

**PLEASE NOTE THAT THIS DRAFT IS BASED ON THE CONTENTS OF THE
ACADEMIC YEAR 2018-19, AND MUST BE TAKEN AS PROVISIONAL AND
SUBJECT TO CHANGE IN ACADEMIC YEAR 19-20**

Mechanisms of Behaviour

PS4096

Student Handbook

2018/19

Module co-ordinator: Karen Spencer

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Aims and objectives

The aim of this course 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 both 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 course will deal with the action of hormonal mechanisms in altering a wide range of behaviours. The course 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.

Course organisation/administration

The module will mostly follow the standard structure of senior honours modules in the School. The initial part of each week (50 min) will provide you with background information about each topic in a lecture format. The second half will be in the form of a discussion group. Please see the timetable below for the schedule of discussion topics. We will also be running a practical and this will be over two weeks, one week to collect the samples and go over the assay you will do and then one week to actually run the samples.

The module co-ordinator is Karen Spencer. I can be reached via email (kas21@st-andrews.ac.uk) or found in room 2.53 in Psychology. I do not have office hours as such, but have an open door policy. If you need to see me then you have two options; either pop into my office and if I can help right away I will, or email me and I will respond within 24 hours to give you an appointment to see me. Other than that I can be approached at the weekly sessions.

Assessment

The course has 3 continuous assessments [reference sections or figure legends not counted in word count in any of these. Any paper over the word limit will be subject to the penalties outlined in the Honours Handbook]:

- 1) Lay summary (500 words max.). This will be a summary of one of the papers that have been presented in the first 3 journal clubs sessions (weeks 3, 4 and 5). In week 2 we will use the discussion period to talk about how to approach writing the summary. You will be expected to describe and evaluate the chosen paper briefly in terms of: 1) importance of topic, 2) methods used, 3) results found and their significance. This will be written in a lay style. This will be in the style of a long abstract, but emphasis is made on the evaluation of the paper as well as purely describing the study. **DEADLINE for submission: 8th March 2019, Week 6.**
- 2) Technical report (2000 words max.). You will be required to write up the practical session (week 6/7) in the form of a short paper using the traditional format of intro/methods/results [with stats analysis]/discussion/references]. A good example of how a paper can be written in 2000 words is the journal Biology Letters, so it might be worth having a look at it. Guidance will also be given on how to write the paper in the practical session. The practical will involve two sessions of 2 hours – one to collect the samples and introduce the assay that you will carry out and then another to carry out the analysis. **DEADLINE for submission: 4th April 2019, Week 8 after Spring vacation.**
- 3) Essay (1500 words max.). This is a traditional essay, requiring an evaluation of the evidence to date and suggestions for future research directions. Students should read outside the papers provided to

obtain a good mark. You will be able to choose from 4 essay questions and these will be posted on Moodle in the first week of term. **DEADLINE for submission: 22nd April 2019, Week 11.**

Timetable of lecture themes

Week	Lecture theme	Discussion format
1	General introduction to the course, assessment and the main integrative research themes	None (lecture will be whole session)
2	Stress – is it good or bad?	JC1 led by Karen and a session on how to write for a general audience.
3	Eating habits – how hormones control what and when we eat	JC2 led by students
4	Circadian rhythms – our internal clock	JC3 led by students
5	Social interactions - hormonal regulation of behaviours such as aggression and affiliation	JC4 led by students
6	Practical session 1 – collection of samples	
7	Practical session 2 – lab analysis	
8	Being a parent – hormonal modulation of maternal and paternal care	JC5 led by students
9	Family life – conflict, sibling rivalry, divorce	JC6 led by students
10	Transgenerational effects –how early life can affect multiple generations	Essay writing tactics/skills
11	Overview and Q&A	

Reading list – general background

These are books that give an overview of physiological/endocrine mechanisms and will be a good companion to the lectures and journal papers we will explore. Most are available as ebooks via SAULCAT.

Carlson, N R. (2014) *Physiology of Behavior*, Pearson new International Edition, 11th edition.

Pfaff, D.W., Arnold, A.P., Fahrbach, S.E., Etgen, A. M. & Rubin, R.T. (eds) (2009) *Hormones, Brain and Behaviour*. Elsevier, 2nd electronic edition.

Pfaff, D.W., Kardon, C., Chason, P. & Christen, Y. (eds) (2008) *Hormones and Social Behaviour*. Springer Verlag.

Kappeler, P. (ed) (2010) *Animal Behaviour: Evolution and Mechanisms*. Springer. [general animal behaviour textbook that may help with some of the animal examples]

Reading list for discussion sessions will be posted on Moodle in the first week of term. Student led journal clubs begin in Week 3. The paper for week 2 JC which is led by Karen will be given in the week 1 lecture. Everyone should read the papers for each weeks discussion, even if they are not presenting them.

Transferable skills/Graduate attributes.

This course aims to expand your skill base. During the course you will be assisted to demonstrate original thought, construct a coherent argument or debate, and apply critical analysis and evaluation and reason from specific issues and examples to the general. You will also be able to test hypotheses, theories, methods and evidence within their proper contexts. You will need to demonstrate the use of an appropriate range of resources to the task at hand, which will involve engaging directly with current research, developments and skills in the discipline. You will gain experience of dealing with primary and secondary material and learn how to differentiate between them. The course also facilitates skills in active learning, reflective learning and will hone your creative skills. As you are able to choose the sources you write about the course will also allow you to demonstrate independence of thought and reasoning and improve your skills in time management. The practical work that you will undertake will also allow you develop your advanced IT skills, your knowledge of quantitative methods of analysis and you will be able to demonstrate expertise in the use of statistical software packages for recording, manipulation & analysis of data.

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