

BL4222 Metabolic and Clinical Biochemistry

(BL4222 online module handbook version 64)

Credits: 15

Semester: 1

Module Organiser

Dr Michela Cerone

mc319@st-andrews.ac.uk

Pre-requisite Modules:

Permission of Biology

Honours Adviser required

Anti-requisite Modules:

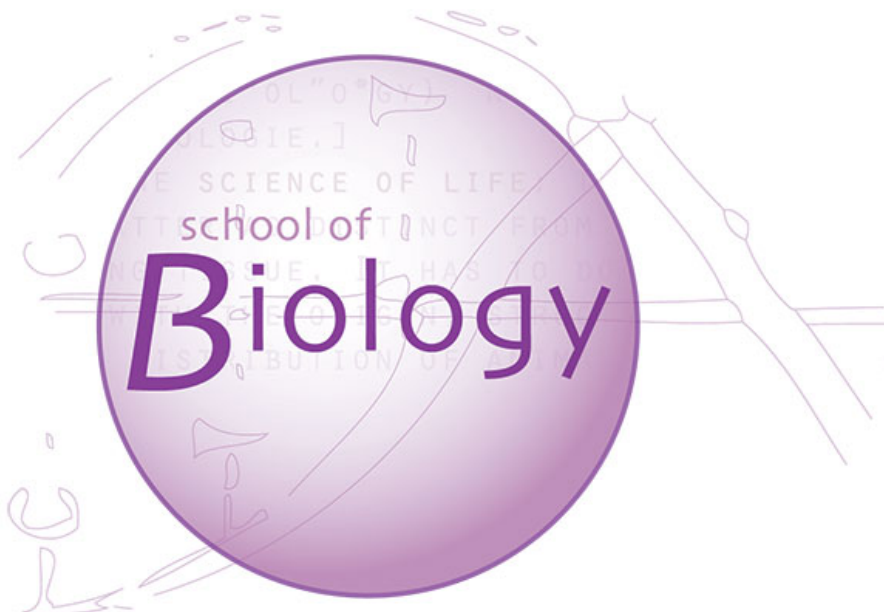
Post-requisite Modules:

Additional Module

Information:

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

This module extends the students' knowledge of human metabolism and applies it to pathologies. The syllabus includes: a study of the integration of whole body metabolic processes, discussion of the role of biochemistry in investigating and monitoring human disease, the methods of diagnosing and treating some common diseases. Topics will cover integration of whole body metabolism, starvation processes, diabetes, metabolic variability, inborn errors of metabolism, endocrinology, homeostasis, plasma protein metabolism, muscle and hepatic metabolism, drug disposition and metabolism, and defects in glucose and lipid metabolism.



[BL4222View content for BL4222 \(2023/4\) in the Module Management System \(MMS\)](#)

[View the current Biology Online Module Catalogue for BL4222](#)

[BL4222View BL4222 \(2023/4\) in the University of St Andrews Module Catalogue](#)

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BL4222: Timetable

Legend (not all modules have every event type):

lecture	tutorial	workshop	practical	other
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Semester 1: Week 1

DATE & TIME	VENUE	STAFF	EVENT
Monday 11-09-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrAngelaBallantyne -	Workshop W1: The Role of the Clinical Biochemist 2023-4_BL4222_W1
Monday 11-09-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrAngelaBallantyne -	Workshop W2: Gonadal Axis Part 1 2023-4_BL4222_W2

Semester 1: Week 2

DATE & TIME	VENUE	STAFF	EVENT
Monday 18-09-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrHeatherHolmes -	Workshop W3: Renal Part 1 2023-4_BL4222_W3 Please ensure you watch this recoding before the cases session in Week 4
Monday 18-09-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrJoyJohnstone -	Workshop W4: Calcium Part 1 2023-4_BL4222_W4

Semester 1: Week 3

DATE & TIME	VENUE	STAFF	EVENT
Monday 25-09-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrJoyJohnstone -	Workshop W5: Calcium Part 2 2023-4_BL4222_W5
Monday 25-09-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrHeatherHolmes -	Workshop W6: Renal Part 2 2023-4_BL4222_W6

Semester 1: Week 4

DATE & TIME	VENUE	STAFF	EVENT
Monday 02-10-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	ProfPeterWilliamson -	Workshop W7: Iron Metabolism 2023-4_BL4222_W7
Monday 02-10-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrAngelaBallantyne -	Workshop W8: Gonadal Axis Part 2 2023-4_BL4222_W8

Semester 1: Week 5

DATE & TIME	VENUE	STAFF	EVENT
Monday 09-10-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrAngelaBallantyne -	Workshop W9: CSF Biochemistry 2023-4_BL4222_W9
Monday 09-10-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrJoyJohnstone -	Workshop W10: Paediatrics and IEM Part 1 2023-4_BL4222_W10
Friday 13-10-2023 11:55 to 12:00	Online Online via MMS	-	Other O1: ESSAYS ARE DUE VIA MMS 2023-4_BL4222_O1

Semester 1: Week 7

DATE & TIME	VENUE	STAFF	EVENT
Monday 23-10-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrJoyJohnstone -	Workshop W11: Paediatrics and IEM Part 2 2023-4_BL4222_W11

Monday 23-10-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrHeatherHolmes -	Workshop W12: Cancer and Tumour Markers Part 1 2023-4_BL4222_W12
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Semester 1: Week 8

DATE & TIME	VENUE	STAFF	EVENT
Monday 30-10-2023 09:00 to 10:00	Mathematical Institute MAT 3B Tutorial Room	DrHeatherHolmes -	Workshop W13: Cancer and Tumour Markers Part 2 2023-4_BL4222_W13
Monday 30-10-2023 10:00 to 11:00	Mathematical Institute MAT 3B Tutorial Room	DrJoyJohnstone -	Workshop W14: Diabetes Part 1 2023-4_BL4222_W14

Semester 1: Week 9

DATE & TIME	VENUE	STAFF	EVENT
Monday 06-11-2023 09:00 to 10:00	Mathematical Institute MAT 3B Seminar room	DrJoyJohnstone -	Workshop W15: Diabetes Part 2 2023-4_BL4222_W15
Monday 06-11-2023 10:00 to 11:00	Mathematical Institute Mat 3B Tutorial Room	DrAngelaBallantyne -	Workshop W16: Case in Toxicology 2023-4_BL4222_W16

Semester 1: Week 10

DATE & TIME	VENUE	STAFF	EVENT
Monday 13-11-2023 09:00 to 11:00	Other NOT A PHYSICAL CLASS	Dr Michela Cerone -	Other O2: Preparation for Case Presentations 2023-4_BL4222_O2 There are no classes this week - please devote this time to preparing your case presentation.
Friday 17-11-2023 09:00 to 11:00	Medical and Biological Sciences Building MBS Seminar Room	DrJohnChalmers -	Workshop W17: Clinical Endocrinology 2023-4_BL4222_W17

Semester 1: Week 11

DATE & TIME	VENUE	STAFF	EVENT
Monday 20-11-2023 14:00 to 17:00	Biomolecular Sciences Building BMS Seminar Room	Dr Michela Cerone -	Other O3: Student Case Presentations 2023-4_BL4222_O3 Attendance recommended for all students - see Moodle for details.
Tuesday 21-11-2023 10:00 to 13:00	Purdie Building Purdie 314 Seminar Room	Dr Michela Cerone -	Other O4: Student Case Presentations 2023-4_BL4222_O4 Attendance recommended for all students - see Moodle for details.
Thursday 23-11-2023 13:00 to 17:00	Medical and Biological Sciences Building MBS Seminar Room	Dr Michela Cerone -	Other O5: Student Case Presentations 2023-4_BL4222_O5 Attendance recommended for all students - see Moodle for details.

BL4222: Reading List

[BL4222Click for BL4222 reading list](#)

BL4222: Assessment

1.5-hour Written Examination = 30%, Coursework = 70%

[BL4222View coursework assessment details for BL4222 \(2023/4\) in MMS](#)

The following related information applies to all Biology modules:

School of Biology Marking Criteria:	See JH booklet info (st-andrews.ac.uk)
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 JH booklet info (st-andrews.ac.uk) : All Biology exams will be conducted online for 2022-23.
Exam timetable:	See Timetables - Exams - University of St Andrews (st-andrews.ac.uk)
Expected attendance:	See JH booklet info (st-andrews.ac.uk) for detailed attendance requirements.
Good Academic Practice & Avoiding Academic Misconduct:	See JH booklet info (st-andrews.ac.uk)
University Student Handbook:	University Student Handbook
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.:	JH booklet info (st-andrews.ac.uk) University Student Handbook

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)
Check your University email
The lecturer who presented the material
The lecturer who set the assignment
Module Organiser (Dr Michela Cerone mc319@st-andrews.ac.uk)
The Demonstrator or Module Organiser (Dr Michela Cerone mc319@st-andrews.ac.uk)
Module Organiser (Dr Michela Cerone mc319@st-andrews.ac.uk)
Module Organiser (Dr Michela Cerone mc319@st-andrews.ac.uk)
Module Organiser (Dr Michela Cerone mc319@st-andrews.ac.uk) **and** the Biology Teaching Office (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)
Advice & Support Centre
Address: 79 North Street, St Andrews
Email: 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

Tel: 01334 46 3602 or 3566

BL4222: Contributing Staff

Dr Michela Cerone
(Module Organiser)

Lecturer in Biochemistry

mc319@st-andrews.ac.uk

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(Module Organiser)

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BL4222: Learning Outcomes

Students completing module BL4222 successfully should be able to:

- Demonstrate a critical understanding of the biochemical and metabolic basis of disease.
- Evaluate the role clinical biochemistry plays in the investigation and monitoring of disease.
- Critically evaluate the specificity and sensitivity of clinical investigations.

BL4222: Acquired Skills

Practical Skills

Transferable Skills

- Group discussion - leading
- Group discussion - participating
- Short individual presentation on given topic (up to 15 min)
- Short informal presentation (using PowerPoint or not)
- Short essay (1000-2000 words)
- Finding information on the web
- Finding literature
- Referencing
- Sourcing figures/tables
- Generating questions
- Problem-solving questions
- Calculations/equations
- Data presentation
- Working in pairs/small groups

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/>