School of Medicine

MEDI351: Nutrients & Metabolism

Subject Outline
Autumn, 2016
On-Campus
Wollongong

Subject Information
Credit Points: 8
Pre-requisite(s): BIOL214 & SHS 211 OR BIOL214 & MEDI211
Co-requisite(s): Nil
Restrictions: This subject has restricted entry. Students from other specialisations must seek academic approval to enrol in this subject or may be removed from the subject. A quota may apply to this subject.
Contact Hours: 4 hrs Lecture (wks 1-10), 2 hrs Prac (wks 2, 4 & 6) and 2 seminar days (wks 12 & 13)

Subject Contacts
Subject Coordinator/Lecturer

<table>
<thead>
<tr>
<th>Name</th>
<th>A/Prof Karen Walton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Building 41, Room 226</td>
</tr>
<tr>
<td>Telephone</td>
<td>61 2 4221 5197</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:karen_walton@uow.edu.au">karen_walton@uow.edu.au</a></td>
</tr>
<tr>
<td>Consultation mode and times</td>
<td>Email for an appointment</td>
</tr>
</tbody>
</table>

Student Support and Advice
For general enquiries please contact StudentHub 41:
Location: 41.138B
Telephone: 61 2 4221 3492
Email: smah-students@uow.edu.au
Student Consultation and Communication

University staff receive many emails each day. In order to enable them to respond to your emails appropriately and in a timely fashion, students are asked to observe basic requirements of professional communication:

Please ensure that you include your full name and student number and identify your practical class or tutorial group in your email so that staff know who they are communicating with and can follow-up personally where appropriate.

Consider what the communication is about
- Is your question addressed elsewhere (e.g. in the subject outline or, on the eLearning site)?
- Is it something that is better discussed in person or by telephone? This may be the case if your query requires a lengthy response or a dialogue in order to address. If so, see consultation times above and/or schedule an appointment.
- Are you addressing your request to the most appropriate person?

Specific email subject title to enable easy identification of issue
- Identify the subject code of the subject you are enquiring about (as staff may be involved in more than one subject) put this in the email subject heading. Add a brief, specific query reference after the subject code where appropriate.

Professional courtesy
- Address the staff member appropriately by name (and formal title if you do not yet know them).
- Use full words (avoid ‘text-speak’ abbreviations), correct grammar and correct spelling.
- Be respectful and courteous.
- Allow 3 – 4 working days for a response before following up. If the matter is legitimately urgent, you may wish to try telephoning the staff member (and leaving a voicemail message if necessary) or inquiring at the School Office.
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Section A: General Information

Subject Learning Outcomes

<table>
<thead>
<tr>
<th>On successful completion of this subject, students will be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the metabolism of macronutrients and micronutrients.</td>
</tr>
<tr>
<td>2. Discuss concepts such as Nutrient Reference Values, The Australian Dietary Guidelines and diet-disease relationships.</td>
</tr>
<tr>
<td>3. Discuss the importance of nutrient quality in relation to health and disease using a case study based whole diet approach.</td>
</tr>
<tr>
<td>4. Demonstrate critical thinking skills by using appropriate databases, critically evaluating scientific literature, interpreting the levels of evidence.</td>
</tr>
<tr>
<td>5. Communicate effectively with peers on selected nutrition issues.</td>
</tr>
</tbody>
</table>

Subject Description

This subject articulates with prior subjects and integrates the nutritional knowledge with the science of biochemistry and physiology. It is a fundamental subject on which further studies in the science of nutrition can be built upon. This subject covers the need for nutrients and how the human body metabolises these nutrients. It begins with concepts such as bioavailability of nutrients from food, the Dietary Guidelines and Nutrient Reference Values (NRVs). It then focuses on macronutrients and micronutrients and utilises a case study approach to explore diet-disease relationships, and methods to obtain estimated dietary requirements within a whole of diet approach.

eLearning Space

This subject has materials and activities available via eLearning. To access eLearning you must have a UOW user account name and password, and be enrolled in the subject. eLearning is accessed via SOLS (student online services). Log on to SOLS and then click on the eLearning link in the menu column. For information regarding the eLearning spaces please use the following link: http://uowblogs.com/moodlelab/files/2013/05/Moodle_StudentGuide-1petpo7.pdf

Lecture, Tutorial, Laboratory Times

All timetable information is subject to variation. Check the latest information on the university web timetable via the Timetable link on the Current Students webpage or log into SOLS to view your personal timetable prior to attending classes. http://www.uow.edu.au/student/index.html

Timetable information can be accessed from http://www.uow.edu.au/student/timetables/info/index.html

Key University Dates can be accessed from http://www.uow.edu.au/student/dates/index.html
Readings, References and Materials

Textbooks
Nil

Prescribed Readings (includes eReadings)
The following readings are prescribed for this subject, but students are not expected to purchase these. They are available to students through the library on the subjects eLearning site.


Materials
Nil

Recommended Readings
The Moodle site has links to a number of prescribed eReadings.

Recommended readings are not intended as an exhaustive list, students should use the Library catalogue and databases to locate additional resources.

Recent Changes to this Subject
i. Two compulsory seminar days for student groups to present their reports to the class, rather than in weekly lectures. This resembles a conference format and allows greater equity in the time to prepare and present.
ii. The introduction of a peer assessment form for group members to complete and submit with their group report.

List of Topics Covered
The following are examples of the topics to be covered in this course. This is not an exhaustive list and will be subject to change.

- Concepts of nutrients and their actions
- Levels of scientific evidence for examining effects of nutrients on health
- Nutrient Reference Values - NRV/RDI/EAR/AI
- Relationship between nutrient reference standards and Australian Dietary Guidelines
- Macronutrients: Protein quality & high protein diets
- Macronutrients: Fat quality -including PUFA, MUFA & CVD background
- Macronutrients: Carbohydrates, Glycaemic Index and fibre
- Case study: the Omega-3 story
- Micronutrients: Folate, vitamins B1, B2, B3, B6 B12
- Micronutrients: Vitamins A, D, E & K
- Micronutrients: Calcium, magnesium, iron, zinc, iodine, potassium and sodium

A Timetable of Topics will be available from the eLearning site in week 1 of session.
Section B: Assessment

Assessment Summary

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Form of Assessment</th>
<th>Due Date</th>
<th>Return/Feedback Due Dates</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>Research Paper Critique</td>
<td>Wk 4 Tutorial</td>
<td>Wk 6 Tutorial</td>
<td>10%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Mid-Session Exam</td>
<td>Thursday 7(^{th}) April 2.30-3.30pm</td>
<td>Thursday 14(^{th}) April</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Major Assignment (Narrative Review) and Presentation</td>
<td>Seminar Days: Friday 27(^{th}) May or 3(^{rd}) June (depending on group allocation)</td>
<td>The end of exam week 1</td>
<td>30%</td>
</tr>
<tr>
<td>Assessment 4</td>
<td>Final Exam</td>
<td>UOW Exam Period</td>
<td>After declaration of marks</td>
<td>40%</td>
</tr>
</tbody>
</table>

Total Marks 100%

Details of Assessment Tasks

Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.

**Assessment 1**
- Research Paper Critique
- Due date: Week 4 tutorial classes
- Weighting: 10%
- Submission: Presentation and discussion (in pairs) in the Week 4 tutorial classes
- Type of Collaboration: Group Assessment (In pairs)
- Length: 10 minute presentation and 3 mins questions/discussion

**Details**
- **Topic:** Critical review of an allocated journal article and journal club presentation to tutorial class
- **Task:** Pairs will be allocated one of 5 journal articles by the tutor in the Week 2 tutorial class.
  1. Critically appraise the allocated journal article using the quality framework provided in the Week 2 tutorial class, and on the eLearning site.
  2. Prepare a PowerPoint presentation (template is available via the eLearning site) that summarises your review for the class.
  3. Email your PowerPoint slides to the tutor by 8am on the day of your Week 4 tutorial, and bring a copy on a USB.
  Present your journal club presentation to class in up to 10 minutes and respond to class questions (3 mins).

**Style and format:** Class presentation and response to questions

**Subject Learning Outcomes:** 4, 5

**Marking Criteria:** The marking criteria will be made available on your eLearning site by week 1 of session.
### Assessment 2

**Mid-Session Exam**

<table>
<thead>
<tr>
<th>Due date</th>
<th>Thursday 7th April, 2.30-3.30pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>20%</td>
</tr>
<tr>
<td>Submission</td>
<td>Exam papers must be submitted at the conclusion of the exam.</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Details</td>
<td>30 multiple choice questions each worth 1 mark, with overall weighting 20% of final mark. The mid-session examination will include material covered in the lectures (weeks 1-5)</td>
</tr>
<tr>
<td>Style and format</td>
<td>2B pencil needed.</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1-5</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>30 multiple choice questions each worth 1 mark, with overall weighting 20% of final mark. Assessment 2 will be marked by the computer.</td>
</tr>
</tbody>
</table>

### Assessment 3

**Major Assignment (Narrative Review) and Presentation**

<table>
<thead>
<tr>
<th>Due date</th>
<th>Friday 27th May or Friday 3rd June (depending on your group allocation and topic). Final topic and group allocations will be decided by wk 4 of session.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>30%</td>
</tr>
<tr>
<td>Submission</td>
<td>Email an electronic copy of your presentation to the Subject Coordinator by 4pm on the Thursday before your Friday presentation, and bring a copy on a USB. Bring a hard copy of your group assignment to the presentation with a cover sheet attached.</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Group assessment (4 people)</td>
</tr>
<tr>
<td>Length</td>
<td>10 pages (excluding references, tables and figures) &amp; 15 min presentation/4 min question time</td>
</tr>
<tr>
<td>Details</td>
<td>Submit a hardcopy of your written assignment in class.</td>
</tr>
<tr>
<td>Style and format</td>
<td>Group presentation and report</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1-5</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>The marking criteria will be made available on your eLearning site by week 1 of session.</td>
</tr>
</tbody>
</table>

### Assessment 4

**Final Examination**

<table>
<thead>
<tr>
<th>Due date</th>
<th>During UOW Exam Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>40%</td>
</tr>
<tr>
<td>Submission</td>
<td>Exam papers and answers must be submitted at the conclusion of the exam.</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>Multiple choice questions and an short answer questions</td>
</tr>
<tr>
<td>Details</td>
<td>30 multiple choice questions and 10 short answer questions</td>
</tr>
<tr>
<td>Style and format</td>
<td>Final exam</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1-5</td>
</tr>
</tbody>
</table>
Minimum Requirements for a Pass in this Subject
To receive a clear pass in this subject a total mark of 50% or more must be achieved. In addition, failure to meet any of the minimum performance requirements is grounds for awarding a Technical Fail (TF) in the subject, even where total marks accumulated are greater than 50%.

The minimum performance requirements for this subject are:

- attempt all assessment tasks
- achieve at least 45% in the final examination
- meet the minimum participation requirements set out below.

Minimum Student Attendance and Participation
It is expected that students will allocate 16 hours per week to this subject, including any required class attendance, completion of prescribed readings and assessment tasks.

Student attendance at tutorials and seminars is compulsory and students must attend at least 100% of classes. Absences will require the submission of an application for Academic Consideration via SOLS and the presentation of suitable documentation, for example a Medical Certificate, to Student Central as soon as practical. For further details about applying for academic consideration visit the Student Central webpage: http://www.uow.edu.au/student/central/academicconsideration/index.html

Scaling
Scaling will not occur in this subject.

Late Submission
Late submission of an assessment task without an approved extension of the deadline is not acceptable. If you are unable to submit an assessment due to extenuating circumstances (e.g. medical grounds or compassionate grounds), you can make an application of academic consideration. Not all circumstances qualify for academic consideration. For further details about applying for academic consideration visit the Student Central webpage: http://www.uow.edu.au/student/central/academicconsideration/index.html

Late Submission Penalty
Marks will be deducted for late submission at the rate of 5% of the total possible marks for that particular assessment task per day. This means that if a piece of work is marked out of 100, then the late penalty will be 5 marks per day (5% of 100 possible marks per day). The formula for calculating the late penalty is: the total possible marks x 0.05 x number of days late. For the purposes of this policy a weekend (Saturday and Sunday) will be regarded as two days.

For example:

- Student A submits an assessment which is marked out of 100. The assessment is submitted 7 days late. This means that a late penalty of 35 marks will apply (100 x 0.05 x 7). The assessment is marked as per normal out of 100 and is given a mark of 85/100, and then the late penalty is applied. The result is that the student receives a final mark of 50/100 for the assessment (85 (original mark) – 35 marks (late penalty) = 50/100 (final mark)).
- Student B submits a report which is marked out of 20. The report is submitted three days late. This means that a late penalty of 3 marks will apply ((20 x 0.05 x 3). The report is marked as per normal out of 20 and is given a mark of 17/20, and then the late penalty is applied. The result is that the student receives a final mark of 14/20 for the report (17 (original mark) – 3 marks (late penalty) = 14/20 (final mark)).

No marks will be awarded for work submitted either after the assessment has been returned to the
students or more than two weeks after the due date, whichever is the sooner. This does not apply to situations where a particular assessment task is undertaken by students at different times throughout the session, but where the assessment is based on experiments or case studies specific to a student. In this case no marks will be awarded for work submitted more than two weeks after the due date.

Notwithstanding this, students must complete all assessment tasks to a satisfactory standard and submit them, regardless of lateness or loss of marks, where submission is a condition of satisfactorily completing the subject.

Supplementary Assessments
Supplementary assessment may be offered to students whose performance in this subject is close to that required to pass the subject, and are otherwise identified as meriting an offer of a supplementary assessment. The precise form of supplementary assessment will be determined at the time the offer of a supplementary assessment is made.

Students can log on to SOLS and click on the link titled “Supplementary Assessment” to view any applicable offers or use the following link; http://www.uow.edu.au/student/exams/suppassess/index.html

System of Referencing Used for Written Work
The Author-Date (Harvard) referencing system should, unless otherwise specified for a particular assessment (check Details of Assessment Tasks), be utilised. A summary of the Harvard system can be accessed on the Library website at: http://public01.library.uow.edu.au/refcite/style-guides/html/

Use of Internet Sources
Students are able to use the Internet to access the most current information on relevant topics and information. Internet sources should only be used after careful critical analysis of the currency of the information, the role and standing of the sponsoring institution, reputation and credentials of the author, the clarity of the information and the extent to which the information can be supported or ratified by other authoritative sources.

Plagiarism
The full policy on Academic Integrity and Plagiarism is found in the Policy Directory on the UOW website.

"The University’s Academic Integrity and Plagiarism Policy, Faculty Handbooks and subject guides clearly set out the University’s expectation that students submit only their own original work for assessment and avoid plagiarising the work of others or cheating. Re-using any of your own work (either in part or in full) which you have submitted previously for assessment is not permitted without appropriate acknowledgement. Plagiarism can be detected and has led to students being expelled from the University.

The use by students of any website that provides access to essays or other assessment items (sometimes marketed as ‘resources’), is extremely unwise. Students who provide an assessment item (or provide access to an assessment item) to others, either directly or indirectly (for example by uploading an assessment item to a website) are considered by the university to be intentionally or recklessly helping other students to cheat. This is considered academic misconduct and students place themselves at risk of being expelled from the University."
Submission of Assessments
Refer to the submission requirements under the details of the individual assessments. Students should ensure that they receive a receipt acknowledging submission. Students will be required to produce this in the event that an assessment task is considered to be lost. Students are also expected to keep a copy of all their submitted assessments in the event that re-submission is required.

Assessment Return
Students will be notified when they can collect or view their marked assessment. In accordance with University Policy marked assessments will usually only be held for 21 days after the declaration of marks for that assessment.
Section C: General Advice

Students should refer to the Faculty of Science, Medicine and Health website for information on policies, learning and support services and other general advice.

University Policies

Students should be familiar with the following University policies:

a. Code of Practice – Teaching and Assessment  

b. Student Charter  

c. Code of Practice – Student Professional Experience  

d. Academic Integrity and Plagiarism Policy  

e. Student Academic Consideration Policy  

f. Course Progress Policy  

g. Graduate Qualities Policy  

h. Academic Complaints Policy (Coursework and Honours Students)  

i. Policy and Guidelines on Non-Discriminatory Language Practice and Presentation  

j. Workplace Health and Safety  

k. Intellectual Property Policy  

l. Human Research Ethics Guidelines  

Student Support Services and Facilities

Students can access information on student support services and facilities at the following link. This includes information on “Academic Support”, “Starting at University”, “Help at University” as well as information and support on “Career’s and Jobs”.  

Student Etiquette

Guidelines on the use of email to contact teaching staff, mobile phone use in class and information on the university guide to eLearning ‘Netiquette’ can be found at  
## Version Control Table

<table>
<thead>
<tr>
<th>Version Control</th>
<th>Release Date</th>
<th>Author/Reviewer</th>
<th>Approved By</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20151209</td>
<td>A/Prof Karen Walton – Subject Coordinator</td>
<td>Sonia Losinno – ADE Nominee</td>
<td>FINAL MEDI351 Autumn 2016 Subject Outline</td>
</tr>
</tbody>
</table>