



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

Notice of Meeting

Tuesday, October 11, 2016

at 3:00pm - 4:30pm

306 Lumbers

Agenda

1. Call to Order and Approval of Agenda
2. Chair's Remarks
3. Minutes of September 13, 2016 meeting
4. Business Arising
5. Inquiries and Communications
 - Senate Synopsis: Meeting of September 22, 2016
6. Dean's Report to Council
7. Associate Deans' and Bethune Master's Remarks
8. Reports from Science Representatives on Senate Committees
9. Reports from Standing Committees of Council
 - 9.1 Executive Committee
 - Ratification of additional nominations: 2016-17 Vacancies Report on Senate and FSc Committees (item for action)
 - 9.2 Science Curriculum Committee (item for consent)
10. Other Business
 - 10.1 Proposed Faculty of Science Policy on Grades (item for action)



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

**Tuesday, September 13, 2016
at 3:00pm – 4:30pm
306 Lumbers**

Minutes

Attendance: S. Benchimol, P. L. Lakin-Thomas, N. Nivillac, V. Saridakis, G. Audette, D. Hastie, G. G. Lavoie, T. Kelly, P. G. Potvin, R. McLaren, A. Mills, J. Amanatides, V. Tsoukanova, J. Grigull, J. M. Heffernan, E.J. J. vanRensburg, N. Madras (Chair), K. R. Maltman, T. S. Salisbury, P. J. Szeptycki, W. P. Tholen, W. J. Whiteley, M. H. Armour, D. Bacinello, W. J. Taylor, D. Golemi-Kotra, D. Wilson, K. Young, A. Persaud, A. Huynh, D. Ratushnyak, E. Shligold, J. Lee, M. Kiumarsi, R. Sammy, S. Shah, S. Qayyum, I. Godra, M. Xu, S. Siyakatshana (Assistant Secretary)

1. Call to Order and Approval of Agenda

The Chair, N. Madras called the meeting to order and the Agenda was adopted as presented.

2. Chair's Remarks

N. Madras welcomed Council members to the meeting.

3. Minutes of May 10, 2016 meeting

A motion was moved, seconded and carried that Minutes of May 10, 2016 be approved.

4. Business Arising

There was none.

5. Inquiries and Communications

Council noted the Senate Synopses of May 26, 2016 and June 16, 2016 meetings.

6. Dean's Report to Council

The Dean, Ray Jayawardhana began his remarks by welcoming Council members to the first fall meeting. He extended a special welcome to the new Chair and Vice-Chair of Council, N. Madras, and D. Golemi-Kotra, respectively.

The Dean also welcomed new administrative leaders, faculty members and staff in Science.

The Dean updated Council that at the June Convocation, Science hosted the honorary degree recipient Dr. James Simons. York Science alumna Dr. Boyana Konforti, Director of Education and Outreach at Simons Foundation, accompanied Dr. Simons on his visit.

In addition, the Faculty held a special Science Unplugged event to recognize and celebrate our honorary degree recipient, Dr. James Simons, and recent outstanding achievements and contributions by colleagues in the Faculty. The Dean was hopeful the University will continue to nurture the established relationship with Dr. Simons in meaningful ways.

The Dean remarked that our NSERC and DURA students participated in the Undergraduate Summer Research Conference held in August. Science students won the top awards for both oral and poster presentations.

He also reported that our summer Science programs were a huge success with significant improvements on the enrolment numbers. Overall, there were a total of 759 registrations for both middle school and high school camps. Helix had a total of 202 registrations, an increase of 92%, and Science Explorations had a total of 557 registrations, increase of 27%, compared to the previous year. He noted that the middle school camps are approaching capacity. However, there is still room for growth in the Helix program. He is hopeful that initiatives such as the Helix program will impact our enrolment numbers in a positive manner.

He informed Council that D. Wilson had been appointed as the point-person who will take the lead to explore how Science might set up a Bio-Analytical Core facility. He will consult with colleagues, identify priority needs, consider possible collaborations with Health and Lassonde, and craft a viable plan.

He also informed Council that the Provost's office had approved seven new faculty searches for the upcoming academic year.

Dean Jayawardhana was pleased to announce to Council that York received funding from the federal government's Strategic Infrastructure Fund for three different projects. A significant amount of the overall infrastructure funding, \$48 million, has been allocated for a Major Science & Health Refresh. The major focus of renovations will be the Farquharson building. There will be some upgrades done in the Chemistry, Petrie and Lumbers buildings as well. He mentioned that a Project Committee had been formed to oversee this project in terms of the budget and timelines.

In addition, a joint User Committee between Science and Health co-chaired by the two Associate Deans from both Faculties had been formed. Both committees have faculty and staff representatives from Science. He informed Council that the government required substantial completion of the projects by April 2018.

He also announced that York University received \$33.3 million from the Canada First Research Excellence Fund for a project called "Vision: Science to Applications". This brings together scholars from across 5 York faculties: Health, Science, Engineering, AMPD and LAPS. It's a huge project spread over 7 years totaling \$120 million. The core group involves two science researchers, Thilo Womelsdorf, Jianhong Wu. New faculty members to be recruited through on-going CRC searches in sensory biophysics and applied statistics are also expected to participate in and benefit from the VISTA initiative.

To conclude his remarks, the Dean announced the following upcoming events;

- The Toronto Public Library and the Faculty of Science will present, The Fascinating (and Sometimes Scary) World of Infectious Diseases on October 1st – November 7th.
- Science Literacy Week: Sep 20-21
- Red and White Day: Sep 29
- Ada Lovelace Day: Oct 17 & 27
- York Science Forum: Nov 2
- The York Science Forum, to be held in November to focus on genome editing technology "CRISPR" and his office had secured Feng Zhang, Professor at the Massachusetts Institute of Technology (MIT), to give the key note address. He added that the moderator will be Paul Kennedy, host of CBC. Mark Bayfield from York Science and Janet Rossant from Gairdner Foundation will also be panelists. He encouraged everyone to attend.

7. Associate Deans' and Bethune Master's Remarks

Associate Dean, Faculty, E. J.J. van Rensburg reminded course coordinators to meet with TA's to allocate teaching times and duties, and to complete TA Workload forms and submit them as per collective agreement. He also reminded those intending to retire to submit their notices allowing nine months' notice to retire as required by the collective agreement.

He informed faculty that the university was planning a university-wide research symposium for the Fall term (tentatively in November) focussed on “Environment and Climate Change”. He added that this was an opportunity for York University to showcase our research. Sylvie Morin was the contact person.

Associate Dean, Students, A. Mills updated Council on the 2016-2017 enrolment numbers. He expressed concern that the domestic undergraduate numbers were down by 10%. Science continues to grow in international enrolments. The faculty is in the process of investigating reasons for this drop. He added that a number of initiatives were underway to find ways of increasing applications from prospective students.

The meeting noted that overall, other faculties generally fared better than Science.

Associate Dean Mills updated Council on the new operating transcript environment that will affect student petitions and appeals and student records as follows:

- First-year leniency policy has been eliminated
- students can take a course a third time as a grade of record
- there is a new withdrawal option (W), which is an option to drop late in the course, but it shows on the transcript as a W. This is expected to reduce the volume of petitions

In conclusion, he noted that the Working Group on the Markham Campus will reconvene in September and he will provide Council with updates accordingly. He also responded to a number of questions from the floor pertaining to his report.

The Master of Bethune, J. Amanatides informed Council that academic orientation for new students had already started and its well-attended and going on well.

A question was raised on the new health levy for post doctorates. Associate Dean S. Morin was asked to look into the matter and inform faculty accordingly.

8. Reports from Science Representatives on Senate Committees

There were no reports.

9. Reports from Standing Committees of Council

Executive Committee

Council moved, seconded and carried a motion to ratify additional nominations of 2016 -17 Vacancies Report on Senate and FSc Committees as presented.

Council also noted the annual reports from the Petitions Committee and the FSc T&P Senate Review Committee.

10. Other Business

10.1 Proposed Faculty of Science Policy on Grades

M. H. Armour spoke to the new grade policy. She informed Council of the following changes,

- that there will be no withholding of grades before faculty can upload the grade
- Grade distribution form has been eliminated to reduce workload for faculty
- Departments are expected to review all grades, note any variations and adjust grades if required.
- At the end of each year, say in May all departments should produce grades reports including anomalies and submit to CEAS
- CEAS to look at historical trends and will no longer be involved before the grades are uploaded.
- They also recommended that this new proposal be reviewed after three years to review how the policy is working particularly with the new W policy.

Council had a wide ranging discussion on this proposal and M. H. Armour answered questions from the floor in order to provide clarification. While these changes were welcomed by Council, some members questioned the language of the proposal, for example, under section 1: Departmental review it states....."this committee will comprise of three department faculty members....." Some members did not feel it was necessary to instruct departments on the composition of committee. There was a sense from Council members that this proposal created a lot of bureaucracy instead.

Council suggested that under Departmental Review section b) "This includes" to be substituted by "this may include". Furthermore, under Actions - b) "CEAS will respond to departments "to be substituted with "Feedback from CEAS as required will be provided within 30 days"

M. H. Armour and her team were asked to incorporate Council feedback into the document and resubmit the proposal to the next Council meeting of October 11th.

10.2 *Nomination of FSc representative on the President's Sustainability Council*

N. Madras informed Council of the need to nominate a representative on the President's Sustainability Council and he encouraged faculty to self-nominate.

10.3 *Ratification of nomination, J. Amanatides: FSc representative on the York University Community Safety Council (CSC)*

A motion was moved, seconded and carried to ratify J. Amanatides as Science representative on the York University Community Safety Council (CSC).

Council adjourned.

N. Madras, Chair of Council

S. Siyakatshana, Assistant Secretary of Council

The Senate of York University

Synopsis

The 628th Meeting of Senate held on Thursday, September 22, 2016

Remarks

At the outset of the first Senate meeting of 2016-2017, the Chair of Senate, Professor George Comninel

- welcomed continuing and new Senators, the latter including Dean Lyndon Martin of the Faculty Education and Dean Paul McDonald of the Faculty of Health
- introduced the Academic Colleague to the Council of Ontario Universities, Senators on the Board of Governors, and Senate committee chairs
- saluted the Vice-Provost Students, Janet Morrison, and wished her well as she prepares to take up the position of Vice-President Academic and Provost at Sheridan College

York's President, Dr Mamdouh Shoukri, applauded the community for all of its many successes and contributions to society, and paid special attention to highlights from the summer months, including major funding from the federal government for multi-institutional initiatives centred at York (The Health Ecosphere: An Innovation Pipeline for Commercial Health Solutions funded by Federal Development Ontario and Vision: Science to Applications or VISTA, made possible by a significant grant from the Canada First Research Excellence Fund). The University's researchers had also fared well in Social Science and Humanities Research Council competitions. Two faculty members were among the latest crop of Trudeau fellows, and three current faculty members and one graduate had been named to the Royal Society. These and other indicators reaffirm York's standing in the world of cutting-edge research and underline its growing impact and multiplying connections with external partners.

An announcement about funding for projects submitted to Ottawa under the Post-Secondary Institutions Strategic Investment Fund is imminent, and the ground will be turned on the Schulich School of Business facility expansion on September 30. Dr Shoukri announced the names of individuals slated to receive honorary degrees at Fall Convocation ceremonies,

Looking ahead to his final year in office, the President called on the community to rally behind York's core values of providing students with the highest quality education while fitting them with the attributes essential for positive citizenship, building on research strengths and interdisciplinarity, and helping to boost the University's profile and reputation. All members of the community should be respectful, responsible, sensitive and collegial.

The President's monthly "Kudos Report" can be accessed in the meeting agenda package.

The Senate of York University

Synopsis

Academic Accommodations on November 2, 2016

Senate approved a resolution declaring November 2, 2016 – on which date a nationwide student day of action will be held - a day of academic accommodations with the specific request

that all course directors be asked through the Deans/Principal to: avoid scheduling exams, tests, presentations or other work on that day and to establish reasonable extensions of deadlines for other graded work due that date and to provide reasonable academic accommodations to students who choose to attend the November 2, 2016 Day of Action, including reasonable alternative access to materials covered during their absence. At its meeting of September 22, 2016 the Senate approved a resolution declaring November 2, 2016 – on which date a nationwide student day of action will be held - a day of academic accommodations with the specific request

Approval under Summer Authority

The Committee reported that the only action it took during the summer resulted in approval of an amendment to the *Senate Policy and Guidelines on Withdrawn from Course Option* specifying that “Petitions for removal of the W notation are not permitted and no refund of tuition fees shall be provided for courses dropped through the late withdrawal option.” (For details on the Policy itself see the reports from Executive and ASCP in the agenda package).

Other Approvals

On a recommendation from the Executive Committee, Senate approved an expansion of the membership of the Senate Appeals Committee by one faculty member to achieve balanced adjudicative panels and diminish the likelihood of postponed meetings. Senate acted at the second stage of a statutory motion.

Senate elected two Librarians to Senate committees: Stacy Allison-Cassin, Academic Standards, Curriculum and Pedagogy, and Yemisi Dina, Awards.

Senate approved a recommendation of the Academic Standards, Curriculum and Pedagogy Committee to

authorize the granting of degrees at the University’s Convocations held in Fall 2016, February 2017 (Convocation *In Absentia*) and Spring 2017 to those students who have fulfilled the degree program requirements and who have been recommended by the Councils of the Faculties and Colleges for receipt of the degrees listed in Appendix A of the ASCP report.

The Senate of York University

Synopsis

authorize the forwarding of recommendations for certification by the Faculty of Education to the Ontario College of Teachers for those students who have been deemed “recommended for certification” by the Council of the Faculty of Education; and that

authorize the granting of diplomas and certificates at the University's Convocations held in Fall 2016, February 2017 (Convocation *In Absentia*) and Spring 2017 to those students who have fulfilled requirements and who have been recommended by the Councils of the Faculties for receipt of the diplomas and certificates listed in Appendix A of the ASCP report.

Committee Information Reports

In its report Senate Executive reported on

- its approval of Senate committee members nominated by Faculty Councils
- enhancements to nominations process and a new timing, in November, for the annual call for expressions of interest in Senate committee membership and other positions elected by Senate; Senators were asked to assist in the process of identifying prospective candidates throughout the year
- Senate meeting dates for 2016-2017, with scheduling adjustments made in December, February and June
- the results of the Senator and Senate committee member survey conducted in June and July, along with actions that will be taken to address key findings
- the annual report on Senate in 2015-2016 together with attendance figures for the September 2016 to May 2017 period

Academic Policy, Planning and Research reported the University Academic Plan 2015-2020 will be at the heart of its agenda for the year, and urged Senators to be strong advocates for the UAP in their Faculties and other collegial settings as they actively participate in the process of both “making the UAP matter” and helping to bring its objectives to fruition. The Committee also advised that it will sponsor academic planning forums in October on recommendations emanating from Institutional Integrated Resource Plan working groups, shared the latest update on Markham Centre planning, and announced members of its sub-committees for the year.

ASCP reported on programs approved to commence by the Quality Council of Ontario and approved for funding by the Ministry of Advanced Education and Skills Development.

Discussion Item

Senators offered their thoughts on a discussion item concerning due diligence in the acceptance of gifts and the recognition of donors. Assurances were given that the

The Senate of York University

Synopsis

University exercises all due diligence in donor relations and the importance of having effective processes was noted by all.

Additional Information about this Meeting

Please refer to the full Senate agenda and supplementary material posted online with the September 2016 meeting for details about these items.

<http://secretariat.info.yorku.ca/senate/meeting-agendas-and-synopses/>

Next Meeting of Senate

Senate's next meeting will be held at 3:00 p.m. on **Thursday, October 27, 2016.**

Faculty of Science

FACULTY COUNCIL

October 11, 2016

Ratification of additional nominations: 2016-17 Vacancies Report on Senate and FSc Committees (item for action)

President's Sustainability Council

S. Sharma, FSc representative

Appeals Committee

D. Ifa, Department of Chemistry representative

FACULTY OF SCIENCE
Science Curriculum Committee

AGENDA

1.1 Physics

- 1.1.1 Change in title: SC/ PHYS 1410 6.0 “Physical Science”
- 1.1.2 Change in pre/co-requisites: SC/BPHS 2090 3.0 “Current Topics in Biophysics”
- 1.1.3 Change in pre/co-requisites: SC/PHYS 2010 3.0 “Classical Mechanics”
- 1.1.4 Change in pre/co-requisites: SC/PHYS 2020 3.0 “Electricity and Magnetism”
- 1.1.5 Change in pre/co-requisites: SC/PHYS 2040 3.0 “Relativity and Modern Physics”
- 1.1.6 Change in pre/co-requisites: SC/PHYS 2060 3.0 “Optics and Spectra”

1.2 Natural Science

- 1.2.1 Change in calendar description and course credit exclusion: SC/NATS 1500 3.0 “Statistics and Reasoning”
- 1.2.2 Change in course credit exclusion: SC/NATS 1700 6.0 “Computers, Information and Society”
- 1.2.3 New course: SC/NATS 1565 3.0 “Plant Life, Human Life”

Changes to Existing Course

Faculty: Science

Department:

Physics and Astronomy

Date of Submission:

September 2016

Course Number:

PHYS 1410 6.0

Effective Session:

Fall 2017

Course Title:

Physical Science

Type of Change:

- | | | | |
|-------------------------------------|---|--------------------------|---|
| <input type="checkbox"/> | in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> | in cross-listing |
| <input type="checkbox"/> | in course number/level | <input type="checkbox"/> | in degree credit exclusion(s) |
| <input type="checkbox"/> | in credit value | <input type="checkbox"/> | regularize course (from Special Topics) |
| <input checked="" type="checkbox"/> | in title (max. 40 characters for short title) | <input type="checkbox"/> | in course format/mode of delivery * |
| <input type="checkbox"/> | in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> | retire/expire course |
| <input type="checkbox"/> | other (please specify): | <input type="checkbox"/> | |

Change From:

To:

PHYS 1410 6.0 Physical Science

PHYS 1410 6.0 Fundamentals of Physics

Rationale:

This course is a year-long, calculus-based course in physics intended for students who do not plan to take any further courses in physics. Some of those students intend to go on to a post-baccalaureate degree in medicine or a related field. A number of those students report that their fulfilment of a physics requirement has been questioned because the current title of PHYS 1410 does not include the word "Physics". To clarify that this course is a full-fledged physics course and to accurately reflect its content, we are changing the title to "Fundamentals of Physics".

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:	Physics and Astronomy	Date of Submission:	September 2016
Course Number:	BPHS 2090 3.0	Effective Session:	Fall 2017
Course Title:	Current Topics in Biophysics		

Type of Change:

<input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s)	<input type="checkbox"/> in cross-listing
<input type="checkbox"/> in course number/level	<input type="checkbox"/> in degree credit exclusion(s)
<input type="checkbox"/> in credit value	<input type="checkbox"/> regularize course (from Special Topics)
<input type="checkbox"/> in title (max. 40 characters for short title)	<input type="checkbox"/> in course format/mode of delivery *
<input type="checkbox"/> in Calendar description (max. 40 words or 200 characters)	<input type="checkbox"/> retire/expire course
<input type="checkbox"/> other (please specify):	<input type="checkbox"/>

Change From:

To:

Prerequisites: SC/PHYS 1010 6.00 or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00; SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 or SC/BIOL 1410 6.00.

Prerequisites: SC/PHYS 1010 6.00, or **SC/PHYS 1800 3.00 and SC/PHYS 1801 3.00**, or SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00, or **SC/ISCI 1301 3.00 and SC/ISCI 1302 3.00**; SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/BIOL 1410 6.00, or **ISCI 1101 3.0 and ISCI 1102 3.0, or permission of instructor.**

Rationale:

We are clarifying that the combination of PHYS 1800 3.0 + PHYS 1801 3.0 (our Physics for Engineers first-year sequence) or of ISCI 1301 3.0 + ISCI 1302 3.0 (the Integrated Science first-year Physics sequence) satisfies the first-year physics prerequisite, and that the first-year Integrated Science Biology sequence ISCI 1101 3.0 + ISCI 1102 3.0 satisfies the first-year biology prerequisite.

We are also codifying past practice that students with high marks in physics courses have been allowed to enrol in BPHS 2090 3.0 without having fulfilled the biology prerequisites (such students have succeeded in the course).

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:

Physics and Astronomy

Date of Submission:

September 2016

Course Number:

PHYS 2010 3.0

Effective Session:

Fall 2017

Course Title:

Classical Mechanics

Type of Change:

- | | |
|--|--|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input type="checkbox"/> other (please specify): | <input type="checkbox"/> |

Change From:

To:

Prerequisites

SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0; SC/MATH 1014 3.0 or equivalent; SC/MATH 1025 3.0 or equivalent; SC/MATH 2015 3.0 or equivalent.

Corequisite

SC/MATH 2271 3.0

Prior to Fall 2010: Prerequisites: SC/PHYS 1010 6.00, or a minimum grade of C in SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00; AS/SC/MATH 1014 3.00 or equivalent; AS/SC/MATH 1025 3.00 or equivalent; Corequisite: SC/MATH 2015 3.00.

Prerequisites

SC/PHYS 1010 6.0, or **SC/PHYS 1800 3.0 and SC/PHYS 1801 3.0, or SC/ISCI 1301 3.0 and SC/ISCI 1302 3.0**, or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0; SC/MATH 1014 3.0 or equivalent; SC/MATH 1025 3.0 or equivalent; SC/MATH 2015 3.0 or equivalent.

Corequisite

SC/MATH 2271 3.0

Rationale:

We are clarifying that the combination of PHYS 1800 3.0 + PHYS 1801 3.0 (our Physics for Engineers first-year sequence) or of ISCI 1301 3.0 + ISCI 1302 3.0 (the Integrated Science first-year Physics sequence) satisfies the first-year physics prerequisite for second-year PHYS courses.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:	Physics and Astronomy	Date of Submission:	September 2016
Course Number:	PHYS 2020 3.0	Effective Session:	Fall 2017
Course Title:	Electricity and Magnetism		

Type of Change:

<input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s)	<input type="checkbox"/> in cross-listing
<input type="checkbox"/> in course number/level	<input type="checkbox"/> in degree credit exclusion(s)
<input type="checkbox"/> in credit value	<input type="checkbox"/> regularize course (from Special Topics)
<input type="checkbox"/> in title (max. 40 characters for short title)	<input type="checkbox"/> in course format/mode of delivery *
<input type="checkbox"/> in Calendar description (max. 40 words or 200 characters)	<input type="checkbox"/> retire/expire course
<input type="checkbox"/> other (please specify):	<input type="checkbox"/>

Change From:

To:

<p>Prerequisites SC/PHYS 1010 6.0 or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0.</p> <p>Corequisite SC/MATH 2015 3.0.</p>	<p>Prerequisites SC/PHYS 1010 6.0, or SC/PHYS 1800 3.0 and SC/PHYS 1801 3.0, or SC/ISCI 1301 3.0 and SC/ISCI 1302 3.0, or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0.</p> <p>Corequisite SC/MATH 2015 3.0.</p>
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Rationale:

We are clarifying that the combination of PHYS 1800 3.0 + PHYS 1801 3.0 (our Physics for Engineers first-year sequence) or of ISCI 1301 3.0 + ISCI 1302 3.0 (the Integrated Science first-year Physics sequence) satisfies the first-year physics prerequisite for second-year PHYS courses.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:

Physics and Astronomy

Date of Submission:

September 2016

Course Number:

PHYS 2040 3.0

Effective Session:

Fall 2017

Course Title:

Relativity and Modern Physics

Type of Change:

- | | |
|--|--|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input type="checkbox"/> other (please specify): | <input type="checkbox"/> |

Change From:

To:

Prerequisites

SC/PHYS 1010 6.0 or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0.

Prerequisites

SC/PHYS 1010 6.0, or **SC/PHYS 1800 3.0 and SC/PHYS 1801 3.0, or SC/ISCI 1301 3.0 and SC/ISCI 1302 3.0**, or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0.

Rationale:

We are clarifying that the combination of PHYS 1800 3.0 + PHYS 1801 3.0 (our Physics for Engineers first-year sequence) or of ISCI 1301 3.0 + ISCI 1302 3.0 (the Integrated Science first-year Physics sequence) satisfies the first-year physics prerequisite for second-year PHYS courses.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:	Physics and Astronomy	Date of Submission:	September 2016
Course Number:	PHYS 2060 3.0	Effective Session:	Fall 2017
Course Title:	Optics and Spectra		

Type of Change:

<input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s)	<input type="checkbox"/> in cross-listing
<input type="checkbox"/> in course number/level	<input type="checkbox"/> in degree credit exclusion(s)
<input type="checkbox"/> in credit value	<input type="checkbox"/> regularize course (from Special Topics)
<input type="checkbox"/> in title (max. 40 characters for short title)	<input type="checkbox"/> in course format/mode of delivery *
<input type="checkbox"/> in Calendar description (max. 40 words or 200 characters)	<input type="checkbox"/> retire/expire course
<input type="checkbox"/> other (please specify):	<input type="checkbox"/>

Change From:

To:

Prerequisites

SC/PHYS 1010 6.0 or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0; AS/SC/MATH 1014 3.00 or equivalent; AS/SC/MATH 1025 3.00 or equivalent.

Prior to Fall 2009: Prerequisites: SC/PHYS 1010 6.00, or a minimum grade of C in SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00; SC/MATH 1014 3.00 or equivalent; SC/MATH 1025 3.00 or equivalent.

Prerequisites

SC/PHYS 1010 6.0, or **SC/PHYS 1800 3.0 and SC/PHYS 1801 3.0, or SC/ISCI 1301 3.0 and SC/ISCI 1302 3.0**, or a minimum grade of C in SC/PHYS 1410 6.0 or SC/PHYS 1420 6.0; AS/SC/MATH 1014 3.00 or equivalent; AS/SC/MATH 1025 3.00 or equivalent.

Rationale:

We are clarifying that the combination of PHYS 1800 3.0 + PHYS 1801 3.0 (our Physics for Engineers first-year sequence) or of ISCI 1301 3.0 + ISCI 1302 3.0 (the Integrated Science first-year Physics sequence) satisfies the first-year physics prerequisite for second-year PHYS courses.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty:
Department:

NATS

Date of Submission:

Jun 27 2016

Course Number:

1500 3.0

Effective Session:

W2016

Course Title:

Statistics and Reasoning

Type of Change:

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> | in cross-listing |
| <input type="checkbox"/> | in course number/level | <input checked="" type="checkbox"/> | in degree credit exclusion(s) |
| <input type="checkbox"/> | in credit value | <input type="checkbox"/> | regularize course (from Special Topics) |
| <input type="checkbox"/> | in title (max. 40 characters for short title) | <input type="checkbox"/> | in course format/mode of delivery * |
| <input checked="" type="checkbox"/> | in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> | retire/expire course |
| <input type="checkbox"/> | other (please specify): | <input type="checkbox"/> | |

Change From:

Statistical reasoning is crucial for a critical understanding of the flood of information we face daily in modern society. This course examines the principles of statistical reasoning with an emphasis on applications to everyday decisions and turning information into understanding. Course credit exclusion: SC/MATH 1532 3.00. NCR Note: Not open to students who have passed or are taking AK/AS/SC MATH 2560 3.00, or who have received advanced standing for the equivalent.

To:

Statistical reasoning is crucial for a critical understanding of the flood of information we face daily in modern society. This course examines the principles of statistical reasoning with an emphasis on applications to everyday decisions and turning information into understanding. **Course credit exclusion:** SC/MATH 1532 3.00. **NCR Note: Not open to students who have passed or are taking AP/HH/SC/PSYC 2021 3.00, AP/HH/SC/PSYC 2022 3.00, AK/PSYC 2510 3.00 (prior to Summer 2002), AK/PSYC 3110 3.00 (prior to Summer 2002), SC/BIOL 2060 3.00, SC/BIOL 3090 3.00 (prior to Summer 2000), AP/ECON 2500 3.00, AP/ECON 3470 3.00, AP/ECON 3480 3.00, AP/ECON 3500 3.00, AP/SC/GEOG 2420 3.0, AP/HH/SC/KINE 2050 3.00, AP/HH/SC/KINE 3150 3.00, AP/SC/MATH 1131 3.0, GL/MATH 1610 3.0, AP/SC/MATH 2500 3.00, AP/SC/MATH 2560 3.00, AP/SC/MATH 2565 3.00, AP/SC/MATH 2570 3.00, AP/POLS 3300 6.00, AP/SOCI 3030 6.00, GL/PSYC 2530 3.00, AP/ADMS2310 3.0, SB/MGMT 1050 3.0.**

Rationale:

Although much of the material covered in NATS 1500 is distinct from that of most university-level statistics courses, students who have already taken a university-level course are at too considerable an advantage in comparison with the first-year non-science students that form the majority of the students in the course.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty:
Department:

Natural Science (STS)

Date of Submission:

Sept. 20 2016

Course Number:

NATS 1700

Effective Session:

2017/2018

Course Title:

Computers, Information and Society

Type of Change:

- | | | | |
|-------------------------------------|---|--------------------------|---|
| <input type="checkbox"/> | in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> | in cross-listing |
| <input type="checkbox"/> | in course number/level | <input type="checkbox"/> | in degree credit exclusion(s) |
| <input type="checkbox"/> | in credit value | <input type="checkbox"/> | regularize course (from Special Topics) |
| <input type="checkbox"/> | in title (max. 40 characters for short title) | <input type="checkbox"/> | in course format/mode of delivery * |
| <input type="checkbox"/> | in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> | retire/expire course |
| <input checked="" type="checkbox"/> | other (please specify): | <input type="checkbox"/> | |

Change From:

Selected survey and critical examination of the history and present-day development of information and communication technologies and of their interplay with society and culture.

To:

SC/NATS 1505 to be listed as a CCE.

Therefore the university calendar description should read.

“Selected survey and critical examination of the history and present-day development of information and communication technologies and of their interplay with society and culture.

Course credit exclusion: SC/NATS 1505 3.0.”

Rationale:

SC/NATS 1700 6.0 is already listed as a CCE for SC/NATS 1505 3.0. Therefore SC/NATS 1505 3.0 should be listed as a CCE for SC/NATS 1700 6.0.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

COMMITTEE ON ACADEMIC STANDARDS, CURRICULUM AND PEDAGOGY TEMPLATE

NEW COURSE PROPOSAL FORM

Faculty:
Indicate all relevant
Faculty(ies)

Science

Department:
Indicate department and
course prefix (e.g.
Languages, GER)

Division of Natural Science, Department of Science and Technology Studies

Date of Submission:

September 27, 2016

Course Number:
Special Topics courses
Include variance (e.g.
HUMA 3000C 6.0,
Variance is "C")

NATS 1565

Var:

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Academic Credit Weight: Indicate both the fee, and MTCU weight if different from academic weight (e.g. AC=6, FEE=8, MET=6)	3
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Course Title:
The official name of the
course as it will appear in
the Undergraduate
Calendar and on the
Repository

Plant Life, Human Life

Short Title:
Appears on any
documents where space
is limited - e.g.
transcripts and lecture
schedules - **maximum
40 characters**

Plant Life, Human Life

With every new course proposal it is the Department's responsibility to ensure that new courses do not overlap with existing courses in other units. If similarities exist, consultation with the respective departments is necessary to determine degree credit exclusions and/or cross-listed courses.

Brief Course Description:

Maximum 2000 characters

(approximately 300 words including spaces and punctuation).

The course description should be carefully written to convey what the course is about. It should be followed by a statement of prerequisites and co-requisites, if applicable. This description appears in the calendar.

For editorial consistency, and in consideration of the various uses of the Calendars, verbs should be in the present tense (i.e., "This course analyzes the nature and extent of...", rather than "This course will analyze...")

The plant world is essential for human life, and shapes human culture. Plants are food, fuel and raw materials. They transform and sustain the soil, air and water of our ecosystems. They produce molecules that are the active ingredients in herbal medicine, modern pharmacology and psychoactive drugs. Humans alter plants using breeding and biotechnology, and use them to enhance their environments and their cultural activities. Using introductory concepts from the life sciences, this course explores these vital relationships between humans and plants.

Prerequisites / Co-requisites: None

NCR Note: This course is not open to any student who has passed or is taking SC/BIOL 1000 3.0, SC/BIOL 1001 3.00, SC/BIOL 1010 6.0

Generic Course Description:

This is the description of the "Parent / Generic course" for Special Topics courses under which variances of the "Generic" course can be offered in different years (Max. 40 words). Generic course descriptions are published in the calendar.

List all degree credit exclusions, prerequisites, integrated courses, and notes below the course description.

**Expanded Course
Description:**

Please provide a detailed course description, including topics / theories and learning objectives, as it will appear in supplemental calendars.

Topics:

This course introduces students to our human connection to the plant world through 6 main topics: Plants as Life Forms; Plants and Energy; Plants as Food; Plants as Raw Materials; Plants as Medicine; Plants and Culture

1. Plants as Life Forms

-a review of the characteristic of living things, the main features of the plant cell, and a general overview of the role plants play in sample ecosystems.

-an introduction to the molecular view of life, and to proteins, carbohydrates, fats and nucleic acids in plants

2. Plants and Energy

-a general overview of the chemical formula for photosynthesis and respiration, and connections to the plant cell, leaf anatomy, and the transport of molecules

-plants as producers in ecosystems

-a discussion of the human use of plants for energy, as wood, coal, oil and natural gas, along with some environmental impacts

3. Plants as Food

-a selection of common plant foods as related to the relevant parts of the plant body, flower, fruit and seed

-an overview of some general principles and techniques in agricultural plant breeding and biotechnology

4. Plants as Raw Materials

-cultivation and manufacturing processes used to generate cloth, wood, and paper

-examples of historical and cross-cultural technologies and uses will be included

5. Plants as Medicine

- a selection examples of the medicinal properties of plants derived from plant-based traditional herbal medicines, with links to modern pharmaceuticals, and psychoactive drugs

- a discussion of plant biodiversity loss and the associated loss of potential medicinal discoveries, as well as “bioprospecting” by industry

6. Plants and Culture

-examples of local gardens, greenhouses, farmers’ markets and conservation areas, as well as the York campus, will be introduced in lecture as preparation for Project #2 (Personal Field Trip)

-examples of indigenous people’s relationships to plants will be explored

-a guest speaker will be invited to present material on one of the topics of this theme – a prospective candidate for 2017 would speak on the uses of plants native to Southern Ontario.

Learning Outcomes:

This course will help students to achieve the following in their conceptual understanding of the living world, through 3 face-to-face lecture hours and one 1-hour online tutorial per week.

- Know the characteristics of living organisms, and describe how these features are evident in plants.
- Identify the significant parts of the plant body, flower, fruit and leaf, as well as the main features of a plant cell, and relate these to specific functions in the organism and environment (for example, photosynthesis; absorption and transpiration of water; absorption, transport and storage of nutrients; soil development and maintenance; gas exchange; inheritance)
- Relate plant structures and functions to their human uses as specific raw materials, foods and molecules that are of interest for human nutrition, health, industry and environmental concerns
- Experience a deeper awareness of plants in their daily lives as they eat a meal, purchase food or other plant-based goods, walk on campus, or explore local farmers' markets, public gardens, greenhouses, parks or conservation areas (students will select one of these as the focus of Project 2 – Personal Field Trip)
- Consider the role of plants in one or more indigenous knowledge systems and cultures

Through in-class “clicker” questions, online tutorial exercises and quizzes, a plant observation exercise (Project 1) and a personal field trip (Project 2), students will learn and practice the following skills:

- Connecting common plant foods with the anatomy of the plant body and the parts of flowers and fruit (Online tutorial exercise)
- Describing, observing and identifying a few plant species in their home, campus or work environment (Project 1)
- Observing details of sample plant parts and living plants, and connecting them with general plant anatomy and function (Online tutorial exercise)
- Interpreting graphs and diagrams (Lecture and online tutorial)
- Working in groups with other students and producing a common document (one online tutorial, and one 2-stage in-class midterm)
- Researching and writing a short report (Projects 1 and 2)

Course Design:

Indicate how the course design supports students in achieving the learning objectives. For example, in the absence of scheduled contact hours what role does student-to-student and/or student-to-instructor communication play, and how is it encouraged?

Detail any aspects of the content, delivery, or learning goals that involve "face-to-face" communication, non-campus attendance or experiential education components.

Alternatively, explain how the course design encourages student engagement and supports student learning in the absence of substantial on-campus attendance.

Face-to-face: (3 lecture hours/week = 36 hours + 2 office hours/week)

Lectures serve to clarify and expand on text readings, and also offer students opportunities to work with course concepts through clicker questions, break-out discussion groups, and practice exercises with unlabeled diagrams. The course director will hold weekly office hours.

Online tutorials: (mandatory - 1 hour per week)

Weekly one-hour instructor-led online tutorials offer further practice in retaining course concepts through supplementary review, and online exercises and quizzes. In addition, there will be responses to student questions, experiential exercises, and support and further instruction on term projects. Some tutorials will feature a pre-recorded video.

Experiential Education:

Project 1 asks students to observe and research information on a plant in their home or neighbourhood, and is connected to material from lecture. Project 2 asks students to investigate human interactions with plants by visiting and researching a public garden, greenhouse, farmer's market, or conservation area. Some tutorials will involve students investigating a plant food or product through a hands-on activity that they can do at home, and later bring to class to share in a group setting.

Instruction:

1. Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
2. Number of department members currently competent to teach the course.
3. Instructor(s) likely to teach the course in the coming year.
4. An indication of the number of contact hours (defined in terms of hours, weeks, etc.) involved, in order to indicate whether an effective length of term is being maintained **OR** in the absence of scheduled contact hours a detailed breakdown of the estimated time students are likely to spend engaged in learning activities required by the course.

1. 1 offering of 1 section, in either the fall or winter term (or offered once in both terms).

2. This course could be taught by faculty from the Department of Biology.

3. Jill Lazenby is expected to teach this course in the coming year.

4. Students will meet with the course director for 3 hours per week of face-to-face lecture contact, for a total of 36 per course. The course director will be available for weekly office hours, and by phone or email.

One online tutorial hour per week will be provided through Moodle, where students will complete an assignment. Some tutorials will be supported by a pre-recorded video.

Students will need an additional 3-5 hours per week to do the readings, projects and tutorial exercises, for a total of 7-9 hours per week.

Evaluation:

A detailed percentage breakdown of the basis of evaluation in the proposed course must be provided.

If the course is to be integrated, the additional requirements for graduate students are to be listed.

If the course is amenable to technologically mediated forms of delivery please identify how the integrity of learning evaluation will be maintained. (e.g. will "on-site" examinations be required, etc.)

In-class participation/quizzes (clickers – drop lowest 2 classes): 10%
 8 Online tutorial exercises (drop lowest 1) = 20%
 Midterm: 15%
 Final Exam in exam period: 25%
 Project 1 (Plant Observation Exercise):15%
 Project 2 (Personal Field Trip): 15%

Bibliography:**A READING LIST MUST BE INCLUDED FOR ALL NEW COURSES**

The Library has requested that the reading list contain complete bibliographical information, such as full name of author, title, year of publication, etc., and that you distinguish between required and suggested readings. A statement is required from the bibliographer responsible for the discipline to indicate whether resources are adequate to support the course.

Also please list any online resources.

If the course is to be integrated (graduate/undergraduate), a list of the additional readings to be required of graduate students must be included. If no additional readings are to be required, a rationale should be supplied.

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.**Required:**

1. A selection of chapters will be drawn from the following text, which is available as an eBook through McGraw-Hill Education.

Levetin, Estelle & McMahon, Karen. (2016). *Plants and Society*, 7th edition. New York: McGraw-Hill Education.

Chapter 1 – Plants in Our Lives (includes “molecules of life”)

Chapter 2 – The Plant Cell

Chapter 3 – The Plant Body

Chapter 5 – Plant Life Cycle: Flowers

Chapter 6 – Plant Life Cycle: Fruits and Seeds

Chapter 10 – Human Nutrition

Chapter 12 – The Grasses

Chapter 13 – Legumes

Chapter 14 – Starchy Staples

Chapter 15 – Feeding a Hungry World (includes breeding and biotechnology)

Chapter 16 – Stimulating Beverages

Chapter 17 – Herbs and Spices

Chapter 18 – Materials: Cloth, Wood and Paper

Chapter 19 – Medicinal Plants

Chapter 20 – Psychoactive Plants

Chapter 26 – Plant Ecology

2. An additional chapter will be assigned from the following source, to cover photosynthesis and respiration for the non-specialist. This eBook is available through the York Library

King, John. (2011). Part 1 – Plants and Energy. In *Reaching for the Sun: How Plants Work* (2nd ed.). Cambridge: Cambridge University Press.

Suggested Reading for Reference Only:

Through York's library system, students will have online access to:

Allaby, Michael (ed.) (2012). *A Dictionary of Plant Sciences*. Oxford: Oxford University Press. (for definitions of technical terms)

Glimn-Lacy, Janice & Kaufman, Peter B. (2006). *Botany Illustrated*. Springer-Verlag. (for diagrams and outlines)

Other Resources:

A statement regarding the adequacy of physical resources (equipment, space, etc.) must be appended. If other resources will be required to mount this course, please explain

COURSES WILL NOT BE APPROVED UNLESS IT IS CLEAR THAT ADEQUATE RESOURCES ARE AVAILABLE TO SUPPORT IT.

This course would require the regular facilities provided by York for its NATS courses: classroom space for 200, with computer, monitor and projector for Powerpoint presentations, lecture recording, online video presentations, and a classroom response system, as well as access to a Moodle course.

Teaching assistants will be needed to assist with marking projects, some online tutorial assignments, and short answer questions on the midterm and exam.

Course Rationale:

The following points should be addressed in the rationale:

How the course contributes to the learning objectives of the program / degree.

The relationship of the proposed course to other existing offerings, particularly in terms of overlap in objectives and/or content. If inter-Faculty overlap exists, some indication of consultation with the Faculty affected should be given.

The expected enrolment in the course.

This course meets the requirements of York's general education offerings in science, by introducing non-science students to the content and practice of science. Students learn specific information about the biology of plants that helps them better understand the role of the plant world in the environment, in health and nutrition, in energy production, and in human culture. Students also engage in activities that require observation, analysis, collaboration, and reporting. In addition, the focus on plant-human relationships empowers students to better understand society's dependence on plant resources, and, therefore, to attribute value to them in important ways that may promote civic engagement for the protection and wise use of plants at a regional and global level.

In order to offer students some flexibility in meeting their general education requirements in science, the Division of Natural Science has sought to increase the number of 3 credit courses. In addition, there are currently no NATS courses that focus on plant life. Some content of Topic 3 (Plants as Food) is covered in NATS 1560 – Understanding Food, however the emphasis on plant biology in the discussion of food in NATS 1565 is novel. Correspondingly, many aspects of food production outlined in NATS 1560 will not be addressed in NATS 1565.

The Department of Biology offers BIOL 2010 – Plant Biology. While NATS 1565 necessarily covers some of the same topics, its intent is to focus on introductory concepts that offer breadth of knowledge to the non-specialist, and aid in the understanding of the importance of plants to human society. NATS 1565 will not offer the depth of inquiry, technical understanding, laboratory experience or identification skills offered by BIOL 2010.

The expected enrolment is 200 students. The course could accommodate a larger class size, and could also be adapted for a fully online offering.

Faculty and Department Approval for Cross-listings:

If the course is to be cross-listed with another department, this section needs to be signed by all parties. In some cases there may be more than two signatures required (i.e. Mathematics, Women's Studies). In the majority of the cases either the Undergraduate Director or Chair of a unit approves the agreement to cross-list. All relevant signatures must be obtained prior to submission to the Faculty curriculum committee.

Dept: _____	_____	_____
Signature (Authorizing cross-listing)	Department	Date
Dept: _____	_____	_____
Signature (Authorizing cross-listing)	Department	Date
Dept: _____	_____	_____
Signature (Authorizing cross-listing)	Department	Date

Accessible format can be provided upon request.

**STEACIE SCIENCE & ENGINEERING LIBRARY
YORK UNIVERSITY**

MEMORANDUM

To: Jill Lazenby, Assistant Lecturer, Division of Natural Sciences

From: Jacqueline Kreller-Vanderkooy, Science Librarian

Re: NATS 1565 - Plant Life, Human Life

Date: August 29, 2016

I have reviewed the course proposal and attached bibliography for **NATS 1565 – Plant Life, Human Life** and can state that the York University Libraries have the required resources to support this undergraduate level course.

Please be aware that the library offers the following services to help students with their research:

- A librarian can go to the classroom or tutorial and introduce students to the various resources available at the library including electronic journals, e-books, and databases.
- A librarian is also available for individual consultations with students to help them find the materials they need for their research.
- A librarian can be available as a user on the course Moodle page to answer student questions using the Forum discussion, provide links to resources in the course, and post handouts presented in face-to-face instruction.

The following books listed in the course bibliography are **owned** by the library:

- Allaby, M. (Ed.) *A dictionary of plant sciences* (3rd ed.). Oxford: Oxford University Press. ISBN: 9780191759147 **(E-Book)**
- Glimn-Lacy, J. & Kaufman, P. B. (2006). *Botany illustrated: Introduction to plants, major groups, flowering plant families* (2nd ed.). New York: Springer. ISBN: 9780387288758 **(E-Book)**
- King, J. (2011). *Reaching for the sun: How plants work* (2nd ed.). Cambridge: Cambridge University Press. ISBN: 9780511860928 **(E-Book)**

The following textbook listed in the course bibliography is owned by the library in an **earlier print edition**:

- Levetin, E. & McMahon, K. (2006). *Plants and society* (4th ed.). Boston: McGraw-Hill Higher Education. ISBN: 0072528427 **(Print)**

If you would like a copy of these textbooks placed on reserve at the library for students' use, please place a reserve request by visiting reserves.library.yorku.ca. For more information about course reserves, please visit: <http://www.library.yorku.ca/web/ask-services/facultyinstructor-support/places-items-on-reserve/>.

The following electronic resources licensed by the library may be of help to the students in this course:

- **Web of Science** is a multidisciplinary citation database that indexes over 12,000 of the highest impact journals worldwide in the sciences, social sciences and humanities.
- **Scopus** is a multidisciplinary citation database that indexes over 21,500 peer-reviewed journals, 360 trade publications, and 113,000 books covering life, health, physical, and social sciences.
- **Biological Abstracts** is a citation database that indexes over 5,200 journals in the life sciences.

A more complete listing of resources is available at the following Research Guides:

- Natural Science: <http://researchguides.library.yorku.ca/nats>
- Biology: <http://researchguides.library.yorku.ca/biology>

**STEACIE SCIENCE & ENGINEERING LIBRARY
YORK UNIVERSITY**

MEMORANDUM

Please note that the Steacie Library has extensive collections of books and reference materials that are relevant to this course.

In summary, I state that we are well positioned to support this course. If you have any questions, please do not hesitate to contact me.

Sincerely,

Jacqueline Kreller-Vanderkooy, Science Librarian
Steacie Science & Engineering Library
416-736-2100 x40075
jkvan@yorku.ca

Introduction and Purpose

The Faculty of Science recognizes the need to continuously support educators in their exploration and engagement of good teaching practices. This includes making sure that instructors understand the connection between learning outcomes and appropriate evaluation methods to ensure both academic integrity and fairness to students. A review of grades and practices is a valuable tool that departments can use to gather the information they require to aid in this critical process. A departmental level review may also lead to discussion of teaching practices within a department.

Students should expect a consistent standard when taking courses in different years and across different sections. Achieving a certain grade in a course should reflect having the comparable attainment of the learning outcomes by a student, irrelevant of when it is taken, and which instructor teaches it. Student grades should be consistent with the overall York grading standards as outlined in the Senate policy for grades. Please see <http://secretariat-policies.info.yorku.ca/policies/common-grading-scheme-for-undergraduate-faculties/> for more information.

While the past policy referred to courses with ‘anomalous grades’ and defined them through the narrow parameter of percentages of final grades, this policy will provide **guidelines** to departments with the expectation that all courses will undergo some oversight and reflective review, regardless of the actual grade distribution.

1. Department Level Review

Final grades shall be reviewed by a departmental committee within six weeks of the grades submission deadline set by the Registrar’s Office for a particular term. At a minimum, this committee will comprise three Department faculty members including either the UPD or Department Chair. Broader faculty involvement is strongly encouraged. On a yearly basis, after the review of winter-term grades, a report to CEAS will be produced.

While recognising that grade distributions in a course must not be predetermined by any system of quotas that specifies the number or percentage of allowable letter grades, exceeding the following guidelines can reasonably be expected to trigger careful Departmental review of a course:

	A and A+	E and F
1000- and 2000-level courses	> 35%	> 25%
3000- and 4000-level courses	> 50%	> 20%
Multi-section courses (this applies to multiple sections in the same term)	section grade point averages within 1 grade point or 5% variation in class average	

Percentages are calculated with a denominator that includes all students except those with the W designator. Any DNWs or missing grades are to be included in the numerator as F grades. A section grade point average is computed as the frequency weighted sum of the letter grade point value divided by the number of students.

Review Considerations

Departmental Review includes:

- a. Reviewing whether grade profiles are consistent across sections of a multi-sectioned course;
- b. Soliciting from instructors and reviewing rationales for grade profiles when deemed appropriate at the unit/department level. (This includes profiles outside the guidelines above, but may include any other profiles a grades committee may consider to be in need of review.)

Factors to consider in reviewing grade profiles (though not limited to)

1. Class size (small classes may lead to much larger variability, and may better be considered in context of 4 year averages).
2. Nature of learning outcomes and assessment structure.
3. Nature of students taking course (e.g., does a course have a large proportion of students repeating the course).
4. Program level expectations for a course.
5. Specialized courses for individualized work, such as honours thesis courses, reading or project courses (courses in which a grade distribution may not be relevant) – such courses could clearly be identified such in the spreadsheet/report sent to CEAS.
6. New course offerings, or a course offering that has undergone substantial revisions (this may include the implementation of new teaching technology, or new teaching techniques such as the ‘flipped classroom’).

Actions

The Departmental Review will involve more careful analysis of courses whose grade distribution falls outside of the parameters listed in the table above to ensure learning outcomes and assessment structure are appropriate for the course and program.

Once a year, within 30 days of the winter-term grades review, the Department shall provide a report to CEAS. The report should address any courses that were outside the guidelines, and may include commentary on other courses the department felt needed to be addressed.

The report would normally include commentary on changes an instructor or department intends to implement to address any concerns, and/or programmatic changes the Department is planning to address systemic concerns. The report may also include comments on innovative teaching strategies employed by course directors. This report may take the form of a spreadsheet with breakdown of all grades, with courses highlighted that are outside the expected ranges, and further discussion of these courses as a short written report.

The spread sheet and written report, stripped of identification of specific instructors, will be made available to all faculty members in the unit.

2. Faculty Level Review

The Committee on Examinations and Academic Standards (CEAS) is responsible for receiving and responding if necessary to Departmental review reports, and for upholding fairness and consistency in grading practices and standards Faculty-wide.

Review Considerations

Review consists of:

- a. Examining the responses effect of actions taken by the Department to address identified concerns. Typically this is situated within historical trends.
- b. Examining grade distributions Faculty-wide with a view to ensuring that comparable standards are maintained across Departments.

Actions

- a. CEAS will compile and maintain a historical record of grade distributions for all courses offered by the Faculty, and make this available to departments to include in their grades review. Grades distributions will be provided to departments by CEAS each term.
- b. CEAS will respond to Departments, if necessary, within 30 days of receiving their annual Departmental review if necessary.
- c. CEAS will also report to Faculty Council at a regular meeting in the Fall term.
- d. CEAS may initiate further review with the department, involving colleagues from CoTL and/or the Teaching Commons, to address issues identified as systemic.

3. Review of Policy

As this policy creates a new process of review and action, and with the advent of the new 'W' option, it is recommended that this policy undergo a review in 3 years to make adjustments as necessary due to the effects of this policy and the 'W' option.