written Exam		
<b>Module coordinator:</b>	Dr M F Zwart		
<b>Module teaching staff:</b>	Dr Maarten Zwart, Prof Keith Sillar, Dr Bill Heitler		

**Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019**

<b>PN4234 Synaptic Transmission</b>				
<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	BSc Hons Neuroscience students have priority on this module			
<b>Planned timetable:</b>	Lectures: 11.00 am - 12:30 pm Wed and 12.00 noon - 1.00 pm Fri. Practicals to be arranged.			
Extensive and versatile communication between nerve cells using special junctions called synapses endows the nervous system with many complex functions like learning and memory. This module will cover important recent progress in understanding the morphology and ultrastructure of synapses, neurotransmitter corelease and recycling mechanisms, retrograde signalling, synaptic plasticity, the role of glial cells and the development of neurotransmission. Some laboratory work will provide students with hands-on experience of advanced research methods.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4234			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> A total of 6 x 1.5 hour seminars, 7 x 1 hour lectures and 2 x 3 hour practicals over 10 weeks			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 60%, Practical Examinations = 20%, Coursework = 20%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 60%, Coursework = 40%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 100%			
<b>Module coordinator:</b>	Dr W Li			
<b>Module teaching staff:</b>	Dr W Li, Dr S Pulver			

<b>PN4235 Motoneurons: From Physiology to Pathology</b>				
<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	BSc Hons Neuroscience students have priority on this module			
<b>Planned timetable:</b>	Lectures : 2.00 pm - 3.00 pm Mon and 9.00 am - 10.30 am Fri. Practicals to be arranged.			
This module aims to provide in depth knowledge of key aspects of neuronal function and potential dysfunction by focussing on one of the most studied and best characterised classes of neurons in the central nervous system, motoneurons. The module will cover topics such as: the history of motoneurons in neuroscience research; the genetics controlling motoneuron development, the intrinsic electrical properties of motoneurons; synaptic inputs received by motoneurons; motoneuron recruitment; and motoneuron disease.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4235			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 10 hours of seminars, 6 hours of lectures and 6 hours of practical over the semester.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 60%, Coursework = 40%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 100%			
<b>Module coordinator:</b>	Prof G B Miles			
<b>Module teaching staff:</b>	Dr W Li, Prof K Sillar, Dr G Miles, Dr W Heitler			

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

PN4299 Neuroscience Research Project				
<b>SCOTCAT Credits:</b>	60	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Not automatically available to General Degree students			
<b>Planned timetable:</b>	To be arranged with the supervisor.			
<p>This project will involve extensive laboratory or field research to investigate a defined problem broadly within biology, psychology, or neuroscience appropriate to the degree programme being studied by each student. The project will involve diligence, initiative and independence in pursuing the literature, good experimental design, good experimental and/or analytical technique either in the field or the laboratory, and excellent record keeping. The project will culminate in the production of a high-quality report that demonstrates a deep understanding of the chosen area of research. Students will be allocated to a member of staff within the School of Psychology and Neuroscience or the School of Biology who will guide and advise them in research activities throughout the academic year.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3312 and pass PN3313			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4200 or take BL4201 or take PS4050 or take PS4299 or take PS4796 or take PS4797			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Meetings with supervisor			
	<b>Scheduled learning:</b> 33 hours		<b>Guided independent study:</b> 567 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 35%, Coursework = 65%			
	<b>As used by St Andrews:</b> Practical Examination = 35%, Coursework = 65%			
<b>Re-assessment pattern:</b>	Practical Examination = 35%, Coursework = 65% re-assessment may include collecting further data			
<b>Module coordinator:</b>	Dr G H Middleton			
<b>Module teaching staff:</b>	Individual Supervisors across the School of Psychology and Neuroscience or the School of Biology			

## Psychology (PS) Modules

PS3021 Research Design and Analysis 1				
<b>SCOTCAT Credits:</b>	15	SCQF Level 9	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Not available to General Degree Students.			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Mon. 1-hour practical: one of Mon 1-2, 2-3, 3-4, 4-5			
This module is designed to provide a basic understanding of research design and statistics that will provide the foundations for independent empirical research and critical analysis required in the final year of the Honours programme. Emphasis will be placed on the acquisition of design and analysis skills and an understanding of the underlying philosophy that guides research. The syllabus will include core aspects such as ethical issues in research, basic statistics, technical writing and the use of statistical packages.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory/tutorial class or seminar.			
	<b>Scheduled learning:</b> 30 hours		<b>Guided independent study:</b> 120 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 25%, Practical Examinations = 0%, Coursework = 75%			
	<b>As used by St Andrews:</b> 1-hour Written Examination = 25%, Coursework = 75%			
<b>Re-assessment pattern:</b>	1-hour Written Examination = 25%, Coursework = 75%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr M W Oram			

PS3022 Research Design and Analysis 2				
<b>SCOTCAT Credits:</b>	15	SCQF Level 9	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Not available to General Degree Students.			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Mon. 1-hour practical: two of Mon 1-2, 2-3, 3-4, 4-5			
This module is designed to provide a more advanced understanding of research design and statistics. Emphasis will be placed on the acquisition of analytical skills covering typical research situations encountered in the behavioural sciences. There is also an emphasis on integration of concepts across a family of techniques based on correlation and regression. The syllabus will include such topics as multiple regression, path analysis, mediation analysis, factor analysis, ANOVA designs using regression, and moderated multiple regression. There is a focus on computerized data analysis, interpretation, and presentation. A section on qualitative analysis is included to highlight a broader range of research approaches and questions.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS3021			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 X 2-hour lecture (weeks 1-11) and 2 X 1 hour laboratory/tutorial (weeks 1-10)			
	<b>Scheduled learning:</b> 42 hours		<b>Guided independent study:</b> 108 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 40%, Practical Examinations = 0%, Coursework = 60%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 40%, Coursework = 60%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 40%, Coursework = 60%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr K I Mavor			
<b>Module teaching staff:</b>	Dr K Mavor, Dr S Pehrson, P Gardner			

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

PS3031 Conceptual Issues and Theoretical Perspectives			
<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b> 1
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser		
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Thu. 1-hour practical: one of Thu 2-3, 3-4, 4-5. (Module runs in weeks 1-5 only)		
This module addresses the historical and philosophical background to current debates in psychology. The module will be taught via lectures and seminars including student presentations. Emphasis will be placed on the development of critical analysis of alternative models and levels of explanations of behaviour, and the ability to relate conceptual debates in psychology to issues in the real world.			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory class or seminar (Weeks 1 - 5).		
	<b>Scheduled learning:</b> 15 hours	<b>Guided independent study:</b> 85 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%		
	<b>As used by St Andrews:</b> Coursework = 100%		
<b>Re-assessment pattern:</b>	Coursework = 100%		
<b>Module coordinator:</b>	Mr P L Gardner		

PS3032 Assessment in Clinical Psychology			
<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b> 2
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser		
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Thu. 1-hour practical: one of Thu 2-3, 3-4, 4-5. (Module runs in weeks 6-10 only).		
This module presents psychopathological conditions and provides a basic understanding of the underlying neuronal and/or cognitive-behavioural mechanisms. Examples will be drawn from the field of clinical psychology and/or clinical neuropsychology. The module will further explore in detail the tools and procedures used to assess psychopathological conditions by discussing their theoretical/statistical background and by demonstrating how to use these tools in clinical and experimental settings.			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory class or seminar (Weeks 6 - 10).		
	<b>Scheduled learning:</b> 15 hours	<b>Guided independent study:</b> 85 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 100%, Practical Examinations = 0%, Coursework = 0%		
	<b>As used by St Andrews:</b> 1.5-hour Written Examination = 100%		
<b>Re-assessment pattern:</b>	1.5-hour Written Examination = 100%		
<b>Module coordinator:</b>	Dr D Balslev		

**Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019**

<b>PS3033 Developmental Psychology</b>			
<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b> 2
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser		
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Thu. 1.5-hour practical: Thu, either 2-3:30 or 3:30-5. (Module runs in weeks 1 - 5 only)		
This module is designed to equip students with an appreciation of key principles, concepts, methods and discoveries in developmental psychology, with an emphasis on evolutionary and comparative perspectives that are a particular strength of such work in St Andrews. The module aims to offer a broad perspective spanning infancy to childhood, and a range of key topics in cognitive and social development.			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002		
<b>Anti-requisite(s)</b>	You cannot take this module if you take PS3010 or take PS3011		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1.5-hour laboratory class or seminar (Weeks 1 - 5).		
	<b>Scheduled learning:</b> 18 hours	<b>Guided independent study:</b> 82 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%		
	<b>As used by St Andrews:</b> Coursework = 100%		
<b>Re-assessment pattern:</b>	Coursework = 100%		
<b>Module coordinator:</b>	Dr E Robbins		

<b>PS3034 Social Psychology</b>			
<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b> 2
<b>Academic year:</b>	2019/0		
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser		
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Tue. 1-hour practical: one of Tue 2-3, 3-4, 4-5 (Module runs in weeks 1 - 5 only)		
This module explores in depth key topics across the breadth of social psychological enquiry. A variety of research approaches will be examined in order to develop the scientific understanding and critical skills in this field. Approaches that will be covered include social cognition, social identity and the study of intergroup relations. In each case, the strengths and limitations of the approaches are explored, and theoretical knowledge will be linked to current events.			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory class or seminar (Weeks 1 - 5)		
	<b>Scheduled learning:</b> 15 hours	<b>Guided independent study:</b> 85 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%		
	<b>As used by St Andrews:</b> Coursework = 100%		
<b>Re-assessment pattern:</b>	Coursework = 100%		
<b>Module coordinator:</b>	Dr N Tausch		

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

### PS3035 Cognitive and Behavioural Neuroscience

<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Tue. 1-hour practical: one of Tue 2-3, 3-4, 4-5 (Module runs in weeks 1 - 5 only).			
This module aims to provide an understanding of psychological knowledge in several inter-related domains concerned with the biological bases of behaviour. Emphasis will be laid on basic experimental science from analysis of molecular and synaptic events, single cell studies, brain activity scans, and clinical studies, and the relationship between cognitive, emotional, behavioural, neurological and physiological processes will be examined.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory class or seminar (Weeks 1 - 5)			
	<b>Scheduled learning:</b> 15 hours		<b>Guided independent study:</b> 85 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 100%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> 1.5-hour Written Examination = 100%			
<b>Re-assessment pattern:</b>	1.5-hour Written Examination = 100%			
<b>Module coordinator:</b>	Dr I Jentsch			

### PS3036 Evolutionary and Comparative Psychology

<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Tue. 1.5-hour practical: one of Tue 2-3:30, 3:30-5pm. (Module runs in weeks 6 - 10 only).			
This module will address evolutionary and comparative approaches to psychology. The aim is to provide an understanding of major evolutionary forces and how they have shaped animal and human behaviour and psychology. Key principles, concepts and methodologies will be introduced and related to specific topic areas such as the evolution of social behaviour and the evolutionary origins of language and cognition.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1.5-hour laboratory class or seminar (Weeks 6 - 10).			
	<b>Scheduled learning:</b> 18 hours		<b>Guided independent study:</b> 82 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 100%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> Take-home format Written Examination (in 2 hour slot)= 100%			
<b>Re-assessment pattern:</b>	Take-home format Written Examination = 100%			
<b>Module coordinator:</b>	Dr C L Hobaiter			
<b>Module teaching staff:</b>	Dr C Hobaiter			

### PS3037 Perception

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Tue. Four 1.5-hour practical: one of Tue 2-3:30, 3:30-5pm. (Module runs in weeks 7 - 11 only).			
The aim of this module is to develop an understanding of visual perception and its functions. Stress will be laid on the integration of findings from physiology, neuropsychology, anatomy, and experimental psychology. Topic areas covered will include theories of human vision and their application to understanding our ability to perceive distinct visual properties, for example the shape, size, location and identity of objects. Emphasis will be placed on the development of the skill of critical evaluation of evidence and theory.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and (weeks 7 - 11) and 4 x 1.5-hour laboratory class or seminar spread over Weeks 7 - 11.			
	<b>Scheduled learning:</b> 16 hours		<b>Guided independent study:</b> 84 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 100%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> 1.5-hour Written Examination = 100%			
<b>Re-assessment pattern:</b>	1.5-hour Written Examination = 100%			
<b>Module coordinator:</b>	Prof J Harris			

### PS3038 Cognition

<b>SCOTCAT Credits:</b>	10	SCQF Level 9	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available to General Degree students with permission of the Psychology Honours Adviser			
<b>Planned timetable:</b>	Lectures: 9.00 am - 11.00 am Thu. 1-hour practical: one of Thu 2-3, 3-4, 4-5. (Module runs in weeks 7 - 11 only).			
The aim of this module is to develop an understanding of human cognitive processes. Topic areas covered include, for example, attention, memory, reasoning, and decision making. Emphasis will be placed on the development of the skill of critical evaluation of evidence and theory. Lectures will be accompanied by practical classes, in which students will gain experience of the experimental methods used in cognitive research, and seminars in which research papers will be critically evaluated.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1-hour laboratory class or seminar (Weeks 7 - 11).			
	<b>Scheduled learning:</b> 15 hours		<b>Guided independent study:</b> 85 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr T Otto			

### PS4040 Psychology Review

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	10	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in a Psychology Honours Programme.			
<b>Planned timetable:</b>	Not applicable.			
This module will foster the abilities needed to search, collate and integrate an extensive area of psychological literature. Emphasis will be placed on analytical and methodological issues, and this module therefore complements PS3021 and PS3022. A systematic approach to the analysis of a specific body of literature will be encouraged. Students are invited to identify preferred subject matters so long as they fall within the area of the supervisor's expertise. Supervision will be given to aid students in the collation, planning and organisational phases of their work. The review will be limited to 4,000 words.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Co-requisite(s):</b>	In the same year as taking this module you should take PS3021 and take PS3022			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Individual supervision by pre-assigned member of staff.			
	<b>Scheduled learning:</b> 10 hours		<b>Guided independent study:</b> 90 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Review = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr R H Sprengelmeyer			
<b>Module teaching staff:</b>	Dr A Seed			

### PS4050 Psychology Project (30)

<b>SCOTCAT Credits:</b>	30	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme			
<b>Planned timetable:</b>	Not applicable.			
The aim of the project is to develop and foster the skills of experimental design, appropriate research management and statistical analysis. A wide choice of topics is possible, but the skills developed in modules PS3021, PS3022 and PS4040 are an essential preparation. The empirical part of the project may be conducted with another student, to allow greater research scope and the choice of more realistic problems, but all analysis and report-writing must be carried out individually. Topics range over all areas of psychology under active investigation in the School, and effort is made to arrange for students to work in one of their preferred areas.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS4040 and pass PS3021 and pass PS3022			
<b>Anti-requisite(s)</b>	You cannot take this module if you take PN4299 or take BL4200 or take PS4299 or take PS4796 or take PS4797			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Individual supervision by pre-assigned member of staff			
	<b>Scheduled learning:</b> 30 hours		<b>Guided independent study:</b> 270 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Dissertation = 100%			
<b>Re-assessment pattern:</b>	Dissertation = 100% Re-assessment may include collecting further data			
<b>Module coordinator:</b>	Dr R H Sprengelmeyer			
<b>Module teaching staff:</b>	Dr J Ainge			

### PS4060 Review Essay

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	To be arranged.			
<p>In this module students will select a key psychological research paper to review (subject to approval by module controller). Students will then submit an outline for formative feedback. The review will be composed independently thereafter. The review should include historical antecedents, including theoretical and methodological issues related to the area and specific problem of issue that the paper addresses. The review should also include an evidence-based evaluation of the impact of the key paper on psychological science and on society. The module includes 6 one-hour sessions on practical skills required to complete the review.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002. Module prerequisites may be waived for students with entry into honours psychology			
<b>Anti-requisite(s)</b>	You cannot take this module if you take BL4200 or take PN4299 or take PS4299			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 3 x 2-hour workshops in Semester 1			
	<b>Scheduled learning:</b> 6 hours		<b>Guided independent study:</b> 144 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr E M Bowman			
<b>Module teaching staff:</b>	TBC			

### PS4069 Group Behaviour

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	To be arranged.			
<p>This module aims to develop an advanced understanding of selected topics relating to the psychology of groups and collective behaviour. It will address how behaviour is affected by the group context and examine the psychological mechanisms which shape how people act as group members. Teaching will be seminar based and students will be expected to read independently and contribute actively to sessions. Emphasis will be placed on the development of critical skills and the ability to relate individual studies and theories to broader conceptual debates in social psychology. More detailed module content will be announced in advance of student choices.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminar plus tutorial time.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Prof S D Reicher			
<b>Module teaching staff:</b>	Prof S Reicher			

### PS4071 Behavioural Neuroscience

**Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019**

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	UG - Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Thu			
<p>The overall aim of this module is to allow students access to current research in the area of behavioural neuroscience. Possible topics include motivation, learning and attention. Past themes explored in the module include: the relationship between 'normal' learning and addiction; the transition from goal-directed action to stimulus-response habit; the neural basis of compulsive gambling; the efficacy of biological treatments of addiction; and the behavioural and neural effects of MDMA ('ecstasy'). Results from both human and animal research will be considered in parallel, with examples of papers ranging from molecular neuroscience to neuropsychology. The format of the module will include lectures (which are designed to provide the students with the background necessary to read research articles); guided seminars and student presentations summarising research articles. In order to maximise the benefits of the students' presentations, each student will meet with the lecturer at least twice to discuss the topic and content of their talk.</p>				
<b>Pre-requisite(s):</b>	Module prerequisites may be waived for students with entry into honours psychology. Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr E M Bowman			

**PS4074 Cognitive Psychology and the Emotional Disorders**

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	9.00 am - 11.00 am Mon			
<p>This module is designed to demonstrate how theories from cognitive psychology can enhance our understanding of the emotional disorders Teaching will be based on individual seminar presentations followed by class discussion. In the presentations students will be expected to review and critically evaluate original research. Seminars will focus on topics such as autobiographical memory and depression, autobiographical memory and anxiety, attentional bias in depression and anxiety, and interpretative biases in depression and anxiety. At the end of the seminar series, students should understand how depression and anxiety can be differentiated on the basis of these biases.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002. Module prerequisites may be waived for students with entry into honours psychology			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr B Dritschel			

**PS4079 Sex Differences and Gender Development**

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Fri			
<p>This advanced-level module will examine the evidence for sex differences in human behaviour and explore how gender develops across the lifespan. Students will learn how hormones, such as testosterone and estrogen, influence brain function and behaviour in non-human animals and will apply this knowledge to human data. Example topics include sexual behaviour (including sexual orientation), aggression, memory, sex differences in mental health, and the evolution of sex differences. Teaching will be based on student-led seminars with supporting lectures. Emphasis will be placed on critical evaluation and the ability to relate scientific data to broader debates regarding sex differences in behaviour.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002. Module prerequisites may be waived for students with entry into honours psychology			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminar plus office hour.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr G R Brown			
<b>Module teaching staff:</b>	Dr G Brown			

### PS4083 Psychology of Music

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Mon			
<p>The aim of the module is to introduce students to psychological processes underlying music perception, cognition, and performance. The relationship between musical phenomena and mental functions will be illustrated. The module will cover different aspects of music perception including psychoacoustics and sound perception, music cognition including music memory emotion and expectancies, skilled performance as well as abnormalities in music perception and performance. The module will be taught in the form of seminars including student presentations. Emphasis will be placed on the development of critical thinking and the ability to relate conceptual debates in psychology to issues in the real world.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr I Jentzsch			

### PS4084 Psychology of Art: Aesthetics and Individual Differences in Visual Function

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme.			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Wed			
<p>This module examines the psychology of artistic activity and aesthetic appreciation, both from the standpoint of the artistic object (e.g., painting), as well as the individual who creates or appreciates art. Why are some things more aesthetically pleasing than others? Why do some people have a greater capacity to create aesthetic things? The module will explore the links between aesthetic creation and appreciation on the one hand and perceptual and cognitive processes on the other. These links will be examined from behavioural and neurological viewpoints. A significant emphasis will be on the neurological conditions that heighten differences in the capacity to create and appreciate aesthetic objects, including mental disorders (e.g., frontotemporal dementia, autism, epilepsy) and atypical cognitive development (e.g., synaesthesia, dyslexia). This will be a critical seminar style module with readings and discussions.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr D Vishwanath			

### PS4085 Evolution and Development of Social and Technical Intelligence

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to undergraduate students in the second year of the Honours Programme. Also available to postgraduate students on MSc Evolutionary and Comparative Psychology: the Origins of Mind			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Fri			
<p>The last two decades have witnessed a surge of research on social and technical intelligence, both in humans and an increasingly wide range of non-human animal species. This module surveys the principal discoveries, integrating field and captive studies, as well as both observational and experimental methodologies, to trace the evolution and development of aspects of social intelligence such as imitation and theory of mind, and technical intelligence, such as tool use and understanding of causality. Key aims include appreciating the range of methodologies that have been developed and how these can be used to trace the evolution and ontogeny of the underlying psychological mechanisms.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2001 and pass PS2002. Module prerequisites may be waived for students with entry into honours psychology			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> Take Home Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	Take Home Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr C P Cross			
<b>Module teaching staff:</b>	Prof M Carpenter			

### PS4086 Origins and Evolution of Mind Reading (Theory of Mind)

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to undergraduate students in the second year of the Honours Programme. Also available to postgraduate students on MSc in Evolutionary and Comparative Psychology: the Origins of Mind			
<b>Planned timetable:</b>	9.00 am - 11.00 am Fri			
The module will offer a comparative approach to the emergence of the ability to understand mental states in children and non-human primates, and its alteration in autism. This ability (also known as Theory of Mind) is at the heart of many of humans unique cognitive achievements, but their origins can be traced back in evolution and development. The course will discuss the current state of research in this area, emphasising both empirical and conceptual aspects posed by the combination of the evolutionary and developmental approaches.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 75%, Coursework = 25%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr J Gomez			
<b>Module teaching staff:</b>	Dr J-C Gomez			

### PS4089 Neural Basis of Episodic Memory

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Tue			
This module will examine how the brain enables us to remember information from our personal experience. It will present students with cutting edge research using both humans and animals that gives us an insight into how the psychological components of episodic memory can be represented and processed by the brain. We will go on to look at how this type of research is applied in fields such as future thinking and memory decline in dementia. The course will include lectures and student presentations based around current research articles in the field.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 75%, Practical Examinations = 0%, Coursework = 25%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr J A Ainge			

### PS4091 Computer-aided Research

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours Programme, or Research Methods in Psychology (MSc)			
<b>Planned timetable:</b>	9.00 am - 11.00 am Tue			
As research becomes ever more computationally intense, the ability to use modern research software is becoming indispensable. This practical module will offer an introduction to computational modelling and provide you with the skills necessary to apply it in your research. Emphasis will be put on using scientific scripting languages in a research context. This module will build on the statistical techniques learned in previous modules and introduce modelling techniques, and imaging, stimulus presentation, and data visualisation.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS3022. Module prerequisites may be waived for students with entry into honours psychology. Prerequisites PS3021 and PS3022 are applicable to ug students only.			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 lecture and 1 seminar plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr T Otto			

### PS4093 The Psychology of Dementia

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Wed			
This module will examine the psychology of dementia focusing on the cognitive and psychosocial impact on individuals with a diagnosis and those who care for them. Students will examine patterns of both lost and retained cognitive skills in people with dementia. We will then focus on how retained skills can be maximised and how the caregiving experience can be improved for both people living with dementia and their caregivers. The module will include lectures and student presentations based around current research articles in the field.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 lecture, 1 seminar plus office hour.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 130 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 60%, 90-minute Written Examination = 40%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr M P Ellis			
<b>Module teaching staff:</b>	Dr M Ellis			

### PS4094 Communicating Psychology and Neuroscience

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Mon			
<p>This module provides final year students within the School of Psychology and Neuroscience with first-hand experience of science communication through a series of expert led master-classes (e.g. Bright Club, BBC, print journalists, science bloggers), presentations and interaction with new media (e.g. podcasts, blogs, Twitter, FaceBook). This module will enable students to gain substantial experience of working to tight deadlines, evaluating how the media translates psychological/neuroscience findings and of communicating complex ideas at various different levels, including presenting work to the press, the public and school children. Topics covered may include: why scientists must communicate with the public; how psychology/neuroscience hits the headlines; evaluating media coverage; using new media to get the message across and designing a science exhibit. While of particular value to students aiming for a career in public engagement, these core skills are equally important for any career that requires good communication, including post-graduate study. In addition students will be required to monitor relevant periodicals and evaluate several new studies in psychology/neuroscience and so should expose students to the latest trends within the field.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS3021 or pass PN3313			
<b>Anti-requisite(s)</b>	You cannot take this module if you take ID4001 or take ID4002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour lecture, plus office hour and occasional fieldwork.			
	<b>Scheduled learning:</b> 26 hours		<b>Guided independent study:</b> 124 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Prof K A Spencer			
<b>Module teaching staff:</b>	Dr K Spencer, Mr P L Gardner			

### PS4095 Psychopathology

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	9.00 am - 11.00 am Mon			
<p>This module aims to describe mental disorders from a psychodynamic, behavioural, cognitive, and neuropsychiatric perspective. Classification systems of mental disorders are compared and evaluated, and research methods and treatment strategies critically discussed. The clinical part of the module focuses on adult mental health (e.g., Mood disorders, Schizophrenia Spectrum disorders, Obsessive compulsive disorders, Trauma and Stress related disorders) and Developmental Psychopathology (e.g., Autism Spectrum disorders).</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour lecture plus office hour.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 50%, Practical Examinations = 0%, Coursework = 50%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 50%, Coursework = 50%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Dr R H Sprengelmeyer			
<b>Module teaching staff:</b>	Dr R Sprengelmeyer			

### PS4096 Mechanisms of Behaviour: integrating psychological and neuroscience perspectives

**Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019**

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	12.00 noon - 2.00 pm Tue			
The aim of this module is to explore some of the many physiological and neural systems that modulate patterns of behaviour in a range of species, including humans. It will highlight the importance of integrating information from psychology and neuroscience disciplines in order to further our understanding of how and why animals and humans behave the way they do in different situations. The module will deal with examples of mechanisms across different levels of complexity (from genes to physiology). The module will include lectures and student presentations/journal club discussions based around current research articles in the field and a practical session with hands on experience of a physiological technique.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour lecture (x 10 weeks), 1 practical class (x 4 weeks) plus office hour.			
	<b>Scheduled learning:</b> 24 hours		<b>Guided independent study:</b> 126 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 15%, Coursework = 85%			
	<b>As used by St Andrews:</b> Coursework (including presentation) = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Prof K A Spencer			
<b>Module teaching staff:</b>	Dr K Spencer			

**PS4097 Research Methods in Cognitive Neuroscience**

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	2
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	9.00 am - 11.00 am Tue			
Tremendous progress in technology allows now to observe the brain in action to understand the physical bases of behaviour. This module showcases this state of the art approach. Guided by a team of lecturers with first-hand expertise in trans cranial magnetic stimulation, neurophysiology, electrophysiology, behavioural modelling, neuropsychology and functional magnetic resonance imaging the students will develop their ability to evaluate and propose cutting edge research. The course includes lectures and student led discussions of current research topics.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 lecture, 1 seminar plus office hour.			
	<b>Scheduled learning:</b> 22 hours		<b>Guided independent study:</b> 128 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Dr D Balslev			
<b>Module teaching staff:</b>	Dr D Balslev, Dr T Otto, Dr J Ales, Dr G Miles			

**PS4101 Selves and Identities**

## Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019

<b>SCOTCAT Credits:</b>	15	SCQF Level 10	<b>Semester</b>	1
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme.			
<b>Planned timetable:</b>	11.00 am - 1.00 pm Thu			
The central theme of the module is the balance between fluidity and stability in the way we define ourselves and others, personally and socially. This framing allows the possibility of exploring a range of important phenomena in personality and social psychology that are linked by that broad theme. The module is also intended to balance theoretical models of the self and social perception with practical outcomes like personal wellbeing and social change.				
<b>Pre-requisite(s):</b>	Students lacking PS2002 require the permission of the psychology honours adviser. . Before taking this module you must pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 lecture, 1 seminar plus office hour. Plus 5 hours of practical classes over the semester.			
	<b>Scheduled learning:</b> 0 hours		<b>Guided independent study:</b> 0 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> 2-hour Written Examination = 50%, Coursework = 50%			
<b>Re-assessment pattern:</b>	2-hour Written Examination = 50%, Coursework = 50%			
<b>Module coordinator:</b>	Dr K I Mavor			
<b>Module teaching staff:</b>	Dr K Mavor			

### PS4299 Psychology Project (60)

<b>SCOTCAT Credits:</b>	60	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	To be arranged with the supervisor.			
This project will involve extensive laboratory or field research to investigate a defined problem broadly within psychology. The project will involve diligence, initiative and independence in pursuing the literature, good experimental design, good experimental and/or analytical technique either in the field or the laboratory, and excellent record keeping. The project will culminate in the production of a high-quality report that demonstrates a deep understanding of the chosen area of research. Students will be allocated to a member of staff within the School of Psychology and Neuroscience who will guide and advise them in research activities throughout the academic year.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS3021 and pass PS3022 and pass PS4040			
<b>Anti-requisite(s)</b>	You cannot take this module if you take PS4050 or take PS4060 or take PN4299 or take BL4200 or take PS4796 or take PS4797			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1-hour individual supervision sessions.			
	<b>Scheduled learning:</b> 20 hours		<b>Guided independent study:</b> 563 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	<b>As used by St Andrews:</b> Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%, Re-assessment may include collecting further data			
<b>Module coordinator:</b>	Dr J A Ainge			
<b>Module teaching staff:</b>	various			

### PS4796 Joint Project (30cr)

**Psychology & Neuroscience - Honours Level - 2019/0 - September - 2019**

<b>SCOTCAT Credits:</b>	30	SCQF Level 10	<b>Semester</b>	Both
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the Second year of the Honours Programme, who have completed the Letter of Agreement, downloadable from <a href="https://www.st-andrews.ac.uk/coursecatalogue">https://www.st-andrews.ac.uk/coursecatalogue</a> ). No student may do more than 60 credits in Dissertation or Project modules.			
<b>Planned timetable:</b>	To be arranged.			
The aim of the project is to develop and foster the skills of experimental design, appropriate research management and analysis. The topic and area of research should be chosen in consultation with the supervisors in order to determine that the student has access to sources as well as a clear plan of preparation.				
<b>Pre-requisite(s):</b>	The student requires a letter of agreement			
<b>Anti-requisite(s)</b>	Cannot take more than 30 credits in other dissertation/project modules			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> As per Letter of Agreement.			
	<b>Scheduled learning:</b> 0 hours		<b>Guided independent study:</b> 0 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> As per Letter of Agreement.			
<b>Re-assessment pattern:</b>	As per Letter of Agreement.			

**PS4797 Joint Project (60cr)**

<b>SCOTCAT Credits:</b>	60	SCQF Level 10	<b>Semester</b>	Full Year
<b>Academic year:</b>	2019/0			
<b>Availability restrictions:</b>	Available only to students in the Second year of the Honours Programme, who have completed the Letter of Agreement, downloadable from <a href="https://www.st-andrews.ac.uk/coursecatalogue">https://www.st-andrews.ac.uk/coursecatalogue</a> ). No student may do more than 60 credits in Dissertation or Project modules.			
<b>Planned timetable:</b>	To be arranged.			
The aim of the project is to develop and foster the skills of experimental design, appropriate research management and analysis. The topic and area of research should be chosen in consultation with the supervisors in order to determine that the student has access to sources as well as a clear plan of preparation.				
<b>Pre-requisite(s):</b>	The student requires a letter of agreement			
<b>Anti-requisite(s)</b>	Cannot take any other dissertation/project module			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> As per Letter of Agreement.			
	<b>Scheduled learning:</b> 0 hours		<b>Guided independent study:</b> 0 hours	
<b>Assessment pattern:</b>	<b>As defined by QAA:</b> Written Examinations = 0%, Practical Examinations = 0%, Coursework = 0%			
	<b>As used by St Andrews:</b> As per Letter of Agreement.			
<b>Re-assessment pattern:</b>	As per Letter of Agreement.			