School of Medicine

SHS220: Musculoskeletal Functional Anatomy

Subject Outline
Spring, 2014
On Campus
Wollongong

Subject Information
Credit Points: 6
Pre-requisite(s): SHS111 and SHS222
Co-requisite(s): Nil
Restrictions: A quota may apply in any one year
Contact Hours: 3hrs Lect, 3hrs Prac per week + 1hr Tut as per outline

Subject Contacts

<table>
<thead>
<tr>
<th>Subject Coordinator/Lecturer</th>
<th>Name</th>
<th>Location</th>
<th>Telephone</th>
<th>Email</th>
<th>Consultation mode and times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dr Deirdre McGhee</td>
<td>Building 41, Room 329</td>
<td>61 2 4221 4980</td>
<td><a href="mailto:deirdre_mcghee@uow.edu.au">deirdre_mcghee@uow.edu.au</a></td>
<td>Tuesday 8.00-9.30am, 12.30-1.30pm; please email for an appointment</td>
</tr>
</tbody>
</table>

Technical Officer

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Telephone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Bryn Stamford</td>
<td>Building 41, Room G65</td>
<td>61 2 4221 4342</td>
<td><a href="mailto:anatomylab-enquiries@uow.edu.au">anatomylab-enquiries@uow.edu.au</a></td>
</tr>
</tbody>
</table>

Student Support and Advice
For general enquiries please contact SMAH Central:
Location: 41.152
Telephone: 61 2 4221 3492
Email: smah-students@uow.edu.au
Table of Contents

Section A: General Information ............................................................................................................... 3
  Subject Learning Outcomes .................................................................................................................. 3
  Subject Description ................................................................................................................................ 3
  Graduate Qualities .................................................................................................................................. 3
  eLearning Space ..................................................................................................................................... 3
  Lecture, Tutorial, Laboratory Times ...................................................................................................... 3
  Readings, References and Materials ...................................................................................................... 4
    Textbooks: ........................................................................................................................................... 4
    Prescribed Readings (includes eReadings): .......................................................................................... 4
    Materials: ............................................................................................................................................ 4
    Recommended Readings: ....................................................................................................................... 4
  Recent Changes to this Subject .............................................................................................................. 4
  Timetable of Topics* .............................................................................................................................. 5
Section B: Assessment ............................................................................................................................... 6
  Assessment Summary .............................................................................................................................. 6
  Details of Assessment Tasks .................................................................................................................... 6
  Minimum Requirements for a Pass in this Subject ................................................................................. 7
    Minimum Student Attendance and Participation: .............................................................................. 7
  Scaling: ................................................................................................................................................... 7
  Late Submission: ..................................................................................................................................... 7
    Late Submission Penalty ...................................................................................................................... 8
  Supplementary Assessments .................................................................................................................. 8
  System of Referencing Used for Written Work .................................................................................... 8
  Use of Internet Sources .......................................................................................................................... 8
  Plagiarism............................................................................................................................................... 8
  Submission of Assignments ..................................................................................................................... 8
  Assessment Return ................................................................................................................................. 8
Section C: General Advice .......................................................................................................................... 9
  University Policies ................................................................................................................................... 9
  Student Support Services and Facilities ............................................................................................... 10
  Student Etiquette ................................................................................................................................... 10
  Version Control Table ............................................................................................................................ 10
Section A: General Information

Subject Learning Outcomes

On completion of this subject, students should be able to:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Identify and understand the structure and function of the musculoskeletal system in relation to both movement and posture</td>
</tr>
<tr>
<td>b)</td>
<td>Analyze movement and posture in terms of the muscles used, their function, activation pattern, the joint range moved through and the applied forces</td>
</tr>
</tbody>
</table>

Subject Description

This subject investigates the musculoskeletal system from a functional anatomy viewpoint. It focuses on the movement of joints and the action and function of muscles during various types of movements and exercises. It provides the foundation anatomical knowledge to develop skills in movement analysis in order to break down any movement into its components for skill acquisition, as well as exercise prescription to be able to prescribe strengthening and stretches exercises for any muscle. Students are introduced to assessment of the musculoskeletal system in terms of range of motion (goniometry and muscle flexibility) and muscle activity (electromyography and muscle strength).

Graduate Qualities

The University of Wollongong has developed five graduate qualities (http://www.uow.edu.au/student/qualities/index.html), which it considers express valuable qualities that are essential for UOW graduates in gaining employment and making an important contribution to society and their chosen field. Student development of the following graduate qualities will be enhanced by their participation in this subject:

1. Informed: Have a sound knowledge of an area of study or profession and understand its current issues, locally and internationally. Know how to apply this knowledge. Understand how an area of study has developed and how it relates to other areas.

2. Independent learners: Engage with new ideas and ways of thinking and critically analyse issues. Seek to extend knowledge through ongoing research, enquiry and reflection. Find and evaluate information, using a variety of sources and technologies. Acknowledge the work and ideas of others.

3. Problem solvers: Take on challenges and opportunities. Apply creative, logical and critical thinking skills to respond effectively. Make and implement decisions. Be flexible, thorough, innovative and aim for high standards.

4. Effective communicators: Articulate ideas and convey them effectively using a range of media. Work collaboratively and engage with people in different settings. Recognise how culture can shape communication.

5. Responsible: Understand how decisions can affect others and make ethically informed choices. Appreciate and respect diversity. Act with integrity as part of local, national, global and professional communities.

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 under Study Resources on the Current Students webpage or log into SOLS to view your personal timetable prior to attending classes.
Readings, References and Materials

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

Kinesiology, Mechanics & Pathomechanics of Human Movement, Carol Oatis.

SHS 220 Lab Manual, University of Wollongong

Prescribed Readings (includes eReadings):
The following texts 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.

Nil

Materials:
Nil

Recommended Readings:
The following references complement the prescribed readings and textbooks. Many of these textbooks are held in closed reserve within the Library.


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. Change: One lab session moved from anatomy lab to URAC gym
   Reason: Improve practical application of anatomical knowledge

ii. Change: Additional surface anatomy laboratory.
   Reason: accommodate OH&S changes within anatomy lab
### Timetable of Topics*

<table>
<thead>
<tr>
<th>Week</th>
<th>Week Commencing</th>
<th>Lecture</th>
<th>Prac B (1 hour)</th>
<th>Prac A (2 hour)</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28/07/2014</td>
<td>Knee Complex</td>
<td>No class</td>
<td>Musculoskeletal Anatomy</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>04/08/2014</td>
<td>Hip Complex</td>
<td>Knee Complex</td>
<td>Hip Complex</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>11/08/2014</td>
<td>Ankle/Foot Complex</td>
<td>Hip Complex</td>
<td>Hip Complex</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>18/08/2014</td>
<td>Bone, Ligament, Tendon</td>
<td>Ankle/Foot Complex Nerve supply LL</td>
<td>Ankle/Foot Complex Nerve supply LL</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25/08/2014</td>
<td>Cartilage, Muscle</td>
<td>Connective Tissue Mechanics</td>
<td>Connective Tissue Mechanics</td>
<td>Spot Test 1 (Pract A)</td>
</tr>
<tr>
<td>6</td>
<td>01/09/2014</td>
<td>Elbow Complex</td>
<td>Surface Anatomy / Muscle Stretching BUILDING 15</td>
<td>Muscle Mechanics BUILDING 15</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>08/09/2014</td>
<td>Shoulder Complex</td>
<td>Elbow Complex</td>
<td>Elbow Complex</td>
<td>Pract exam 1</td>
</tr>
<tr>
<td>8</td>
<td>15/09/2014</td>
<td>Wrist/Hand Complex</td>
<td>Shoulder Complex</td>
<td>Shoulder Complex</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>22/09/2014</td>
<td>Vertebral Column/Pelvis</td>
<td>Wrist/Hand Complex Nerve supply UL</td>
<td>Wrist/Hand Complex Nerve supply UL</td>
<td></td>
</tr>
</tbody>
</table>

**Mid-Session Recess**

<table>
<thead>
<tr>
<th>Week</th>
<th>Week Commencing</th>
<th>Lecture</th>
<th>Prac B (1 hour)</th>
<th>Prac A (2 hour)</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>06/10/2014</td>
<td>Vertebral Column/Pelvis</td>
<td>No Class Public Holiday</td>
<td>Vertebral Column/Pelvis</td>
<td>Spot Test 2 (Pract A)</td>
</tr>
<tr>
<td>11</td>
<td>13/10/2014</td>
<td>Movement Analysis</td>
<td>Vertebral Column/Pelvis</td>
<td>Vertebral Column/Pelvis</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>20/10/2014</td>
<td>Posture</td>
<td>Revision</td>
<td>Movement Analysis URAC</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>27/10/2014</td>
<td>Pract exam 2</td>
<td>Surface Anatomy / Muscle Stretching BUILDING 15</td>
<td>EMG BUILDING 15</td>
<td>Pract exam 2</td>
</tr>
</tbody>
</table>

**Study Recess**

*The above timetable should be used as a guide only, as it is subject to change. Students will be advised of any changes as they become known.*
Section B: Assessment

Assessment Summary

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Form of Assessment</th>
<th>Due Date</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>Spot Test 1 (2hr Lab)</td>
<td>27-28/08/2014 (Week 5)</td>
<td>7.5%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Practical Exam 1</td>
<td>10/09/2014 (Week 7)</td>
<td>12%</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Spot Test 2 (2hr Lab)</td>
<td>8-9/10/2014 (Week 10)</td>
<td>7.5%</td>
</tr>
<tr>
<td>Assessment 4</td>
<td>Practical Exam 2</td>
<td>29/10/2014 (Week 13)</td>
<td>18%</td>
</tr>
<tr>
<td>Assessment 5</td>
<td>Final Theory Exam</td>
<td>UOW Exam Period</td>
<td>55%</td>
</tr>
</tbody>
</table>

Total Marks 100%

Details of Assessment Tasks

Assessment 1

<table>
<thead>
<tr>
<th>Due date</th>
<th>Wednesday-Thursday, 27-28 August 2014 (Week 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>7.5%</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>10 mins</td>
</tr>
<tr>
<td>Details</td>
<td>Spot Test 1: Covers lectures and labs weeks 1-5 inclusive</td>
</tr>
<tr>
<td>Style and format</td>
<td>In-class test</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Short answer questions</td>
</tr>
</tbody>
</table>

Assessment 2

<table>
<thead>
<tr>
<th>Due date</th>
<th>12:30-2:30pm Wednesday 10 September 2014 (Week 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>12%</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>13 mins</td>
</tr>
<tr>
<td>Details</td>
<td>Covers lectures and labs weeks 1-6 inclusive</td>
</tr>
<tr>
<td>Style and format</td>
<td>Cadaver based exam in anatomy lab</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Short answer questions with cadavers</td>
</tr>
</tbody>
</table>

Assessment 3

<table>
<thead>
<tr>
<th>Due date</th>
<th>Wednesday-Thursday, 8-9 October 2014 (Week 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>7.5%</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>10 mins</td>
</tr>
<tr>
<td>Details</td>
<td>Spot Test 2: Covers lectures and labs weeks 6-10 inclusive</td>
</tr>
<tr>
<td>Style and format</td>
<td>In-class test</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Short answer questions</td>
</tr>
</tbody>
</table>
### Assessment 3
**Practical Exam 2**

**Due date**
12:30-2:30pm Wednesday 29 October 2014 (Week 13)

**Weighting**
18%

**Submission**
Exam papers and answers must be submitted at the conclusion of the exam.

**Type of Collaboration**
Individual Assessment

**Length**
17 mins

**Details**
Covers lectures and labs weeks 7-13 inclusive

**Style and format**
Cadaver based exam in anatomy lab

**Marking Criteria**
Short answer questions with cadavers

### Assessment 4
**Final Theory Exam**

**Due date**
UOW Exam Period

**Weighting**
55%

**Submission**
Exam papers and answers must be submitted at the conclusion of the exam.

**Type of Collaboration**
Individual Assessment

**Length**
3 hours

**Details**
Covers lectures and labs weeks 1-13 inclusive

**Style and format**
Multiple Choice & Short Answer Questions

### 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:

- Meet minimum attendance requirements as set out below.

### 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 tutorials, practicals, seminars and/or simulations is compulsory and students must attend at least 80% of classes (where the student is present for the entire duration of the laboratory). **Students must ensure that their name is marked on the role as a record of attendance.** 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. **Students are also strongly encouraged to contact their demonstrator or the Subject Coordinator as soon as possible regarding their absence and missed material.** 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 by a combination of methods dependent on circumstances pertaining to the result in any one year e.g. addition/subtraction, percentage adjustment or piecewise scaling. Any adjustment will normally be minor (e.g. <2% of final mark).

### Late Submission:

All assessments for this subject are exam based; as such no late submissions are possible. Students should refer to the supplementary assessments for how this may apply.
Late Submission Penalty
N/A

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;

System of Referencing Used for Written Work
All assessments for this subject are exam based; as such no referencing is expected.

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 Assignments
Refer to the submission requirements under the details of the individual assessments.

Assessment Return
Contact your lecturer/tutor/subject coordinator if you would like feedback on your 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. 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 Grievance Policy (Coursework and Honours Students) 

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

l. Workplace Health and Safety, where relevant  

m. Intellectual Property Policy  

n. IP Student Assignment 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

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”. http://www.uow.edu.au/student/services/index.html

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 http://www.uow.edu.au/student/elearning/netiquette/index.html

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>20140620</td>
<td>Dr Deirdre McGhee Subject Coordinator</td>
<td>Miss Emma Purdy ADE Nominee</td>
<td>Final SHS 220 Spring 2014 Outline</td>
</tr>
</tbody>
</table>