School of Medicine

MEDI321: Advanced Exercise Physiology

Subject Outline
Autumn, 2017
On-Campus
Wollongong

Subject Information
Credit Points: 8
Pre-requisite(s): MEDI221
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
Contact Hours: 1 x 2 hr Lecture; 4 x 3 hr Laboratories (run in 3 week cycles)

Subject Contacts

Subject Coordinator/Lecturer for weeks 1-7
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Location: Building 41, Room 311
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Consultation mode and times: Office hours: Wednesday 10:30 to 12:30 or contact by email

Subject Coordinator/Lecturer for weeks recess-13
Name: Ms Heather Bowes
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Email: hbowes@uow.edu.au
Consultation mode and times: Office hours: Wednesday 10:30 to 12:30

Technical Officer
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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
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Section A: General Information

Subject Learning Outcomes

On successful completion of this subject, students will be able to:

1. Demonstrate an understanding of the influence of genetics in the expression of physical power, either directly, or via its influence upon other physiological functions
2. Identify the links within the oxygen transport chain, and discuss the action and interaction of these links in relation to the cause(s) of maximal exercise limits
3. Differentiate between the anatomical and physiological characteristics of men and women, as they relate to exercise
4. Describe the role of exercise on menstrual function
5. Demonstrate an understanding of the anatomical and physiological changes associated with the process of menopause
6. Interpret ageing data presented in standard formats: e.g. survival curves and age-specific mortality rates
7. Differentiate between primary and secondary ageing processes, and provide examples of each
8. Demonstrate an understanding of the primary biological changes associated with the ageing process paying specific attention to: energy metabolism, maximal aerobic power and cardiovascular, respiratory and skeletal muscle function
9. Demonstrate an understanding of the role deep body temperature change in the heat adaptation process
10. Understand the general process of human heat acclimation in terms of sudomotor and vasomotor function
11. Describe the effects of exercising in hypoxic environments and adaptations to altitude training

Subject Description

This subject is designed to serve those with a specific undergraduate focus in human exercise physiology, and for those wishing to undertake postgraduate studies in exercise physiology, or within areas for which such knowledge is considered to be a pre-requisite. Most physiology subjects within the School of Medicine deal with human function in relatively unstressed states. Yet, from an evolutionary perspective, man evolved as a being preoccupied with outdoor, physical activity. While we now are engaged in a more sedentary lifestyle, exercise still provides a stimulus that pushes physiological function to extreme levels, providing a unique window through which the impact of stress upon human function may be explored. Therefore, an examination of physiological functions during rest and exercise across a wide range of environmental conditions, and of how these functions may adapt through repeated exposures, forms an integral part of a sound physiology curriculum. The aim of this subject is to develop an understanding of physiological function under stress, across both age and health spectra. As such, this subject may well be described as Stress or Work Physiology. While the majority of the content will focus upon the average person (male and female), subject matter will cover both ends of the health spectrum (from disease states to the elite performer), several age groups (adolescent, adult, menopausal and the elderly), and the transition stages between these groups. The two Exercise Physiology subjects aim at providing both descriptions and explanations of functional changes accompanying both acute and chronic physical activity, often undertaken under extreme environmental states.

Readings, References and Materials

Textbooks

The following text(s) will need to be purchased by students enrolled in this class.

Prescribed Readings (includes eReadings)
Each laboratory activity has essential reading. This material is available via Moodle.
Lecture notes will also be made available (in advance) via Moodle.
The eReadings for this subject are designed to support laboratory and lecture content and these are available through the Library website.

Materials
Nil

Recommended Readings
The following references complement the prescribed readings and textbooks:

- Ashcroft. Life at the extremes: the science of survival.
- Golden and Tipton. Essentials of sea survival.
- Kamler. Surviving the extremes: a doctor’s journey to the limits of human endurance.
- Nunn, J.F. Nunn's applied respiratory physiology.
- Pandolf et al. Human performance and environmental medicine at terrestrial extremes.
- Rippe. Lifestyle Medicine.
- Plowman and Smith. Exercise physiology for health, fitness and performance.
- West, J.B. Respiratory physiology - the essentials.
- Wilmore and Costill. Physiology of sport and exercise.
- Wells, C. Women, sport and performance.

Recent Changes to this Subject
Nil
## List of Topics Covered

The following topics will be covered in this subject.

<table>
<thead>
<tr>
<th>Wk</th>
<th>Date</th>
<th>Lecture 1</th>
<th>Lecture 2</th>
<th>Lecturer</th>
<th>Assessment</th>
<th>Laboratory</th>
<th>Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27/2/16</td>
<td>Limits to exercise</td>
<td>Limits to exercise</td>
<td>EGT</td>
<td></td>
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<td>6/3/16</td>
<td>Limits to exercise</td>
<td>Limits to exercise</td>
<td>EGT</td>
<td>Maximal exercise</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<td>Limits to exercise</td>
<td>Women and exercise</td>
<td>EGT</td>
<td>Maximal exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>20/3/16</td>
<td>Women and exercise</td>
<td>Women and exercise</td>
<td>EGT</td>
<td>Maximal exercise</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>27/3/16</td>
<td>Women and exercise</td>
<td>Women and exercise</td>
<td>EGT</td>
<td>Efficiency</td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td>3/4/16</td>
<td>Age and exercise</td>
<td>Age and exercise</td>
<td>EGT</td>
<td>Efficiency</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10/4/16</td>
<td>Age and exercise</td>
<td>Age and exercise</td>
<td>EGT</td>
<td>Seminar written report due</td>
<td>Efficiency</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>17/4/16</td>
<td>Recess</td>
<td>Recess</td>
<td>Recess</td>
<td>Recess</td>
<td>Recess</td>
<td>Recess</td>
</tr>
<tr>
<td>9</td>
<td>24/4/16</td>
<td>Heat adaptation</td>
<td>Mid-semester exam</td>
<td>HMB</td>
<td>Exam</td>
<td>Cold immersion</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1/5/16</td>
<td>Heat adaptation</td>
<td>Heat adaptation</td>
<td>HMB</td>
<td>Cold immersion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>8/5/16</td>
<td>Altitude adaptation</td>
<td>Altitude adaptation</td>
<td>HMB</td>
<td>Cold immersion</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>15/5/16</td>
<td>Seminar 1</td>
<td>Seminar 2</td>
<td>EGT/HMB</td>
<td>Seminar presentations</td>
<td>Altitude simulation</td>
<td>yes</td>
</tr>
<tr>
<td>13</td>
<td>22/5/16</td>
<td>Seminar 3</td>
<td>Seminar 4</td>
<td>EGT/HMB</td>
<td>Seminar presentations</td>
<td>Altitude simulation</td>
<td>yes</td>
</tr>
<tr>
<td>14</td>
<td>29/5/16</td>
<td>Seminar 5</td>
<td>Seminar 6</td>
<td>EGT/HMB</td>
<td>Seminar presentations</td>
<td>Altitude simulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5/6/16</td>
<td>Study recess</td>
<td>Study Recess</td>
<td>EGT/HMB</td>
<td>Lab reports</td>
<td>Oral exam</td>
<td></td>
</tr>
</tbody>
</table>
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 Date</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>Mid-Session Exam</td>
<td>26/4/17</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Written Report: Group Seminar</td>
<td>12/4/17</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Oral Presentation: Group Seminar</td>
<td>Weeks 11, 12, 13</td>
<td>TBA</td>
<td>5%</td>
</tr>
<tr>
<td>Assessment 4</td>
<td>Laboratory Report(s)</td>
<td>31/5/17</td>
<td>TBA</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 5</td>
<td>Seminar group peer assessment</td>
<td>Weeks 11, 12, 13</td>
<td>TBA</td>
<td>5%</td>
</tr>
<tr>
<td>Assessment 6</td>
<td>Final Oral Exam</td>
<td>7/6/17-8/6/17</td>
<td>TBA</td>
<td>30%</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 via MOODLE

Assessment 1
Mid-Session Exam
Due Date 26/4/17
Weighting 20%
Submission Examinations papers and answers must be submitted at the conclusion of the examination
Type of Collaboration Individual Assessment
Length 50 minutes
Details Multiple choice examination
Style and format Multiple choice
Learning Outcomes 1-8
Marking Criteria Negative grading will not be used

Assessment 2
Written Report: Group Seminar
Due Date 12/4/17
Weighting 20%
Submission These must be handed personally to the subject co-ordinator
Type of Collaboration Group Project
Length 5,000 words, double spaced, typed pages plus references
Details Each group will hand in two type-written reports (at the same time). One will be a one-page summary, whilst the other is a 5,000 word report (plus references)
Style and format As described in lectures
Learning Outcomes 1-5 and 8-10
Marking Criteria Clarity of writing, logical flow and structuring of ideas, knowledge of subject matter within the topic. Ability to develop clear and well-supported arguments and discussion from the primary data and other published materials. Quality and breadth of supporting publications.
### Assessment 3

**Oral Presentation: Group Seminar**

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Weeks 11, 12, 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>5%</td>
</tr>
<tr>
<td>Submission</td>
<td>Oral Presentation</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Group Project</td>
</tr>
<tr>
<td>Length</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Details</td>
<td>Each group member must present a portion of the seminar. How that is structured is determined by the group</td>
</tr>
<tr>
<td>Style and format</td>
<td>Power point or other visual presentation</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>1-5 and 8-10</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Ability to communicate critical concepts from the oral report and to answer questions relating to that material. The quality of the presentation materials (e.g: power point, charts, visual media).</td>
</tr>
</tbody>
</table>

### Assessment 4

**Laboratory Reports**

<table>
<thead>
<tr>
<th>Due Date</th>
<th>31/5/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>20%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit a hardcopy to the StudentHub 41</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>Determined by the data and the designated questions</td>
</tr>
<tr>
<td>Details</td>
<td>Two lab reports will be submitted and one will be marked</td>
</tr>
<tr>
<td>Style and format</td>
<td>As prescribed within the laboratory manual</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>1-11</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Clarity and correctness of interpretation of answers to designated questions, use and understanding of relevant scientific literature, and clarity of graphs and figures</td>
</tr>
</tbody>
</table>

### Assessment 5

**Peer review of seminar group**

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Weeks 11, 12, 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>5%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit hard copy to Student Hub 41</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Details</td>
<td>Students are to assess the contribution of each group member in planning and developing their seminar topic. Hand in the peer assessment at the end of the session in which you present your seminar.</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>N/A</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>50% of the mark will be associated with your honest and fair assessment of your peers’ contribution to the assignment and the other 50% of the mark will be an average of the marks given to you by the rest of the group</td>
</tr>
</tbody>
</table>

### Assessment 6

**Final Oral Exam**

<table>
<thead>
<tr>
<th>Due Date</th>
<th>7/6/17-8/6/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>30%</td>
</tr>
<tr>
<td>Submission</td>
<td>N/A</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment, but performed in pairs</td>
</tr>
<tr>
<td>Length</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Details</td>
<td>Within the study recess (Friday), a 15-min oral examination will occur. Two academic staff members will administer this examination simultaneously, which will be conducted in pairs</td>
</tr>
<tr>
<td>Style and format</td>
<td>Oral Examination</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>1-10</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Clarity and understanding displayed when responding to questions</td>
</tr>
</tbody>
</table>
Details of Assessment Tasks

Seminars
Seminars assignments must be given to the subject co-ordinator in person. DO NOT submit these reports to StudentHub 41. Students form groups of 3-5 people and each group will select a seminar topic from the list provided below. Topics will be allocated on a "first come, first served" basis. Students will sign up for their seminar on the timetable outside of the coordinators' office (Room 311, Building 41) in the first week of term. No more than two groups may present any one seminar topic. The seminar topics are designed to complement the lecture material and will form part of the final oral assessment. This is a group project and as such grades will apply to all members of the group. The peer assessment will give each member an opportunity to formally assess the contribution of the other group members to the project.

The timing of the oral presentation is very important. You need to practise the presentation to achieve your objective within 10 min. Your presentation should be supported by visual aids such as PowerPoint or other media. It is expected that each student will dedicate a minimum of 20 hours to this project and assessment will be based on the quality and quantity of the presentation at a third year university standard (this assumes 80-100 hours of research and writing).

The group will hand in a type-written report that includes:
1. A title page
2. A one page abstract that summarises the findings in your report.
3. A 5,000 word, double spaced report. Figures and tables and an appropriate reference list should also be included.

Seminar Topics
1. Human performance is/is not limited centrally.
2. One cannot predict human performance from aerobic power measures.
3. Physically demanding trades: can women tolerate heavy workloads?
4. Are women narrowing the gender gap in elite sports performance?
5. The anaerobic threshold: fact or misinterpretation?
6. Exercise and ageing: can the biological clock be stopped?
7. Thirty minutes of incidental exercise is an adequate exercise prescription.
8. It is not economically viable to address the penalties of sedentary behaviour through primary prevention (exercise) strategies.
10. Current fluid intake guidelines are not evidence based.
11. Does altitude training improve exercise performance at sea level?
12. How is it possible for people to perform single breath dives to depths greater than 70 metres?

Submission of Laboratory Reports
Each student is expected to complete all laboratory reports, however you are only required to submit two written reports, one of which will be assessed. Each report will include raw data, analyses, tables, graphs, interpretations and answers to questions. Use data from your assigned laboratory group if so requested in the laboratory manual, otherwise use data obtained from all groups which will be available in MOODLE. You will be notified which two laboratory reports you are required to submit.

Submit both laboratory reports to StudentHub 41. Assessments submitted at StudentHub 41 must have a SATS (Student Assessment Tracking System) coversheet attached to the front of the assessment. Instructions for generating a coversheet can be found on the StudentHub 41 web page: http://smah.uow.edu.au/current-students/UOW151958.html

For an assessment to be successfully submitted at StudentHub 41 please note the following:

- The coversheet must be signed and dated.
- The assessment must have the correct coversheet i.e. the correct subject code and tutorial group (if applicable).
- A legible barcode with all numbers and digits below e.g. UOW20121007656.
- Assessments must be submitted by 4:00pm on the due date.

If an assessment is submitted to StudentHub 41 without any of the above we will contact you through
your student email address and advise that you need to return to StudentHub 41 with the correct coversheet. Your assessment won’t be considered submitted until the correct coversheet is attached. This might mean that your assessment is submitted late.

An email receipt will be issued on the same day as submission of assessments and students are required to retain this receipt until they have received the final mark for that assessment task. It is your responsibility to contact StudentHub 41 if you have not received this receipt by the following business day. The receipt is proof of submission of assessments and 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. SATS Group Assessment Coversheets are printed by the lead member of the group and subsequent names can be added in the SATS student interface before printing. All members of the group must sign the printed SATS Group Assessment Coversheet before submitting the assessment.

Note that if assessments are submitted in the after-hours slot at StudentHub 41 it will be scanned into SATS the following business day. Assessments submitted via post will be scanned into SATS on the day of delivery. Any assessments received without the correct assessment coversheet attached will not be accepted by SATS. It is the student’s responsibility to ensure that the correct assessment coversheet is submitted with their assessment.

Students may post their assessments to:

StudentHub 41 (41.138B)
University of Wollongong
Wollongong NSW 2522

Assessments will be considered submitted on the date of postage. It is the student’s responsibility to ensure they have evidence of their submission date if it arrives at the office after the due date.

Peer Assessment
You are required to assess the contribution of your peers to a group task (seminar presentations). The proforma for this assessment will be available for your use on MOODLE. Remember that this is an opportunity to give positive feedback to your peers and to receive feedback and it is your responsibility to ensure that the feedback is honest and constructive. Hand in the peer assessment form to the course coordinator at the end of the term in which you present your seminar.

Oral Examination
This will take place in the study recess. It is a 15-minute oral examination conducted by two academic staff simultaneously. Students will enter the room (TBA) in pairs where you will be asked questions pertaining to the material in the course including lectures, laboratories, seminars or readings. The questions following form the basis of the examination but supplementary questions will be used as appropriate and are at the discretion of the examiners.

1. Consider the following individuals: a patient with emphysema, a healthy young adult and an Olympic cross-country skier. Discuss the possible sites of physiological limitation to maximal exercise during a standard 15-min peak aerobic power test conducted on a treadmill.
2. Throughout this subject you have been deliberately exposed to numerous experimental methodological and design considerations. Many of these impact upon the validity and merit of the experimental observations and the universal applicability of the findings. Be prepared to discuss these considerations as they relate to the scientific literature you have been reading.
3. Thoroughly review each of the laboratory activities. Imagine you haven appointed head tutor for this subject and you have been asked to give a one hour tutorial on one of the laboratory activities to next year’s students. Your responsibilities include familiarity with the background reference material, the purpose of the activity, the general running of the laboratory and an understanding of the expected results from each laboratory.
4. Study the following papers. Be prepared to discuss the strengths, weaknesses, major observations and physiological implications of each study. Assume you will be questioned as if you were the first author of each paper.
   a. Bangsbo et al. (1996). Effect of muscle acidity on muscle metabolism and fatigue


**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:

- Attend and actively participate in all laboratory activities
- Attempt and pass every assessment item
- Submit two laboratory reports
- Submit peer assessment

**Minimum Student Attendance and Participation**

It is expected that students will allocate 12 hours per week to this subject, including any required class attendance, completion of prescribed readings and assessment tasks.

Student attendance at laboratory classes is compulsory and students must attend 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](http://www.uow.edu.au/student/central/academicconsideration/index.html)

**Scaling**

Scaling may occur in this subject at the end of session by the Unit Assessment Committee and/or Faculty Assessment Committee (FAC). Marks will only be scaled to ensure fairness/parity of marking across groups of students. Scaling will not affect any individual student’s rank order within their cohort. For more information refer to Assessment Guidelines – Scaling: [http://www.uow.edu.au/about/policy/UOW039331.html](http://www.uow.edu.au/about/policy/UOW039331.html)

**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](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 this subject, students must complete and submit all assessment tasks, and these must be of a satisfactory standard, regardless of lateness or loss of marks.

Supplementary Assessments
Supplementary Examinations are only available for the Final Examination, with the following policies governing this process:

Eligibility: Supplementary examinations may only be permitted in extenuating circumstances, such as verified illness beyond the student’s control, or for religious reasons. Thus, a person who did not sit the final examination due to medical or other serious extenuating circumstances will be eligible. Supplementary examinations will not be granted to anyone who sits the final examination (either partially or fully).

Academic Consideration: The student must apply for Academic Consideration, supported by appropriate documentation (e.g. medical certificate), through SOLS (go to Academic Consideration and request Supplementary Examination); do not contact either the School or subject co-ordinator. Only one Supplementary Examination will be offered each semester. This must be organised with the subject co-ordinator (at a time of mutual convenience), and not through the Academic Registrar’s Division (ARD) or the School. 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
For this subject, follow the American Psychological Association (APA) style manual with exceptions and recommendations noted below:

Spelling: The standard for this subject is the Oxford Dictionary.
Author citations: Use authors’ names and not reference numbers.
For citations in parenthesis within the text:
“….it is generally recognised that xxxx cures xxxx (Mercer et al., 1992) …”
Note: et al. is an abbreviation for et alia, and therefore must have the “.”
For citations not in parenthesis and within text:
“Horne et al. (1992) has shown that xxxx cures xxxx …”
You can play with: ‘Horne and colleagues’, ‘Horne and associates’.
When citing multiple authors, cite in chronological order not alphabetical.
Never follow the APA rule for multiple authors citations.
Put all references in alphabetical (then chronological) order in the ‘reference’ section of your report.
Where there is more than one reference by the same author (or identical group with same first author) in same year, use lower case letters to identify citation differences (e.g. Lowe et al., 1992a, 1992b). In the ‘reference’ section, follow the style below:
Assessment Return/Feedback

Seminar assignments will be returned by the subject co-ordinator in lectures. For your laboratory reports, you will be notified by email when marked assignments are available for collection from SMAH Central during business hours. Students will be required to present their student card when collecting marked assignments. In accordance with University Policy, marked assignments will usually only be held for 21 days after the declaration of marks for that assignment.

Business Hours & Location: SMAH central, building 41
Monday – Friday
9:00 am to 4:30 pm
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.

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.

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

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.
Lecture, Tutorial, Laboratory Times
On campus
All timetable information is subject to variation. Check latest timetabling information on the 'Current Student' webpage on UOW website or log into SOLS to view your personal timetable prior to attending classes.

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

Tutorials
Five, non-mandatory, 1-h tutorials will be held throughout the session. These will be held weeks 4, 6, 10, 11, and 12, between 14:30-15:30 in computer room 17-105. The tutorials are an opportunity for students to get help with their laboratory reports, if required.

The tutorials will have a maximum capacity of 45 students. Therefore, spaces will be given on a first-come-first-serve basis. On occasions where this limit is succeeded, a second tutorial hour (15:30-16:30) will be opened up immediately following the first, where the tutor will still be present to help those students who could not be accommodated during the first hour. Please note, if the number of students does not exceed 45 in the first hour, this second class will not be run.

The tutorial room (17-105) has been booked for weeks 2-13 and will be available for students to use to do work between 14:30-15:30 throughout the session. However, please be advised that tutorial help will only be provided during the five weeks outlined above.

Extraordinary Changes for the Subject after Release of the Subject Outline
In extraordinary circumstances the provisions stipulated in this Subject Outline may require amendment after the Subject Outline has been distributed. All students enrolled in the subject must be notified and have the opportunity to provide feedback in relation to the proposed amendment, prior to the amendment being finalised.

Learning Analytics
Data on student performance and engagement (such as Moodle and University Library usage, task marks, use of SOLS) will be available to the Subject Coordinator to assist in analysing student engagement, and to identify and recommend support to students who may be at risk of failure. If you have questions about the kinds of data the University uses, how we collect it, and how we protect your privacy in the use of this data, please refer to http://www.uow.edu.au/dvca/bala/analytics/index.html

The Assessment Quality Cycle
The Assessment Quality Cycle provides a level of assurance that assessment practice across the University is appropriate, consistent and fair.

Assessment Quality Cycle Activities are undertaken to contribute to the continuous improvement of assessment and promote good practices in relation to the:

a. design of the assessment suite and individual assessment tasks;
b. marking of individual assessment tasks;
c. finalisation of subject marks and grades; and
d. review of the subject prior to subsequent delivery
Copies of student work may be retained by the University in order to facilitate quality assurance of assessment processes.

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

“The University's Academic Integrity 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 or without the explicit permission of the Subject Coordinator. 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. Uploading an assessment task, subject outline or other course materials without express permission of the university is considered academic misconduct and students place themselves at risk of being expelled from the University.”

**Student Academic Complaints Policy (Coursework or Higher Degree Research)**
In accordance with the Coursework Student Academic Complaints Policy, a student may request an explanation of a mark for an assessment task or a final grade for a subject consistent with the student's right to appropriate and useful feedback on their performance in an assessment task. Refer to the Coursework Student Academic Complaints Policy for further information.

**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 “Careers and Jobs”. [http://www.uow.edu.au/student/services/index.html](http://www.uow.edu.au/student/services/index.html)

**Student Etiquette**
## UOW Grade Descriptors

The University of Wollongong Grade Descriptors are general statements that describe student performance at each of the University's grade levels.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mark %</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Distinction</td>
<td>85-100</td>
<td>A high distinction grade (HD) is awarded for performance that provides evidence of an outstanding level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a distinction grade plus (as applicable):</td>
</tr>
</tbody>
</table>
| HD                  |        | • consistent evidence of deep and critical understanding  
|                     |        | • substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem-solving approaches  
|                     |        | • critical evaluation of problems, their solutions and their implications  
|                     |        | • use of quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work  
|                     |        | • creativity in application as appropriate to the discipline  
|                     |        | • eloquent and sophisticated communication of information and ideas in terms of the conventions of the discipline  
|                     |        | • consistent application of appropriate skills, techniques and methods with outstanding levels of precision and accuracy  
|                     |        | • all or almost all answers correct, very few or none incorrect  |
| Distinction         | 75-84  | A distinction grade (D) is awarded for performance that provides evidence of a superior level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a credit grade plus (as applicable):   |
| D                   |        | • evidence of integration and evaluation of critical ideas, principles, concepts and/or theories  
|                     |        | • distinctive insight and ability in applying relevant skills, techniques, methods and/or concepts  
|                     |        | • demonstration of frequent originality in defining and analysing issues or problems and providing solutions  
|                     |        | • fluent and thorough communication of information and ideas in terms of the conventions of the discipline  
|                     |        | • frequent application of appropriate skills, techniques and methods with superior levels of precision and accuracy  
|                     |        | • most answers correct, few incorrect  |
| Credit              | 65-74  | A credit grade (C) is awarded for performance that provides evidence of a high level of attainment of the relevant subject learning outcomes, demonstrating the attributes of a pass grade plus (as applicable):   |
| C                   |        | • evidence of learning that goes beyond replication of content knowledge or skills  
|                     |        | • demonstration of solid understanding of fundamental concepts in the field of study  
|                     |        | • demonstration of the ability to apply these concepts in a variety of contexts  
|                     |        | • use of convincing arguments with appropriate coherent and logical reasoning  
|                     |        | • clear communication of information and ideas in terms of the conventions of the discipline  
|                     |        | • regular application of appropriate skills, techniques and methods with high levels of precision and accuracy  
|                     |        | • many answers correct, some incorrect  |
| Pass                | 50-64  | A pass grade (P) is awarded for performance that provides evidence of a satisfactory level of attainment of the relevant subject learning outcomes, demonstrating (as applicable):   |
| P                   |        | • knowledge, understanding and application of fundamental concepts of the field of study  
|                     |        | • use of routine arguments with acceptable reasoning  
|                     |        | • adequate communication of information and ideas in terms of the conventions of the discipline  
|                     |        | • ability to apply appropriate skills, techniques and methods with satisfactory levels of precision and accuracy  
|                     |        | • a combination of correct and incorrect answers  |
| Fail                | <50    | A fail grade (F) is given for performance that does not provide sufficient evidence of attainment of the relevant subject learning outcomes.  |
| Technical Fail      |        | A technical fail (TF) grade is given when minimum performance level requirements for at least one assessment item in the subject as a whole has not been met despite the student achieving at least a satisfactory level of attainment of the subject learning outcomes.  |
| Satisfactory        |        | A satisfactory grade (S) is awarded for performance that demonstrates a satisfactory level of attainment of the relevant subject learning outcomes.  |
| Unsatisfactory      |        | An unsatisfactory grade (U) is awarded for performance that demonstrates an unsatisfactory level of attainment of the relevant subject learning outcomes.  |
| Excellent           |        | An excellent grade (E) may be awarded, instead of a satisfactory grade (S), within subjects from the School of Medicine that have been completed with a consistent pattern of high standard of performance in all aspects of the subject.  |

More details on UOW Grade descriptors can be found on the following link [http://www.uow.edu.au/content/groups/public/@web/@gov/documents/doc/uow194941.pdf](http://www.uow.edu.au/content/groups/public/@web/@gov/documents/doc/uow194941.pdf)
University Policies

Students should be familiar with the following University policies:

a. Code of Practice – Teaching and Assessment

b. Code of Practice – Research, where relevant

c. Code of Practice – Honours, where relevant

d. Student Charter

e. Code of Practice – Student Professional Experience, where relevant

f. Academic Integrity and Plagiarism Policy

g. Student Academic Consideration Policy

h. Course Progress Policy

i. Graduate Qualities Policy

j. Academic Complaints Policy (Coursework and Honours Students)

k. Inclusive Language Policy

l. Workplace Health and Safety, where relevant

m. Intellectual Property Policy

n. IP Student Assessment of Intellectual Property Policy, where relevant

o. Policy on Ethical Objection by Students to the Use of Animal and Animal Products in
   Coursework Subjects, where relevant

p. Human Research Ethics Guidelines, where relevant

q. Animal Research Guidelines, where relevant

r. Student Conduct Rules and accompanying Procedures or Research Misconduct Policy for
   research students
## 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>
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<td>Sonia Losinno-Learning and Teaching Officer</td>
<td>Changes to timetable</td>
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<td>Sonia Losinno-Learning and Teaching Officer</td>
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<td>Sonia Losinno-Learning and Teaching Officer</td>
<td>Confirm dates of assessments and finalise</td>
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<tr>
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<td>Paul Stapely – HOS</td>
<td>Sonia Losinno-Learning and Teaching Officer</td>
<td>Final MEDI321 Subject Outline Autumn 2017</td>
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