



NATURAL SCIENCES PROGRAM  
COURSE OUTLINE

1. **Course:** SCIE 511, Peer Mentoring and Collaborative Learning in Science

**FALL 2019**

Lecture Sections:

L01: We, 5:00 PM - 7:45 PM, TI Learning Studio A, Dr. Kyla Flanagan, B1266, 403-220-7644, kmflanag@ucalgary.ca, Office Hours: by appointment, feel free to contact me anytime to make an appointment.

**Course Site Name on Desire 2 Learn (D2L):** SCIE 511 L01- CMCL 507 S01 (Fall 2019) - Peer Mentoring and Collaborative Learning in Science (available through My UofC Portal)

**USC Specialized Programs Office**

EEEL 426

403-220-8600

[sciemail@ucalgary.ca](mailto:sciemail@ucalgary.ca)

### Course Description

In this course, students (Peer Mentors) will gain both theoretical knowledge of mentoring and practical experience in supporting their peers through the learning process. Peer Mentors enrolled in this course will act as a bridge between the host instructor and students in a course in which the Peer Mentors have previously demonstrated excellence; they will encourage and motivate learning, convey enthusiasm for course material, and provide support for active learning in and out of the classroom. Specific mentorship duties will be dependent on the host instructor's requirements and each Peer Mentor's vision of mentorship. This course will support Peer Mentors in their role by providing instruction in science-based learning theories and in principles and practices of group facilitation.

### Responsibilities and Expectations

My philosophy of teaching is that it is my responsibility to 'set the stage' for learning to occur. It is my job to ensure that the classroom environment, support materials, and assessment tools used all support the conditions that allow students to learn. Feedback from students is very important in this so that I know whether such conditions exist, how well the course is going and where problems are arising. I encourage you to feel free to tell me about these things at any point in the semester. It is also my goal that, as much as possible, students will spend class time actively working with course material and applying what has been learned from the readings and lectures. This means coming to class prepared and willing to participate!

#### My expectations of you:

- treat others in class with respect. This means:
  - Be considerate, open, and encouraging of the contributions of other students in the class
  - Listen actively to others
  - Assume positive intent when receiving feedback from others
  - Be supportive of the efforts and initiatives of others
  - Restrict your use of laptops and other electronic devices to only those activities directly related to class
  - Be on time & come prepared; participate actively in class

#### What you can expect from me:

- Treat all students with respect
- Start and end classes on time
- Available outside of class time to discuss course content, practicum or any other course concerns
- Post materials on D2L in a timely manner
- Return graded materials within a week
- Reply to emails within 24 h (except weekends)

- 2. Prerequisites:** permission from the Instructor is required to enrol in this course.
- 3. Grading:** The University policy on grading and related matters is described sections [F.1](#) and [F.2](#) of the online University Calendar.

Students will earn grades based on the **requirements they choose to complete**. Students must complete all the requirements at **AND** below their chosen grade. For example, students who aim to earn an A, must complete all 4 of the Learning Bundles, students who choose to earn a B, must complete Learning Bundles 1-3. Failure to successfully complete Learning Bundle 1 will result in an F grade.

**Learning Outcomes for each of the 4 Learning Bundles:**

- (1) Practicum Learning Bundle – Apply theories of learning and tools for teaching during the mentorship of peers in your host class
- (2) Foundational Concepts Learning Bundle – Explain and describe different theories of learning, tools for teaching and approaches of mentorship
- (3) Reflection Learning Bundle – Write critical reflections on experiences linking foundational concepts of learning/mentoring and the practice of teaching/mentorship
- (4) Facilitation Learning Bundle – Apply theories of group management, engagement, team building, and conflict resolution during facilitation within SCIE 511

To receive a D, you must complete the *Practicum* learning bundle to an “acceptable” standard as defined by the **Practicum Specifications & Rubric**

To receive a C, you must complete the requirements of a D, as well as complete the *Foundational Concepts* learning bundle to an “acceptable” standard as defined by the **Foundational Concepts Specifications & Reading Summary Rubric**

To receive a B, you must complete all the requirements of a C, as well as complete the *Reflection* learning bundle to an “acceptable” standard as defined by the **Reflection Specifications & Rubric**

To receive an A, you must complete all the requirements of a B, as well as complete the *Facilitation* learning bundle to an “acceptable” standard as defined by the **Facilitation Specifications & Rubric**

Additionally, for an A, you must produce a *Mentoring Philosophy* and pull together materials produced during the course into a professional *Portfolio* to an “acceptable” standard as defined by the **Mentoring Philosophy & Portfolio Specifications and Rubrics**

**Specifications for each Learning Bundle** – for each learning Bundle you must successfully complete ***all*** the points specified.

**1. Practicum Specifications:**

- Complete an *average of 3 hours/week of practicum* with the host class where you provide mentorship to your peers (some weeks may be more than 3 hours, some weeks less, but on *average* the expectation is 3 hours per week).
- Conduct yourself professionally in interactions with your host instructor including attending and being on time for meetings (missing or arrive late to no more than one meeting in the semester without notice).
- Conduct yourself professionally in interactions and communication with students in the host class.

\*\* This Learning Bundle will be assessed by your *host instructor* mid-semester and at the end-of-semester using the *Practicum Rubric on D2L*. Only the end-of-semester evaluation will determine successful completion of this Learning Bundle.

**2. Foundational Concepts Specifications:**

- Attend, be on time, and participate in our SCIE511 class activities and discussions with no more than **1 unexcused late/absence during the semester**.
- Submit at the **start of the first class (Sept 11)** a ~300-word typed *Semester Plan* outlining your goals you wish to work towards throughout the semester. Credit for this is awarded if the

Semester Plan demonstrates sound academic effort, as measured by completeness and professional writing.

- Submit at the **start of each class (excluding the first class) (Sept 18 - Dec 4)** a ~300-word typed *Reading Summary* outlining the most important points of the reading(s) for the week.
- **10 out of a possible 11** Reading Summaries must be to an “acceptable” standard as defined by the *Reading Summary Rubric* provided on D2L.

### 3. Reflection Specifications:


- Submit at the **start of class every two weeks** (Sept 18, Oct 2, Oct 16, Oct 30, Nov 20, Dec 4) a ~800 word typed *Critical Reflection*.
- **5 out of a possible 6** Critical Reflections must be to an “acceptable” standard, as defined by the *Critical Reflection Rubric* provided on D2L.
- Critical Reflections less than 400 words will not be given credit.

\*\* For Students to receive an “A”, for this Learning Bundle they must ALSO:

- o On the **last day of the semester**, submit a ~600 word typed *Mentoring Philosophy* explaining your reasoning for mentoring, providing a brief description of how you mentor and justifying your beliefs about mentoring. The Mentoring Philosophy must be completed to an acceptable standard as outlined in the *Mentoring Philosophy Rubric* on D2L.
- o On the **last day of the semester**, submit a *Portfolio* containing all the material produced during the semester including all submitted Critical Reflections and the Mentoring Philosophy as well as any other documents as specified in the Portfolio Rubric. The Portfolio must be completed to an acceptable standard as outlined in the *Portfolio Rubric* on D2L.

### 4. Facilitation Specifications:

- Facilitate 1 group “check-in”. Guidelines for your role in facilitating the check-in will be provided during the first class.
- In a small group of 2-3 students, facilitate a 40-minute class on a topic provided to an “acceptable” standard as outlined in the *Facilitation Rubric* on D2L.
- **At the start of your facilitated class**, provide to the instructor a detailed, typed ‘*lesson plan*’ for the class, identifying learning outcomes, pedagogical tools and techniques used, and motivation for approaches/strategies/tools used.

\*\* Students will be given **three (3) ‘free passes’** that can be used to re-submit any written assignment (Reflection or Reading Summary) to get the work to an “acceptable” standard. The free pass and re-submitted assignment must be submitted **within one week (7 days) of the graded assignment being returned or mark being posted**. There is only one re-submission per free pass and the free pass must be completed and attached to the re-submitted assignment. Re-submitted material must also be accompanied by the original graded assignment and a brief summary (approximately one paragraph) describing how the student has revised their assignment in response to that feedback. Free passes can also be used to hand in an assignment **up to 1 week late**. Free passes are **not** transferable and will **not** be replaced if lost. \*\* 

\*\* Students who *exceed* expectations *FOR A GIVEN* letter grade, will earn the “+” letter designation. For example, a student aiming to complete the “B” letter grade requirements who completes 6 out of 6 Critical Reflections to an acceptable standard (rather than 5/6) *and* 11 out of 11 Reading Summaries to an acceptable standard (rather than 10/11) will earn a B+ letter grade. To earn an A+ students must exceed expectations for **all** Learning Bundles. \*\*

\*\* Students who do not successfully complete **1 (and only 1)** of the specifications **within a single Learning Bundle**, will earn the “-” letter designation. For example, a student aiming to complete the “B” letter grade requirements, who only completes 4 out of 6 Critical Reflections to an acceptable standard (rather than 5/6) **or** 9 out of 11 Reading Summaries to an acceptable standard (rather than 10/11) will earn a B- letter grade. Students not successfully completing **more than one** of the specifications **within a single Learning Bundle**, will be assessed as **not having met the requirements for that Learning Bundle** and will drop to the Letter grade associated with the Learning Bundles they have successfully completed. This excludes the Practicum Bundle, which must be completed for successful completion of the course.\*\*

\*\* Note that a grade of F will result if students do not successfully meet **all** of the requirements for a D grade.

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.3](#) of the University Calendar
5. **Scheduled out-of-class activities:** This course has a practicum component with an expectation of 3 hours of out of class time activities a week. Students will make arrangements for their practicum in collaboration with their host instructor.

**REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** All course Readings are provided on D2L.
7. **Examination Policy:** There are no examinations in this course.
8. **Approved Mandatory and Optional Course Supplemental Fees:** There are no mandatory or optional course supplemental fees for this course.
9. **Writing across the curriculum statement:** In this course, the quality of the student's writing will be a factor in the evaluation of those documents. See also [Section E.2](#) of the University Calendar.
10. **Human studies statement:** students in the course may be expected to participate as subjects or researchers. See [Section E.5](#) of the University Calendar.

#### 11. Reappraisal of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

1. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **15 days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall immediately submit the Reappraisal of Graded Term work form to the department in which the course is offered. The department will arrange for a reassessment of the work if, and only if, the student has sufficient academic grounds. See sections [I.1](#) and [I.2](#) of the University Calendar

#### 12. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Mental Health:** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- (b) **SU Wellness Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see [www.ucalgary.ca/wellnesscentre](http://www.ucalgary.ca/wellnesscentre) or call [403-210-9355](tel:403-210-9355).
- (c) **Sexual Violence:** The University of Calgary is committed to fostering a safe, productive learning environment. The Sexual Violence Policy (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>) is a fundamental element in creating and sustaining a safer campus environment for all community members. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email ([svsa@ucalgary.ca](mailto:svsa@ucalgary.ca)) or phone at [403-220-2208](tel:403-220-2208).
- (d) **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University

Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/ fabrication of experimental values in a report. These are only examples.

- (e) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (f) **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#). Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Program Director of the Natural Sciences Program, Dr. Edwin Cey by email [ntscdirector@ucalgary.ca](mailto:ntscdirector@ucalgary.ca) or phone 403-220-8393. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than 14 days prior to the date in question. See [Section E.4](#) of the University Calendar.
- (g) **Safewalk:** Campus Security will escort individuals day or night (See the [Campus Safewalk](#) website). Call [403-220-5333](tel:403-220-5333) for assistance. Use any campus phone, emergency phone or the yellow phones located near most parking lot pay stations.
- (h) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- (i) **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca). SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca). Student Ombudsman, Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca).
- (j) **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
- (k) **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- (l) **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Program Approval: \_\_\_\_\_ Approved by Program Director (E.Cey)

Date: August 20, 2019

Associate Dean's Approval for alternate final exam arrangements: \_\_\_\_\_ Approved by Associate Dean (N. Chibry)

Date: August 22, 2019

## SCIE 511 Tentative Schedule of Topics and Readings Fall 2019

Week	Theme	Activities	Readings	Assessment
1 (Sep 11)	<b>Welcome to the Curricular Peer Mentoring program!</b>	Orientation and Introduction Ethics paperwork, Course Outline Reflective Writing Specifications for Critical Reflections	1. Course Outline ( D2L) 2. Ethics Guidelines (in class) 3. Question Formulation Technique (in class) 4. Critical Reflection Specifications (in class) 5. "Reflection in Higher Education Learning" (D2L) 6. "Reflective Writing Guidance Notes for Students" (D2L)	DUE: <u>Semester Plan</u>
2 (Sep 18)	<b>The Nature of Learning</b>	Facilitated Check-in (45 minutes) De-brief "The Nature of Learning" Constructing an activity/lesson plan incorporating The Nature of Learning	1. "The Nature of Learning: Using Research to Inspire Practice – the Practitioner’s Guide" (D2L)	DUE: <u>Reading Summary #1</u> DUE: <u>Critical Reflection #1</u>
3 (Sep 25)	<b>Active Learning</b>	Facilitated Check-in (45 minutes) Class Discussion: Active Learning -- Sage on the Stage vs. Guide on the Side Small group discussions: Cadaver dog questions Incorporate an Active Learning Technique into a mentoring plan	1. "Classroom activities for Active Learning" (D2L) 2. "What my Cadaver Dog Taught me about Teaching and Learning" (D2L)	DUE: <u>Reading Summary #2</u>
4 (Oct 2)	<b>Collaborative Learning</b>	Facilitated Check-in (45 minutes) De-brief "My pedagogical creed" Gallery walk activity	1. "My Pedagogical Creed" (D2L) 2. "The Art of Collaborative Learning" (D2L)	DUE: <u>Reading Summary #3</u> DUE: <u>Critical Reflection #2</u>
5 (Oct 9)	<b>Metacognition &amp; Exam prep.</b>	Facilitated Check-in (45 minutes) De-brief "Promoting Student Metacognition" Jigsaw activity on studying techniques that help students learn	1. "Promoting Student Metacognition" (D2L) 2. "Improving Students' Learning with effective learning techniques" (handouts in class)	DUE: <u>Reading Summary #4</u>
<b>Empowering Learners</b>				
6* (Oct 16)	<b>The Zone of Proximal Development</b>	Check-in (45 minutes) Student Facilitated Class	1. "In and Out of the Zone of Proximal Development. Vygotsky on Education" (D2L) 2. "Sharpening a tool for teaching: the zone of proximal development" (D2L)	DUE: <u>Reading Summary #5</u> DUE: <u>Critical Reflection #3</u>
7* (Oct 23)	<b>Intelligence, resiliency and mindsets</b>	Check-in (45 minutes) Student Facilitated Class	1. "Mindsets that promote resiliency: when students believe that personal characteristics can be developed" (D2L)	DUE: <u>Reading Summary #6</u>
8* (Oct 30)	<b>Universal Design for Learning</b>	Check-in (45 minutes) Student Facilitated Class	1. "Universal Instructional Design in Higher Education: An Approach for Inclusion" (D2L) 2. "Universal Design for Learning in Higher Education" (D2L)	DUE: <u>Reading Summary #7</u> DUE: <u>Critical Reflection #4</u>
9* (Nov 6)	<b>Power and Learning</b>	Check-in (45 minutes) Student Facilitated Class	1. "Collaboration across the Power Line" (D2L)	DUE: <u>Reading Summary #8</u>
10 (Nov 13)	<b>Reading Days -- NO CLASS</b>			
11* (Nov 20)	<b>Gender and Learning</b>	Check-in (45 minutes) Student Facilitated Class	1. "Coming Out in Class: Challenges and Benefits of Active Learning in a Biology Classroom for LGBTQIA Students" (D2L)	DUE: <u>Reading Summary #9</u> DUE: <u>Critical Reflection #5</u>
12* (Nov 27)	<b>Teaching and Freedom</b>	Check-in (45 minutes) Student Facilitated Class	1. "Pedagogy of the oppressed" Chapter 2 (D2L)	DUE: <u>Reading Summary #10</u>
13* (Dec 4)	<b>Teaching with Heart and Soul</b>	Check-in (45 minutes) Student Facilitated Class	1. "Teaching with Heart and Soul: Reflections on Spirituality in Teacher Education" (D2L)	DUE: <u>Reading Summary #11</u> DUE: <u>Critical Reflection #6</u> DUE: <u>Final Portfolio with Mentoring Philosophy</u>

\*indicates student facilitated classes