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.)

Core Science Component in Atmospheric & Oceanic Sciences

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)
Major	Joint Honours Component (HC)
Joint Major	Internship/Co-op
Major Concentration (CON)	Thesis (T)
Minor	Non-Thesis (N)
Minor Concentration (CON)	**X Other**

Please specify

Liberal Program

1.5

B.Sc.; Liberal Program–Core Science Component in Atmospheric & Oceanic Sciences

2.0 Administering Faculty/Unit

Science

Offering Faculty/Department

Science

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: **201309**

4.0 Existing Credit Weight **46**

Proposed Credit Weight **45-48**

5.0 Rationale for revised program

Adjustments to the program were made to take into account course changes and in the spirit of changes made in the Majors program:

1. To introduce an atmospheric sciences and oceanography specific laboratory course (ATOC 357) that is required in most other meteorology programs in North America.
2. To provide atmospheric dynamics at the U2 level (ATOC 312).
3. To provide more flexibility for students seeking to pursue sub-fields of atmospheric science other than operational meteorology.
4. To enrich the educational experience for AOS students by offering more options for complementary courses within AOS and the Faculty of Science.

6.0 Revised Program Description (Maximum 150 words)

7.0 List of existing program and proposed program

Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)

Required Courses (37 credits)

ATOC 214 Introduction: Physics of the Atmosphere (3 credits)
~~ATOC 215 Oceans, Weather and Climate (3 credits)~~
~~ATOC 309 Weather Radars and Satellites (3 credits)~~
ATOC 315 Thermodynamics and Convection (3 credits)
~~ATOC 412 Atmospheric Dynamics (3 credits)~~
~~ATOC 540 Synoptic Meteorology 1 (3 credits)~~
~~ATOC 546 Current Weather Discussion (1 credit)~~
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)
~~PHYS 230 Dynamics of Simple Systems (3 credits)~~
~~PHYS 232 Heat and Waves (3 credits)~~

Complementary Courses (9 credits)

ATOC 419 Advances in Chemistry of Atmosphere (3 credits) *
~~ATOC 530 Paleoclimate Dynamics (3 credits)~~
ATOC 531 Dynamics of Current Climates (3 credits)
COMP 208 Computers in Engineering (3 credits)
MATH 203 Principles of Statistics 1 (3 credits)
MATH 319 Introduction to Partial Differential Equations (3 credits)
PHYS 257 Experimental Methods 1 (3 credits)
PHYS 333 Thermal and Statistical Physics (3 credits)
PHYS 340 Majors Electricity and Magnetism (3 credits)

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required

Required Courses (21 credits)

ATOC 214 Introduction: Physics of the Atmosphere (3 credits)
ATOC 312 Rotating Fluid Dynamics (3 credits)
ATOC 315 Thermodynamics and Convection (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 (24-27 credits)

Note: All students are encouraged to consult with the undergraduate advisor for help selecting from among the complementary courses.

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:
PHYS 257 Experimental Methods 1 (3 credits)
ATOC 357 Atmospheric and Oceanic Science Laboratory (3 credits)

3 credits selected from:
PHYS 230 (Dynamics of Simple Systems)
PHYS 251 (Classical Mechanics 1) and

3 credits selected from:
PHYS 232 (Heat and Waves)
PHYS 253 (Thermal Physics)

12-16 credits selected from (at least 6 of which must be ATOC):

ATOC 309 Weather Radars and Satellites (3 credits)
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)
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 (3 credit)
ATOC 568 Ocean Physics (3 credits)
COMP 208 Computers in Engineering (3 credits)
MATH 203 Principles of Statistics 1 (3 credits)
MATH 319 Introduction to Partial Differential Equations (3 credits)
PHYS 333 Thermal and Statistical Physics (3 credits)
PHYS 340 Majors Electricity and Magnetism (3 credits)

Attach extra page(s) as needed

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