

# Chemistry

## Graduate and Undergraduate Review

### Year 2 (2021) - FAR Implementation Report

(reviewed 2017-19)

#### Recommendation #1

Reduce the onerous load on the 2<sup>nd</sup> and 3<sup>rd</sup> year students in the Honours/Majors program by removing the two 2<sup>nd</sup> year Physics courses (two of PHYS 2P02, 2P20, 2P31, 2P50, 2P51) from the required curriculum.

#### ARC Disposition of the Recommendation

ARC considers the recommendation to be accepted and in the process of implementation.

#### Implementation Plan (1<sup>st</sup> Priority)

Responsible for approving:	Department
Responsible for resources:	Department
Responsible for implementation:	Department
Timeline:	Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 The Department submitted a revised Undergrad Calendar (Sept 2019) having two 2 <sup>nd</sup> year Physics courses removed from the required curriculum.	Department	C		

#### Comments 2020:

The recommendation has been implemented. The Department submitted a revised Undergrad Calendar (Sept 2019) having two 2<sup>nd</sup> year Physics courses removed from the required curriculum.

#### Comments 2021:

No further steps required

#### Recommendation #2

Reduce the number of explicitly required 3<sup>rd</sup> year CHEM courses in the Honours program and replace them with choices/options.

\*On Target (T), Delayed (D), Complete (C), Complete and Ongoing (O)

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted for consideration.

**Implementation Plan (1<sup>st</sup> Priority)**

Responsible for approving: Department  
 Responsible for resources: Department  
 Responsible for implementation: Department  
 Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 The Department submitted a revised Undergrad Calendar (Sept 2019) having the number of explicitly required 3 <sup>rd</sup> year CHEM courses reduced by one.	Department	C		

**Comments 2020:**

The recommendation has been implemented. The Department submitted a revised Undergrad Calendar (Sept 2019) having the number of explicitly required 3<sup>rd</sup> year CHEM courses reduced by one, from seven to six. An elective half-credit course was added instead.

**Comments 2021:**

No further steps required

**Recommendation #3**

We recommend instituting weekly laboratory instruction for the 2nd term of 1<sup>st</sup> year Chemistry (i.e., 1P92).

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted for consideration. The Committee expects that the Department is best-positioned to determine the frequency of laboratory instruction and/or other experiential opportunities for students.

**Implementation Plan (1<sup>st</sup> Priority)**

Responsible for approving: Department  
 Responsible for resources: Department  
 Responsible for implementation: Department  
 Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 The tutorial and labs for 1 <sup>st</sup> year classes have been restructured.	Department	C		

**Comments 2020:**

Students attend biweekly tutorials and laboratories and therefore they already have weekly experiential contact hours. Instituting weekly laboratories in CHEM 1P92 is not financially feasible. Students already have 15 contact hours of laboratory over the 12 weeks and 7.5 contact hours of tutorial over the 12 weeks.

**Comments 2021:**

No further steps required

**Recommendation #4**

Re-inaugurate an Undergraduate Chemistry Club, with some Departmental financial support and mentorship for student-organized social and professional events

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted for consideration. The Committee recognizes that the formation of a Student Club will require both initiative from the students and support from the Department. The Department is encouraged to work with the new Communications Outreach Officer in the Faculty.

**Implementation Plan (2<sup>nd</sup> Priority)**

Responsible for approving: Department  
 Responsible for resources: Department  
 Responsible for implementation: Department  
 Timeline: Dean of Mathematics and Science to report by the end of academic year 2020/21

Actions	Responsibility	Year One*	Year Two	Year Three

Action #1 This recommendation has been discussed at Dept. meeting.	Department	O	O	
Action #2 Speak with graduate students	Department	D	D	

**Comments 2020:**

This recommendation has been discussed at Dept. meeting. in September 2019. It was recommended that graduate students should discuss this idea and, if they express interest in re-inaugurate an Undergraduate Chemistry Club, it will be supported by the Department. Implementation is delayed because all meetings are currently suspended.

**Comments 2021:**

Because the usual line of business is still suspended, we could not implement this recommendation.

**Recommendation #5**

Reduce the # of courses required for Ph.D. by one, and remove the sub-disciplinary course requirements at the Ph.D. level.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be accepted for consideration.

**Implementation Plan (1<sup>st</sup> Priority)**

Responsible for approving: Department  
 Responsible for resources: Department  
 Responsible for implementation: Department  
 Timeline: Dean of Mathematics and Science to report by the end of academic year 2019/20

Actions	Responsibility	Year One*	Year Two	Year Three
Action #1 This recommendation has gone through a preliminary discussion discussed at a Dept. meeting.	Department	T	D	
Action #2 Discuss at future Dept. meetings	Department	D	D	

**Comments 2020:**

This recommendation has been discussed at the Dept. meeting in September 2019. It was decided to come back to this issue at a later Dept. meeting. Implementation is delayed because all meetings are currently suspended.

**Comments 2021:**

The discussion is being delayed until we resume the regular operations.

**Recommendation #6**

We recommend that the University continue to pursue funding for a substantial renovation of the Mackenzie teaching laboratory space.

**ARC Disposition of the Recommendation**

considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction. The Committee expects that the Department will proceed through normal channels of advocacy for the renovation of these space resources.

**Implementation Plan**

Recommendation not accepted

**Recommendation #7**

Upon retirement, the Tier I CRC Research Chair currently in the Chemistry Department should remain allocated to the Department, in order to help maintain its international research profile and to assist in continuing to attract top students.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction. However, the Committee recognizes the importance of the Department maintaining its international research profile and attracting top students to its programs.

**Implementation Plan**

Recommendation not accepted

**Recommendation #8**

We strongly recommend that the two Physical Chemistry faculty that are due for retirement be replaced expediently with new faculty with expertise in Physical Chemistry, and that this intention be clearly communicated to the Department.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction. The Committee expects that the Department will proceed through normal channels of advocacy for faculty renewal.

**Implementation Plan**

Recommendation not accepted

**Comments 2020:**

The request by the Chemistry Department to replace a Professor with another physical chemist has not been granted. The number of physical chemists at Chemistry Department decreased from the long-time norm of three to just one, which is untenable.

**Comments 2021:**

Repeated request by the Chemistry Department to hire a Professor of physical chemist has not been granted once again. Teaching is compromised because one prof. cannot teach 6 courses.

**Recommendation #9**

We strongly recommend that the "four-courses per year" teaching load include the teaching of seminar-type courses and the teaching and supervision of graduate and undergraduate research students, as is the norm at other universities (including the institutions of the reviewers), in recognition of the very substantial time and teaching effort required to provide this type of experiential instructional learning.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be not accepted as it lies outside of the Committee's jurisdiction and has implications with respect to the Brock University/Faculty Association Collective Agreement. The Committee recognizes the importance of integrating experiential elements into the Department's programs and the commitment required to provide this type of instructional learning.

**Implementation Plan**

Recommendation not accepted

**Recommendation #10**

We very strongly recommend that an overall minimum graduate student stipend aggregated from all sources be clearly delineated for the entire two-year M.Sc. and four-year Ph.D. period of study, as is the norm at other schools.

**ARC Disposition of the Recommendation**

ARC considers the recommendation to be not accepted as stated. The Committee understands that the funding available from various sources is subject to change over the course of the student's period of study. The Committee suggests that communication with the student should be as clear as possible about the base and additional funding possibilities available to them over the period of their program.

**Implementation Plan**

Recommendation not accepted