

<p><b>Instructor:</b> Darren Stefanyshyn  <b>Phone:</b> 403 220-8637  <b>Email:</b> darren@kin.ucalgary.ca  <b>Office:</b> KNB 2226  <b>Office Hours:</b> Tuesday 2:00-3:00</p>	<p><b>Room:</b> KNB 130  <b>Days:</b> Monday, Wednesday  <b>Time:</b> 9:00-10:15 am  <b>Lab:</b> 10:15-10:45 am  <b>Course Website:</b> Blackboard</p>
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<b>Course Description:</b>	Exploring basic concepts of analysis and modeling in biomechanics, including numerical implementation and solution.										
<b>Course Objectives:</b>	<p>Specific topics will include:</p> <ul style="list-style-type: none"> <li>(a) introduction to data collection equipment utilized in biomechanics</li> <li>(b) introduction to data analysis and programming in Matlab.</li> <li>(c) analysis and interpretation of real kinematic, kinetic and other data previously collected</li> <li>(d) inverse dynamics: introduction to the theory of and implementation of inverse dynamics (2 dimensional) (including analysis of real experimental data).</li> </ul>										
<b>Text:</b>	Biomechanics of the Musculo-Skeletal System, third edition, Nigg and Herzog (eds.), John Wiley & Sons, 2007.										
<b>Contacting the Instructor:</b>	<p>Students requiring assistance are encouraged to speak with their instructor during class or office hours. Should you wish to meet with the instructor outside of office hours, please phone or email the instructor to make an appointment.</p> <p>Email, while commonly used, does limit the effectiveness of communications and may not be the best way for instructors to answer student questions. Therefore, the instructor may request a telephone call or personal meeting. Your instructor will inform you as to his/her expectations about emails.</p>										
<b>Evaluation of Course Content:</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 45%;">Assignments (15%):</td> <td>Assignments will involve analyzing and solving results of biomechanical investigations (3 assignments)</td> </tr> <tr> <td>Matlab Project (20%):</td> <td>Inverse dynamics data analysis project</td> </tr> <tr> <td>Presentation (20%):</td> <td>Students prepare an oral presentation about a defined topic (presentations tentatively scheduled for April 2 and 4).</td> </tr> <tr> <td>Midterm (20%):</td> <td>Written midterm exam during class time – <b>Feb. 13</b></td> </tr> <tr> <td>Final (25%):</td> <td>Oral final exam, <b>April 15</b> (1 hour), comprehensive, closed book</td> </tr> </table>	Assignments (15%):	Assignments will involve analyzing and solving results of biomechanical investigations (3 assignments)	Matlab Project (20%):	Inverse dynamics data analysis project	Presentation (20%):	Students prepare an oral presentation about a defined topic (presentations tentatively scheduled for April 2 and 4).	Midterm (20%):	Written midterm exam during class time – <b>Feb. 13</b>	Final (25%):	Oral final exam, <b>April 15</b> (1 hour), comprehensive, closed book
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**Grading Scale:**

Grade	Percent	Grade Point Value	Description
A+	95.0-100	4.00	Outstanding
A	90.0-94.9	4.00	Excellent - superior performance, showing comprehensive understanding of subject matter.
A-	86.0-89.9	3.70	
B+	82.0-85.9	3.30	
B	78.0-81.9	3.00	Good-clearly above average performance with knowledge of subject matter generally complete.
B-	74.0-77.9	2.70	
C+	70.0-73.9	2.30	
C	66.0-69.9	2.00	Satisfactory – basic understanding of the subject matter. Grade point average below 2.00 is not sufficient for promotion.
C-	62.0-65.9	1.70	
D+	58.0-61.9	1.30	
D	54.0-57.9	1.00	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
F	<54.0	0	Fail – unsatisfactory performance or failure to meet course requirements.

**Late Policy:**

Late assignments and project reports will not be accepted

**Additional Course Information:**

Calculators are allowed on exams. Please bring calculators with you to all classes to facilitate practicing solving problems.  
 Students should be familiar with basic calculus and linear algebra. The course material will rely on knowledge of these concepts.  
 Students will require a UCIT ID to access Matlab for their assignments.

## Supplementary Course Information

### *In accordance with the University of Calgary Calendar*

<b>Academic Accommodation Awareness Information:</b>	It is the student's responsibility to request academic accommodation. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the commencement of this course. Students who have not registered with the Disability Resource Centre <u>are not</u> eligible for formal academic accommodation.
<b>Plagiarism/Cheating/Other Academic Misconduct: (see Calendar)</b>	A <u>single</u> offence of cheating, plagiarism, or other academic misconduct is a serious act that will not be tolerated in the Faculty of Kinesiology. Penalties for such acts will be determined by the Dean and may result in a failing grade, probation, suspension, or expulsion. Any student who is uncertain if an action falls into this category should consult the instructor and/or the Calendar.
<b>Midterm Exam Policy:</b>	The Faculty of Kinesiology policy is that all students are expected to write midterm exams on the dates listed on the course outline. Special accommodation may be granted by the instructor in <u>exceptional circumstances only</u> which include illness, participation in athletic events (varsity, national or international), domestic affliction, and religious conviction. It is the student's responsibility to supply proper documentation and/or notification <u>prior</u> to the originally scheduled midterm to support their circumstance. Personal travel plans and arrangements are <u>not</u> valid reasons for requesting a special accommodation for a midterm exam. Failure to comply with this policy will result in a grade of zero for the midterm and possible failure in the course.
<b>FOIP Policy:</b>	Please note that the University is under the jurisdiction of the provincial Freedom of Information and Protection of Privacy (FOIP) Act. Please refer to the website for details: <a href="http://www.ucalgary.ca/secretariat/privacy">http://www.ucalgary.ca/secretariat/privacy</a>
<b>Internet and Electronic Communication Device Information:</b>	Any surfing of the Internet during lectures that is not directly related to the class discussion is distracting and strictly forbidden. Additionally, the use of any electronic devices (e.g., cellular phones, Blackberrys) for e-mailing, texting, etc. is strictly prohibited. Please turn OFF your phone before the beginning of each lecture.  Instructors have the authority, at the discretion of the dean of their faculty, to require that specific course assignments, term papers and academic exercises be submitted in an electronic format. Instructors cannot require that multiple copies of an assignment be submitted.
<b>Emergency Evacuation/Assembly Points: Safewalk Information:</b>	For classes in the Kinesiology buildings Primary assembly point is the MacEwan Student Centre - North Courtyard and the Alternate assembly point is University Theatres Lobby  Safewalk volunteers walk people safely to their destination on campus (including Health Sciences, Children's Hospital, McMahon Stadium, and University LRT station). This service is free and available to students, staff and campus visitors. Call 403-220-5333 (24 hours a day/7 days a week/365 days a year).
<b>Student's Union:</b>	The Kinesiology Representative is Calindy Ramsden - E-mail: <a href="mailto:kinesrep@su.ucalgary.ca">kinesrep@su.ucalgary.ca</a> .