



UNIVERSITY OF
CALGARY

UNIVERSITY OF CALGARY
FACULTY OF ARTS
SCHOOL OF CREATIVE AND PERFORMING ARTS - DANCE
DNCE 363 Dance Science and Kinesiology
Winter 2016

Instructor Office Email Office Hours	Sarah Kenny MSc, PhD Candidate Sport Injury Prevention Research Centre: KNB 3300A kennys@ucalgary.ca By appointment
Day(s),time(s) and location of class	Tuesdays and Thursdays, 9:00 – 10:50am CHC 002
Out of class activities	Telus Spark Science Centre Event: Body Worlds – Vital Dates: January 16 – May 31 2016 Times: 10am – 4pm Tickets: \$25
Learning resources: required readings, textbooks and materials	Required (available for purchase at Campus Bookstore) 1. Simmel, L. (2014). Dance medicine in practice. London: Routledge. 2. Clippinger, K. (2007). Dance anatomy and kinesiology. Champaign: Human Kinetics. Recommended 1. Calais-Germain, B. (1993). Anatomy of movement. Seattle: Eastland Press. 2. Farhi, D. (1996). The breathing book. New York: Henry Holt. 3. Fitt, S. S. (1996). Dance kinesiology (2nd ed.). New York: Shirmer Books. 4. Haas, J. (2010). Dance anatomy. Champaign: Human Kinetics. 5. Koutedakis, Y., & Sharp, N. C. C. (1999). The fit and healthy dancer. Chichester: Wiley. 6. Laws, K., & Sugano, A., (2008). Physics and the art of dance: Understanding movement (2nd ed.). New York: Oxford University Press, Inc. 7. Olsen, A. (1998). Body stories: A guide to experiential anatomy. New York: Station Hill Openings. 8. Quin, E., Rafferty, S., & Tomlinson, C. (2015). Safe dance practice. Champaign: Human Kinetics. 9. Solomon, R., Solomon, J., & Minton, S. C. (2005). Preventing dance injuries (2nd ed.). Champaign: Human Kinetics. 10. Taylor, J., & Estanol, E. (2015). Dance psychology for artistic and performance excellence (2nd ed). Champaign: Human Kinetics. 11. Thomas, J., Nelson, J., Silverman, S. (2015). Research Methods in Physical Activity (7th ed). Champaign: Human Kinetics. Dance Science Journals Journal of Dance Medicine and Science Medical Problems of Performing Artists Journal of Dance Education IADMS Resource Papers, Bulletins for Teachers
Prerequisites	Kinesiology 259 and two of Dance 205, 207, 209, 211, 221, or equivalent, or consent of the Division Chair, Dance.
Supplementary fees	None.

Course description	Kinesiological analysis of dance, and the fundamentals of Dance Science.
Course overview	<p>The primary focus of this course will be on the scientific study of dance and dancers, and the practical application of scientific principles to dance practice. Students will learn to analyze dance movement from a kinesiological perspective. The research process (design and methodology) will be introduced. Overall emphasis will include safe dance practice in order to optimize dance training, enhance performance potential and reduce risk of injury. Students will be expected to apply this understanding to the assessment of their own practice and to the design of a dance science research project.</p> <p>This course will develop knowledge, comprehension, application and evaluation of:</p> <ul style="list-style-type: none"> • dance movement analysis (i.e. structure, function, role of gravity) • scientific research strategies (i.e. design, methodology, quantitative, qualitative) • biomechanics (i.e. terminology, musculoskeletal system, postural assessment) • physiology (i.e. neuromuscular system, respiratory system, energy system) • nutrition (i.e. energy sources, hydration, somatotypes, female athlete triad) • psychology (i.e. motivation, confidence, psychological skills) • somatics (i.e. kinaesthetic awareness, movement efficiency, breath patterns) • safe dance practice (i.e. risk identification, injury prevention, injury management) <p>All classes will involve lecture and studio activities. In each class, we will be moving, talking, and taking notes. Observation and hands on work will facilitate the exploration of ideas. Please take care of your own comfort and dress appropriately.</p>
Course learning outcomes	<p>By the completion of this course, successful students will be able to:</p> <ol style="list-style-type: none"> 1. explain the principles of kinesiology (i.e. anatomical and biomechanical organization) that underline the performance of human movement 2. conduct a comprehensive movement analysis of a dance phrase 3. reflect on the application of kinesiology to their own dance practice 4. integrate issues of health and safety into their own dance practice 5. describe physiological and psychological processes relevant to dance 6. compare different research designs and scientific methodologies 7. present a dance science research proposal (literature review, objective, research plan, significance) 8. defend the importance of scientific research and its application to a dancer's training, performance enhancement, health and wellness, and injury prevention
Course schedule:	See below.
Assessment components	<p><u>Assignment 1: Participation</u> Value: 10% of final grade Description: Owing to the experiential nature of this course, classes are equivalent to assignments. A participation grade will be awarded for arriving to class on time, being prepared to work, being fully engaged in class (i.e. involvement in experiential work, note taking, engaging in discussions, contributing to forums on D2L, etc.). Marks will be deducted if you miss more than one week of class (i.e. 2 classes) – see Assessment Expectations below.</p> <p><u>Assignment 2: Movement Analysis</u> Value: 25% of final grade Due Date: Tuesday February 23, 2016 at 9:00am Type: Written exam (midterm) Description: Short-answer questions will assess your knowledge of material covered in class and weekly readings from weeks 1 – 5. You will conduct a series of movement</p>

analyses (e.g. movement planes, major joints, primary muscles) of simple dance movements. Knowledge of safe dance practice (i.e. risk identification, injury prevention, injury management) will also be tested.

Assignment 3: Self Profile Essay

Value: 25% of final grade

Due Date: Tuesday February 23, 2016 at 9:00am

Type: Written essay

Description: The Self Profile essay will address a personal observation based on at least one of the following: anatomical structure, postural assessment, biomechanical alignment, and/or bilateral differences. Rather than try to change anything, you will simply observe and reflect upon the impact that your observation has had on your current dance training. To conclude, recommendations for continued personal improvement in your dance practice, specific to your observation, will be made. Relevant literature will support your essay and a bibliography will be included. Referencing will follow the format of the Journal of Dance Medicine and Science (JDMS).

Assessment Criteria

By the completion of this assessment, successful students will be able to:

- describe and analyze a personal observation using anatomical and biomechanical terminology
- discuss the impact of this personal observation on current dance training
- formulate recommendations for an improved, injury free dance practice in relation to personal observation
- support all discussion points with relevant, current dance science literature
- write a clear and coherent 3-page essay with an introduction, body, and conclusion that is free from grammatical and spelling errors

Assignment 4: Research Proposal

Value: 40% of final grade

Due Date: Tuesday April 5 OR Thursday April 7, 2016 at 9:00am

Type: Oral presentation

Description: You will be required to work together in groups of 3-4 people and prepare a 10-minute oral presentation to deliver near the end of term. The purpose of this presentation is to propose a specific dance science research project. The proposal will be referred to in future tense (i.e. will, will be). With reference to material covered in class, current dance science literature and an understanding of scientific methodology, you will discuss why you think this particular research project is necessary (background, objective) and how it could be implemented (research plan – participants, procedures, analysis). The conclusion (significance) will explain the impact that your project will have on future dance practice and dance science research as a whole. A question and answer period will follow your 10-minute presentation, where peers and assessors will ask questions and/or offer comments.

Please note: all PowerPoint slides for group presentations (electronic and paper copies) must be handed in by ALL students on Tuesday April 5, 2016 at 9:00am.

Assessment Criteria

By the completion of this assessment, successful students will be able to:

- describe the relevance of the proposed dance science research project to dance

	<p>practice</p> <ul style="list-style-type: none"> • design an appropriate research plan to execute the proposed project • explain how the proposed project will impact dance science research on the whole • follow standard scientific framework • present effectively (i.e. coherent PowerPoint slides, clear speaking, eye contact, easeful transitions between group members) • answer questions and expand ideas as required
<p>Assessment expectations</p>	<p><u>Expectations for Writing</u> Writing skills are important to academic study across all disciplines. Consequently, instructors may use their assessment of writing quality as a factor in the evaluation of student work. Please refer to the Undergraduate Calendar E.2 Writing Across the Curriculum policy for details.</p> <p><u>Expectations for Attendance and Participation</u> Please refer to the Undergraduate Calendar E.3 Attendance for details.</p> <p>Division of Dance Attendance Policy</p> <ul style="list-style-type: none"> • A significant part of your grade is based on participation. Participation means not only showing up for class, but also attending to the material at hand with effort and engagement. • With regard to participation, classes are considered equivalent to assignments. Thus, more than 2 absences per term will have an adverse effect on your final grade. • If you miss more than one week of classes (i.e. 2 classes), your final grade will begin to drop by as much as 10% per missed class. • If you miss more than two weeks of classes (i.e. 4 classes), you have the potential to fail the course. • If you show up late for or leave early from class, this will be counted as half an absence. • If for some reason you are feeling unwell during class time, a substitute form of participation may be arranged; however, <i>you may not obtain this privilege more than once</i> and you will receive half an absence. • For studio courses, if you opt out of full participation and choose to sit for a portion of the class, this will be counted as non-participation and will be marked as half an absence. • Students are responsible for any and all material missed during an absence. • If you sustain a significant injury during the term that will impact your participation for longer than a week's worth of classes (i.e. 2 classes) and if this injury is verified by a medical practitioner's note, your case will be submitted to the Dance Division Committee to address your situation. <p><u>Guidelines for Formatting Assignments</u> Self Profile Essay: You will put a title, your name and UCID on a cover sheet. The body of the essay will be at maximum 3 pages, typed, single sided, double spaced, 12 point Calibri font, with default margins. A separate reference page will complete the essay with a minimum of 4 references that follow the formatting structure of the Journal of Dance Medicine and Science (on D2L).</p> <p>Research Proposal: Your 10-minute oral presentation, with accompanying PowerPoint slides, of a potential dance science research project that will follow standard scientific framework (i.e. background, objective, research plan – participants, procedures,</p>

	<p>analysis, and significance).</p> <p><u>Guidelines for Submitting Assignments</u> The Movement Analysis Exam will take place during class time (9:00 – 10:50am). The Self Profile Essay will be handed in at the beginning of class (9:00am). All PowerPoint slides for Research Proposal group presentation (electronic and paper copies) will be handed in by ALL students on the first day of presentations at the beginning of class (9:00am).</p> <p><u>Late Assignments</u> The Self Profile Essay will not be accepted beyond the day that it is due: Thursday April 7, 2016. If it is submitted after 9:00am, then your grade will be affected by as much as 10%.</p> <p><u>Criteria That Must Be Met To Pass</u> In order to achieve a passing grade in the course, the minimum requirement is D.</p>																																																				
Grading scale	<p>For the course as a whole, letter grades should be understood as follows, as outlined in the section F.2 of the Undergraduate Calendar for 2015-2016:</p> <table border="1"> <thead> <tr> <th>Grade</th> <th>Percent</th> <th>GPA</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A+</td> <td>96-100</td> <td>4.00</td> <td>Outstanding.</td> </tr> <tr> <td>A</td> <td>91-95</td> <td>4.00</td> <td>Excellent-superior performance, showing comprehensive understanding of subject matter.</td> </tr> <tr> <td>A-</td> <td>86-90</td> <td>3.70</td> <td></td> </tr> <tr> <td>B+</td> <td>81-85</td> <td>3.30</td> <td></td> </tr> <tr> <td>B</td> <td>76-80</td> <td>3.00</td> <td>Good - clearly above average performance with knowledge of subject matter generally complete.</td> </tr> <tr> <td>B-</td> <td>71-75</td> <td>2.70</td> <td></td> </tr> <tr> <td>C+</td> <td>66-70</td> <td>2.30</td> <td></td> </tr> <tr> <td>C</td> <td>61-65</td> <td>2.00</td> <td>Satisfactory - basic understanding of the subject matter.</td> </tr> <tr> <td>C-</td> <td>56-60</td> <td>1.70</td> <td>Receipt of a grade point average of 1.70 may not be sufficient for promotion or graduation. (See individual undergraduate faculty regulations.)</td> </tr> <tr> <td>D+</td> <td>51-55</td> <td>1.30</td> <td></td> </tr> <tr> <td>D</td> <td>46-50</td> <td>1.00</td> <td>Minimal pass - marginal performance; generally insufficient preparation for subsequent courses in the same subject.</td> </tr> <tr> <td>F</td> <td>45 and below</td> <td>0</td> <td>Fail - unsatisfactory performance or failure to meet course requirements.</td> </tr> </tbody> </table>	Grade	Percent	GPA	Description	A+	96-100	4.00	Outstanding.	A	91-95	4.00	Excellent-superior performance, showing comprehensive understanding of subject matter.	A-	86-90	3.70		B+	81-85	3.30		B	76-80	3.00	Good - clearly above average performance with knowledge of subject matter generally complete.	B-	71-75	2.70		C+	66-70	2.30		C	61-65	2.00	Satisfactory - basic understanding of the subject matter.	C-	56-60	1.70	Receipt of a grade point average of 1.70 may not be sufficient for promotion or graduation. (See individual undergraduate faculty regulations.)	D+	51-55	1.30		D	46-50	1.00	Minimal pass - marginal performance; generally insufficient preparation for subsequent courses in the same subject.	F	45 and below	0	Fail - unsatisfactory performance or failure to meet course requirements.
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Midterm and final examination scheduling	<p>Final examinations may be scheduled at any time during the examination period (11-22 December for Fall 2015 term; 16-27 April for Winter 2016 term); students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures: ucalgary.ca/registrar/exams/deferred_final</p>																																																				
Deferrals of exams/term work	<p>It is possible to request a deferral of term work or final examinations for reasons of illness, accident, family or domestic affliction, or religious obligations. Please check with your advisor if any of these issues make it impossible for you to sit an exam or finish term work by stated deadlines. ucalgary.ca/registrar/exams/deferred_final ucalgary.ca/pubs/calendar/current/g-6.html ucalgary.ca/pubs/calendar/current/g-7.html</p>																																																				
Internet and electronic communication device	<p>elearn.ucalgary.ca/category/d2l/ ucalgary.ca/emergencyplan/emergency-instructions/uc-emergency-app The in-class use of computers may be approved by your Instructor. Cell phones and other</p>																																																				

	electronic communication devices should be silenced or turned off upon entering the classroom. If you violate the Instructor's policy regarding the use of electronic communication devices in the classroom, you may be asked to leave the classroom; repeated abuse may result in a charge of misconduct. No audio or video recording of any kind is allowed in class without explicit permission of the Instructor.
Academic integrity, plagiarism	The University of Calgary is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are referred to the section on plagiarism in the University Calendar (ucalgary.ca/pubs/calendar/current/k-2.html) and are reminded that plagiarism-- Using any source whatsoever without clearly documenting it—is an extremely serious academic offence. Consequences include failure on the assignment, failure in the course and possibly suspension or expulsion from the university. You must document not only direct quotations but also paraphrases and ideas where they appear in your text. A reference list at the end is insufficient by itself. Readers must be able to tell exactly where your words and ideas end and other people's words and ideas begin. This includes assignments submitted in non-traditional formats such as Web pages or visual media, and material taken from such sources. Please consult your instructor or the Student Success Centre (TFDL 3rd Floor) if you have any questions regarding how to document sources.
Copyright	It is the responsibility of students and professors to ensure that materials they post or distribute to others comply with the Copyright Act and the University's Fair Dealing Guidance for Students. Further copyright information for students is available on the Copyright Office web page (library.ucalgary.ca/copyright).
Academic accommodation	Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS); SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/ . Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy_0.pdf .
FOIP	ucalgary.ca/secretariat/privacy
Student misconduct	ucalgary.ca/pubs/calendar/current/k.html
Academic standing	ucalgary.ca/pubs/calendar/current/f.html
Safewalk	220-5333 anytime. ucalgary.ca/security/safewalk
Campus security	220-5333. Help phones: located throughout campus, parking lots, and elevators. They connect directly to Campus Security; in case of emergency, press the red button.
Emergency evacuation	Assembly points for emergencies have been identified across campus. THE PRIMARY ASSEMBLY POINT FOR CRAIGIE HALL IS THE PROFESSIONAL FACULTIES FOOD COURT. For more information, see the University of Calgary's Emergency Management website: ucalgary.ca/emergencyplan/assemblypoints
Faculty of Arts program advising and student information resources	For academic advising, visit the Arts Students' Centre (ASC) for answers about course registration, graduation checks, and the 'big picture' on programs and majors. Drop in at SS102, email us at ascarts@ucalgary.ca or call us at 403-220-3580. You can also visit the Faculty of Arts website at arts.ucalgary.ca/undergraduate which has detailed information on common academic concerns. For academic success support, such as writing support, peer support, success seminars, and learning support, visit the Student Success Centre on the third floor of the Taylor Family Digital Library (TFDL), email them at success@ucalgary.ca or visit their website at ucalgary.ca/ssc/ for more information or to book an appointment. For enrolment assistance, including registration (add/drop/swap) changes, paying fees, and navigating your Student Centre, contact Enrolment Services at 403-210-ROCK [7625], by email at futurestudents@ucalgary.ca or visit them at the MacKimmie Block 117.
Course outlines for transfer credit	It is possible that you will be asked for copies of this outline for credit transfers to other institutions or for proof of work done. It is the student's responsibility to keep these outlines and provide them to employers or other universities when requested. Please ensure that outlines of all the courses you take are kept in a safe place for your future reference.

	Departments/Programs do not guarantee that they will provide copies.
Letter of permission	If you wish to study at another institution while registered at the U of C, you must have a letter of permission. You can submit your request through your Student Centre at MyUofC. Students must have the Letter of Permission before they take the course at another school. Failure to prepare may result in no credit awarded and could result in suspension from the faculty.
Students' union and ombudsperson contacts	Student Union: su.ucalgary.ca/about/who-we-are/elected-officials/ Faculty of Arts reps: arts1@su.ucalgary.ca ; arts2@su.ucalgary.ca ; arts3@su.ucalgary.ca ; arts4@su.ucalgary.ca Graduate Student's Association: gsa.ucalgary.ca/executive Student Ombudsman: su.ucalgary.ca/page/quality-education/academic-services/student-rights
Undergraduate associations	DUS: Drama Undergraduate Society, CHC 005 uofcdus@gmail.com MUS: Music Undergraduate Society, CHF 219 undmusic@ucalgary.ca

DNCE 363: Dance Science and Kinesiology
Course Schedule

Week	Dates	Tuesday. 900 – 1050	Thursday. 900 – 1050
1	Jan 12 + 14	Introduction: Why is science important to dance? What does it mean to be a healthy dancer?	Safe dance practice: Injury risk, prevention, management Reading: Simmel Ch 11, IADMS First Aid for Dancers paper, Technique Class Participation paper
2	Jan 19 + 21	Applied biomechanics: physics of dance, musculoskeletal system Reading: Simmel p3-13, Clippinger Ch 1-2, IADMS Teacher Bulletin (Wilson)	Movement analysis: muscular function, role of gravity, postural assessment Reading: Clippinger Ch 8
3	Jan 26 + 28	Lower limbs: foot, ankle Reading: Simmel Ch 6, Clippinger Ch 6	Lower limbs: knee Reading: Simmel Ch 5, Clippinger Ch 5
4	Feb 2 + 4	Lower limbs: hip Reading: Simmel Ch 3-4, Clippinger Ch 4	Spine Reading: Simmel Ch 2, Clippinger Ch 3
5	Feb 9 + 11	Upper limbs: shoulder, arm Reading: Simmel Ch 7, Clippinger Ch 7	Review
	Feb 16 + 18	READING WEEK	
6	Feb 23 + 25	Midterm: Movement Analysis Due: Self-profile essay	Motor Control Field Trip to Human Performance Lab Guest: Elaine Little
7	Mar 1 + 3	Research Methods: qualitative and quantitative research, research designs, simple statistics	Research Methods: literature search strategies, structure of a scientific study Guest: Hailey McLeod
8	Mar 8 + 10	Applied Physiology: energy systems, neuromuscular system Reading: Simmel Ch 12; p19-23, IADMS Teacher Bulletin (Angioi, Wyon)	Nutrition: energy sources, hydration, somatotypes, female athlete triad Reading: Simmel Ch 9, IADMS Fueling the Dancer paper
9	Mar 15 + 17	Psychology: motivation, confidence, psychological skills Reading: Simmel Ch 8, IADMS Teacher Bulletin (Miulli)	No class: Mainstage opens
10	Mar 22 + 24	Somatic practice: movement efficiency, kinaesthetic awareness Reading: IADMS Somatic Studies and Dance paper, Proprioception paper	Somatic practice: breath patterns, respiratory system
11	Mar 29 + 31	Group Tutorials; Guided study time	Group Tutorials; Guided study time
12	Apr 5 + 7	Group Presentations	Group Presentations
13	Apr 12	Reflection	