



**UNDERGRADUATE EDUCATION COMMITTEE (UEC) MEETING**  
**May 24, 2019 - 10:00 AM**  
**A225**

**AGENDA**

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Page

**1. APPROVAL OF THE AGENDA**

**1.1.**

**2. APPROVAL OF UEC MINUTES**

3 - 7      **2.1.** UEC draft minutes: April 26, 2019

MOTION: To approve the draft minutes as presented.

8 - 13      **2.2.** Correction to UEC minutes: Dec. 14, 2018

MOTION: To approve the corrected December 14, 2019 minutes as presented.

**3. COURSES AND PROGRAMS**

14      **3.1. Applied Business Technology**

Discontinuation: ABT 108, ABT 118, ABT 124, ABT 128, ABT 132, ABT 134, ABT 135A, ABT 135B, ABT 137B, ABT 144, ABT 187A, ABT 187B, OFC TYP1, OFC TYP3

MOTION: To discontinue the ABT courses as presented.

15      **3.2. English Language Studies**

Discontinuation: ESL BU55, ESL C54, ESL CB60, ESL CB77, ESL CWE30, ESL CWE40, ESL DR47, ESL FLM, ESL IB19, ESL MU47, ESL T85

MOTION: To discontinue the ESL courses as presented.

16      **3.3. Upgrading and University Preparation**

Discontinuation: CCP LC, ENGL 090, FNST 091, GED PREP, SCI SR12

MOTION: To discontinue the UUP courses as presented.

17 -      **3.4. Mathematics and Statistics**

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32

Change to program requirements: Data Analysis Post-baccalaureate certificate

MOTION: To approve the changes to the Data Analysis Post-baccalaureate certificate as presented.

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**3.5. Chemistry: Course outline**

New course: CHEM 499, Honours Research and Thesis in Chemistry

MOTION: To approve the new CHEM 499 course outline as presented.

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**3.6. Chemistry: New program**

New program: Chemistry Honours

MOTION: To recommend the Chemistry Honours as presented.

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**3.7. Adult Education**

New program: Adult Education minor

MOTION: To recommend the Adult Education minor as presented.

**4. OTHER BUSINESS/DISCUSSION ITEMS**

**4.1. Admissions Subcommittee report**

**4.2. Transfer Credit Subcommittee report**

**4.3. Policy Subcommittee report**

**4.4. Senate report**

**5. INFORMATION ITEMS**

**5.1. Minor course changes** (outlines will be available at  
[www.ufv.ca/calendar/courseoutlines](http://www.ufv.ca/calendar/courseoutlines))

**6. ADJOURNMENT**



## **UNDERGRADUATE EDUCATION COMMITTEE (UEC) MEETING**

April 26, 2019  
10:00 AM - A225  
Abbotsford Campus

### **DRAFT MINUTES**

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**PRESENT:** Heather Compeau, Rajdeep Dhaliwal, Vlad Dvoracek, Ceilidh Hart, Bobby Jaswal, David Johnston, Gilmour Jope, Bruce Kirkley, David McGuire, Teresa Piper, Eric Spalding, and Ben Vanderlei  
**ABSENT:** Donna Alary, Adrianna Bakos, Courtney Boisvert, Sue Brigden, Peter Geller, Shirley Hardman, Everett Igobwa, Esther Jimenez Atochero, Amber Johnston, Elaine Newman, Samantha Patridge, and Kirsten Robertson  
**GUESTS:** Susan Francis, Claire Hay, Wayne Henry, Heather Hurtubise, Sabrina Ngo, Liana Thompson, and Nadia Tudhope  
**RECORDER:** Amanda Grimson

#### **1. APPROVAL OF THE AGENDA**

#### **2. APPROVAL OF UEC MINUTES**

##### **2.1. UEC draft minutes: March 29, 2019**

**MOTION:**

To approve the draft minutes as presented.  
CARRIED

#### **3. COURSES AND PROGRAMS**

##### **3.1. Child, Youth, and Family Studies: Course outline**

Revised learning outcomes: CYC 395

As requested at the March 29 UEC meeting, the department has submitted revised learning outcomes for this course.

**MOTION:**

To approve the revised learning outcomes for CYC 395 as presented.  
CARRIED

##### **3.2. Geography: Course outlines**

New course: GEOG 316, Geography of Food II: Fermentation

New course: GEOG 481, Directed Readings

Discontinuation: GEOG 101, 102, 131, 211, 250, 270

The course outlines for GEOG 316 and 481 were inadvertently omitted from the agenda package. UEC reviewed these outlines onscreen, and had previously received them as part of Campus-Wide Consultation (CWC).

**MOTION:**

To approve the GEOG 316 and 481 course outlines as presented.  
CARRIED

**MOTION:**

To approve the discontinuation of GEOG 101, 102, 131, 211, 250, and 270 as presented.  
CARRIED

**3.3. Continuing Education: Course changes**

Review with changes including title and total hours: HLTH NC01

Review with changes including title, prerequisites, and total hours: HLTH NC02, NC03, NC04, NC05, NC06, NC07, NC08, NC09, NC10, NC11, NC12

**MOTION:**

To approve the HLTH NC course outlines as presented.  
CARRIED

**3.4. Continuing Education: Program changes**

Change to program and entrance requirements: Nursing Unit Clerk certificate

**MOTION:**

To recommend the changes to the Nursing Unit Clerk certificate program and entrance requirements as amended, effective September 2019:

- Successful completion of the Nursing Unit Clerk assessment will be moved from "other requirements" to become #4 of the entrance requirements.

CARRIED

**3.5. Chemistry: Course outline**

New course: CHEM 499, Honours Research and Thesis in Chemistry

This item was postponed to the May meeting at the request of the department.

**3.6. Chemistry: New program**

New program: Chemistry Honours

This item was postponed to the May meeting at the request of the department.

**3.7. Philosophy: Course discontinuation**

Discontinuation: PHIL 370

**MOTION:**

To approve the discontinuation of PHIL 370 as presented.  
CARRIED

**3.8. Philosophy: Program changes**

Change to program requirements: Philosophy major

**MOTION:**

To approve the changes to the Philosophy major as presented, effective January 2020.  
CARRIED

**3.9. Biology: Course discontinuations**

Discontinuation: BIO 270/CRIM 270, BIO 470/CRIM 470

**MOTION:**

To approve the discontinuation of BIO 270/CRIM 270 and BIO 470/CRIM 470 as presented.

CARRIED

**3.10. Arts: Course discontinuations**

Discontinuation: FD 113, 115, 163, 164, 171, 172, 174, 180, 182, 192, 193, 263, 271, 281, 283, 290, 291, 292, 296, 297, 298, 320, 345, 360, 364, 371, 382, 384, 390, 396, 397, 398

Discontinuation: LING 270, 275

**MOTION:**

To approve the discontinuation of the FD courses as presented.

CARRIED

**MOTION:**

To approve the discontinuation of LING 270 and 275 as presented.

CARRIED

**3.11. General Studies**

Correction: General Studies diploma

The program requirements for the General Studies diploma that were approved by UEC in December incorrectly included the numeracy requirements for the Bachelor of Integrated Studies. The requirement "One of: STAT 104, STAT 106, or PSYC 110" should not have been included.

**MOTION:**

To approve the following correction to the General Studies diploma:

- "One of STAT 104, STAT 106, or PSYC 110" will not be included in the Use and Interpretation of Numerical Data requirements.

CARRIED

**4. OTHER BUSINESS/DISCUSSION ITEMS**

**4.1. Changes relating to B.C. High School curriculum changes**

**MOTION:**

That UEC approve the changes in course prerequisites as described on the presented charts.

CARRIED

**MOTION:**

That UEC approve the List of Approved Courses as described on the presented charts, and including Halq'eméylem 12.

CARRIED

**MOTION:**

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26 Apr 2019

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That UEC recommend the changes to University Admission requirements as described in the presented charts.

CARRIED

**MOTION:**

That UEC approve changes to the English Language Proficiency requirements as follows:

- **For the Entry Level English Language Proficiency Standards:** "English Studies 12 or English First Peoples 12. Students may also present English 12, English Literature 12, English 12 First Peoples, International Baccalaureate English A (standard level or higher level), Advanced Placement English, or equivalent."
- **For the Degree/diploma level English language proficiency standards:** "English Studies 12 or English First Peoples 12 with a minimum C+ grade. Students may also present English 12, English Literature 12, English 12 First Peoples; all with a minimum C+ grade, International Baccalaureate English A (standard level or higher level), Advanced Placement English, or equivalent."

CARRIED

**4.2. UEC Terms of Reference**

All standing committees of Senate are asked to review their Terms of Reference on an annual basis and recommend any changes to the Senate Governance Committee. UEC members suggested that the circumstances under which proposals are recommended to APPC be clarified, requested that two Ex Officio members be able to appoint designates, and noted some required updates to the membership listing.

**MOTION:**

To recommend the following revisions to the UEC Terms of Reference:

- Item #6 revised to: Advise the Academic Planning & Priorities Committee on proposals for new **programs**, and ~~revised programs~~ **revisions** that **may** occasion a change to the alignment of programs with institutional priorities.
- "International Education" changed to "UFV International".
- Titles updated for both the Associate Vice-President of Institutional Research and Integrated Planning and the Associate Director of Program Development and Quality Assurance.
- Allow Ex Officio members from both UFV International and IRIP to appoint a designate to the committee.

CARRIED

**4.3. Admissions Subcommittee report**

There was no report from this subcommittee.

**4.4. Transfer Credit Subcommittee report**

This subcommittee has three requests to review, which will be reported on at a future meeting.

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**4.5. Policy Subcommittee report**

This subcommittee should plan to meet after the May UEC meeting to discuss upcoming work.

**4.6. Senate report**

There was nothing of note to report back from Senate.

**4.7. International admissions**

Registrar D. Johnston distributed information regarding adjustments to the admission processes for international students.

**5. INFORMATION ITEMS**

**5.1. Minor course changes** (outlines will be available at [www.ufv.ca/calendar/courseoutlines](http://www.ufv.ca/calendar/courseoutlines))

AH 230  
BIO 350  
VA 283

**6. ADJOURNMENT**

The meeting was adjourned at 12:03 pm.



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**UEC MEMORANDUM**

UEC Chair: Eric Spalding  
Phone: 5435

UEC Assistant: Amanda Grimson  
Phone: 4571

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**TO:** Undergraduate Education Committee  
**FROM:** Amanda Grimson, Undergraduate Education Committee Assistant  
**DATE:** May 16, 2019  
**RE:** Correction to UEC minutes: December 14, 2019

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It has been brought to my attention that a statement in the UEC minutes from the December 14, 2019 meeting is incorrect. The following was included under item 4.2, General Studies:

*The calendar should note that completion of a particular certificate can only be used to satisfy one requirement for each of the General Studies diploma and the BGS.*

This was intended as a calendar clarification, but would actually constitute a material change to these programs. Students are permitted to use a single certificate to meet more than one competency if relevant. Corrected minutes are attached.





## **UNDERGRADUATE EDUCATION COMMITTEE (UEC) MEETING**

December 14, 2018  
10:00 AM - A225  
Abbotsford Campus

### **DRAFT MINUTES**

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**PRESENT:** Adrianna Bakos, Sue Brigden, Rajdeep Dhaliwal, Shirley Hardman, Ceilidh Hart, Everett Igobwa, Esther Jimenez Atochero, David Johnston, Gilmour Jope, Bruce Kirkley, Samantha Pattridge, Teresa Piper, Kirsten Robertson, Eric Spalding, and Ben Vanderlei  
**ABSENT:** Donna Alary, Courtney Boisvert, Heather Compeau, Vlad Dvoracek, Peter Geller, Bobby Jaswal, Amber Johnston, David McGuire, and Elaine Newman  
**GUESTS:** Ian Affleck, Karin Jager, Marlene Murray, Michelle Rhodes, Barbara Salingre, Norm Taylor, and Sven Van de Wetering  
**RECORDER:** Amanda Grimson

#### **1. APPROVAL OF THE AGENDA**

#### **2. APPROVAL OF UEC MINUTES**

##### **2.1. UEC draft minutes: Oct. 26, 2018**

##### **MOTION:**

To approve the draft minutes as presented.

**CARRIED**

#### **3. UEC SUBCOMMITTEES**

##### **3.1. Transfer Credit Subcommittee membership**

One additional faculty member is still needed for this subcommittee. D. Johnston is continuing to look for someone to fill this role.

#### **4. COURSES AND PROGRAMS**

##### **4.1. University Studies: Course outline**

Changes including title, credits, and prerequisites: UNIV 101

There were some concerns that these changes were being rushed for Winter 2019. S. Pattridge (College of Arts Associate Dean) noted that the biggest change is from 2 to 3 credits, which will be to the advantage of international students registered in the course for Winter 2019. Other revisions have been developed in consultation with advisors, student services, and international education.

There were also a question regarding why this is a university-level elective, rather than a developmental-level course. M. Rhodes indicated that this is very much an academic course, focusing on reflective practice and designed to complement classroom-based learning. She also noted that UFV is one of few

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institutions that does not already include a mandatory component similar to this course.

It was suggested that a title change to "Introduction to University Studies" or "University Success Skills" might be appropriate. This can be considered with future revisions.

**MOTION:**

To approve the changes to the UNIV 101 course outline as presented, including a change from 2 to 3 credits.

CARRIED; ABSTENTION: 3

**MOTION:**

To approve the changes to UNIV 101 effective January 2019.

CARRIED; ABSTENTION: 1

**4.2. General Studies: Program changes**

Change to program requirements: General Studies diploma

Changes to entrance and program requirements: Bachelor of General Studies

Name change: Bachelor of Integrated Studies (formerly Bachelor of General Studies)

~~The calendar should note that completion of a particular certificate can only be used to satisfy one requirement for each of the General Studies diploma and the BGS.~~

B. Kirkley (Program Development and Quality Assurance) presented additional revisions to the Thematic Option section, which will be included in the submission to Senate. D. Johnston (Registrar) noted that Thematic options are printed on transcripts. PDQA will do some additional research on the thematic options to be sure that this approach still meets current ministry standards.

**MOTION:**

To approve the changes to the General Studies diploma program requirements as presented, effective September 2019.

CARRIED

**MOTION:**

To recommend the changes to the Bachelor of General Studies program and entrance requirements as presented, effective September 2019.

CARRIED

**MOTION:**

To recommend changing the Bachelor of General Studies to the Bachelor of Integrated Studies as presented, effective September 2019.

CARRIED

**MOTION:**

That students graduating prior to September 1, 2019 are not eligible to replace their Bachelor of General Studies degree with a Bachelor of Integrated Studies.

CARRIED

**4.3. Environmental Studies: Course outlines**

Changes including learning outcomes: ENV 200, 410

**MOTION:**

To approve the changes to the ENV course outlines as presented.  
CARRIED

**4.4. Geography and the Environment: Course outline**

New course: GEOG 331, Environmental Assessment and Management

**MOTION:**

To approve the GEOG 331 course outline as presented.  
CARRIED

**4.5. Environmental Studies: Program changes**

Changes to entrance and program requirements: Bachelor of Environmental Studies

**MOTION:**

To recommend the changes to the Bachelor of Environmental Studies as presented, effective September 2019.  
CARRIED

**4.6. Chemistry: Course change**

Discontinuation: CHEM 105, Introductory Chemistry for the Health and Environmental Sciences

**MOTION:**

To discontinue CHEM 105 as presented.  
CARRIED

**4.7. Graphic and Digital Design: Course outline**

New course: GD 461, Advanced Portfolio for Graphic and Digital Design

**MOTION:**

To approve the GD 461 course outline as presented.  
CARRIED

**4.8. Physics: Course outlines**

Changes including prerequisites: PHYS 100

Change to prerequisites: PHYS 105

**MOTION:**

To approve the PHYS course outlines as amended:

- PHYS 100: MATH 095 will be removed from corequisites, and this section will be changed to a note.

CARRIED

**4.9. Psychology: Course outline**

New course: PSYC 429, Heuristics, Biases, and Critical Thinking

**MOTION:**

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To approve the PSYC 429 course outline as amended:

- Prerequisites changed to "60 university-level credits including PSYC 202 and PSYC 221."

CARRIED

**4.10. Teacher Education: Course outline**

New course: EDUC 100, Introduction to Education

Some suggestions were made for revisions to the learning outcomes and prerequisites. B. Salingre (Teacher Education representative) will take this back to the department and resubmit to the next UEC meeting.

**MOTION:**

To approve the new EDUC 100 course outline as presented.

TABLED

**4.11. Mathematics and Statistics: Course outlines**

Review with changes including total hours: MATH 225

Review with changes including total hours: MATH 312

Review with changes including title and total hours: MATH 339, 439

Review with changes including prerequisites: MATH 445

**MOTION:**

To approve the MATH course outlines as presented.

CARRIED

**4.12. Science: Program changes**

Change to entrance requirements: Bachelor of Science

**MOTION:**

To recommend the changes to the Bachelor of Science entrance requirements, effective September 2019.

CARRIED

**4.13. Biology: Program changes**

Change to program requirements: Biology Honours

The Biology department indicated that BIO 497 will be formally discontinued.

**MOTION:**

To approve the changes to the Biology Honours as presented, effective September 2019.

CARRIED

**5. OTHER BUSINESS/DISCUSSION ITEMS**

**5.1. Admissions Subcommittee report**

**5.2. Transfer Credit Subcommittee report**

**5.3. Policy Subcommittee report**

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**5.4. Senate report**

**6. INFORMATION ITEMS**

- 6.1. Minor course changes** (outlines will be available at  
[www.ufv.ca/calendar/courseoutlines](http://www.ufv.ca/calendar/courseoutlines))  
ADED 422  
MATH 125  
PHIL 240

- 6.2. Revision to approved proposal:** Graphic and Digital Design major

- 6.3. Harmonization:** Construction Electrician certificate

- 6.4. Program suspended:** Management Post-baccalaureate certificate

**7. ADJOURNMENT**

The meeting was adjourned at 12:07 pm.

**Memo for Course Changes**

To: Faculty of Access and Continuing Education

From: Amanda Grimson, UEC Assistant

Date: February 28, 2019

**Subject: Proposal for revision of ABT 108, ABT 118, ABT 124, ABT 128, ABT 132, ABT 134, ABT 135A, ABT 135B, ABT 137B, ABT 144, ABT 187A, ABT 187B, OFC TYP1, and OFC TYP3.**

1. Summary of changes (select all that apply):

- ☐ Six-year review
- ☐ Number and/or course code
- ☐ Credits and/or total hours
- ☐ Title
- ☐ Calendar description
- ☐ Prerequisites and/or co-requisites
- ☐ Frequency of course offering
- ☐ Learning outcomes
- ☐ Delivery methods and/or texts and resource materials
- ☐ PLAR options, grading system, and/or evaluation methods
- ☒ Discontinuation of course
- ☐ Other – Please specify:

2. Rationale for change:

These courses have not been offered for the past 15 semesters.

3. Is this course required by any program beyond the discipline? If so, how will this change affect that program or programs?

No.

4. Which program areas have been consulted about the change(s)?

Applied Business Technology.

**Memo for Course Changes**

To: Faculty of Access and Continuing Education

From: Amanda Grimson, UEC Assistant

Date: February 28, 2019

**Subject: Proposal for revision of ESL BU55, ESL C54, ESL CB60, ESL CB77, ESL CWE30, ESL CWE40, ESL DR47, ESL FLM, ESL IB19, ESL MU47, and ESL T85**

1. Summary of changes (select all that apply):

- ☐ Six-year review
- ☐ Number and/or course code
- ☐ Credits and/or total hours
- ☐ Title
- ☐ Calendar description
- ☐ Prerequisites and/or co-requisites
- ☐ Frequency of course offering
- ☐ Learning outcomes
- ☐ Delivery methods and/or texts and resource materials
- ☐ PLAR options, grading system, and/or evaluation methods
- ☒ Discontinuation of course
- ☐ Other – Please specify:

2. Rationale for change:

These courses have not been offered in the last 15 semesters.

3. Is this course required by any program beyond the discipline? If so, how will this change affect that program or programs?

No.

4. Which program areas have been consulted about the change(s)?

English Language Studies.

**Memo for Course Changes**

To: Faculty of Access and Continuing Education

From: Amanda Grimson, UEC Assistant

Date: February 28, 2019

**Subject: Proposal for revision of CCP LC, ENGL 090, FNST 091, GED PREP, and SCI SR12**

1. Summary of changes (select all that apply):

- ☐ Six-year review
- ☐ Number and/or course code
- ☐ Credits and/or total hours
- ☐ Title
- ☐ Calendar description
- ☐ Prerequisites and/or co-requisites
- ☐ Frequency of course offering
- ☐ Learning outcomes
- ☐ Delivery methods and/or texts and resource materials
- ☐ PLAR options, grading system, and/or evaluation methods
- ☒ Discontinuation of course
- ☐ Other – Please specify:

2. Rationale for change:

These courses have not been taught for the past 15 semesters.

3. Is this course required by any program beyond the discipline? If so, how will this change affect that program or programs?

No.

4. Which program areas have been consulted about the change(s)?

Upgrading and University Preparation.



**Memo for Program Changes**

To: FSCC, SFC, CWC, UEC

From: Ian Affleck (Department Head, Math & Stats)

Date: January 15, 2019

**Subject: Program change (Data Analysis Post-baccalaureate Certificate)**

1. Summary of changes (select all that apply):

- ☐ Program revision that requires new resources
- ☐ Addition of new course options or deletion or substitution of a required course
- ☐ Change to the majority of courses in an approved program
- ☒ Change to the duration, philosophy, or direction of a program
- ☐ Addition of a new field of specialization, such as a concentration
- ☐ Change in requirements for admission
- ☐ Change in requirements for residency or continuance
- ☐ Change in admission quotas
- ☐ Change which triggers an external review
- ☐ Deletion of a program not included in the Program Discontinuance policy
- ☐ Other – Please specify:

2. Rationale for change(s):

In its current form, the Data Analysis Post-baccalaureate Certificate (DAC) is presented as a program that may be completed either in 10-12 months or (with the inclusion of a summer Co-op semester) in 16-18 months. The longer version is relatively new. Students who entered the DAC in 2018 were the first who had a choice of program length (Co-op or not), and students applying to enter the DAC in 2019 are the first who were aware of the new option when they applied.

The motivation for creating the longer option (with Co-op potential) was to increase interest in the program. Considering the surge in applications for 2019 intake, it appears now that this longer version is much more attractive than the original 10-12 month version. We feel that the benefits of keeping both options available (with the short option expected to be far less popular) are outweighed by the benefits of having a single format for program completion. If we are to continue to guarantee that the program can be completed in either 10-12 months or 16-18 months, planning of course offerings and reserves will become very difficult to manage.

We will arrange course offerings and reserves to be in place to accommodate the two 2018 intake cohorts (those wanting the shorter version, and those wanting the longer version with Co-op potential) and for the two 2019 intake cohorts, but students applying for intake in 2020 and beyond will only be promised that courses will be offered in such a way as to facilitate completion within 16-18 months.

3. If program outcomes are new or substantially changed, explain how they align with the Institutional Learning Outcomes:

There are no changes to program outcomes.

4. What consideration has been given to indigenizing the curriculum?

Indigenization is encouraged at the program level through breadth/elective requirements, where students can choose from courses where indigenization is appropriate to the course content and discipline.

5. Will additional resources be required? If so, how will these costs be covered?

No additional resources will be required. In fact, resources will be saved by not having to arrange course scheduling for both cohorts of students each year.

6. How will students be impacted? (Indicate the projected number of students impacted.) Is the change expected to increase/decrease enrolment in the program?

The inclusion of a longer version with a Co-op option appears to have greatly increased enrolment in the DAC. The elimination of the original shorter version of the DAC (as proposed here) will likely slightly decrease the number of applications, but could increase enrolment – as we could scale enrolment capacity more easily without setting aside sections for 5-10 students in the original program structure.

7. Does the number of required core or elective credits from the program-specific discipline change? If so, will this change the total number of courses to be offered within the discipline?

There is no change to the required or core elective credits.

8. Identify any available resources that will be used to accommodate the program changes. (Eg. seats in existing classes, conversion of sections, timetabling changes, deletion of courses, etc.)

No such resources will be necessary.

9. Is the number of required or elective courses from other disciplines in the program changing? If so, what is the estimated impact to enrolments in these courses? Provide a memo from the respective dean(s) of the impacted faculty to confirm if budgetary implications have been considered and addressed.

There is no change in the number of required or elective courses from other disciplines in the program.

10. Provide a memo from the program's dean to confirm that budgetary implications of the proposed changes have been considered and will be addressed within the faculty budget.

**CWC comments and responses:**

- Additional supporting data is required for these changes. (Can a financial analysis and evidence of support from the Dean be provided? Is there data available to support the attractiveness of the new version of this program?)

*This is the first year in which we're seeing the effects of marketing the DAC with information about the longer Co-op option being available.*

*The most recent report on applications and admissions (provided March 5 by Sarah Graham, Senior Associate Registrar, Recruitment and Admissions) shows that applications jumped from 53 last year (2018 intake) to 175 this year (2019 intake), and admissions increased from 26 to 95.*

*I won't put words in the dean's mouth, but my understanding is that Lucy Lee is excited about the increase in interest, and is supportive of the change to eliminate the 10-month option.*

- International Education should be consulted on these changes.

*A description of the proposed change, along with updated calendar copy, was sent to Ravi Philips, John Potts, Betty Wang, and Simon Xi in UFV International, including the message "Before going ahead with the proposal to make this change, I wanted to hear from UFV International, including recruiters and advisers. As I mention above, please feel free to pass along this email to anyone who you think may have comments."*

*UFV International has confirmed that they feel the rise in application numbers speaks to the increased attractiveness of the co-op option, and has no concerns with this change.*

- To what extent can the department guarantee that students will be able to be placed in a Co-op position? Will students be responsible for finding their own positions?

*We make no guarantees about placement in Co-op positions. Application for Co-op positions is competitive, and the number of positions available will vary year-to-year. Students who enroll in Co-op in September of their intake year will receive guidance and support from the Co-op office as necessary, and will get an opportunity to apply for Co-op positions. Some Co-op positions may be located outside of the Lower Mainland.*

*Calendar copy has been revised accordingly.*

- Language should be added to clearly indicate that students can complete this certificate without the Co-op option.

*Agreed. Ideally, it would simply be presented as a 16-18 month program, beginning with a course in late Summer (if necessary), 9 credits in Fall, 9 in Winter, and 9 in a final Fall, with the feature that students who take the courses in this sequence may register in the Co-op program. Students registered in Co-op are allowed to apply for the Co-op positions that are reserved for Co-op students, and Co-op positions are expected to begin and end in the Summer term immediately before the final Fall term.*

*Calendar copy has been revised accordingly.*

## Data Analysis Post-baccalaureate certificate

Data analysis is the science of correctly collecting data, assessing it for trustworthiness, extracting information from it, and presenting it in a comprehensible informative way.

These skills are vital to institutions such as government, business, or health care where sound decisions must be made based on data and the way it is interpreted.

Students will acquire the skills needed to extract reliable information from large data sets. With carefully designed courses taken in both computing and statistics, students will gain the data-base skills needed to house, extract, manipulate, and maintain data, and will learn the statistical techniques needed to collect data correctly, assess its quality, analyze it, and present the information effectively to decision makers. The industry standard statistical software environments SAS and R will be used throughout.

### Entrance requirements

1. A Bachelor's degree from a recognized institution.

Note: Students currently earning a university degree may enrol in the courses of the Data Analysis Post-baccalaureate certificate, provided they meet the course-prerequisites. They will be granted credit for having completed the certificate when they have met its requirements, and have fulfilled the requirements of their degree.

2. One of the following programming courses:
  - COMP 120, Computing for the Sciences
  - COMP 150, Introduction to Programming
  - COMP 152, Introduction to Structured Programming
  - COMP 155, Object Oriented Programming (recommended)
3. Applicants must meet the Degree/diploma level English language proficiency requirement. For details on how this requirement may be met, see the [English](#)

[language proficiency requirement](#) section of the calendar.

4. Applicants must have one of the following:

- Prerequisite for [STAT 106](#)
- A score of 155 or higher on the Quantitative Reasoning section of the Graduate Records Examinations (GRE)

## When to apply

Applications are accepted for entrance to the late Summer (July/August) semester, although students whose applications demonstrate completion of STAT 106 (with a B or better) or MATH 270/STAT 270 or an equivalent course will begin their study in the Fall semester. Because there are limited seats available, and applications are processed on a first-come, first-served basis, it is recommended that applications and supporting documents be submitted to UFV as soon as possible (in January of the year in which the program is to begin, at the latest). For application deadlines, see [Specific intake application process](#).

## How to apply

Apply online at [ufv.ca/admissions/apply](http://ufv.ca/admissions/apply).

## Additional documents required for a complete application:

- Official transcripts (or interim transcripts) of all post-secondary institutions attended showing grade/course achievement as per program entrance requirements. To be considered official, transcripts must be sent directly to UFV from the originating institution; see the [Transfer Credit](#) section for details.

## Fees and additional costs

See the [Fees and Other Costs](#) section.

## Program requirements

Students must complete ten courses, for a total of 31 credits. [At least seven of these courses \(21 credits\) must be completed at UFV.](#)

~~The certificate with Co-op option can be earned~~completed ~~in about 18 months, beginning in July and finishing in December of the following year. Those students who begin the program with credit for STAT 106 (with a B or better) or MATH 270/STAT 270 can earn the certificate in about sixteen months, beginning in September and finishing in December of the following year.~~~~The certificate can be earned in about one year, beginning in July and finishing at the end of the following June. Those students who begin the program with credit for STAT 106 (with a B or better) or MATH 270/STAT 270 can earn the certificate in about ten months, beginning in September and finishing at the end of the following June. For a detailed schedule, see the~~Typical program plan ~~section below.~~

## Co-operative Education option

Co-operative Education (Co-op) combines academic studies with relevant work experience.~~Academic semesters alternate with work terms,~~ providing students work experience that draws upon and reinforces the skills that they have been building in the classroom and lab, as well as opportunities to meet with potential employers in their field of study.

~~DAC students who wish to pursue the Co-op~~students option ~~must complete ten-three courses in their initial Fall semester, three courses in the following Winter semester, courses as well as a four month Co-op work term in the summer semester and three more courses in~~directly before ~~their final~~Fall ~~academic semester, in order for these three semesters to qualify as full-time academic study semesters.~~

~~Students who enroll in Co-op in September of their intake year will receive guidance and support from the Co-op Office as necessary, and will get an opportunity during the Winter semester to apply for Co-op positions in the upcoming Summer semester. However, placement in a Co-op position is not guaranteed. Application for Co-op positions is competitive, and the number of positions available will vary year-to-year. Some Co-op positions may be located outside of the Lower Mainland.~~

~~The certificate with Co-op option can be earned in about 18 months, beginning in July and finishing in December of the following year. Those students who begin the program~~

~~with credit for STAT 106 (with a B or better) or MATH 270/STAT 270 can earn the certificate in about sixteen months, beginning in September and finishing in December of the following year. Students who complete all of the academic requirements of the certificate but do not complete the Co-op semester may still earn the Data Analysis Post-baccalaureate certificate without a Co-op option designation.~~

For more information about Co-op programs at UFV, see the Co-operative Education section of the academic calendar.

~~For a detailed schedule, see the Typical program plan (Co-op option) section below.~~

## Program outline

### Required courses

| Course                      | Title                                                   | Credits |
|-----------------------------|---------------------------------------------------------|---------|
| STAT 106                    | Statistics I (with a B or better)                       | 4       |
| <b>or</b> MATH 270/STAT 270 | Introduction to Probability and Statistics              |         |
| STAT 271                    | Introduction to Data Analysis and Statistical Modelling | 3       |
| STAT 272                    | Statistical Graphics and Languages                      | 3       |



|                                |                                                                 |   |
|--------------------------------|-----------------------------------------------------------------|---|
| COMP 230                       | Databases and Database Management Systems<br>(formerly CIS 230) | 3 |
| COMP 331/STAT<br>331           | Data Quality                                                    | 3 |
| STAT 315                       | Applied Regression Analysis                                     | 3 |
| COMP 381                       | Introduction to Machine Learning                                | 3 |
| <b>or</b> STAT 431/COMP<br>431 | Data Mining                                                     |   |

### Elective courses

Students must choose three courses from the following:

| Course   | Title                 | Credits |
|----------|-----------------------|---------|
| STAT 330 | Design of Experiments | 3       |

|          |                                                            |   |
|----------|------------------------------------------------------------|---|
| STAT 350 | Survey Sampling                                            | 3 |
| STAT 402 | Applied Generalized Linear Models and Survival Analysis    | 3 |
| STAT 430 | Time Series and Forecasting                                | 3 |
| STAT 470 | Applied Multivariate Statistical Analysis                  | 3 |
| COMP 380 | Introduction to Artificial Intelligence (formerly CIS 380) | 3 |
| CIS 385  | Project Management                                         | 3 |
| COMP 430 | Advanced Database Topics (formerly CIS 430)                | 3 |
| COMP 455 | Extreme Computing                                          | 3 |

### ~~Co-op work term~~

~~In order to satisfy the requirements of the Data Analysis Post Baccalaureate certificate (Co-op option), students must complete two four-month semesters of academic study (9 credits each), followed by a four-month Co-op work term (typically during a summer semester), followed by one more semester of academic study (9 credits). Some students will also need to initially begin~~

~~with a July-August summer semester with STAT 106 (4 credits). Students who complete all of the academic requirements of the certificate but do not complete the Co-op semester may still earn the Data Analysis Post-baccalaureate certificate without a Co-op option designation.~~

~~For more information about Co-op programs at UPV, see the Co-operative Education section of the academic calendar.~~

## ~~Typical program plan~~

### ~~Semester I: Late Summer Session (July-August)~~

- ~~• STAT 106~~

### ~~Semester II: Fall (September-December)~~

- ~~• STAT 271~~
- ~~• STAT 272~~
- ~~• COMP 230~~
- ~~• STAT 350 or STAT 330~~

### ~~Semester III: Winter (January-April)~~

- ~~• STAT 315~~
- ~~• COMP 331/STAT 331~~
- ~~• CIS 385~~
- ~~• One of STAT 402, STAT 430, or STAT 470~~

### ~~Semester IV: Early Summer Session (May-June)~~

- ~~• STAT 431/COMP 431 or COMP 381~~

## ~~Typical program plan (Co-op option)~~

### ~~Semester I: Late Summer Session (July-August)~~

- STAT 106

#### Semester II: Fall (September-December)

- STAT 271
- STAT 272
- COMP 230

#### Semester III: Winter (January-April)

- STAT 315
- COMP 331/STAT 331
- One of STAT 402, STAT 430, ~~or~~ STAT 470, or CIS 385

#### Semester IV: Summer (May-August)

- Potential Co-op work term

#### Semester V: Fall (September-December)

- STAT 350 or STAT 330
- One of STAT 402, STAT 430, STAT 470, or CIS 385
- STAT 431/COMP 431 or COMP 381

### Course repetition

A maximum of three repeated courses are permitted without dean's approval.

### Residency

At least 21 credits toward the certificate (excluding Co-op) must be taken at UFV.

### Undergraduate continuance

Students enrolled in undergraduate courses (courses numbered 100 or above) must maintain an undergraduate Cumulative Grade Point Average (CGPA) of at least 2.00 to remain enrolled in Good Academic Standing at UFV. Students in Good Academic Standing will have no

registration limits placed on them. Failure to meet the minimum CGPA requirement will result in restrictions on registration and may eventually lead to academic suspension from undergraduate studies at UFV. Students on Academic Warning or Academic Probation are limited to registering in 10 credits. For further details, see the [Academic standing and undergraduate continuance section](#) of the academic calendar. Academic standing is governed by UFV's [Undergraduate Continuance policy \(92\)](#).

## Graduation requirements

Students must have a minimum GPA of 2.00 on all ten courses (31 credits) required to complete the program.

To graduate from the data analysis certificate, students must have completed the requirements of a university degree.

## Course listings

For complete details on courses see the [course descriptions](#) section.

[Return to main Mathematics and Statistics page](#)

[Return to main Computer Information Systems page](#)

## Data Analysis Post-baccalaureate certificate

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### QUICK FACTS

Apply online

#### CREDENTIAL:

POST-DEGREE CERTIFICATE

#### DURATION:

~~TEN~~ SIXTEEN TO EIGHTEEN MONTHS

#### FORMAT:

FULL TIME

#### HOW TO APPLY

#### START DATE:

JULY OR SEPTEMBER

#### LOCATION:

ABBOTSFORD CAMPUS

#### COST:

(DETAILS)

#### FEATURES:

- Co-op option gives you the opportunity to apply for Summer Co-op work positions, which would ~~Co-op semester(s)~~ provide paid work experience ~~in your relevant to your~~ field ~~of study of study~~.
- UFV has a Math Centre staffed with assistants, Mathematics & Statistics faculty, and student monitors, who can help you with course material.

### PROGRAM DESCRIPTION

~~UFV The ten~~sixteen- to eighteen-month\* Data Analysis post-degree program at UFV equips you with the practical skills needed to extract reliable information from large data sets.

By taking carefully designed courses with the right mix of computing and statistics, you gain the database skills you need to house, extract, manipulate and maintain data.

More importantly, you also learn the statistical techniques needed to collect data correctly, assess its quality, analyze it, and turn it into the business intelligence that companies and institutions highly value in the marketplace. Beyond knowing how to use specific programming languages and tools, employers need you to identify meaningful patterns, so that you can draw actionable conclusions to guide decision-making.

The Co-operative Education feature provides the opportunity for students to apply for paid Co-op work term positions, offered by regional, national, and global firms.

Completing a Co-op semester provides you with valuable experience and boosts your career prospects.

The industry standard statistical software environments **SAS** and **R** are used throughout.

**View full program requirements**

## **Additional opportunities**

~~Build credibility and on-the-job skills by opting for the Co-operative Education option. Combine your studies with a paid work term, offered in regional, national, and global firms. Completing a co-op semester provides you with valuable experience and boost your career prospects.~~

~~**Note:** Coursework normally takes ten months to complete. Choosing to add a co-op placement can prolong your studies up to eighteen months.~~

## **CAREER EXPECTATIONS**

IBM estimates that humans create 2.5 quintillion bytes of data every day as information pours in from digital platforms, wireless sensors, and billions of mobile phones.

However, while the world is awash in data, businesses are facing a shortage of big data professionals who know how to properly analyze it.

In fact, a recent survey by McKinsey Global Institute reports that finding the right talent is the biggest hurdle companies face in trying to integrate data and analytics into their operations. Approximately half of executives across regions and industries reported greater difficulty recruiting analytical talent than filling any other kind of role.

UFV's Data Analysis Post-degree certificate builds on the skills and knowledge you have already acquired in your undergraduate degree, allowing you to grow your career within your own field. The combination of your degree background and your data analysis skills can help you grow your career, diversify your professional opportunities, and boost your earnings.

#### ENTRANCE REQUIREMENTS

Please review the [entrance requirements on the UFV Calendar](#)

#### OTHER ADMISSION CATEGORIES

This program is open for international students

- [How to apply](#)
- [Apply now](#)

#### UPGRADING OPTIONS

Upgrading options during the summer months are available for those who do not meet the [entrance requirements](#).

#### QUESTIONS?

**Phone:** 604-864-4674

**Toll free:** 1-888-504-7441, local 4674

**Email:** [advising@ufv.ca](mailto:advising@ufv.ca)

**Or ask online**



**Memo for New Course**

To: UEC

From: Jason Thomas (Chair, Chemistry Honours Program Working Group)

Date: April 26, 2019

**Subject: Proposal for new course (CHEM 499 Honours Research and Thesis in Chemistry)**

1. Rationale for new course:

This is a required capstone course that provides in-depth research experience for students enrolled in the newly developed Chemistry honours program. This course is not available to students in any other programs.

2. How this new course fits into program(s):

Chemistry honours program students will take this course in their final year of study.

3. Explain how the course learning outcomes align with the learning outcomes of the program(s):

The chemistry department is currently developing learning outcomes for all of its programs, and hopes to complete this process in spring 2019.

4. Will this course be required by any program beyond the discipline? If so, how will this course affect that program or programs?

No.

5. Which program areas have been consulted about the course?

Chemistry, Faculty of Science

6. If a new discipline designation is required, explain why:

N/A

7. What consideration has been given to indigenizing the curriculum?

Indigenization is encouraged at the program level through breadth/elective requirements where students can choose from courses where indigenization is appropriate to the course content and discipline. CHEM 499 provides the opportunity for students to propose projects that investigate relationships between science and Indigenous experience and/or ways of knowing, and the department would welcome projects with an Indigenous focus or component.

8. If this course is not eligible for PLAR, explain why:

As a capstone research course, CHEM 499 is one of the most essential elements of the proposed honours program. Therefore we require that this course be completed at UFV.

9. Explain how each of the following will affect the budget for your area or any other area:

We anticipate that implementation of this new course will have little significant effect on the budget for the chemistry department.

## a. Credit value

Tuition is used to compensate supervising faculty members as is currently the case with all research and directed studies courses in science. Thus the departmental budget is not affected by increased credit value (12 credits for CHEM 499) for research in the honours program.

## b. Class size limit

Class size is limited by the availability of research projects with faculty members. We do not anticipate that student demand will exceed the ability of faculty members to offer research projects.

## c. Frequency of offering:

Annually

## d. Resources required (labs, equipment)

Adequate equipment and instrumentation for research already exists in the department. Chemicals and supplies are purchased through the research grants held by faculty members.

## 10. Are field trips required for this course? (Field trip requirements must be announced in the timetable.) How are the trips funded?

No field trips are required.

## 11. Estimate of the typical costs for this course, including textbooks and other materials:

Costs to students are very minimal for this course. No textbooks are required. Although optional, students may wish to purchase their own personal protective equipment (lab coat and safety glasses which might cost about \$60).

**Response to UEC Screening comments, April 2019**

| <b>UEC Screening comments</b>                                                                         | <b>Responses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Why are students with credit for CHEM 407, 408, 409, or 410 not about to take this course for credit? | CHEM 407, 408, 409 are directed studies/research courses intended for majors students only. CHEM 410 is a more demanding research course open only to honours students. Honours students may not take any of CHEM 407, 408, or 409, as they are already undertaking a major research project/thesis worth 12 credits in CHEM 410. If chemistry honours students took CHEM 407, 408, or 409, they could satisfy some or all of the upper level CHEM elective credits with research/directed studies credits. The upper level CHEM elective credits are intended to be 400-level chemistry lecture courses. |



ORIGINAL COURSE IMPLEMENTATION DATE: January 2020  
 REVISED COURSE IMPLEMENTATION DATE:  
 COURSE TO BE REVIEWED (six years after UEC approval): May 2025  
 Course outline form version: 05/18/2018

## OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

**Note:** The University reserves the right to amend course outlines as needed without notice.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------|--|-----------------------------|----|--------------------------------------------------------------|-----|------------------------------|--|---------------------------------------------|----|--------------------|------------|----------------------------------------------------------------------------------------------------------------------|--|
| <b>Course Code and Number:</b> CHEM 499                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | <b>Number of Credits:</b> 12 <a href="#">Course credit policy (105)</a>                                                                                                                                                                                                                                                                         |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Course Full Title:</b> Honours Research and Thesis in Chemistry<br><b>Course Short Title:</b> Chemistry Honours Thesis<br><i>(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)</i>                                                                                                                                                                                                                                                                  |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Faculty:</b> Faculty of Science                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | <b>Department (or program if no department):</b> Chemistry                                                                                                                                                                                                                                                                                      |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Calendar Description:</b><br>For students pursuing the Chemistry Honours program. This course requires the completion of an advanced undergraduate research project designed in consultation with a faculty supervisor, and the preparation and oral defence of a thesis. Students will conduct a research project over two semesters.<br><br>Note: This course is expected to take two semesters to complete.<br>Note: Students with credit for CHEM 407, CHEM 408, CHEM 409, or CHEM 410 cannot take this course for further credit.     |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Prerequisites (or NONE):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            | Acceptance into the Chemistry Honours program.                                                                                                                                                                                                                                                                                                  |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Corequisites (if applicable, or NONE):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Pre/corequisites (if applicable, or NONE):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Antirequisite Courses</b> <i>(Cannot be taken for additional credit.)</i><br>Former course code/number:<br>Cross-listed with:<br>Dual-listed with:<br>Equivalent course(s):<br><i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>                                                                                                                        |            | <b>Special Topics</b> <i>(Double-click on boxes to select.)</i><br>This course is offered with different topics:<br><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, topic will be recorded when offered.)</i>                                                                                                   |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            | <b>Independent Study</b><br>If offered as an Independent Study course, this course may be repeated for further credit: <i>(If yes, topic will be recorded.)</i><br><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit                                                        |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            | <b>Transfer Credit</b><br>Transfer credit already exists: <i>(See <a href="#">bctransferguide.ca</a>.)</i><br><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes<br>Submit outline for (re)articulation:<br><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, fill in transfer credit form.)</i> |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Typical Structure of Instructional Hours</b> <table border="1"> <tr> <td>Lecture/seminar hours</td> <td></td> </tr> <tr> <td>Tutorials/workshops</td> <td></td> </tr> <tr> <td>Supervised laboratory hours</td> <td>30</td> </tr> <tr> <td>Experiential (field experience, practicum, internship, etc.)</td> <td>120</td> </tr> <tr> <td>Supervised online activities</td> <td></td> </tr> <tr> <td>Other contact hours: (faculty consultation)</td> <td>30</td> </tr> <tr> <td><b>Total hours</b></td> <td><b>180</b></td> </tr> </table> |            | Lecture/seminar hours                                                                                                                                                                                                                                                                                                                           |  | Tutorials/workshops |  | Supervised laboratory hours | 30 | Experiential (field experience, practicum, internship, etc.) | 120 | Supervised online activities |  | Other contact hours: (faculty consultation) | 30 | <b>Total hours</b> | <b>180</b> | <b>Grading System</b><br><input checked="" type="checkbox"/> Letter Grades <input type="checkbox"/> Credit/No Credit |  |
| Lecture/seminar hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Tutorials/workshops                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Supervised laboratory hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30         |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Experiential (field experience, practicum, internship, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 120        |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Supervised online activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Other contact hours: (faculty consultation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30         |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Total hours</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>180</b> |                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| Labs to be scheduled independent of lecture hours: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes                                                                                                                                                                                                                                                                                                                                                                                                                        |            | <b>Maximum enrolment (for information only):</b><br><b>Expected Frequency of Course Offerings:</b><br>annually <i>(Every semester, Fall only, annually, etc.)</i>                                                                                                                                                                               |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Department / Program Head or Director:</b> Cory Beshara                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            | <b>Date approved:</b> March 2019                                                                                                                                                                                                                                                                                                                |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Faculty Council approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            | <b>Date approved:</b> March 2019                                                                                                                                                                                                                                                                                                                |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Dean/Associate VP:</b> Lucy Lee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | <b>Date approved:</b> March 2019                                                                                                                                                                                                                                                                                                                |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Campus-Wide Consultation (CWC)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            | <b>Date of posting:</b> April 19, 2019                                                                                                                                                                                                                                                                                                          |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |
| <b>Undergraduate Education Committee (UEC) approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | <b>Date of meeting:</b> May 24, 2019                                                                                                                                                                                                                                                                                                            |  |                     |  |                             |    |                                                              |     |                              |  |                                             |    |                    |            |                                                                                                                      |  |

**Learning Outcomes:**

Upon successful completion of the course, a student will have demonstrated the ability to:

- Survey and assess existing literature on their chosen research topic.
- Formulate a written research proposal in which the rationale for their choice of research topic is presented.
- Design and execute experiments and/or computer simulations relevant to their research topic.
- Handle all necessary equipment and chemicals in a safe and effective manner.
- Master any specific techniques required to complete the chosen project.
- Produce a thesis describing their research, written in a clear and scholarly way
- Present the results of their research by means of a seminar or other form of presentation approved by the supervisor.

**Prior Learning Assessment and Recognition (PLAR)**

☐ Yes     ☒ No, PLAR cannot be awarded for this course because this course can only be completed as part of the Honours Chemistry program.

**Typical Instructional Methods** (*Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.*)

The student will be expected to access the chemical literature using on-line and/or traditional methods. The student will carry out faculty-supervised independent laboratory or computational research, and then prepare and orally defend a thesis to supervisor, other chemistry faculty, other chemistry students.

**NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.**

**Typical Text(s) and Resource Materials** (*If more space is required, download Supplemental Texts and Resource Materials form.*)

| Author (surname, initials) | Title (article, book, journal, etc.) | Current ed.              | Publisher | Year |
|----------------------------|--------------------------------------|--------------------------|-----------|------|
| 1.                         |                                      | <input type="checkbox"/> |           |      |
| 2.                         |                                      | <input type="checkbox"/> |           |      |
| 3.                         |                                      | <input type="checkbox"/> |           |      |
| 4.                         |                                      | <input type="checkbox"/> |           |      |
| 5.                         |                                      | <input type="checkbox"/> |           |      |

**Required Additional Supplies and Materials** (*Software, hardware, tools, specialized clothing, etc.*)

**Typical Evaluation Methods and Weighting**

|                |   |              |     |                   |   |                    |      |
|----------------|---|--------------|-----|-------------------|---|--------------------|------|
| Final exam:    | % | Assignments: | %   | Field experience: | % | Oral Presentation: | 15%  |
| Midterm exam:  | % | Thesis:      | 30% | Practicum:        | % | Research Proposal: | 15%  |
| Quizzes/tests: | % | Lab work*:   | 40% | Shop work:        | % | Total:             | 100% |

**Details (if necessary):**

\*Lab work: Results/productivity (judged by weekly progress reports) - 40%

**Typical Course Content and Topics**

1. Project proposal and literature search.
2. Laboratory and safety orientation or introduction to computational/theoretical methods, as applicable.
3. Independent laboratory or computational research in consultation with supervising faculty member.
4. Thesis preparation in consultation with supervising faculty member.
5. Oral defense of thesis.

# MEMO



**To:** UEC  
**Cc:** Lucy Lee, Dean, Faculty of Science; Bruce Kirkley, Assoc. Director, Program Development and Quality Assurance  
**From:** Jason Thomas, Program Working Group Chair  
**Date:** April 26, 2019  
**Re:** Chemistry honours degree

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On behalf of the Chemistry honours Program Working Group, please accept the following attachments as part of the submission to UEC for the April 26, 2019 meeting:

- Chemistry honours proposal
- New course memo
- CHEM 499 course outline
- Chemistry honours application form
- UEC Screening comments and responses

**Note:** The program proposal and calendar copy are available in **S:\Groups\UEC\2019-05-24 Chemistry Honours.**

The Chemistry honours program was recommended by the Science Faculty Council on March 8, 2019 to move forward in the approval process. The proposal was reviewed at UEC Screening on April 1, 2019; comments and responses are attached.

**Program Summary:**

The Chemistry honours degree will provide exceptional students with an option for a more rigorous, research-intensive degree option that provides better preparation for graduate school. In comparison to the existing Chemistry major program, the Chemistry honours program requires more credits overall, and the completion of an original research project and undergraduate thesis (CHEM 499). All third year courses required in the major program are also required in the honours program, with the addition of a required introductory course in biochemistry (CHEM 350). An introductory biochemistry requirement will provide honours students with greater breadth of knowledge within chemistry as well as a better appreciation for the increasingly interdisciplinary nature of modern scientific research and practice.

**Concept Paper:**

A concept paper is not required for a new honours program in a field in which a major or degree is already approved.

# MEMO



To: UEC  
From: Chris Campbell, Program Working Group Chair  
Cc: Tracy Ryder Glass, Dean, Faculty of Professional Studies; Bruce Kirkley, Assoc. Director, Program Development and Quality Assurance  
Date: May 24, 2019  
Re: Proposed Adult Education minor

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Please find attached for approval at the May 24, 2019 meeting of UEC:

- Proposal
- Calendar copy
- Response to UEC Screening comments

**Note:** The program proposal and calendar copy are available in *S:\Groups\UEC\2019-05-24 Adult Education minor*.

The program proposal was presented at the Professional Studies Faculty Council on March 15, 2019 and was approved as presented. The proposal was approved at UEC Screening on April 24, 2019 and was posted to CWC for information on May 15, 2019.

## **Program Summary:**

The proposed Adult Education minor offers students a suite of knowledge and skills to engage and empower learners in their own specific academic, workplace, and community educational contexts. These skills include the development and application of theoretical knowledge and practical skills related to curriculum, instructional design, teaching, and assessment in formal, informal, and non-formal learning spaces. A minor in Adult Education will make this area of professional educational practice available to students in a wide variety of degree programs such as Arts, Integrated Studies (BIS), Computer Information Systems (CIS), and Kinesiology.

## **Program Working Group:**

Chris Campbell (Chair) – Assistant Professor, Adult Education  
Corinne Richardson – Program Advisor/Department Assistant, Adult Education  
Maureen Wideman – AVP Teaching and Learning, Educational Technology Services  
Ian Hunt – Professor Emeritus, Adult Education  
Michelle Rhodes – Associate Professor, Geography and the Environment  
Carl Janzen – Assistant Professor, Computer Information Systems

## **Concept Paper:**

A concept paper is not required for a new minor program where a major or degree is already approved.