Unit Outline
HUMV2001 Motor Control and Learning
Semester 1, 2017

Unit study package code: HUMV2001
Mode of study: Internal
Tuition pattern summary: Note: For any specific variations to this tuition pattern and for precise information refer to the Learning Activities section.
Lecture: 1 x 2 Hours Weekly
Practical: 1 x 2 Hours Weekly
This unit does not have a fieldwork component.
Credit Value: 25.0
Pre-requisite units:
314152 (v.0) Exercise Science for Health 100 or any previous version
OR
REHT1001 (v.0) Exercise Science for Health or any previous version
AND
314163 (v.0) Bachelor of Science (Exercise, Sports and Rehabilitation Science) or any previous version
OR
B-EXSPRHB (v.0) Bachelor of Science (Exercise, Sports and Rehabilitation Science) or any previous version

Co-requisite units: Nil
Anti-requisite units: Nil
Result type: Grade/Mark
Approved incidental fees: Information about approved incidental fees can be obtained from our website. Visit fees.curtin.edu.au/incidental_fees.cfm for details.

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Learning Management System: Blackboard (lms.curtin.edu.au)
Acknowledgement of Country

We respectfully acknowledge the Indigenous Elders, custodians, their descendants and kin of this land past and present. The Centre for Aboriginal Studies aspires to contribute to positive social change for Indigenous Australians through higher education and research.

Syllabus

The nature of human motor actions. How efficient motor skills are developed and controlled, from both cognitive and dynamical systems approaches, and their classification and measurement. The integrated development of perception and action. A basic understanding of how to design motor development programs. The integration of theory and practical work develops key competencies for teaching skill development.

Introduction

In this unit students will gain an understanding of the basis for the development of the neuromuscular control of human movement and the alterations that take place with normal growth, development and ageing. This unit is a prerequisite for the third year unit Skill Acquisition HUMV3002. It is compulsory for students to learn all of the skills specified within the unit outline/guide and to demonstrate competency. Students will need to engage in practice outside specified class times to develop the required level of competence. It is recommended that students spend approximately 12 hours of study (including lectures, practical sessions, tutorials, individual and group study) per week on this unit.

Unit Learning Outcomes

All graduates of Curtin University achieve a set of nine graduate attributes during their course of study. These tell an employer that, through your studies, you have acquired discipline knowledge and a range of other skills and attributes which employers say would be useful in a professional setting. Each unit in your course addresses the graduate attributes through a clearly identified set of learning outcomes. They form a vital part in the process referred to as assurance of learning. The learning outcomes tell you what you are expected to know, understand or be able to do in order to be successful in this unit. Each assessment for this unit is carefully designed to test your achievement of one or more of the unit learning outcomes. On successfully completing all of the assessments you will have achieved all of these learning outcomes.

Your course has been designed so that on graduating we can say you will have achieved all of Curtin’s Graduate Attributes through the assurance of learning process in each unit.

<table>
<thead>
<tr>
<th>On successful completion of this unit students can:</th>
<th>Graduate Attributes addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compare and contrast key theories related to motor control, and neuromuscular function</td>
<td><img src="emailIcon" alt="Email" /> <img src="phoneIcon" alt="Phone" /></td>
</tr>
<tr>
<td>2. Describe methods commonly used to test modulation of neural circuitry and the effects of health ageing, diseases and injury on neuromuscular functions</td>
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</tr>
<tr>
<td>3. Evaluate basic tests of neuromuscular function</td>
<td><img src="checkmarkIcon" alt="Checkmark" /></td>
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<tr>
<td>4. Contrast physiology of neuromuscular function, disorders and methods for testing neuromuscular function</td>
<td><img src="emailIcon" alt="Email" /> <img src="phoneIcon" alt="Phone" /> <img src="commentIcon" alt="Comment" /></td>
</tr>
</tbody>
</table>
Curtin’s Graduate Attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply discipline knowledge</td>
<td>(use analytical skills to solve problems)</td>
</tr>
<tr>
<td>Communication skills</td>
<td>(confidence to investigate new ideas)</td>
</tr>
<tr>
<td>Technology skills</td>
<td>(confidence to tackle unfamiliar problems)</td>
</tr>
<tr>
<td>International perspective</td>
<td>(value the perspectives of others)</td>
</tr>
<tr>
<td>Cultural understanding</td>
<td>(value the perspectives of others)</td>
</tr>
<tr>
<td>Learning how to learn</td>
<td>(apply principles learnt to new situations)</td>
</tr>
<tr>
<td>Professional Skills</td>
<td>(work independently and as a team)</td>
</tr>
</tbody>
</table>

Learning Activities

The outcomes for this unit will be achieved by a combination of lecture, practical and tutorial classes, and directed learning.

Lectures: A two-hour lecture is scheduled weekly.

Practical Classes: Two-hour practical classes (that may involve a number of topics) are scheduled throughout the semester. Please keep checking the timetable to ensure you do not miss a class.

Tutorials: Two-hour tutorials (that may involve a number of topics) are scheduled on specified weeks during the semester. Again check the schedule to be sure you do not miss a session.

Review the program calendar at the end of this unit outline for details of weekly topics:

Practical Session: There are eight two-hour practical sessions during the semester in which you will learn specific skills, often by working in peer groups of two or more students. In recognition of the nature of the material to be learned students will be expected to assume increasing individual responsibility for their learning. Opportunities to clarify problems or concerns will be provided within these sessions.

Tutorial Session: Three two-hour tutorial sessions are scheduled throughout the semester. On occasions a session may include practical/laboratory tasks.

Guide and Workbook:

The Motor Control and Learning HUMV2001 unit has a guide/workbook. The guide is divided into topics. Each topic describes the mode of study used to cover the content, indicates any prior knowledge required, directs the student to specific readings, and outlines activities to direct the students learning to achieve the learning outcomes for that topic and for the unit in general. Students are expected to complete any items described as directed learning in their own study time outside of class. The material covered in directed learning activities is examinable. Copies of all required readings are available from the eReserve section of the Library Website. Copies of required texts and recommended readings are placed on Closed Reserve in the library. At the discretion of the lecturer copies of lecture notes may be provided as .pdf documents available from FLECS-Blackboard.

Learning Resources

Library Reading List

The Reading List for this unit can be accessed through Blackboard.

Essential texts

The required textbook(s) for this unit are:

- Motor learning and control: From theory to practice.
  Author: William H. Edwards.
  (ISBN/ISSN: 978-0-495-01080-7)
Assessment

Assessment schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Value %</th>
<th>Date Due</th>
<th>Unit Learning Outcome(s) Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment</td>
<td>20 percent</td>
<td>Week: Week 13 Day: 22 May Time: 11:59pm</td>
<td>1,2,4</td>
</tr>
<tr>
<td>e-Test 1</td>
<td>15 percent</td>
<td>Week: Week 6 Day: 5 - 7 April Time: Booking required</td>
<td>1</td>
</tr>
<tr>
<td>e-Test 2</td>
<td>15 percent</td>
<td>Week: Week 11 Day: 10 - 12 May Time: Booking required</td>
<td>1,4</td>
</tr>
<tr>
<td>Written examination</td>
<td>50 percent</td>
<td>Week: Exam Period Day: TBA Time: TBA</td>
<td>1,2,3,4</td>
</tr>
</tbody>
</table>

Detailed information on assessment tasks

1. Research article critique: Each student will look through the literature to find a research article relevant to motor control and learning topics covered in this unit. The critique must address points outlined in the associated rubric. The word limit is 2000 ± 200 words.
   The assignment must be uploaded to Blackboard submission point as well as Turnitin.

2. eTest 1 is based on topics covered in the first five weeks of lectures, labs and tutorial classes.
3. eTest 2 covers topics from weeks 6, 9 and 10.
4. The final exam will consist of multiple choice and extended answer questions. These may include topics covered in lectures, labs and tutorials from throughout the semester.

Pass requirements

There are four assessment items associated with this unit. Students must achieve an overall grade of at least 50% and satisfactorily complete all assessments in order to pass this unit. Failure to complete all assessments satisfactorily may result in a fail grade even if the overall grade is greater than 50%.

For example:
Assignment - incomplete = 0
E-test 1 = 14
E-Test 2 = 12
Final exam = 30
Therefore final mark = 56% Final grade will be FAIL INCOMPLETE

Fair assessment through moderation

Moderation describes a quality assurance process to ensure that assessments are appropriate to the learning outcomes, and that student work is evaluated consistently by assessors. Minimum standards for the moderation of assessment are described in the Assessment and Student Progression Manual, available from policies.curtin.edu.au/policies/teachingandlearning.cfm
Late assessment policy
This ensures that the requirements for submission of assignments and other work to be assessed are fair, transparent, equitable, and that penalties are consistently applied.

1. All assessments students are required to submit will have a due date and time specified on this Unit Outline.
2. Students will be penalised by a deduction of ten percent per calendar day for a late assessment submission (e.g. a mark equivalent to 10% of the total allocated for the assessment will be deducted from the marked value for every day that the assessment is late). This means that an assessment worth 20 marks will have two marks deducted per calendar day late. Hence if it was handed in three calendar days late and given a mark of 16/20, the student would receive 10/20. An assessment more than seven calendar days overdue will not be marked and will receive a mark of 0.

Assessment extension
A student unable to complete an assessment task by/on the original published date/time (e.g. examinations, tests) or due date/time (e.g. assignments) must apply for an assessment extension using the Assessment Extension form (available from the Forms page at students.curtin.edu.au/administration/) as prescribed by the Academic Registrar. It is the responsibility of the student to demonstrate and provide evidence for exceptional circumstances beyond the student's control that prevent them from completing/submitting the assessment task.

The student will be expected to lodge the form and supporting documentation with the unit coordinator before the assessment date/time or due date/time. An application may be accepted up to five working days after the date or due date of the assessment task where the student is able to provide an acceptable explanation as to why he or she was not able to submit the application prior to the assessment date. An application for an assessment extension will not be accepted after the date of the Board of Examiners' meeting.

Deferred assessments
If your results show that you have been granted a deferred assessment you should immediately check OASIS for details.

Deferred examinations/tests will be held from 10/07/2017 to 14/07/2017. Notification to students will be made after the Board of Examiners' meeting via the Official Communications Channel (OCC) in OASIS.

Supplementary assessments
Supplementary assessments, if granted by the Board of Examiners, will have a due date or be held between 10/07/2017 and 14/07/2017. Notification to students will be made after the Board of Examiners' meeting via the Official Communications Channel (OCC) in OASIS.

It is the responsibility of students to be available to complete the requirements of a supplementary assessment. If your results show that you have been granted a supplementary assessment you should immediately check OASIS for details.

Reasonable adjustments for students with disabilities/health circumstances likely to impact on studies
A Curtin Access Plan (CAP) is a document that outlines the type and level of support required by a student with a disability or health condition to have equitable access to their studies at Curtin. This support can include alternative exam or test arrangements, study materials in accessible formats, access to Curtin’s facilities and services or other support as discussed with an advisor from Disability Services (disability.curtin.edu.au). Documentation is required from your treating Health Professional to confirm your health circumstances.

If you think you may be eligible for a CAP, please contact Disability Services. If you already have a CAP please provide it to the Unit Coordinator at the beginning of each study period.
Referencing style

The referencing style for this unit is APA 6th Ed.

More information can be found on this style from the Library web site: http://libguides.library.curtin.edu.au/referencing.

Copyright

© Curtin University. The course material for this unit is provided to you for your own research and study only. It is subject to copyright. It is a copyright infringement to make this material available on third party websites.

Academic Integrity (including plagiarism and cheating)

Any conduct by a student that is dishonest or unfair in connection with any academic work is considered to be academic misconduct. Plagiarism and cheating are serious offences that will be investigated and may result in penalties such as reduced or zero grades, annulled units or even termination from the course. Assessments under investigation will not be given a mark until the matter is concluded. This may result in the unit grade being withheld or a grade of Fail Incomplete (F-IN) until a decision has been made by the Student Disciplinary Panel. This may impact on enrolment in further units/study periods.

Plagiarism occurs when work or property of another person is presented as one’s own, without appropriate acknowledgement or referencing. Submitting work which has been produced by someone else (e.g. allowing or contracting another person to do the work for which you claim authorship) is also plagiarism. Submitted work is subjected to a plagiarism detection process, which may include the use of text matching systems or interviews with students to determine authorship.

Cheating includes (but is not limited to) asking or paying someone to complete an assessment task for you or any use of unauthorised materials or assistance during an examination or test.

From Semester 1, 2016, all incoming coursework students are required to complete Curtin’s Academic Integrity Program (AIP). If a student does not pass the program by the end of their first study period of enrolment at Curtin, their marks will be withheld until they pass. More information about the AIP can be found at: https://academicintegrity.curtin.edu.au/students/AIP.cfm

Refer to the Academic Integrity tab in Blackboard or academicintegrity.curtin.edu.au for more information, including student guidelines for avoiding plagiarism.

Information and Communications Technology (ICT) Expectations

Curtin students are expected to have reliable internet access in order to connect to OASIS email and learning systems such as Blackboard and Library Services.

You may also require a computer or mobile device for preparing and submitting your work.

For general ICT assistance, in the first instance please contact OASIS Student Support: oasisapps.curtin.edu.au/help/general/support.cfm

For specific assistance with any of the items listed below, please contact The Learning Centre: life.curtin.edu.au/learning-support/learning_centre.htm

- Using Blackboard, the I Drive and Back-Up files
- Introduction to PowerPoint, Word and Excel

Additional information

Enrolment

It is your responsibility to ensure that your enrolment is correct - you can check your enrolment through the eStudent option on OASIS, where you can also print an Enrolment Advice.
Student Rights and Responsibilities

It is the responsibility of every student to be aware of all relevant legislation, policies and procedures relating to their rights and responsibilities as a student. These include:

- the Student Charter
- Values and Signature Behaviours
- the University’s policy and statements on plagiarism and academic integrity
- copyright principles and responsibilities
- the University’s policies on appropriate use of software and computer facilities

Information on all these things is available through the University’s “Student Rights and Responsibilities” website at: students.curtin.edu.au/rights.

Student Equity

There are a number of factors that might disadvantage some students from participating in their studies or assessments to the best of their ability, under standard conditions. These factors may include a disability or medical condition (e.g. mental illness, chronic illness, physical or sensory disability, learning disability), significant family responsibilities, pregnancy, religious practices, living in a remote location or another reason. If you believe you may be unfairly disadvantaged on these or other grounds please contact Student Equity at eesi@curtin.edu.au or go to http://eesi.curtin.edu.au/student_equity/index.cfm for more information.

You can also contact Counselling and Disability services: http://www.disability.curtin.edu.au or the Multi-faith services: http://life.curtin.edu.au/health-and-wellbeing/about_multifaith_services.htm for further information.

It is important to note that the staff of the university may not be able to meet your needs if they are not informed of your individual circumstances so please get in touch with the appropriate service if you require assistance. For general wellbeing concerns or advice please contact Curtin’s Student Wellbeing Advisory Service at: http://life.curtin.edu.au/health-and-wellbeing/student_wellbeing_service.htm

Recent unit changes

Students are encouraged to provide unit feedback through eVALUate, Curtin’s online student feedback system. For more information about eVALUate, please refer to evaluate.curtin.edu.au/info/

To view previous student feedback about this unit, search for the Unit Summary Report at https://evaluate.curtin.edu.au/student/unit_search.cfm. See https://evaluate.curtin.edu.au/info/dates.cfm to find out when you can eVALUate this unit.

Recent changes to this unit include:

Due to changes made across this course in accordance with accreditation requirements, this unit has changed significantly from previous versions. Please see the unit outline and workbook to keep up-to-date on the assessments and requirements for this unit.
<table>
<thead>
<tr>
<th>Week</th>
<th>Begin Date</th>
<th>Lecture</th>
<th>Laboratory/Tutorial</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>20 February</td>
<td></td>
<td></td>
<td>Orientation Week</td>
</tr>
<tr>
<td>1.</td>
<td>27 February</td>
<td>Neural mechanisms underlying movement</td>
<td></td>
<td>No Lab</td>
</tr>
<tr>
<td>2.</td>
<td>6 March</td>
<td>Muscle activation</td>
<td>Electromyography</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>13 March</td>
<td>Somatosensory function</td>
<td>Isokinetic dynamometry</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>20 March</td>
<td>Autonomic function and feedback</td>
<td>Balance and postural control</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>27 March</td>
<td>Autonomic function and movement</td>
<td>Reaction time &amp; Hicks’ Law</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>3 April</td>
<td>Fundamentals of neurodevelopment</td>
<td>Review tutorial lectures 1 to 5</td>
<td>E-test 1</td>
</tr>
<tr>
<td>7.</td>
<td>10 April</td>
<td></td>
<td>Tuition Free Week</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>17 April</td>
<td></td>
<td>Tuition Free Week</td>
<td></td>
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<tr>
<td>9.</td>
<td>24 April</td>
<td>Milestones in motor development</td>
<td>No lab/tutorial</td>
<td></td>
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<tr>
<td>10.</td>
<td>1 May</td>
<td>Age-related changes in motor control</td>
<td>Motor development</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>8 May</td>
<td>Classification of motor skills</td>
<td>Classification and measurement of skills</td>
<td>E-test 2</td>
</tr>
<tr>
<td>12.</td>
<td>15 May</td>
<td>Instruction and demonstration</td>
<td>Instruction and demonstration</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>22 May</td>
<td>Feedback</td>
<td>Feedback</td>
<td>Assignment due</td>
</tr>
<tr>
<td>14.</td>
<td>29 May</td>
<td>Variation, distribution and types of practice</td>
<td>Variation, distribution and types of practice</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>5 June</td>
<td></td>
<td>Study Week</td>
<td></td>
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<tr>
<td>16.</td>
<td>12 June</td>
<td></td>
<td>Examinations</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>19 June</td>
<td></td>
<td>Examinations</td>
<td></td>
</tr>
</tbody>
</table>