MEDI2103
Alimentary System, Nutrition and Metabolism
Session 1, Special circumstances 2021

Medicine, Health and Human Sciences Faculty level units

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Notice
As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to timetable viewer. To check detailed information on unit assessments visit your unit’s iLearn space or consult your unit convenor.
General Information

Unit convenor and teaching staff
Unit Convener
Mirjana Strkalj
mirjana.strkalj@mq.edu.au

Course Director
Cara Hildreth
cara.hildreth@mq.edu.au

Credit points
10

Prerequisites
Admission to BClinSc and (HLTH108 or ANAT1001) and (MEDI209 or MEDI219 or MEDI2200)

Corequisites

Co-badged status

Unit description
In this unit you will develop an in depth understanding of the anatomy, physiology and biochemistry of the alimentary system. You will be provided with a unique learning experience that encompasses anatomy wet laboratory sessions, simulation laboratory classes, and interactive tutorials. Gross and surface anatomy will be taught alongside gastrointestinal physiology and the major metabolic pathways (carbohydrate, protein and fatty acid metabolism). You will engage in clinical problem solving supported by relevant medical and scientific literature and discuss the ways in which scientific advances translate into clinical practice.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes
On successful completion of this unit, you will be able to:

ULO1: Describe the anatomy of the gastrointestinal system, including structural components and structural organisation of the abdominopelvic wall and viscera.
ULO2: Describe the physiology of the gastrointestinal system, including regulation of motility, secretory function and absorption.

ULO3: Describe the pathways involved in the metabolism of glucose, fatty acids and amino acids.

ULO4: Describe the hormonal mechanisms that regulate food intake and metabolism.

ULO5: Explain anatomical and physiological changes that occur in common gastrointestinal diseases.

ULO6: Discuss case studies by organising and integrating knowledge of gastrointestinal structures and functions (as well as concepts of pathophysiology) and by critically evaluating evidence from scientific and medical literature.

General Assessment Information

Student Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses. As part of developing professionalism, students are expected to attend all small group interactive sessions including tutorials. Furthermore, lectures and seminars are key learning activities that you are expected to review throughout completion of the Bachelor of Clinical Science.

Students are required to attend a minimum of 80% of all small group interactive sessions. Students that do not meet this requirement may be deemed unable to meet expectations regarding professionalism and may be referred for disciplinary action (which may include exclusion from assessments and unit failure).

Similarly, as part of developing professionalism, students are expected to submit all work by the due date. Applications for assessment task extensions must be supported by appropriate evidence and submitted via www.ask.mq.edu.au. For further details please refer to the Special Consideration Policy available at https://students.mq.edu.au/study/my-study-program/special-consideration.

Late Submission

All assignments which are officially received after the due date, and where no extension has been granted, will incur a deduction of 5% for the first day, and 5% for each subsequent day including the actual day on which the work is received up until 10 days after the due date, after which the assignment will not be accepted. Weekends and public holidays are included. For example:

<table>
<thead>
<tr>
<th>Due date</th>
<th>Received</th>
<th>Days late</th>
<th>Deduction</th>
<th>Raw mark</th>
<th>Final mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday 14th</td>
<td>Monday 17th</td>
<td>3</td>
<td>15%</td>
<td>75%</td>
<td>60%</td>
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</table>
Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy and Physiology Test</td>
<td>25%</td>
<td>No</td>
<td>Week 7</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>No</td>
<td>Scheduled per university timetable</td>
</tr>
<tr>
<td>Video Infographic</td>
<td>20%</td>
<td>No</td>
<td>Week 8</td>
</tr>
<tr>
<td>Online Quiz</td>
<td>5%</td>
<td>No</td>
<td>Week 5</td>
</tr>
</tbody>
</table>

Anatomy and Physiology Test

Assessment Type: Quiz/Test
Indicative Time on Task: 10 hours
Due: Week 7
Weighting: 25%

In class practical test assessing integrated anatomy and physiology knowledge of the alimentary system.

On successful completion you will be able to:

- Describe the anatomy of the gastrointestinal system, including structural components and structural organisation of the abdominopelvic wall and viscera.
- Describe the physiology of the gastrointestinal system, including regulation of motility, secretory function and absorption.
- Explain anatomical and physiological changes that occur in common gastrointestinal diseases.

Final Exam

Assessment Type: Examination
Indicative Time on Task: 20 hours
Due: Scheduled per university timetable
Weighting: 50%

Formal written exam using a combination of question types assessing content delivered across the session. This task is completed under examination conditions during the University examination period.

On successful completion you will be able to:

- Describe the anatomy of the gastrointestinal system, including structural components and structural organisation of the abdominopelvic wall and viscera.
• Describe the physiology of the gastrointestinal system, including regulation of motility, secretory function and absorption.
• Describe the pathways involved in the metabolism of glucose, fatty acids and amino acids.
• Describe the hormonal mechanisms that regulate food intake and metabolism.
• Explain anatomical and physiological changes that occur in common gastrointestinal diseases.
• Discuss case studies by organising and integrating knowledge of gastrointestinal structures and functions (as well as concepts of pathophysiology) and by critically evaluating evidence from scientific and medical literature.

Video Infographic
Assessment Type 1: Media presentation
Indicative Time on Task 2: 10 hours
Due: Week 8
Weighting: 20%

Creation of a three minute video that provides a newly diagnosed patient with relevant medical and scientific information about the disease.

On successful completion you will be able to:
• Describe the anatomy of the gastrointestinal system, including structural components and structural organisation of the abdominopelvic wall and viscera.
• Describe the physiology of the gastrointestinal system, including regulation of motility, secretory function and absorption.
• Describe the pathways involved in the metabolism of glucose, fatty acids and amino acids.
• Describe the hormonal mechanisms that regulate food intake and metabolism.
• Explain anatomical and physiological changes that occur in common gastrointestinal diseases.
• Discuss case studies by organising and integrating knowledge of gastrointestinal structures and functions (as well as concepts of pathophysiology) and by critically evaluating evidence from scientific and medical literature.

Online Quiz
Assessment Type 1: Quiz/Test
Indicative Time on Task 2: 2 hours
Due: Week 5
Weighting: 5%
Online quiz assessing integrated knowledge of anatomy and physiology (MCQ, problem solving questions)

On successful completion you will be able to:

- Describe the anatomy of the gastrointestinal system, including structural components and structural organisation of the abdominopelvic wall and viscera.
- Describe the physiology of the gastrointestinal system, including regulation of motility, secretory function and absorption.
- Describe the pathways involved in the metabolism of glucose, fatty acids and amino acids.
- Describe the hormonal mechanisms that regulate food intake and metabolism.
- Explain anatomical and physiological changes that occur in common gastrointestinal diseases.

1 If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Learning Skills Unit for academic skills support.

2 Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

**Delivery and Resources**

**Unit Readings**


**Unit Schedule**

Lectures 2h per week, online available Tuesday morning
Practical classes, 1.5 h in weeks 2, 3 and 6

Tutorials, 2 h per week

Please see iLearn for details!

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURES</th>
<th>TUTORIALS</th>
<th>PRACTICALS</th>
<th>TESTS AND EXAMS</th>
</tr>
</thead>
</table>
| W1   | Introduction to the unit  
1. Oral cavity and principles of mastication  
2. Structures of the neck and anatomy of the pharynx and principles of swallowing | Oral cavity, structures of the neck, Pharynx | | Formative quiz basic histology of the GI system |
| W2   | 3. Histology of the oral cavity and pharynx, anatomy and histology of the oesophagus  
Salivary glands  
4. Development of the structures of the head and neck | ANAT LAB  
Oral cavity  
Muscles of mastication and facial expression, temporal, infratemporal and pterygopalatine fossae | | Formative quiz  
Embryology of the head and neck |
| W3   | 5. General organization of the abdominal wall and cavity, peritoneum  
6. Stomach and small intestine | ANATOMY LAB  
Abdominal wall, peritoneum and abdominal viscera, simulation (regions of the abdomen)  
surface anatomy, palpation, bowel movement | | |
| W4   | 7. Accessory digestive organs (liver, gall bladder and pancreas)  
8. Gastrointestinal secretion | TUTORIAL  
Structure and function of the accessory digestive organs  
Gastrointestinal secretion | | Formative quiz  
Structure and function of the accessory digestive organs |
| W5   | 9. Large intestine  
10. Gastrointestinal absorption | Anatomy of the large intestine and GI absorption | | Online quiz 5%  
Tests topics from W1-W5 |
| W6   | 11. Physiology of the smooth muscle and regulation of GI motility  
12. Anatomy of the pelvis and general organisation of the pelvic viscera, rectum and anal canal | ANATOMY LAB  
Anatomy of the accessory digestive organs, large intestine, pelvis | | |
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<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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</table>
| W7   | 13. Embryology of the GI  
   14. Gut microbiome (online) |
|      | **In class practical test 25%** |
|      | Testing the topics covered from W1-W6 |
| W8   | 15. Common disorders of GI  
   16. Pharmacology of the GI |
|      | **Formative quiz**  
   **Common disorders of the GI** |
| W9   | 17-18. Gut Immunity  
   **Gut immunity** |
| W10  | 19. Micronutrients and Macronutrients  
   20. Carbohydrate metabolism |
|      | **Complete online module**  
   **Video assignment 20%** |
| W11  | 21. Fat metabolism  
   22. Protein metabolism |
|      | **Complete online module**  
   **Formative quiz**  
   **Metabolism practice quiz** |
| W12  | 23. Hormonal control of food intake  
   24. Obesity and starvation |
|      | **TBL**  
   **Formative quiz**  
   **Hormonal control of food intake** |
| W13  | Revision week |
|      | **Final exam as per University timetable 50%** |

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- **Academic Appeals Policy**
- **Academic Integrity Policy**
- **Academic Progression Policy**
- **Assessment Policy**
- **Fitness to Practice Procedure**
- **Grade Appeal Policy**
- **Complaint Management Procedure for Students and Members of the Public**
- **Special Consideration Policy**

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.
To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

**Student Code of Conduct**

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

**Results**

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

**Student Support**

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

**Learning Skills**

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

**Student Enquiry Service**

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

**Equity Support**

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

**IT Help**

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.
When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.