

# BL4285 Complex Systems in Animal Behaviour

(BL4285 online module handbook version 45)

**Credits:** 15

**Semester:** 2

**Module Organiser**

Dr V Anne Smith

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**Pre-requisite Modules:**

Permission of Biology

Honours Adviser required

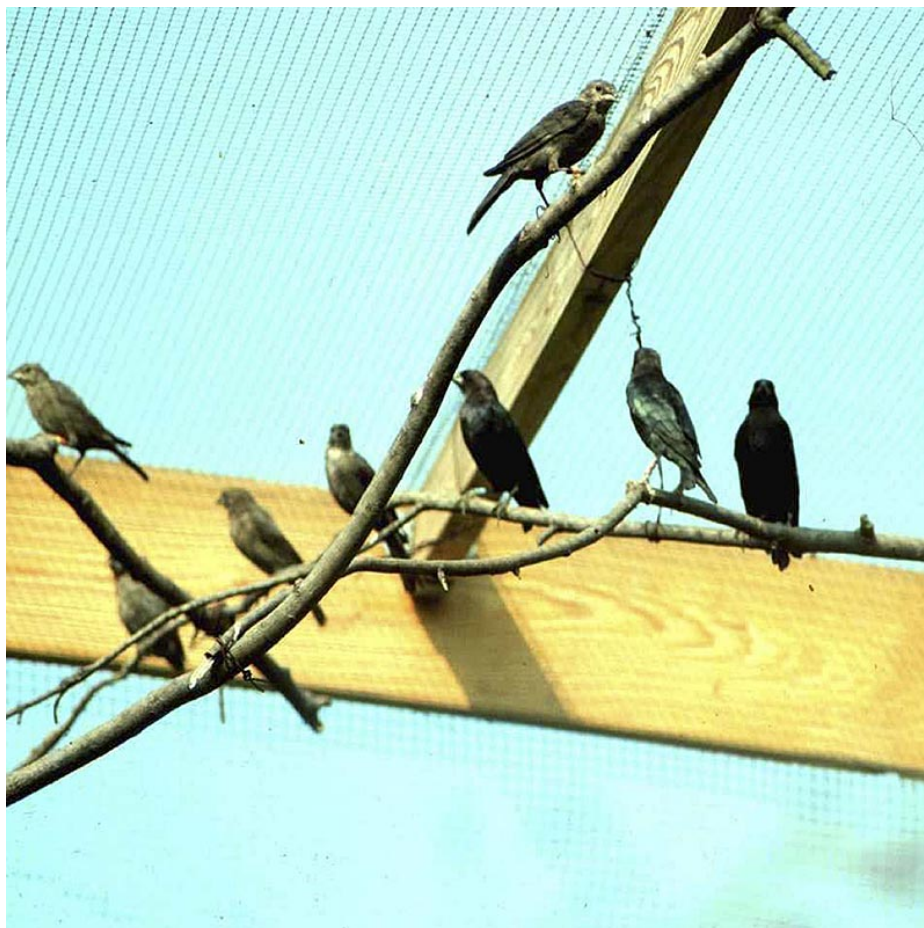
**Anti-requisite Modules:**

**Post-requisite Modules:**

**Additional Module**

**Information:**

[Please check MMS regularly for additional module information](#)



Behaving animals form complex systems, and can create complicated and beautiful phenomena, such as flocks of birds, termite nests, and patterns of army ant swarms. This course will look at research that examines animal behaviour from a complex systems perspective, where analyses range from captive housing of entire bird flocks, computer simulation, and use of robots to interact with the animals. Introductory lectures will be followed by seminar-style discussion of the primary literature, computer practicals, and hands-on practicals where students will identify complex systems in animal behaviour in the world around them.

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[BL4285View content for BL4285 \(2023/4\) in the Module Management System \(MMS\)](#)

[View the current Biology Online Module Catalogue for BL4285](#)

[BL4285View BL4285 \(2023/4\) in the University of St Andrews Module Catalogue](#)

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# BL4285: Timetable

**Legend** (not all modules have every event type):

lecture	tutorial	workshop	practical	other
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## Semester 2: Week 1

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 16-01-2024 12:00 to 13:00	Medical and Biological Sciences Building Biology Teaching Labs	<a href="#">Dr V Anne Smith</a> -	<b>Tutorial T1: Intro to Module, Activities to go with Lecture material</b> <small>2023-4_BL4285_T1</small> Please view first 3 videos on Moodle beforehand, about 30 min total.
Friday 19-01-2024 12:00 to 13:00	Medical and Biological Sciences Building Biology Teaching Labs	<a href="#">Dr V Anne Smith</a> -	<b>Tutorial T2: Activities to go with Lecture material</b> <small>2023-4_BL4285_T2</small> Please view next 3 videos on Moodle beforehand, also about 30 min total.

## Semester 2: Week 2

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 23-01-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O1: Student-led Discussion (Classic Papers)</b> <small>2023-4_BL4285_O1</small>
Friday 26-01-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O2: Student-led Discussion (Classic Papers)</b> <small>2023-4_BL4285_O2</small> Lunch orders for Week 5 due

## Semester 2: Week 3

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 30-01-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O3: Student-led Discussion (Classic Papers)</b> <small>2023-4_BL4285_O3</small>
Friday 02-02-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O4: Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_O4</small>

## Semester 2: Week 4

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 06-02-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O5: Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_O5</small>
Friday 09-02-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	<b>Other O6: Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_O6</small>

## Semester 2: Week 5

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 13-02-2024 11:00 to 13:00	Medical and Biological Sciences Building Biology Teaching Labs	<a href="#">Dr V Anne Smith</a> -	<b>Practical P1: Computer Practical Part 1</b> <small>2023-4_BL4285_P1</small>
Wednesday 14-02-2024 12:00 to 13:00	Medical and Biological Sciences Building Biology Teaching Labs	<a href="#">Dr V Anne Smith</a> -	<b>Other O7: Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_O7</small>
Wednesday 14-02-2024 13:00 to 14:00	Medical and Biological Sciences Building Biology Teaching Labs	-	<b>Other O8: Lunch</b> <small>2023-4_BL4285_O8</small> Lunch orders due end of Week 2
Wednesday 14-02-2024 14:00 to 16:00	Medical and Biological Sciences Building Biology Teaching Labs	<a href="#">Dr V Anne Smith</a> -	<b>Practical P2: Computer Practical Part 2</b> <small>2023-4_BL4285_P2</small>

Friday 16-02-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	Other O9: <b>Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_09</small>
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## Semester 2: Week 6

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 20-02-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	Other O10: <b>Student-led Discussion (Student-Chosen Papers)</b> <small>2023-4_BL4285_010</small>

## Spring Break: 26-Feb-2024 to 01-Mar-2024

## Semester 2: Week 7

DATE & TIME	VENUE	STAFF	EVENT
Tuesday 05-03-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	Other O11: <b>Field Project Presentations</b> <small>2023-4_BL4285_011</small>
Friday 08-03-2024 12:00 to 13:00	Dyers Brae Seminar Room	<a href="#">Dr V Anne Smith</a> -	Other O12: <b>Field Project Presentations if needed, or End-of-Module Prizes/Discussion</b> <small>2023-4_BL4285_012</small>

# BL4285: Reading List

[BL4285Click for BL4285 reading list](#)

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## BL4285: Assessment

Coursework = 100%

[BL4285View coursework assessment details for BL4285 \(2023/4\) in MMS](#)

The following related information applies to all Biology modules:

School of Biology Marking Criteria:	See <a href="#">JH booklet info (st-andrews.ac.uk)</a>
Late submission of continuous assessment work:	All late submissions of coursework that do not require electronic submission should be made via the Biology Teaching Office, Level 2, BMS Building, North Haugh.
Exam details:	See School of Biology UG Handbook <a href="#">JH booklet info (st-andrews.ac.uk)</a> : All Biology exams will be conducted online for 2022-23.
Exam timetable:	See <a href="#">Timetables - Exams - University of St Andrews (st-andrews.ac.uk)</a>
Expected attendance:	See <a href="#">JH booklet info (st-andrews.ac.uk)</a> for detailed attendance requirements.
Good Academic Practice & Avoiding Academic Misconduct:	See <a href="#">JH booklet info (st-andrews.ac.uk)</a>
University Student Handbook:	<a href="#">University Student Handbook</a>
School and University regulations in the School and University Undergraduate Handbook relating to absence reporting, penalties and rules for late submission of work, extensions for coursework, return of coursework, S-coding, good academic practice and Academic Alerts.:	<a href="#">JH booklet info (st-andrews.ac.uk)</a> <a href="#">University Student Handbook</a>

## Who to ask

(Information in this section applies to all Biology Modules)

**Before contacting staff**, students should check the content of the Biology Undergraduate Handbook, the module handbook and specific task instructions.

### Questions about

General teaching matters  
Rescheduled or cancelled events  
Lecture or practical content  
Completing assessed practical assignments  
Completing assessments  
Marking on continuous assessment  
Marking on exams  
Rearranging practical days  
Absence and/or extensions  
Difficulties with academic progress which impact more than one module:  
Overall performance, progress or future directions:  
Disability:  
For advice and support on any issue e.g. academic, financial, international, personal or health matters, or if you are unsure of who to go to for help:

### University assistance with urgent matters out of office hours:

### Contact

Biology Teaching Office ( [bioteach@st-andrews.ac.uk](mailto:bioteach@st-andrews.ac.uk) )  
Check your University email  
The lecturer who presented the material  
The lecturer who set the assignment  
Module Organiser ( [Dr V Anne Smith vas1@st-andrews.ac.uk](mailto:Dr V Anne Smith vas1@st-andrews.ac.uk) )  
The Demonstrator or Module Organiser ( [Dr V Anne Smith vas1@st-andrews.ac.uk](mailto:Dr V Anne Smith vas1@st-andrews.ac.uk) )  
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Module Organiser ( [Dr V Anne Smith vas1@st-andrews.ac.uk](mailto:Dr V Anne Smith vas1@st-andrews.ac.uk) ) **and** the Biology Teaching Office ( [bioteach@st-andrews.ac.uk](mailto:bioteach@st-andrews.ac.uk) )  
Year Coordinator  
See School of Biology UG Handbook for list: [JH booklet info \(st-andrews.ac.uk\)](http://www.st-andrews.ac.uk/jh-booklet-info)  
Advisor of Studies  
Disability Coordinator ( [biodisabilities@st-andrews.ac.uk](mailto:biodisabilities@st-andrews.ac.uk) )  
Advice & Support Centre  
Address: 79 North Street, St Andrews  
Email: [theasc@st-andrews.ac.uk](mailto:theasc@st-andrews.ac.uk)  
Web: <https://www.standrews.ac.uk/ask-a-question/>  
Tel: 01334 462020  
Tel: 01334 476161  
Web: <https://www.st-andrews.ac.uk/students/advice/counselling/incrisis/>

## Biology Teaching Office:

We are happy to hear from you about teaching matters. The School of Biology Teaching Office is open Monday to Friday 09.00 - 13.00 and 14.00 - 17.00. School of Biology staff will respond to your emails during these hours. Our team will provide a response to you within three working days.

Biology Teaching Office (Level 2), University of St Andrews, Biomolecular Sciences Building, North Haugh, St Andrews, Fife KY16 9ST

Email: [bioteach@st-andrews.ac.uk](mailto:bioteach@st-andrews.ac.uk)

Tel: 01334 46 3602 or 3566

## BL4285: Contributing Staff

[Dr V Anne Smith](#)  
(Module Organiser)

Senior Lecturer

[vas1@st-andrews.ac.uk](mailto:vas1@st-andrews.ac.uk)

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(Module Organiser)

Senior Lecturer

[vas1@st-andrews.ac.uk](mailto:vas1@st-andrews.ac.uk)

## **BL4285: Learning Outcomes**

Students completing module BL4285 successfully should be able to:

- Identify properties of complex systems
- Assess whether and how a system of animal behaviour represents a complex system
- Understand complexity-based methods of studying animal behaviour
- Design experiments using complexity-based methods of studying animal behaviour
- Search and critique primary literature



# **BL4285: Acquired Skills**

## **Practical Skills**

### **Transferable Skills**

- Group discussion - leading
- Group discussion - participating
- Journal club
- Short individual presentation on project idea (up to 15 min)
- "Short" practical write-up (e.g. completed worksheet)
- "Think piece"
- Handout (for presentation or poster)
- Critically evaluating sources/information
- Finding literature
- Computer programming
- Critiquing experimental design
- Designing experiments

# Policies

(Information in this section applies to all Biology Modules)

- The procedures and regulations followed by the School of Biology are outlined in the [University Handbook](#) and in the School of Biology UG handbook [JH booklet info \(st-andrews.ac.uk\)](#)
- All coursework associated with the module must be completed and submitted by its due date.
- Specific School regulations relating to absence reporting, penalties and rules for late submission of work, extensions for coursework, return of coursework, S-coding, Good Academic Practice and Academic Alert are stated in the School of Biology UG handbook [JH booklet info \(st-andrews.ac.uk\)](#) and students are required to carefully read these regulations.
- Students are also referred to the University Handbook, available at: <http://www.st-andrews.ac.uk/studenthandbook/>