

PN3313 Neuroscience			
<b>SCOTCAT Credits:</b>	20	SCQF level 9	<b>Semester</b> 1
<b>Academic year:</b>	2021-2022		
<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 understanding of neuronal survival and loss, followed by 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 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, optogenetics and mechanisms of neuronal cell loss.</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass BL2301 and pass BL2305		
<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>Assessment pattern:</b>	Continual assessment 40% (15% lab report 1 and 25% lab report 2) and 2hr Exam 60%		
<b>Re-assessment pattern:</b>	Continual assessment 40% (15% lab report 1 and 25% lab report 2) and 2hr Exam 60%. Applies to failed components only		
<b>Module coordinator:</b>	Dr W Li		
<b>Module coordinator Email:</b>	wl21@st-andrews.ac.uk		
<b>Module teaching staff:</b>	Dr Judith Schweimer, Dr S Pulver, Prof G Miles, Dr W Heitler, Dr W Li, Dr G Doherty, Dr A Smith		

PN4230 Maladaptive changes in the nervous system			
<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b> 2
<b>Academic year:</b>	2021-2022		
<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		
<p>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.</p>			
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313 and pass BL3303		
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hr Seminars (9 weeks), 6-hr Practicals (1 week)		
<b>Assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%		
<b>Re-assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%. Applies to failed components only		
<b>Module coordinator:</b>	Dr G H Middleton		
<b>Module coordinator Email:</b>	ghm@st-andrews.ac.uk		
<b>Module teaching staff:</b>	Team taught		

## Psychology & Neuroscience - Postgraduate - 2021/2 - August – 2021

PN4231 Neuromodulation				
<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<b>Availability restrictions:</b>	BSc Hons Neuroscience and MRes 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.			
<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>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2 seminars.			
<b>Assessment pattern:</b>	Continual assessment 30% (poster and viva) and 2hr Exam 70%			
<b>Re-assessment pattern:</b>	Continual assessment 30% (poster and viva) and 2hr Exam 70%, applies to failed components only.			
<b>Module coordinator:</b>	Dr S R Pulver			
<b>Module coordinator Email:</b>	sp96@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr S Pulver, Prof K Sillar, Dr W Li, Dr M Zwart			

PN4234 Synaptic Transmission in Health and Disease				
<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<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.			
<p>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.</p>				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PN3313			
<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>Assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%			
<b>Re-assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%, applies to failed components only.			
<b>Module coordinator:</b>	Dr W Li			
<b>Module coordinator Email:</b>	wl21@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr W Li, Dr S Pulver, Dr A Smith			

PN4235 Motoneurons: From Physiology to Pathology				
<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<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>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>Assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%			
<b>Re-assessment pattern:</b>	Continual assessment 30% (10% commentaries and 20% lab report) and 2hr Exam 70%, applies to failed components only.			
<b>Module coordinator:</b>	Professor G B Miles			
<b>Module coordinator Email:</b>	gmb4@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr W Li, Prof K Sillar, Prof G Miles, Dr W Heitler, Dr A Smith			

PN5000 Neuroscience Research Design Reading Party				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	Summer before start of session
<b>Academic year:</b>	2021-2022			
<b>Availability restrictions:</b>	Available only to students on MRes in Neuroscience.			
<b>Planned timetable:</b>	n/a			
An introductory week-long module designed to provide an intensive introduction to designing and carrying out neuroscience research at the postgraduate level. Throughout the module, students will have opportunities learn transferable career skills that revolve around the process of proposing and evaluating scientific research. Students will critically analyse current primary literature in neuroscience and the methodology and ethical issues underlying research proposals. Students will self-direct their own learning and work in groups to formulate research proposals which they then orally present. In response to feedback, students finally submit a written assessment that critically evaluates published primary literature or grant proposals.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 20 hours of seminars and 20 hours of tutorials during 1 week in summer vacation before pre-session week			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr S R Pulver			
<b>Module coordinator Email:</b>	sp96@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Team taught			

PN5001 Techniques and Skills in Neuroscience Research				
<b>SCOTCAT Credits:</b>	20	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Availability restrictions:</b>	Available only to students on MRes in Neuroscience			
<b>Planned timetable:</b>	10-11:30 on Wednesdays			
This seminar-based module offers a theoretical perspective on state-of-the-art neuroscience techniques through critical analysis of primary literature. It also provides opportunities to learn transferrable career skills that are of importance to neuroscientists irrespective of any one area of research. Weekly seminars will involve presentations by students and/or staff that cover neurophysiological, neuropharmacological and neurogenetic approaches to understanding neural function. Learning will be largely self-directed with students delving into research areas that they wish to pursue. Assessment will be based on oral presentations which synthesize and critique recent advances in neuroscience.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1.5-hour seminars (x 11 weeks)			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr A E Smith			
<b>Module coordinator Email:</b>	aes29@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Team taught			

PN5099 Masters Thesis Research in Neuroscience				
<b>SCOTCAT Credits:</b>	120	SCQF level 11	<b>Semester</b>	Full Year
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	n/a			
The student will carry out a major piece of original and independent research under the supervision of an academic advisor. Supervision will be regular but will vary depending on the nature of the research project and the skill set of individual students. Under normal circumstances, research will be carried out during both semesters and during the summer. The aim of the module is to give students an opportunity to design, conduct and analyze neuroscience research and then learn how to present such work in writing. Assessment will be in the form of an oral presentation at the beginning of semester 2 and in the form of a written thesis submitted by the stated date in August.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 hour (x 40 weeks)			
<b>Assessment pattern:</b>	30-minute Oral Examination = 25%, Dissertation = 75%			
<b>Re-assessment pattern:</b>	No Re-Assessment Available			
<b>Module coordinator:</b>	Dr S R Pulver			
<b>Module coordinator Email:</b>	sp96@st-andrews.ac.uk			
<b>Module teaching staff:</b>	various			

PS4071 Behavioural Neuroscience				
<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<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			
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. Weekly workshops will include lectures (which are designed to provide the students with the background necessary to read research articles), guided seminars, tutorials and student presentations summarising research articles.				
<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>Assessment pattern:</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			
<b>Module coordinator Email:</b>	emb@st-andrews.ac.uk			

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>	2021-2022			
<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			
The last few decades have witnessed a surge of research on social and technical intelligence, both in humans and in an increasingly wide range of non-human animal species. This module surveys the principal discoveries, integrating research on humans and field and captive studies of animals, using both observational and experimental methods, to trace the evolution and development of social learning and culture.				
<b>Pre-requisite(s):</b>	Before taking this module you must pass PS2001 and pass PS2002			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 2-hour seminars plus office hour.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%			
<b>Module coordinator:</b>	Professor M J Carpenter			
<b>Module coordinator Email:</b>	mc213@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Prof M Carpenter			

Psychology & Neuroscience - Postgraduate - 2021/2 - August – 2021

PS4086 Theory of Mind in development, evolution and autism				
SCOTCAT Credits:	15	SCQF level 10	Semester	2
Academic year:	2021-2022			
Availability restrictions:	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			
Planned timetable:	9.00 am - 11.00 am Fri			
This module addresses the nature and origins of the social-cognitive ability known as 'mentalising' or 'theory of mind', whose function is to compute and understand the mental states of others (and oneself) in social interaction. This ability is at the heart of complex human cognition, including communication, cooperation and competition, and one of the most complex adaptive achievements in evolution. We will discuss cutting edge interdisciplinary research on the nature of theory of mind analysing its emergence in primate evolution and infant development, and how it applies to autism.				
Pre-requisite(s):	Before taking this module you must pass PS2002			
Learning and teaching methods of delivery:	Weekly contact: 2-hour seminars plus office hour.			
Assessment pattern:	2-hour Written Examination = 75%, Coursework = 25%			
Re-assessment pattern:	2-hour Written Examination = 75%, Coursework = 25%, Re-assessment applies to failed components only			
Module coordinator:	Dr J Gomez			
Module coordinator Email:	jg5@st-andrews.ac.uk			
Module teaching staff:	Dr J-C Gomez			

PS4089 Neural Basis of Episodic Memory				
SCOTCAT Credits:	15	SCQF level 10	Semester	2
Academic year:	2021-2022			
Availability restrictions:	Available only to students in the second year of the Honours Programme			
Planned timetable:	11.00 am - 1.00 pm Friday			
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.				
Pre-requisite(s):	Before taking this module you must pass PS2002			
Learning and teaching methods of delivery:	Weekly contact: 2-hour seminars plus office hour.			
Assessment pattern:	Coursework = 100%			
Re-assessment pattern:	Coursework = 100%			
Module coordinator:	Dr J A Ainge			
Module coordinator Email:	jaa7@st-andrews.ac.uk			

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

<b>SCOTCAT Credits:</b>	15	SCQF level 10	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<b>Availability restrictions:</b>	Available only to students in the second year of the Honours programme			
<b>Planned timetable:</b>	To be assigned			
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 sessions 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 9 weeks) plus office hour and practical sessions held across the semester.			
<b>Assessment pattern:</b>	Coursework (including presentation) = 100%			
<b>Re-assessment pattern:</b>	Coursework = 100%. Re-assessment applies to failed components only			
<b>Module coordinator:</b>	Professor K A Spencer			
<b>Module teaching staff:</b>	Prof. Karen Spencer			

**PS5002 Psychology Master's Research Project**

<b>SCOTCAT Credits:</b>	60	SCQF level 11	<b>Semester</b>	Full Year
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	To be arranged with the supervisor.			
The student will carry out a major piece of original and independent research under the guidance of an academic supervisor. Under normal circumstances the research will be planned during the academic semesters and then conducted during the summer after successful completion of the other MSc modules. Supervision will be regular and will normally average approximately one hour every two weeks. The aim of the module is to give the student an opportunity to develop expertise in designing, conducting and analysing psychological research, and also to learn how to present such work in writing.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Personal tutorials at approximately 2-weekly intervals.			
<b>Assessment pattern:</b>	15,000 word (maximum) research report = 100%			
<b>Module coordinator:</b>	Dr S D Pehrson			
<b>Module coordinator Email:</b>	sdp21@st-andrews.ac.uk			

**PS5003 Generic Research and Professional Skills in Psychology**

## Psychology & Neuroscience - Postgraduate - 2021/2 - August – 2021

<b>SCOTCAT Credits:</b>	30	SCQF level 11	<b>Semester</b>	Full Year
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	To be arranged.			
This module introduces students to the various skills and issues that are of importance to academic psychologists irrespective of their particular area of research. Weekly seminars will cover the various topics, such as academic presentations (published writing, talks, posters), the use of technology in order to enhance communication, how to read research reports, how to gain ethical approval for research, and how to build an academic career.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 17 x 2-hour seminars.			
<b>Assessment pattern:</b>	4 elements of Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr N Tausch			
<b>Module coordinator Email:</b>	nt20@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Team taught			

### PS5005 Methods of Data Analysis in Psychology

<b>SCOTCAT Credits:</b>	30	SCQF level 11	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	12.00 noon Mon			
This module aims to ensure that students are competent in the use of advanced data analysis in psychology. This includes advanced training in common statistics (including regression, analysis of variance and multivariate techniques) plus additional training in qualitative methods. Students will also study more complex topics such as statistical modeling.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 11 x 3-hour workshops plus optional tutorials.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr E M Bowman			
<b>Module teaching staff:</b>	Dr E Bowman, Dr S Pehrson, M Oram and Professor S Reicher			



PS5010 Principal Approaches to the Origins of Mind				
<b>SCOTCAT Credits:</b>	30	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am Seminars, 2.00 pm practicals/tutorials.			
This module serves to introduce distinct ways of studying the origins of mind within a comparative Tinbergian framework, emphasising both functional and mechanistic accounts; why capacities exist, how they are implemented, how they evolved and how they develop. Lectures will cover general evolutionary theory and: (1) Comparative/Phylogenetic, (2) Developmental, (3) Mechanistic/causal, and (4) Functional/adaptive approaches. 'Hot' research topics will be presented using particulars of these frameworks and will exemplify the spectrum of methods possible to address the origins of mind.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> Seminar and tutorial/practical each week.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr C L Hobaiter			
<b>Module coordinator Email:</b>	clh42@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr C Hobaiter, Dr G Brown			

PS5011 Empirical Approaches to the Evolution of Communication				
<b>SCOTCAT Credits:</b>	15	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	2.00 pm - 4.00 pm Fri (lectures); Practical sessions to be advised			
This module will explore the evolution of human language and animal communication through the comparative study of communication and cognition in humans and a variety of non-human species. The module will include detailed analysis of multiple empirical approaches used in cutting-edge research in both field and laboratory. The module integrates evolutionary theory, behavioural ecology, ethology, linguistics and psychological theory to account for how and why humans and other species have evolved their unique communication skills. An important focus will be on empirical methods of testing various theories proposed for the evolution of communication and language.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> A combination of lectures, seminars and practicals will be delivered over the semester (30 hours in total).			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Professor K Zuberbühler			
<b>Module coordinator Email:</b>	kz3@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Prof K Zuberbühler			

Psychology & Neuroscience - Postgraduate - 2021/2 - August – 2021

PS5012 Origins of Human Cognition				
SCOTCAT Credits:	15	SCQF level 11	Semester	2
Academic year:	2021-2022			
Planned timetable:	9.00 am seminars, 2.00 pm practicals/tutorials.			
<p>This module focuses on the origins of human cognition from evolutionary and developmental perspectives. How do we come to parse the 'blooming buzzing confusion' of cues from our physical and social environments into meaningful representations that support functionally adaptive behaviour? In the physical world are objects, their properties and the causal underpinnings of their interactions. The social world contains agents, their actions, and their mental states. How does cognitive processing reveal cues and build representations about the causal structure of the physical and social world? This course examines how these features are perceived and processed by developing humans and other animals for adaptive behaviour, and investigates the evidence for the proximate mechanisms underlying the abilities seen. The module links together the evolution and development of different cognitive abilities with a focus on empirical comparative research.</p>				
Learning and teaching methods of delivery:	Weekly contact: 2-hour seminars, 3- hour tutorials and practicals.			
Assessment pattern:	Coursework = 100%			
Re-assessment pattern:	Resubmission of failed item(s) of coursework			
Module coordinator:	Dr A M Seed			
Module coordinator Email:	ams18@st-andrews.ac.uk			
Module teaching staff:	Dr A Seed			

PS5013 Origins of Mind: Psychology Master's Research Project				
SCOTCAT Credits:	60	SCQF level 11	Semester	Full Year
Academic year:	2021-2022			
Planned timetable:	To be arranged with the supervisor.			
<p>The aim of this module is to acquire intellectual and practical research skills within the domain of evolutionary psychology associated with evolutionary, comparative and developmental approaches to the study of the mind. Students will conduct and report an independent and original research project under the supervision of an academic advisor from an evolutionary perspective. Projects may comprise field and/or laboratory-based studies, the analysis (including meta-analysis) of extant data or the modelling of theoretical concepts. Under normal circumstances, the research will be planned during the first academic semester and then conducted during the second semester. Supervision will be regular with a minimum of one meeting per month. Students will need to demonstrate substantive contribution to the project and that the work is original. The thesis can be in any area of Evolutionary, Comparative or Developmental Psychology agreed by the student's supervisor, course coordinator, and approved by ethical review.</p>				
Learning and teaching methods of delivery:	Weekly contact: Personal tutorials at regular intervals.			
Assessment pattern:	15,000 word (maximum) research report = 100%			
Module coordinator:	Dr C L Hobaiter			
Module coordinator Email:	ms397@st-andrews.ac.uk			

PS5021 Methodologies for Psychology and Neuroscience				
<b>SCOTCAT Credits:</b>	15	SCQF level 11	<b>Semester</b>	Full Year
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	To be arranged.			
<p>The primary aim of this module would be that the student gains some practical, hands-on experience, albeit rather briefly, of a number of laboratory techniques and of research methodologies as are employed by the Principal Investigators in the School of Psychology and Neuroscience. Across the course the student would experience a wide variety of methods and research practices and thereby become more aware of the possibilities of an integrative approach. The course would entail one weekly session (approx. 5 hours per week) during which the student would spend a session in the laboratory of a PI (Principal Investigator). This module would cover the research design, data collection, data analysis and the publication style of each PI. The PI would demonstrate the methodology, data collection and data analysis relevant to that laboratory and to the field in which the PI works. This may include an introductory lecture or discussion of literature relevant to the PI's field and would be followed by observation of, and basic training in the specific techniques used by the PI in conducting that research. The student would be involved in any data collection that may take place during that session, be made aware of the way in which those data are analysed by that PI's group and then shown how those results are prepared for publication and other dissemination.</p>				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 5 hours each week for 5 weeks.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr S C Edwards			
<b>Module coordinator Email:</b>	kas21@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr Sophie Edwards			

PS5231 Conceptual Issues and Theoretical Perspectives				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	Lecture 9.00 am - 11.00 am, and workshop 2.00 pm, 3.00 pm, or 4.00 pm Thu (first half of semester). Tutorial 11-12 Fri			
<p>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.</p>				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x practical/workshop class of up to 3 hours. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Mr P L Gardner			
<b>Module coordinator Email:</b>	plg@st-andrews.ac.uk			

Psychology & Neuroscience - Postgraduate - 2021/2 - August – 2021

PS5232 Assessment in Clinical Psychology				
SCOTCAT Credits:	10	SCQF level 11	Semester	2
Academic year:	2021-2022			
Planned timetable:	Thu (second half of semester-weeks 6-10): see 'Weekly contact' for details			
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.				
Learning and teaching methods of delivery:	<b>Weekly contact:</b> Lectures: Thursday 9am - 11am; 1-hour Practicals: one of Thursday 2pm-3pm, 3pm-4pm, 4pm-5pm; 1-hour Tutorials: Thursday 12pm-1pm. Module runs in weeks 6-10 only			
Assessment pattern:	Coursework = 100%			
Re-assessment pattern:	Resubmission of failed item(s) of coursework			
Module coordinator:	Dr D Balslev			
Module coordinator Email:	db87@st-andrews.ac.uk			

PS5233 Developmental Psychology				
SCOTCAT Credits:	10	SCQF level 11	Semester	2
Academic year:	2021-2022			
Planned timetable:	9.00 am - 11.00 am and 12.30 pm - 2.00 pm Thu (first half of semester). Tutorial: TBA			
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.				
Learning and teaching methods of delivery:	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1.5 practical/workshop class. Additionally 5 x 1-hour tutorials across the semester.			
Assessment pattern:	Coursework = 100%			
Re-assessment pattern:	Resubmission of failed item(s) of coursework			
Module coordinator:	Dr E Robbins			
Module coordinator Email:	er70@st-andrews.ac.uk			

PS5234 Social Psychology				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am - 11.00 am and 2.00 pm - 5.00 pm Tue (first half of semester)			
This module explores several major themes and debates in social psychology, the central one being the nature of the relationship between individuals and groups. We will be looking in depth at the ways in which human experience and behaviour is shaped by social groups, and how this helps us to understand a range of behaviours. A variety of methodological approaches theoretical perspectives on these topics will be examined in order to develop your understanding of the field and your ability to evaluate social psychological research critically. We will examine strengths and limitations of different approaches, introduce current debates in the literature, and link theoretical knowledge to current events.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x practical/workshop class of up to 3 hours. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr S D Pehrson			
<b>Module coordinator Email:</b>	sdp21@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr Sam Pehrson			

PS5235 Cognitive and Behavioural Neuroscience				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am - 11.00 am and 1.00 pm - 2.00 pm Tue (first half of semester)			
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>Anti-requisite(s)</b>	You cannot take this module if you take PS5236			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x practical/workshop class of up to 3 hours. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr I Jentzsch			
<b>Module coordinator Email:</b>	ij7@st-andrews.ac.uk			

PS5236 Evolutionary and Comparative Psychology				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	2
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am - 11.00 am and 2.00 pm - 5.00 pm Tue (second half of semester)			
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>Anti-requisite(s)</b>	You cannot take this module if you take PS5235			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x practical/workshop class of up to 3 hours. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr C L Hobaiter			
<b>Module coordinator Email:</b>	clh42@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr C Hobaiter			

PS5237 Perception				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am - 11.00 am and 2.00-3:30 pm or 3:30- 5.00 pm Tue (weeks 7-11)			
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 psychophysics. 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, with particular focus on awareness of the latest issues in the discipline.				
<b>Anti-requisite(s)</b>	You cannot take this module if you take PS5238			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x practical/workshop class of up to 3 hours. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr J M Ales			
<b>Module coordinator Email:</b>	jma23@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr Justin Ales			

PS5238 Cognition				
<b>SCOTCAT Credits:</b>	10	SCQF level 11	<b>Semester</b>	1
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	9.00 am - 11.00 am Thu and 2.00 pm - 4.00 pm Fri (second half of semester)			
The aim of this module is to develop an understanding of human memory and attention. Topic areas covered will include theories of attention, short and long-term memory, processes involved in memory encoding, maintenance and retrieval. 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>Anti-requisite(s)</b>	You cannot take this module if you take PS5237			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 1 x 2-hour lecture and 1 x 1h practical class. Additionally 5 x 1-hour tutorials across the semester.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr T Otto			
<b>Module coordinator Email:</b>	to7@st-andrews.ac.uk			

PS5240 Review				
<b>SCOTCAT Credits:</b>	15	SCQF level 11	<b>Semester</b>	Full Year
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	To be arranged.			
The aim of PS5240 is for students to develop the ability to write a good review of psychological research. They will be able to select their own topic within the field of psychology. There will be general tutorials that will develop key skills to facilitate execution of the review such as the abilities to conduct a literature review, to write evidence-based arguments and to critically analyze psychological research. In addition to the general tutorials, students will be assigned an individual review supervisor who will provide guidance and feedback on the outline and draft of their individual review. Once the review is completed the general tutorials will focus on providing support for the completion for the final master's project.				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> To be arranged with tutor.			
<b>Assessment pattern:</b>	Review = 100%			
<b>Re-assessment pattern:</b>	Resubmission of failed item(s) of coursework			
<b>Module coordinator:</b>	Dr B Dritschel			
<b>Module coordinator Email:</b>	bd9@st-andrews.ac.uk			

PS5500 The Psychosocial Impact of Dementia				
<b>SCOTCAT Credits:</b>	20	SCQF level 11	<b>Semester</b>	Both
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	200 notional hours of learning time. Delivered by distance learning.			
<p>This module provides an introduction to the psychosocial impact of dementia on individuals with a diagnosis and those who care for them. The module begins with an introduction to dementia. It addresses what dementia is and what it is not, different types and causes of the illness and patterns of progression in the brain. The module then addresses several different models of dementia - most notably the biomedical and psychosocial perspectives. The psychosocial impact of dementia on memory and communication will then be explored. This study of the combination of damage to the brain and the social context within which the illness exists will provide students with a context within which they can consider their own experiences of caring for individuals with dementia.</p>				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 200 notional hours of learning time. Delivered by distance learning.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of the failed pieces of work.			
<b>Module coordinator:</b>	Dr M P Ellis			
<b>Module coordinator Email:</b>	mpe2@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr M Ellis			

PS5501 The Care of Individuals with Dementia				
<b>SCOTCAT Credits:</b>	20	SCQF level 11	<b>Semester</b>	Both
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	200 notional hours of learning time. Delivered by distance learning.			
<p>This module provides an introduction to several psychological models of dementia care, i.e. biomedical, person-centred, palliative and supportive. The student is encouraged to consider the care model that is in use in his/her own workplace and to reflect on the impact of this approach from the perspectives of people with dementia, family members, professional caregivers and management. The module then explores how one might meet the psychological needs of individuals with dementia and their caregivers from each perspective. Students will then go on to learn about the psychology of the self in dementia care in terms of those with a diagnosis and their caregivers. The self will be examined in terms of its manifestation, psychological threats to self and how the self can be maintained in both caregivers and people with dementia. Psychological perspectives on relationship-building with individuals with dementia will then be explored. Students will be encouraged to reflect on their own experiences of caring for individuals with dementia and of forming relationships with them.</p>				
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 200 notional hours of learning time. Delivered by distance learning.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of the failed pieces of work.			
<b>Module coordinator:</b>	Dr M P Ellis			
<b>Module coordinator Email:</b>	mpe2@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr M Ellis			



PS5502 Implementing Effective Care				
<b>SCOTCAT Credits:</b>	20	SCQF level 11	<b>Semester</b>	Both
<b>Academic year:</b>	2021-2022			
<b>Planned timetable:</b>	200 notional hours of learning time. Delivered by distance learning.			
<p>The module provides a theoretical and evidence-based background to assist students to implement effective dementia care. Students will begin by considering the application of psychological theory to dementia care in different environments, i.e. the home, day care, residential care and hospital care. This will then lead to an analysis of the needs of each individual (those with a diagnosis and carers) in care situations. Students will then examine how one might assess what effective care might look like and how one might approach its measurement. This part of the module will foster the beginnings of research skills that will stand the student in good stead for further postgraduate study. The final section of this module will ask students to consider how effective care can be maintained. This will involve the exploration of self-determination theory and models of work motivation. On completing this module, students will be equipped with evidence-based strategies that will allow them to plan, change, measure and maintain effective practice in their workplaces.</p>				
<b>Pre-requisite(s):</b>	Students must have a University Degree or have other Certifiable or Experiential Prior Learning			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 200 notional hours of learning time. Delivered by distance learning.			
<b>Assessment pattern:</b>	Coursework = 100%			
<b>Re-assessment pattern:</b>	Resubmission of the failed pieces of work.			
<b>Module coordinator:</b>	Dr M P Ellis			
<b>Module coordinator Email:</b>	mpe2@st-andrews.ac.uk			
<b>Module teaching staff:</b>	Dr M Ellis			

SS5104 Quantitative Research in Social Science			
<b>SCOTCAT Credits:</b>	15	SCQF level 11	<b>Semester</b> 1
<b>Academic year:</b>	2021-2022		
<b>Planned timetable:</b>	1.00 - 4.00 pm Mon (combined lecture and tutorial)		
This module provides a user-friendly introduction to the fundamental concepts of quantitative analysis. It will cover underlying principles, terminology, research design, sampling strategies, uncertainty and missing data, computerised data management and univariate and multivariate approaches to data analysis. The assessment will be in the form of practical tasks completed in class and/or independently.			
<b>Learning and teaching methods of delivery:</b>	<b>Weekly contact:</b> 3-hour combined lecture and tutorial.		
<b>Assessment pattern:</b>	Coursework = 100%		
<b>Re-assessment pattern:</b>	2-hour Written Class Test = 100%		
<b>Module coordinator Email:</b>	plg@st-andrews.ac.uk		
<b>Module teaching staff:</b>	Mr Paul Gardner		