McGill

Program/Major or Minor/Concentration Revision Form

(07/2004)

1.0 Degree Title
Specify the two degrees for concurrent degree programs

Bachelor of Science

1.1 Major (Legacy= Subject) (30-char. max.)

Atmospheric Science

1.2 Concentration (Legacy = Concentration/Option) If applicable (30 char. max.)

1.3 Minor (with Concentration, if applicable) (30 char. max.)

1.4 Category

Faculty Program (FP)	**Honours (HON) X**
Major	Joint Honours Component (HC)
Joint Major	Internship/Co-op
Major Concentration (CON)	Thesis (T)
Minor	Non-Thesis (N)
Minor Concentration (CON)	Other
	Please specify

1.5

B.Sc. Honours in Atmospheric Science

2.0 Administering Faculty/Unit

Faculty of Science/Atmospheric & Oceanic Sciences

Offering Faculty/Department

Faculty of Science/Atmospheric & Oceanic Sciences

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 "Rationale" in the case of retirement
(Ex. Sept. 2004 = 200409) Retirement

Term: **201409**

4.0 Existing Credit Weight **72-73**

Proposed Credit Weight **72-73**

5.0 Rationale for revised program

These program revisions do not alter the content; they simply subdivide the complementary courses into "core" courses and "streams", the latter allowing for specialization in one of three recognizable subdomains of atmospheric science (along with a general stream for students not wishing to specialize). These streams will strengthen the link between the AOS curriculum and subjects of high interest/importance to science and society, which will aid the AOS undergraduate recruiting efforts.

6.0 Revised Program Description (Maximum 150 words)

The revised Honours program offers the same courses as the previous program but introduces streams that allow students to specialize in one of three recognizable areas.

Students can be admitted to the Honours program after completion of the U1 year of the Major in Atmospheric Science program with a minimum GPA of 3.30. Students having completed a U1 year in a different program with high standing may be admitted to the Honours program on the recommendation of that department. A minimum GPA of 3.30 in the Honours program courses (taken as a whole) is required to remain in the program. A CGPA of 3.30 on the total program is also required to graduate with honours. Required Courses (27 credits) ATOC 214 Introduction: Physics of the Atmosphere (3 credits) ATOC 312 Rotating Fluid Dynamics (3 credits) ATOC 315 Thermodynamics and Convection (3 credits) ATOC 480 Honours Research Project (3 credits) COMP 208 Computers in Engineering (3 credits) MATH 222 Calculus 3 (3 credits) MATH 223 Linear Algebra (3 credits) MATH 314 Advanced Calculus (3 credits) MATH 315 Ordinary Differential Equations (3 credits) Complementary Courses (46 credits) 45-46 credits ~~Note: All students are encouraged to consult with the undergraduate adviser for help selecting from among the complementary courses. As general recommendations (but not programmatic requirements), students wishing to comply with Environment Canada recommendations for careers in operational meteorology are advised to take ATOC 215, 309, 512, 513, 540, 541, and 546. Students interested in atmospheric chemistry, aerosols, and cloud physics are advised to take ATOC 219, 309, 419, 521, 525, 540 and CHEM 223, 253. Suggested minors include math, physics, chemistry, computer science, earth and planetary science, and geography.~~ 27 credits at the 200 to 300 level 3-6 credits selected from: ATOC 215 Oceans, Weather and Climate (3 credits) ATOC 219 Introduction to Atmospheric Chemistry (3 credits) 3 credits selected from: ATOC 357 Atmospheric and Oceanic Science Laboratory (3 credits) PHYS 257 Experimental Methods 1 (3 credits) 3 credits selected from: PHYS 230 Dynamics of Simple Systems (3 credits) PHYS 251 Honours Classical Mechanics 1 (3 credits) 3 credits selected from: PHYS 232 Heat and Waves (3 credits) PHYS 253 Thermal Physics (3 credits) 3 credits selected from: CHEM 223 Introductory Physical Chemistry 1 (2 credits) CHEM 253 Introductory Physical Chemistry 1 Laboratory (1 credit) MATH 319 Introduction to Partial Differential Equations (3 credits) 9-12 credits selected from: ATOC 309 Weather Radars and Satellites (3 credits) CHEM 243 Introductory Physical Chemistry 2 (2 credits) CHEM 362 Advanced Organic Chemistry Laboratory (2 credits) CHEM 367 Instrumental Analysis 1 (3 credits) MATH 203 Principles of Statistics 1 (3 credits) MATH 317 Numerical Analysis (3 credits) MATH 323 Probability (3 credits) MATH 324 Statistics (3 credits) PHYS 241 Signal Processing (3 credits) PHYS 331 Topics in Classical Mechanics (3 credits) PHYS 333 Thermal and Statistical Physics (3 credits) PHYS 340 Majors Electricity and Magnetism (3 credits) PHYS 342 Majors Electromagnetic Waves (3 credits) 18-19 credits at the 400 to 500 level, selected from the following (at least 12 credits must come from ATOC): ATOC 419 Advances in Chemistry of Atmosphere (3 credits) ATOC 512 Atmospheric and Oceanic Dynamics (3 credits) ATOC 513 Waves and Stability (3 credits) ATOC 515 Turbulence in Atmosphere and Oceans (3 credits) ATOC 521 Cloud Physics (3 credits) ATOC 525 Atmospheric Radiation (3 credits) ATOC 531 Dynamics of Current Climates (3 credits)	**Students can be admitted to the Honours program after completion of the U1 year of the Major in Atmospheric Science program with a minimum GPA of 3.30. Students having completed a U1 year in a different program with high standing may be admitted to the Honours program on the recommendation of that department.** **A minimum GPA of 3.30 in the Honours program courses (taken as a whole) is required to remain in the program. A CGPA of 3.30 on the total program is also required to graduate with honours**. **Required Courses (27 credits)** **ATOC 214 Introduction: Physics of the Atmosphere (3 credits)** **ATOC 312 Rotating Fluid Dynamics (3 credits)** **ATOC 315 Thermodynamics and Convection (3 credits)** **ATOC 480 Honours Research Project (3 credits)** **COMP 208 Computers in Engineering (3 credits)** **MATH 222 Calculus 3 (3 credits)** **MATH 223 Linear Algebra (3 credits)** **MATH 314 Advanced Calculus (3 credits)** **MATH 315 Ordinary Differential Equations (3 credits)** **Complementary Courses (46 credits)** **45-46 credits** **Note: Students are required to fulfill the core complementary requirements along with one of the four streams listed below. In cases of overlap, each course can only be used once toward the satisfaction of the core complementary courses or the chosen stream.** **Core complementary courses (24 credits)** **3-6 credits selected from:** **ATOC 215 Oceans, Weather and Climate (3 credits)** **ATOC 219 Introduction to Atmospheric Chemistry (3 credits) or CHEM 219** **3 credits selected from:** **ATOC 357 Atmospheric and Oceanic Science Laboratory (3 credits)** **PHYS 257 Experimental Methods 1 (3 credits)** **3 credits selected from:** **PHYS 230 Dynamics of Simple Systems (3 credits)** **PHYS 251 Honours Classical Mechanics 1 (3 credits)** **3 credits selected from:** **PHYS 232 Heat and Waves (3 credits)** **PHYS 253 Thermal Physics (3 credits)** **3 credits selected from:** **CHEM 223 Introductory Physical Chemistry 1 (2 credits)** **CHEM 253 Introductory Physical Chemistry 1 Laboratory (1 credit)** **MATH 319 Introduction to Partial Differential Equations (3 credits)** **6-9 credits selected from:** **CHEM 243 Introductory Physical Chemistry 2 (2 credits)** **CHEM 263 Introductory Physical Chemistry 2 Laboratory (1 credit)** **CHEM 367 Instrumental Analysis 1 (3 credits)** **CHEM 575 Chemical Kinetics (3 credits)** **MATH 203 Principles of Statistics 1 (3 credits) *** **MATH 317 Numerical Analysis (3 credits)** **MATH 319 Introduction to Partial Differential Equations (3 credits)** **MATH 323 Probability (3 credits)** **MATH 324 Statistics (3 credits) *** **PHYS 333 Thermal and Statistical Physics (3 credits)** **PHYS 340 Majors Electricity and Magnetism (3 credits)**** **PHYS 342 Majors Electromagnetic Waves (3 credits)***** **PHYS 350 Honours Electricity and Magnetism (3 credits)**** **PHYS 352 Honours Electromagnetic Waves (3 credits)***** **Streams (21-22 credits)** **WEATHER ANALYSIS AND FORECASTING STREAM (22 credits)** **ATOC 309 Weather Radars and Satellites (3 credits)** **ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)** **ATOC 521 Cloud Physics (3 credits)** **ATOC 540 Synoptic Meteorology 1 (3 credits)** **ATOC 541 Synoptic Meteorology 2 (3 credits)** **ATOC 546 Current Weather Discussion (1 credit)** **6 credits selected from:** **ATOC 513 Waves and Stability (3 credits)** **ATOC 515 Turbulence in Atmosphere and Oceans (3 credits)** **ATOC 525 Atmospheric Radiation (3 credits)** **ATOC 530 Paleoclimate Dynamics (3 credits)**

ATOC 540 Synoptic Meteorology 1 (3 credits) ATOC 541 Synoptic Meteorology 2 (3 credits) ATOC 546 Current Weather Discussion (1 credit) ATOC 558 Numerical Methods and Laboratory (3 credits) ATOC 568 Ocean Physics (3 credits) CHEM 575 Chemical Kinetics (3 credits) EPSC 542 Chemical Oceanography (3 credits) MATH 423 Regression and Analysis of Variance (3 credits) MATH 555 Fluid Dynamics (4 credits) * PHYS 432 Physics of Fluids (3 credits) * PHYS 551 Quantum Theory (3 credits) PHYS 559 Advanced Statistical Mechanics (3 credits) * Students may take PHYS 432 OR MATH 555.	**ATOC 531 Dynamics of Current Climates (3 credits)** **ATOC 558 Numerical Methods and Laboratory (3 credits)** **ATOC 568 Ocean Physics (3 credits)** **MATH 555 Fluid Dynamics (4 credits) ****** **PHYS 432 Physics of Fluids (3 credits) ****** **<u>CLIMATE SCIENCE (21 credits)</u>** **MATH 323 Probability (3 credits)** **MATH 324 Statistics (3 credits) *** **ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)** **ATOC 531 Dynamics of Current Climates (3 credits)** **9 credits (6 of which must be ATOC) selected from:** **ATOC 513 Waves and Stability (3 credits)** **ATOC 515 Turbulence in Atmosphere and Oceans (3 credits)** **ATOC 521 Cloud Physics (3 credits)** **ATOC 525 Atmospheric Radiation (3 credits)** **ATOC 530 Paleoclimate Dynamics (3 credits)** **ATOC 540 Synoptic Meteorology 1 (3 credits)** **ATOC 558 Numerical Methods and Laboratory (3 credits)** **ATOC 568 Ocean Physics (3 credits)** **EPSC 513 Climate and the Carbon Cycle (3 credits)** **EPSC 542 Chemical Oceanography (3 credits)** **MATH 423 Regression and Analysis of Variance (3 credits)** **MATH 555 Fluid Dynamics (4 credits) ****** **PHYS 432 Physics of Fluids (3 credits) ****** **<u>ATMOSPHERIC CHEMISTRY AND PHYSICS (21 credits)</u>** **ATOC 309 Weather Radars and Satellites (3 credits)** **ATOC 519 Advances in Chemistry of Atmosphere (3 credits)** **ATOC 521 Cloud Physics (3 credits)** **CHEM 223 Introductory Physical Chemistry 1 (2 credits)** **CHEM 243 Introductory Physical Chemistry 2 (2 credits)** **CHEM 253 Introductory Physical Chemistry 1 Laboratory (1 credit)** **CHEM 263 Introductory Physical Chemistry 2 Laboratory (1 credit)** **6 credits selected from:** **ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)** **ATOC 513 Waves and Stability (3 credits)** **ATOC 519 Advances in Chemistry of Atmosphere (3 credits)** **ATOC 525 Atmospheric Radiation (3 credits)** **ATOC 530 Paleoclimate Dynamics (3 credits)** **ATOC 540 Synoptic Meteorology 1 (3 credits)** **ATOC 558 Numerical Methods and Laboratory (3 credits)** **CHEM 367 Instrumental Analysis 1 (3 credits)** **CHEM 575 Chemical Kinetics (3 credits)** **EPSC 513 Climate and the Carbon Cycle (3 credits)** **EPSC 542 Chemical Oceanography (3 credits)** **MATH 423 Regression and Analysis of Variance (3 credits)** **<u>GENERAL (21-22 credits)</u>** **21-22 credits (at least 15 of which must be ATOC) selected from:** **ATOC 309 Weather Radars and Satellites (3 credits)** **ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)** **ATOC 513 Waves and Stability (3 credits)** **ATOC 519 Advances in Chemistry of Atmosphere (3 credits)** **ATOC 521 Cloud Physics (3 credits)** **ATOC 525 Atmospheric Radiation (3 credits)** **ATOC 530 Paleoclimate Dynamics (3 credits)** **ATOC 531 Dynamics of Current Climates (3 credits)** **ATOC 540 Synoptic Meteorology 1 (3 credits)** **ATOC 541 Synoptic Meteorology 2 (3 credits)** **ATOC 546 Current Weather Discussion (1 credit)** **ATOC 558 Numerical Methods and Laboratory (3 credits)** **ATOC 568 Ocean Physics (3 credits)** **CHEM 367 Instrumental Analysis 1 (3 credits)** **CHEM 575 Chemical Kinetics (3 credits)** **EPSC 513 Climate and the Carbon Cycle (3 credits)** **EPSC 542 Chemical Oceanography (3 credits)** **MATH 423 Regression and Analysis of Variance (3 credits)** **MATH 555 Fluid Dynamics (4 credits) ****** **PHYS 432 Physics of Fluids (3 credits) ****** *** Students cannot receive credit for both MATH 203 and MATH 324** **** Students cannot receive credit for both PHYS 340 and PHYS 350** ***** Students cannot receive credit for both PHYS 342 and PHYS 352** ****** Students cannot receive credit for both PHYS 432 or MATH 555**

8.0 Consultation with Related Units ☒ Yes ☐ No Financial Consult ☐ Yes ☐ No

Attach list of consultations

9. Approvals

Routing Sequence	Name	Signature	Date
Department			
Curric/Acad Committee			
Faculty 1			
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name	
Phone	
Email	
Submission Date	

To be completed by ARR:

CIP Code

8.0 Consultation with Related Units Yes [x] No [ ] Financial Consult Yes [ ] No [ ]

Attach list of consultations

9. Approvals

Routing Sequence	Name	Signature	Date
Department			
Curric/Acad Committee			
Faculty 1			
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name	Daniel Kirshbaum
Phone	
Email	Daniel.kirshbaum@mcgill.ca
Submission Date	

To be completed by ARR:

CIP Code

Josie D'Amico

From: Daniel Kirshbaum, Prof.
Sent: March-19-14 4:30 PM
To: Josie D'Amico
Subject: Fwd: Re: AOS stream in Atmospheric Chemistry and Physics

Consultation with Chemistry on the program changes...

Dan

-------- Original Message --------
Subject: Re: AOS stream in Atmospheric Chemistry and Physics
Date: Fri, 28 Feb 2014 11:29:55 -0500
From: Amy Szuchmacher Blum <amy.blum@mcgill.ca>
To: Daniel Kirshbaum <daniel.kirshbaum@mcgill.ca>
CC: David Ronis, Dr. <david.ronis@mcgill.ca>, John R. Gyakum, Prof. <john.gyakum@mcgill.ca>, Parisa A. Ariya, Dr. <parisa.ariya@mcgill.ca>

I don't see any problems with the Atmospheric Chemistry and Physics streams as described.

Regards,

Amy

On 2/24/2014 6:01 PM, Daniel Kirshbaum wrote:
> Dear Amy,
>
> Beyond the course-numbering changes that we have already discussed, we
> are hoping to propose some additional curriculum changes at the March
> academic-committee meeting. These do not involve the addition or
> removal of any programs or any change in the fundamental content of
> our curriculum. They simply reshape our complementary courses into
> so-called "streams" that will help to articulate the different focus
> areas of our field and enable students to specialize in them. These
> four streams are entitled
>
> 1. Weather analysis and forecasting
> 2. Climate Science
> 3. Atmospheric Chemistry and Physics
> 4. General
>
> Stream 3 above is very similar to our previous Majors and Honours
> programs in Atmospheric Chemistry, which we retired in 2013. Because
> there is significant Chemistry content in this stream, we are hoping
> that you could look at it and tell us if you approve of its existence
> and/or share any comments. Given the fact that it is very similar to
> our old programs, we doubt that Chemistry would find it
> objectionable. But we still wanted to request your approval before
> formally proposing it. So, we would greatly appreciate if you could
> review the stream in the attached document and let us know if you
> approve.

>
> Thanks and best regards,
> Dan
>

--

Dr. Amy Szuchmacher Blum
Assistant Professor
McGill University
Department of Chemistry
801 Sherbrooke Street West
Montreal, QC H3A 0B8
Canada

Josie D'Amico

From: Eric Galbraith
Sent: March-19-14 10:59 AM
To: Daniel Kirshbaum, Prof.
Cc: Jeanne Paquette, Dr.; William Minarik, Dr.; John R. Gyakum, Prof.; Josie D'Amico; Alfonso Mucci, Dr.
Subject: Re: EPSC 513

Hi Dan,

Fantastic! That sounds great to me, I'd be delighted to have those students in EPSC 513 and don't forsee any problems. (It also sounds like a great idea to split up the program into three streams.)

Thanks for the heads-up,

best regards
Eric

On Mar 19, 2014, at 10:47 AM, Daniel Kirshbaum <daniel.kirshbaum@mcgill.ca> wrote:

> Dear Jeanne, Bill, and Eric,
>
> At the Academic Committee meeting next week, AOS is proposing to modify our Majors and Honours programs. We are splitting our complementary courses into "core" complementaries and "streams". The streams are in various recognizable sub-disciplines of atmospheric science (Weather Analysis and Forecasting, Climate Science, and Atmospheric Chemistry and Physics).
>
> The impact of this on Earth and Planetary Sciences is quite minor. We are simply seeking to use the new EPSC 513 as a complementary course in our "Climate Science" stream.
>
> Given that our undergraduate enrollment is quite small, there are likely to be fewer than three AOS undergraduate students taking the course at a time.
>
> Is this incorporation of EPSC 513 into our streams OK with you? If possible, please let me know by Friday the 21st.
>
> best regards,
> Dan
>
> --
> Daniel J. Kirshbaum

Josie D'Amico

From: Daniel Kirshbaum, Prof.
Sent: March-19-14 3:59 PM
To: George McCourt
Cc: Kathryn Roulet, Ms; Josie D'Amico
Subject: Re: ATOC/CHEM 419

Hi George,

Thank you for your quick reply. I'm glad that you have no problems with the course revision.

Best regards,
Dan

On 14-03-19 2:45 PM, George McCourt wrote:

> Hello Daniel,
>
> Kathy sent me your e-mail about changing ATOC/CHEM 419 and ATOC/CHEM 619 to ATOC/CHEM 519. We have no problems with this.
>
> Thanks,
>
> George
>
> Senior Faculty Lecturer, McGill School of Environment
> Associate Director Undergraduate Affairs, McGill School of Environment
>
> McGill School of Environment
> Rowles House,
> Macdonald Campus of McGill University
> 21, 111 Lakeshore Road,
> Ste-Anne-de-Bellevue, QC, H9X 3V9
>
> Tel: 514-398-7550
> E-mail: george.mccourt@mcgill.ca
>
> ---
>
> **From:** Kathryn Roulet, Ms
> **Sent:** Wednesday, March 19, 2014 2:41 PM
> **To:** George McCourt
> **Subject:** Fwd: ATOC/CHEM 419
>
> Hi George:
>
> This is fine. The course will be automatically renumbered in our programs and students will then just take it as a 500-level course.
>
> - Kathy

Kathryn Roulet, M.Sc. | Program Adviser | McGill School of Environment | (514) 398-4306

The times and locations of my drop-in hours for the Winter 2014 term are shown on the MSE website: http://www.mcgill.ca/mse/students/student-resources/advising

Begin forwarded message:

> **From:** Daniel Kirshbaum <daniel.kirshbaum@mcgill.ca>
> **Date:** March 20, 2014 at 3:32:09 AM GMT+13
> **To:** <kathy.roulet@mcgill.ca>, <sylvie.deblois@mcgill.ca>
> **Cc:** "John R. Gyakum, Prof." <john.gyakum@mcgill.ca>, Josie D'Amico <josie.damico@mcgill.ca>
> **Subject: ATOC/CHEM 419**
>
> Dear Sylvie and Kathy,
>
> At the March academic meeting next week, AOS and Chemistry are proposing to renumber ATOC/CHEM 419 to ATOC/CHEM 519. The purpose for this change is to simplify the curriculum by turning four courses (ATOC/CHEM 419 and ATOC/CHEM 619) into two (ATOC/CHEM 519). This renumbering would have a very minor impact on the following programs, all of which use ATOC 419 as a complementary course:
>
> B.Sc.
> Major Environment - Atmospheric Environment and Air Quality (60 credits)
> Major Environment -Water Environments and Ecosystems - Biological (60 credits)
>
> B.Sc. Ag
> Major Environment -Water Environments and Ecosystems - Biological (60 credits)
>
> These changes would go into effect in Fall 2014. If possible, please let me know whether you approve of them by Friday March 21. My sincere apologies for the late notice.
>
> best regards,
> Dan
>
> --
> Daniel J. Kirshbaum
> Assistant Professor, McGill University
> Dept. of Atmospheric and Oceanic Sciences
> Room 839 Burnside Hall
> 805 Sherbrooke St West
> Montréal, QC H3A OB9 (Canada)
> Tel: 1-514-398-3347

Josie D'Amico

From: Daniel Kirshbaum, Prof.
Sent: March-19-14 4:31 PM
To: Josie D'Amico
Subject: Fwd: Re: Atmospheric Chemistry and Physics

Consultation with Physics on the program changes...

Dan

-------- Original Message --------
Subject: Re: Atmospheric Chemistry and Physics
Date: Thu, 13 Mar 2014 15:33:32 -0400
From: Guy Moore <guymoore@hep.physics.mcgill.ca>
To: Daniel Kirshbaum <daniel.kirshbaum@mcgill.ca>

```
Hi Dan,

Thanks for your detailed answers.  So physics has no objections to the
changes.

guy

On Thu, Mar 13, 2014 at 02:30:44PM -0400, Daniel Kirshbaum wrote:
> Dear Guy,
>
> Thanks for taking the time to look at the proposal and for providing
> very useful feedback.  Here are my responses to your two comments:
>
> 1. We had some difficulty naming the stream "Atmospheric Chemistry
> and Physics".  Our field is broadly subdivided into so-called
> atmospheric dynamics, physics, and chemistry.  Dynamics is
> geophysical fluid dynamics, physics is radiation, thermodynamics,
> and cloud microphysics, and chemistry is air and cloud chemistry. So
> our use of the term "Atmospheric Chemistry and Physics" includes
> radiation, thermodynamics, cloud microphysics, and chemistry.  This
> proposed stream contains courses on atmospheric radiation (ATOC
> 309), cloud microphysics (ATOC 521) and chemistry (ATOC 519 and 6
> credits of physical chemistry).  So  although there are no extra
> PHYS courses in the stream (beyond the core complementaries), there
> are the ATOC courses that specialize in atmospheric physics.
>
> We didn't name the stream "Atmospheric Chemistry" or "ATmospheric
> Physical Chemistry" because that would imply a more restrictive
> focus on chemistry.  On the other hand, we didn't choose "Physical
> meteorology", which is more synonymous with atmospheric physics and
> would have belied the chemistry component.
>
> 2. This is an oversight that probably should be corrected.
> Originally our program was limited to PHYS 230 and PHYS 232 - the
> honours versions could only be taken as exceptions.  However, we
> added the honours versions last year in response to vigorous student
> complaints about PHYS 232.  Students had better experiences in the
> honours version of PHYS 253 than in the PHYS 232 so we decided to
```

> provide that option (along with the analogous option for PHYS 230).
> Now that we have the honours options for those courses, it makes
> sense to have them for E&M also. So we will add that into the
> proposal to make it consistent. Thank you for pointing this out.
>
> Well, hopefully these explanations make some sense and do not raise
> any objections.
>
> best regards,
> Dan

--
Guy D. Moore
McGill University Dept. of Physics phone (514) 398-4345
room 313, Rutherford Building fax (514) 398-3733
3600 rue University e-mail guymoore@physics.mcgill.ca
Montreal QC H3A 2T8 Canada

Josie D'Amico FROM ESS AC-13-89 to AC-13-92 (Cover)

From: Daniel Kirshbaum, Prof.
Sent: March-21-14 9:15 AM
To: William Minarik, Dr.
Cc: Josie D'Amico
Subject: Re: ATOC/CHEM 419

Hi Bill (cc Josie),

Thanks for your response. I'm glad that ESS is OK with the course-number change.

The outline and syllabus will be very similar to ATOC 419. I'll ask Parisa to forward it to you once it's complete.

Best regards,
Dan

On 14-03-20 5:54 PM, William Minarik wrote:
> Hi Dan:
>
> This should be OK. It'll have limited impact on ESS; few of our
> students take p-chem, which is a prerequisite.
>
> I'd like to see a Course Outline or Syllabus when it's available so
> that I can advise interested students.
>
> Cheers,
> Bill
>
> On 14-03-19 10:55 AM, Jeanne Paquette wrote:
>> Hello Daniel
>>
>> I have only one question myself: since the course had been offered
>> at the 400- and 600-level, is it possible to let us know if there
>> were any differences in the method of evaluation between the two
>> levels? If there were differences, what balance in expectations will
>> be struck at the 500-level?
>>
>> If there is no change in pre-requisite or evaluation method from
>> the 400-level, this will have no material impact on the inclusion of
>> the course in the Earth System Science undergraduate programs. I
>> forward this to Bill Minarik who is the adviser for the Earth System
>> Science, for further input.
>>
>> Regards,
>>