Introduced by: Undergraduate Academic Council

Date: April 2, 2012

REVISIONS TO CURRICULUM IN ATMOSPHERIC SCIENCE BS AND ENVIRONMENTAL SCIENCE BS

IT IS HEREBY PROPOSED THAT THE FOLLOWING BE ADOPTED:

1. That this takes effect for the Fall 2012 semester.

2. That this proposal be forwarded to President George M. Philip for approval.
Proposed Curriculum Revisions in the Atmospheric Science B.S. and Environmental Science B.S.

Department of Atmospheric and Environmental Sciences
December 16, 2011

Proposed changes to the Atmospheric Science B.S.
The Atmospheric Science B.S. curriculum is designed such that students take each course in a prescribed sequence. Currently, the students take the dynamics "core" (ATM 410 and 411) during their senior year, along with the electives Synoptic Meteorology I and II (ATM 400 and 401, respectively), which are taken by a large majority of ATM B.S. students. After reviewing feedback from ATM B.S. graduates, and after several in-depth meetings among DAES faculty about the pros and cons of the current curriculum, we have decided that the dynamics core should be moved up one full year, thus beginning during the fall semester of a student's junior year. The benefits of this proposed curriculum change are as follows:

1) With the dynamics core moved up one semester, students will already have a solid foundation in the major with which to build upon when they take elective courses such as Synoptic Meteorology I and II (ATM 400 and 401), Tropical Meteorology (ATM 421), and Climate Variability and Change (ATM 306). Currently, some dynamics is taught in these courses in order to make up for material that students haven't yet learned, and moving the dynamics sequence up one full year will allow new, relevant material to be taught in the aforementioned courses.

2) There is currently a one-semester gap between ATM 315 and the current dynamics core (ATM 410 and 411). As it is currently taught, ATM 315 covers introductory dynamics and quantitative methods, but with the lengthy gap between this course and Dynamics I (ATM 410) in the current curriculum, material that was covered in ATM 315 needs to be covered again, since many students have forgotten some of the core concepts covered in ATM 315.

3) The change allows a third course in the dynamics sequence to be offered (ATM 418) during a student's senior year, which will cover mesoscale dynamics, material that hasn't been offered at the undergraduate level at Albany before but is covered in other universities' atmospheric science programs. A detailed syllabus for the proposed course is presented within this document.

It is proposed that ATM 315 be revised and re-named Environmental Statistics, an elective for the Atmospheric Science B.S., and required for the Environmental Science B.S. core (see the narrative for the ENV B.S. in this document for details on the latter). Concepts covered in both majors require a certain amount of background knowledge in statistics and statistical research methods. Skills acquired in such a course would be highly valuable for students in rounding out their major, and preparing them for careers or graduate work in either field. A syllabus for the revised course is included in this document.

With the addition of new faculty to the department in the Fall 2012 semester, we would also like to offer a "special topics" course for undergraduates in both atmospheric and environmental sciences. This gives the department some flexibility in course offerings for our new faculty. In addition, the department occasionally has visiting faculty, and special topics courses allow us to offer electives for undergraduates taught by visiting specialists in the field.
Finally, it is proposed that ATM 350 become a two-credit co-taught course. A second period devoted to lab time to work on assigned coursework under the guidance of the instructors will be introduced. In addition, a final presentation using the tools learned in the course will be required. This will add one credit to the Atmospheric Science B.S., bringing it to 66 total credits.

Summary of Atmospheric Science B.S. Changes
Current Curriculum
A MAT 111/112/118, 113, 214, 311
A PHY 140, 145, 150, 240
A CHM 120
A ATM 209
A ATM 210/210Z
A ATM 211
A ATM 315
A ATM 320
A ATM 321
A ATM 350
A ATM 410, 411 (Dynamics)
12 upper-level electives

Proposed Changes
“ ”
“ ”
“ ”
“ ”
“ ”
Revised course; see syllabus
“ ”
“A ATM 404 (same course, taken senior year)
Now two credits (two days per week)
“A ATM 316, 317, 418 (begins jr. year, three courses)
“ ”

Atmospheric Science B.S. MAP with proposed curriculum revisions
*ONLY required courses are listed*

Fall 1
A MAT 112
A PHY 140, 145
A CHM 120

Spring 1
A MAT 113
A PHY 150

Fall 2
A MAT 214
A PHY 240
A ATM 209
A ATM 210/Z

Spring 2
A MAT 311
A ATM 211

Fall 3
A ATM 316

Spring 3
A ATM 317
A ATM 320
A ATM 350

Fall 4
A ATM 418

Spring 4
A ATM 404

Total credits in the major = 66

Proposed changes to the Environmental Science B.S.
The Environmental Sciences B.S. curriculum consists of a core program required of all ENV students and four different concentrations: Climate, Geography, Biology and Geology. With the retirement and departure of our remaining Geology professors, Linsley, Kidd and Delano, we have no faculty member left in our department with expertise in Classical Geology. We therefore have no other choice than to close out the Geology concentration and eliminate all remaining Geology courses from the Undergraduate Bulletin, except for some cross-listed courses (GEO/ENV) and one introductory course (AGEO 221) which will remain a required course for all ENV majors and which will be taught by instructional support specialist and geochemist Steve Howe. Note that this reduces the required credits in our major from 66 to 65 credits.

The second proposed change includes the revision of AATM 315 (Environmental Statistics), taught by Prof. Roundy, which would replace AENV 105 (Introduction to Environmental Science) in the core curriculum. We feel that our ENV students do not receive sufficient training in the statistical analysis of environmental data, required in today’s job market. AENV105 on the other hand was a course that was offered at the Gen-Ed level and our students often complained that it was overcrowded with students who showed a lack of interest and was based on repetitive material that they were exposed to in other courses as well. We feel that this substitution will increase the rigor of our ENV B.S. degree program.

The third proposed change concerns the climate concentration where with the addition of a new faculty member, Prof. Zhou, we have attained new expertise in the area of Hydrology and Remote Sensing. This allows us to reintroduce a Hydrology course (AATM 301 – Surface Hydrology and Hydrometeorology) as a required course in the climate concentration. This is an already existing course, but it was never taught after the departure of Prof. Mohr and is currently listed only as an elective in the Climate concentration. This course will replace AGOG 304 (Climatology), which will remain an elective in the climate concentration.

The fourth change concerns the ENV Biology concentration. We had a meeting with some of our colleagues from Biology on November 21, in which we discussed the availability and usefulness of Biology courses currently listed as required or elective courses for our ENV students with a Biology concentration. Based on this discussion we propose to replace ABIO 230 (People and Resources in Ecological Perspective), which will likely not be taught much longer, by A BIO 212Y (Genetics). A BIO 212Y is a prerequisite for almost all upper level BIO courses and our students therefore had to take this course regardless in the past. Not listing this course as required was an oversight on our part which we now rectify. In addition we also include ABIO 320 (Ecology) as a required course. On the other hand we have relaxed the requirements for the electives, by allowing our students to fulfill the remaining 9 elective credits from any BIO course that is equal to BIO 218 or higher.

**Summary of Environmental Sciences B.S. Changes**
CORE

**Current Curriculum** | **Proposed Changes**
--- | ---
A MAT 111/112/118*, 113/119 | 
A PHY 140/141, 150/151/202 | “ ”
A CHM 120/130, 121/131 | “ ”
A BIO 120 | “ ”
A ENV 105 | Replaced by new course, A ATM 315
A ENV 201 | “ ”
A ATM 210 | “ ”
A GEO 221 | New description, reduced to 3 credits
A ENV 250 | “ ”
A ENV 327 | “ ”
A ENV 490 | “ ”

**CLIMATE CONCENTRATION**

**Current Curriculum** | **Proposed Changes**
--- | ---
Required courses: | 
A GOG 304 | Replaced by A ATM 301
A ATM 306 | “ ”
A ENV 450 | “ ”

Electives
(“at least 3 credits from following list”)
A ATM 301 | Replaced by A GOG 304
A ATM 304, 307, 335, 414 | “ ”
ENV/GEO 435 | Replaced by A ENV/GEO 350
A MAT 308 | “ ”

(“at least 12 elective credits must be taken from the combination of the previous elective list and”):
A CHM 220, 221 | “ ”
A ENV 496, | “ ”
A MAT 214, 311, | “ ”
A PHY 150 OR 151 OR T PHY 151, | “ ”
APHY 202, | “ ”
APHY 240, | “ ”
I CSI 201 | “ ”

**GEOLOGY CONCENTRATION**

We have previously submitted a request to governance to end admission to this concentration as of Spring 2012. This concentration will be closed. This requires eliminating, without substitution, the following courses from the Bulletin, as they will not be offered, regardless;
A ENV/GEO 435 (Geohydrology)
A GEO 223 (Introductory Field Geology)
A GEO 330 (Structural Geology)
A GEO 331 (Field excursions in Structural Geology)
A GEO 332 (Structural Geology Laboratory)
A ENV/GEO 466 (Marine and Estuary Systems)
A GEO 470 (Tectonics)

BIOLOGY CONCENTRATION

<table>
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<tr>
<th>Current Curriculum</th>
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<td>Required courses:</td>
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<td>A BIO 121</td>
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<td>A BIO 123Z</td>
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<tr>
<td>ABIO 230</td>
<td>“Replaced by A BIO 212Y”</td>
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<td>“”</td>
<td>“Adding new required course ABIO 320”</td>
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<tr>
<td>Electives</td>
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<tr>
<td>new: “at least 9 credits from any BIO course equal to BIO 218 or higher”</td>
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GEOGRPAHY CONCENTRATION
No changes

New/Revised Course Syllabi
ATM/ENV 315
Environmental Statistics, Catalog#xxxxx  Fall 2012

Professor: Dr. Paul E. Roundy       ES339A  442-4476
Office hour 1:30-2:30 p.m. Tuesday or by appointment
roundy@atmos.albany.edu

Graduate Student Assistant: To be announced
Meeting Time: TH AM?.  Classroom TBA

Students must purchase the student version of MATLAB, as the in-class and project exercises will be prosecuted via this software (no additional toolboxes are required). Pre-reqs: ATM210; MAT113. Recommended Course: MAT220.

GRADING: Class Exams (2), 30% each. Participation and quizzes, 40%. Participation includes brief project reports in which the students explain what they did and interpret the results physically. Some assignments may be distributed by e-mail.

- 90-93 A-, 94-100 A, 80-83 B-, 83-87 B, 87-89 B+, etc.
- Improvement greater than 15% from the first exam to the last yields 3% added to final grade.

PURPOSE: This course is designed to prepare students from various backgrounds to succeed in applying statistical methods for operational and research activities with a particular emphasis on physical interpretation of the results.

The class will include a brief introduction to MATLAB. Course content also will include:

1. Characterization and interpretation of atmospheric and environmental data sets, going beyond the basics of mean, median, range, standard deviation, variance, etc.
2. Spatial statistics of environmental data (correlation, autocorrelation, scaling, sampling)
3. Hypothesis testing
4. Understanding and communicating forecast probabilities for Weather or Climate events
5. Basic vector and matrix methods for discrete environmental data and a simple empirical orthogonal function (EOF) analysis
6. Statistical modeling and forecasting of environmental data (e.g., representing Mona Loa CO$_2$, MOS (Model Output Statistics) temperature forecasting, SHIPS hurricane intensity forecasting) and assessing forecast skill
7. Basic power spectrum analysis

and related topics, developed in the context of real atmospheric/environmental datasets and associated problems.

ATM 418: Dynamic Meteorology III
Fall Semester 2011 (3 credits), Class Number ?????
Lecture: Tuesday & Thursday 8:45-10:05 in ES 232
http://www.atmos.albany.edu/daes/atmclasses/…

Instructor:
Professor Ryan Torn
Office: ES 229
Phone: 442.4560
Fax: 442.5825
torn@atmos.albany.edu
Office hours: Monday and Wednesday 11:00-12:00, and by appointment

Course Objective:
This course uses the governing equations of the atmosphere to understand mesoscale phenomena, including convection, flow over topography and boundary layer. In addition, students will learn how the governing equations are used to produce numerical weather model forecasts.

Prerequisites:
ATM 317, 320

Text:
An Introduction to Dynamic Meteorology by J. R. Holton

Supplementary reading:
Mid-Latitude Atmospheric Dynamics: A First Course, by J. E. Martin
Cloud Dynamics, by R. A. Houze

Course Requirements:
7 Homework assignments and Summary: 30%
2 In-class exams: 20% each
Final exam: 30%
Grading: A-E
Each student will be assigned a group that will be responsible for giving a summary of the previous lecture on a regular basis. At the end of the course, each group is assigned a grade based on the quality of the summary, with adjustments based on peer assessment. Late Homework and off-time exams are only allowed for University-recognized reasons.

Course Outline:
1. Topographic flow (2 weeks; course notes)
   • flow around topography
   • downslope winds
   • topographic kelvin waves
2. Dynamics of Convection (4 Weeks; course notes)
   • buoyancy and entrainment
• squall lines and RKW theory
• supercell dynamics
• sea breezes and dry lines

3. Boundary Layer (3 Weeks)
  • mean and perturbation form of equations (Holton 5.1)
  • turbulent kinetic energy (Holton 5.2)
  • introduction to K methods (Holton 5.3)
  • Ekman solution and spin-down (Holton 5.3)

4. Numerical Weather Prediction (3 weeks; course notes)
  • finite differencing
  • time stepping algorithms
  • spectral techniques
  • microphysics, cumulus, boundary layer parameterizations
  • data assimilation and ensemble forecasting

Interdepartmental Support Letter
Dear Prof. Roundy,

This note is to express our department's support for your proposed course in Environmental Statistics. Certainly, we are happy to see the use of linear algebra and statistics in analyzing real world data sets. (We fully expect that after your course has been taught for a few years, the TV weatherman will be much more reliable!)

We agree that your course should make only minor demands on our department's resources. Since you are not requiring linear algebra, we would expect only a few of your students to take that course each year, and some of them are already taking it as math minors. The same goes, only more so, for our applied statistics course, since it is a 400-level course, so we would expect only your best students to consider it.

Good luck with your new course.

Best,

Steven Plotnick
Director of Undergraduate Studies
Department of Mathematics
Index

1. A ATM 301
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7. A ATM 321Y
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10. A ATM 401
11. A ATM 409
12. A ATM 410/A ATM 316 (new)
13. A ATM 411/A ATM 317 (new)
14. A ATM 418
15. A ATM 421
16. A ATM 450
17. A ENV/GEO 435
18. A GEO 223/223Z
19. A GEO 330
20. A GEO 331
21. A GEO 332
22. A ENV/GEO 466
23. A GEO 470
24. A GOG 304
25. A ENV 105
26. A ATM 306
27. A ENV/ATM 327
28. A BIO 230
29. A BIO 212Y
30. A BIO 320
31. A GEO 221
32. A ATM 480
33. A ENV 480
**College of Arts and Sciences**

**Course Action Form**

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<td>Shared-Resources Course</td>
<td>Title</td>
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<td>Deactivate / Activate Course (boldface &amp; underline as appropriate)</td>
<td>Credits</td>
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<td>X Other (specify):</td>
<td>Major Requirements</td>
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**Department:** Atmos. and Environmental Sci.

**To be effective (semester/year):** Fall 2012

<table>
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<th>Course Number</th>
<th>Current:</th>
<th>New:</th>
<th>Credits</th>
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<tbody>
<tr>
<td>A ATM 301</td>
<td>A ATM 301</td>
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</table>

**Course Title:** Surface Hydrology and Hydrometeorology

**Course Description to appear in Bulletin:**

A survey of the water cycle and its interactions with the earth and atmosphere, including the processes of precipitation, evaporation, and stream flow. Water resources and policy issues incorporated where applicable. Counts as upper level credit for the Atmospheric Science B.S. degree.

**Prerequisites statement to be appended to description in Bulletin:**

**Pre-requisite:** ATM 210 or 210Z.

If S/U is to be designated as the only grading system in the course, check here: [ ]

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

**Explanation of proposal:**

With the anticipated annual teaching of ATM 301 and inability to offer ATM 408 as frequently, ATM 301 will now count as an upper-level elective for Atmospheric Science majors. The rigor of the course material will match that of other currently taught upper-level ATM electives. The updated bulletin will now read that courses ATM 301 or above will count as upper-level ATM electives, with the exception of ATM 304.

In addition, we also propose to change ATM 301 from elective to required course in the Climate concentration of the Environmental Science B.S.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

**Chair of Proposing Department (TYPE NAME/SIGN) Date**

**Chris Thorncroft** 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s)

**PRINT NAME/SIGN** Date

Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York
College of Arts and Sciences  
Course Action Form  
Proposal No. 2

Please mark all that apply:

- New Course
- Revision of: Number
- Description
- Cross-Listing
- Number
- Title
- Credits
- Prerequisites
- X
- Other (specify):
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)

Department:  
Atmos. and Environmental Sci.

To be effective (semester/year):  
Fall 2012

Course Number  
Current:  
A ATM 305 
New:  
-----

Credits:  
3

Course Title:  
Global Physical Climatology

Course Description to appear in Bulletin:

Same as at present.

Prerequisites statement to be appended to description in Bulletin:

Co-requisites:  
A ATM 316, A ATM 315 or permission of instructor.

If S/U is to be designated as the only grading system in the course, check here:  

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Due to changes in the dynamics “core” (see curriculum revision narrative), the new appropriate co-requisite for ATM 305 is ATM 316: Dynamics I. This ensures that atmospheric science majors interested in taking ATM 305 already have a background in weather and forecasting and are at the very least taking Dynamics I concurrent with ATM 305.

A ATM 315 is added as a co-requisite due to the amount of statistics in the ATM 305 syllabus.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft  
12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s)  
(Print Name/Sign)

Dean of College (Print Name/Sign)  

Chair of Academic Programs Committee (Print Name/Sign)  

Dean of Graduate (Undergraduate) Studies (Print Name/Sign)  

University at Albany – State University of New York
### Course Action Form

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<td>Cross-Listing</td>
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<td>Shared-Resources Course</td>
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<td>Deactivate / Activate (boldface &amp; underline as appropriate)</td>
<td>Other (specify):</td>
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**Department:** Atmos. and Environmental Sci.  
**To be effective (semester/year):** Fall 2012

**Course Number:** Current: A ATM 211  New: -----  **Credits:** 4

**Course Title:** Weather Analysis and Forecasting

**Course Description to appear in Bulletin:**

An introduction to the use and interpretation of observed weather data, satellite and radar imagery, and atmospheric soundings; horizontal atmospheric forces and force balances; airmasses and fronts; extratropical cyclone development and structure; mid-latitude flow properties; temperature and precipitation forecasting. Offered Spring semester only.

**Prerequisites statement to be appended to description in Bulletin:**

Same as at present

If S/U is to be designated as the only grading system in the course, check here:

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

**Explanation of proposal:**

Minor update to course description

**Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:**

---

**Chair of Proposing Department (TYPE NAME/SIGN):** Chris Thorncroft  
**Date:** 12-16-2011

**Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN):**

**Dean of College (PRINT NAME/SIGN):** Date

**Chair of Academic Programs Committee (PRINT NAME/SIGN):** Date

**Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN):** Date

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University at Albany – State University of New York
Continuation of ATM 211. Analysis and forecasting of various types and scales of severe weather, including tropical cyclones, thunderstorms and thunderstorm complexes, tornadoes, hail, lightning, lake-effect precipitation, blizzards, and ice storms. Once per week, students lead current and forecast weather discussions. Offered Fall semester only.

Prerequisites statement to be appended to description in Bulletin:

Same as at present

If S/U is to be designated as the only grading system in the course, check here: ✔

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Minor update to course description and title

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date
Chris Thorncroft 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date
Application of statistical methods to physical interpretation of signals in atmospheric and environmental datasets. Basic characterization of datasets, hypothesis testing, spatial statistics, assessment of forecast skill, and other topics to help analyze, understand, and communicate with others about the physical processes behind the signals and their relevance to stakeholders.

Prerequisites statement to be appended to description in Bulletin:

ATM 210 or 210Z, A MAT 113 or 119 or T MAT 119. Recommended: MAT 220

Explanation of proposal:

The changes to A ATM 315 reflect a revised curriculum covering statistical methods in atmospheric and environmental sciences. Having our students learn such methods for their major is highly beneficial in research and other career paths in both fields. The course will now be an elective for the atmospheric science major, and required for the environmental science core. For additional explanation, please refer to the introductory narrative, course syllabus, and inter-departmental support letter, all embedded within this document.

See support letter from the math department.
<table>
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<th>Revision of:</th>
<th>Number</th>
<th>Description</th>
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<td>Department:</td>
<td>Atmos. and Environmental Sci.</td>
<td>To be effective (semester/year):</td>
<td>Fall 2012</td>
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<td>Course Number</td>
<td>Current: A ATM 320</td>
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<td>Course Title:</td>
<td>Atmospheric Thermodynamics</td>
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<tr>
<td>Course Description to appear in Bulletin:</td>
<td>Same as at present</td>
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<tr>
<td>Prerequisites statement to be appended to description in Bulletin:</td>
<td>A PHY 240; A ATM 316</td>
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<td>This course is (will be) a shared-resources course with (i.e., CAS ###):</td>
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<tr>
<td>Explanation of proposal:</td>
<td>Update to prerequisites to reflect changes to the ATM curriculum: 1) The dynamics core begins fall of junior year with ATM 316, which should be the semester before a student takes ATM 320; 2) ATM 321 will now be taken during a student’s senior year, so it is removed as a co-requisite.</td>
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Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date
Chris Thorncroft 12-16-2011
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date
Dean of College (PRINT NAME/SIGN) Date
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York
New Course

Revision of:

Number

Title

X

X

Description

Prerequisites

Cross-Listing

Credits

Other (specify):

Shared-Resources Course

Department: Atmos. and Environmental Sci.

Deactivate / Activate Course (boldface & underline as appropriate)

To be effective (semester/year):

Fall 2012

Course Number

Current: A ATM 321Y

New: A ATM 404Y

Credits: 4

Course Title: Physical Meteorology

Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

A ATM 316, 320 (the latter acceptable as a co-requisite)

If S/U is to be designated as the only grading system in the course, check here:

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Update to prerequisites to reflect changes to the ATM curriculum: The dynamics core begins fall of junior year with ATM 316.

The change in course number is to bring it to a 400+ level, since in the ATM MAP, it will now be suggested to be taken during the spring semester of a student’s senior year. ATM 404 matches the graduate course with the same name, ATM 504.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  Date

Chris Thorncroft  12-16- 2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date

Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York
College of Arts and Sciences  
Course Action Form  
Proposal No. 8

Please mark all that apply:

- New Course
- Revision of: Number  
  Title  
  X Credits
- Cross-Listing
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)
- Other (specify):

Department: Atmos. and Environmental Sci.  
To be effective (semester/year): Fall 2012

Course Number  
Current: ATM 350  
New:  
Credits: 2

Course Title: Meteorological Datasets and Numerical Computation

Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

**A ATM 211, 316**

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

**Update to prerequisites to reflect changes to the ATM curriculum:** 1) The dynamics core begins fall of junior year with ATM 316, as ATM 315 is now a statistics course.

In addition, the course is now two credits, which brings the ATM B.S. major up to 66 credits.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft  
Date: 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  
Date

Dean of College (PRINT NAME/SIGN)  
Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  
Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
Date

University at Albany – State University of New York

College of Arts and Sciences  
Course Action Form  
Proposal No. 9
Investigation of multi-scale weather phenomena through application of fundamental thermodynamic and dynamic principles; exploration of the connections between observational and theoretical descriptions of atmospheric motions; use of operational weather prediction models and products for weather forecasting; scientific issues in weather forecasting. Two joint lecture-laboratory periods each week.

Prerequisites: A ATM 311, 317, 350

Update to prerequisites, since the new Dynamics II (ATM 317) should be taken prior to ATM 400. It was decided that students should have sufficient knowledge of dynamics prior to taking synoptic meteorology. The course description was also updated to reflect recent minor changes to the course material.
New Course
Revision of:

Cross-Listing

Shared-Resources Course

Deactivate / Activate Course (boldface & underline as appropriate)

Department: Atmos. and Environmental Sci.

To be effective (semester/year): Fall 2012

Course Number
Current: A ATM 401
New: Credits: 3

Course Title: Synoptic Meteorology II

Course Description to appear in Bulletin:

Application of advanced fundamental thermodynamic and dynamic concepts to the investigation of multi-scale weather phenomena; exploitation of ensemble and probabilistic forecasting techniques and remote sensing radar and satellite technologies in weather analysis and forecasting; application of fundamental synoptic and mesoscale concepts to a real-time severe weather and heavy precipitation forecasting exercise.

Prerequisites statement to be appended to description in Bulletin:

Prerequisites: A ATM 400, 418

If S/U is to be designated as the only grading system in the course, check here: ☐

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Update to prerequisites, since the new course, A ATM 418 (Dynamics III) should be taken prior to ATM 401. The course description was also updated to reflect recent minor changes to the course material.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date

Chris Thorncroft 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date

Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York

College of Arts and Sciences Course Action Form Proposal No. 11

Please mark all that apply:

New Course Revision of: Number Description
Cross-Listing

Shared-Resources Course

Deactivate / Activate Course (boldface & underline as appropriate)

Department: Atmos. and Environmental Sci.

To be effective (semester/year): Fall 2012

Course Number Current: A ATM 409 New: Credits: 3

Course Title: Atmospheric Precipitation Processes

Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

A ATM 316, 320; A MAT 311

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Change of prerequisites to reflect the change in the dynamics sequence.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (PRINT NAME/SIGN)  Date

Chris Thorncroft  12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s)
(Print NAME/SIGN)  Date

Dean of College (PRINT NAME/SIGN)  Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  Date

University at Albany – State University of New York

Proposal No. 12
### Course Number

| Current: | A ATM 410 |
| New:     | A ATM 316 |

### Credits

| Credits: | 3 |

### Course Title

**Dynamic Meteorology I**

### Course Description to appear in Bulletin:

Equations and concepts that provide the basis for describing and understanding atmospheric motion systems on planetary and synoptic scales; review of mathematical concepts and tools; kinematics of horizontal flows; fundamental and apparent forces; basic conservation laws; elementary applications of the equations of motion.

### Prerequisites statement to be appended to description in Bulletin:

**Prerequisites:** A ATM 211, A PHY 150 or 151 or T PHY 151, A MAT 214, 311 (the latter acceptable as a corequisite)

### Explanation of proposal:

The change in course number to 300-level reflects changes in the ATM B.S. curriculum described in the narrative (the dynamics core, beginning with this course, now should be taken junior year). As a result, prerequisites change as indicated. In addition, a slight change to the course description is proposed.
### Course Action Form

**Department:** Atmos. and Environmental Sci.  
**To be effective (semester/year):** Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: ATM 411</th>
<th>New: ATM 317</th>
<th>Credits: 3</th>
</tr>
</thead>
</table>

**Course Title:** Dynamic Meteorology II

**Course Description to appear in Bulletin:**

Application of the governing equations to describe and understand synoptic to planetary scale phenomena, including vertical motion, jet streaks, and the frontal cyclone; introduction of the concepts of vorticity and potential vorticity.

**Prerequisites statement to be appended to description in Bulletin:**

Prerequisites: ATM 316

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ##): 

This course is (will be) a shared-resources course with (i.e., CAS ##):

**Explanation of proposal:**

The change in course number to 300-level reflects changes in the ATM B.S. curriculum described in the narrative (the dynamics core now should be taken junior year). As a result, prerequisites change as indicated. The course description has also been updated.

**Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:**

---

**Chair of Proposing Department (TYPE NAME/SIGN)**  
Chris Thorncroft  
12-16-2011

**Approved by Chair(s) of Department(s) having cross-listed course(s) (PRINT NAME/SIGN)**

**Date**  
Dean of College (PRINT NAME/SIGN)  
Date

**Chair of Academic Programs Committee (PRINT NAME/SIGN)**  
Date  
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
Date

---

University at Albany – State University of New York

**College of Arts and Sciences**  
**Course Action Form**  
**Proposal No.** 14

Please mark all that apply:

- [X] New Course  
- [ ] Cross-Listing  
- [ ] Shared-Resources Course  
- [X] Deactivate / Activate Course (boldface & underline as appropriate)  
- [ ] Other (specify): Major Requirements

- [ ] Number  
- [ ] Title  
- [ ] Prerequisites  
- [ ] Credits
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<th>To be effective (semester/year):</th>
<th>Fall 2012</th>
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<tr>
<td>Course Number:</td>
<td>Current:</td>
<td>New: A ATM 418</td>
<td>Credits: 3</td>
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<tr>
<td>Course Title:</td>
<td>Dynamic Meteorology III</td>
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<td></td>
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<tr>
<td>Course Description to appear in Bulletin:</td>
<td>Application of the governing equations to describe and understand mesoscale phenomenon, including flow over topography, organized convection and severe weather, and the atmospheric boundary layer; mathematics and description of the components of numerical weather prediction models.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prerequisites statement to be appended to description in Bulletin:

**Prerequisites:** A ATM 317, 320  

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ##): 

This course is (will be) a shared-resources course with (i.e., CAS ##): 

Explanation of proposal:

**This course will introduce mesoscale meteorology (for topics, see course syllabus) into the undergraduate curriculum, and will be required for the ATM B.S. It is the third course in the dynamics sequence, and should be taken the fall semester of a student’s senior year (400-level).**  

In adding a 400-level, course, and making ATM 321 a 400-level course, the major will continue to have the same number of 400-level courses required, since Dynamics I and Dynamics II have become 300-level courses.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date  

Chris Thornocroft  

12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date  

Dean of College (PRINT NAME/SIGN) Date  

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date  

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date  

University at Albany – State University of New York

**Course Action Form**

<table>
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<th>Proposal No.</th>
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Please mark all that apply:  

- New Course  
- Revision of: Number  
- Cross-Listing  
- Title  
- Shared-Resources Course  
- Credits  
- Deactivate / Activate Course (boldface & underline as appropriate)  
- Other (specify): X Prerequisites
Course Number: Current: A ATM 421 New: Credits: 3
Course Title: Tropical Meteorology
Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

Prerequisites: A ATM 316

If S/U is to be designated as the only grading system in the course, check here: ❑
This course is (will be) cross listed with (i.e., CAS ###):
This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Due to changes in the dynamics sequence (316, 317, 418), the new prerequisite for ATM 421 is ATM 316, Dynamics I.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date
Chris Thorncroft 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York

College of Arts and Sciences Course Action Form Proposal No. 16

Please mark all that apply:
- New Course
- Revision of: Number
- Title
- Credits
- Other (specify):
- Cross-Listing
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)
Department: Atmos. and Environmental Sci.  

To be effective (semester/year): Fall 2012

Course Number  
Current: A ATM 450  
New:  
Credits: 3

Course Title: Computer Applications in Atmospheric Science

Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

Prerequisites: A ATM 316, 350

If S/U is to be designated as the only grading system in the course, check here:  

This course is (will be) cross listed with (i.e., CAS ###):  

This course is (will be) a shared-resources course with (i.e., CAS ###):  

Explanation of proposal:

Simple change of prerequisites to match the new dynamics sequence and the recent introduction of A ATM 350 to the curriculum

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  

Chris Thorncroft  

12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  

Date

Dean of College (PRINT NAME/SIGN)  

Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  

Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  

Date

University at Albany – State University of New York

College of Arts and Sciences  

Course Action Form  

Proposal No. 17

Please mark all that apply:

New Course  

Revision of: Number  

Cross-Listing  

Title  

Shared-Resources Course  

Credits  

Prerequisites
**Department:** Atmos. and Environmental Sci.  
**Course Number:** Current: A ENV/GEO 435  
**Course Title:** Geohydrology  
**To be effective (semester/year):** Fall 2012

<table>
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<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td>A ENV/GEO 435</td>
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</table>

**Course Description to appear in Bulletin:**

---

**Prerequisites statement to be appended to description in Bulletin:**

---

**If S/U is to be designated as the only grading system in the course, check here:**

---

**This course is (will be) cross listed with (i.e., CAS ###):**

---

**This course is (will be) a shared-resources course with (i.e., CAS ###):**

---

**Explanation of proposal:**

**Deactivate course (see curriculum revision narrative)**

---

**Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:**

---

**Chair of Proposing Department (TYPE NAME/SIGN):**

Chris Thorncroft  
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN):

---

**Dean of College (PRINT NAME/SIGN):**

---

**Chair of Academic Programs Committee (PRINT NAME/SIGN):**

---

**Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN):**

---
Department: Atmos. and Environmental Sci.  To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: A GEO 223/223Z</th>
<th>New: -----</th>
<th>Credits: 1</th>
</tr>
</thead>
</table>

Course Title: Introductory Field Geology

Course Description to appear in Bulletin:

---

Prerequisites statement to be appended to description in Bulletin:

---

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

**Deactivate course (see curriculum revision narrative)**

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

---

Chair of Proposing Department (TYPE NAME/SIGN)  Date

Chris Thorncroft  12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  Date

Dean of College (PRINT NAME/SIGN)  Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  Date

University at Albany – State University of New York

Course Action Form  Proposal No. 19

Please mark all that apply:

- [ ] New Course
- [ ] Cross-Listing
- [ ] Shared-Resources Course
- [x] Deactivate / Activate Course (boldface & underline as appropriate)

<table>
<thead>
<tr>
<th>Number</th>
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<th>Description</th>
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Other (specify):
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<th>Course Number Current: A GEO 330</th>
<th>New: -----</th>
<th>Credits: 3</th>
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<tbody>
<tr>
<td>Course Title: Structural Geology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Description to appear in Bulletin:</td>
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<td></td>
</tr>
<tr>
<td>Prerequisites statement to be appended to description in Bulletin:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If S/U is to be designated as the only grading system in the course, check here:</td>
<td></td>
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</tr>
<tr>
<td>This course is (will be) cross listed with (i.e., CAS ##):</td>
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<td></td>
</tr>
<tr>
<td>This course is (will be) a shared-resources course with (i.e., CAS ##):</td>
<td></td>
<td></td>
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<tr>
<td>Explanation of proposal:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Deactivate course (see curriculum revision narrative)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:</td>
<td></td>
<td></td>
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</tbody>
</table>

**Chair of Proposing Department (TYPE NAME/SIGN)**  
**Date**: 12-16-2011  
Chris Thorncroft

**Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)**  
**Date**: 2011  
Dean of College (PRINT NAME/SIGN)

**Chair of Academic Programs Committee (PRINT NAME/SIGN)**  
**Date**: 2011  
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)

**University at Albany – State University of New York**

**Course Action Form**  
**Proposal No.**: 20

Please mark all that apply:  
- New Course  
- Revision of:  
  - Number  
  - Title  
  - Credits  
  - Prerequisites  
- Cross-Listing  
- Shared-Resources Course  
- **Deactivate** / Activate Course (boldface & underline as appropriate)  
  - Other (specify):
Department: Atmos. and Environmental Sci.  

To be effective (semester/year): Fall 2012

Course Number  
Current: A GEO 331  
New: -----  
Credits: 1

Course Title: Field excursions in Structural Geology

Course Description to appear in Bulletin: ___

Prerequisites statement to be appended to description in Bulletin: ___

If S/U is to be designated as the only grading system in the course, check here: ___

This course is (will be) cross listed with (i.e., CAS ###): ___

This course is (will be) a shared-resources course with (i.e., CAS ###): ___

Explanation of proposal:

Deactivate course (see curriculum revision narrative)

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  
Date: 12-16-2011

Dean of College (PRINT NAME/SIGN)  
Date: ___

Chair of Academic Programs Committee (PRINT NAME/SIGN)  
Date: ___

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
Date: ___

University at Albany – State University of New York

Course Action Form  
Proposal No. 21

Please mark all that apply:

New Course  
Cross-Listing  
Shared-Resources Course  
X Deactivate / Activate Course (boldface & underline as appropriate)

Revision of: Number  
Title  
Credits  
Prerequisites

Description  
Other (specify): ___
**Department:** Atmos. and Environmental Sci.  
**To be effective (semester/year):** Fall 2012

<table>
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<tr>
<th>Course Number</th>
<th>Current: A GEO 332</th>
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<tbody>
<tr>
<td><strong>Course Title:</strong></td>
<td>Structural Geology Laboratory</td>
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<td><strong>Course Description to appear in Bulletin:</strong></td>
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<tr>
<td><strong>Prerequisites statement to be appended to description in Bulletin:</strong></td>
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<tr>
<td><strong>If S/U is to be designated as the only grading system in the course, check here:</strong></td>
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<tr>
<td><strong>This course is (will be) cross listed with (i.e., CAS ###):</strong></td>
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<tr>
<td><strong>This course is (will be) a shared-resources course with (i.e., CAS ###):</strong></td>
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</table>

**Explanation of proposal:**

**Deactivate course (see curriculum revision narrative)**

**Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:**

---

**Chair of Proposing Department (TYPE NAME/SIGN):** Chris Thorncroft  
**Date:** 12-16-2011

**Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN):**

<table>
<thead>
<tr>
<th>Date</th>
<th>Dean of College (PRINT NAME/SIGN)</th>
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**Chair of Academic Programs Committee (PRINT NAME/SIGN):**

<table>
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<tr>
<th>Date</th>
<th>Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)</th>
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University at Albany – State University of New York

**College of Arts and Sciences**  
**Course Action Form**  
**Proposal No. 22**

**Please mark all that apply:**

- New Course
- Cross-Listing
- Shared-Resources Course
- **Deactivate** / Activate Course (boldface & underline as appropriate)

**Revision of:**

<table>
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<td>Course Title:</td>
<td>Marine and Estuary Systems</td>
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Course Description to appear in Bulletin:

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

**Deactivate course (see curriculum revision narrative)**

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) | Date
---|---
Chris Thorncroft | 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) | Date
---|---
Dean of College (PRINT NAME/SIGN) | Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) | Date
---|---
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) | Date

University at Albany – State University of New York

College of Arts and Sciences

Course Action Form

Proposal No. 23

Please mark all that apply:

- New Course
- Cross-Listed
- Shared-Resources Course
- **Deactivate** / Activate Course (boldface & underline as appropriate)

Revision of:

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<th>Prerequisites</th>
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Other (specify):
Department: Atmos. and Environmental Sci.  
To be effective (semester/year): Fall 2012

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Course Title: Tectonics

Course Description to appear in Bulletin:

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: [ ]

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Deactivate course (see curriculum revision narrative)

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft  
12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s)  
(Print Name/Sign)  
[Signature]

Dean of College (PRINT NAME/SIGN)  
[Signature]  
Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  
[Signature]  
Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
[Signature]  
Date

University at Albany – State University of New York

College of Arts and Sciences  
Course Action Form  
Proposal No. 24

Please mark all that apply:

- New Course
- Cross-Listing
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)  
- Number
- Title
- Credits
- Other (specify): Major requirements
Department: Atmos. and Environmental Sci.

To be effective (semester/year): Fall 2012

Course Number
Current: A GOG 304
New: 
Credits: 3

Course Title: Climatology

Course Description to appear in Bulletin:

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Change from required course in Climate concentration to elective

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date

Chris Thorncroft 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)

Date Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York

College of Arts and Sciences Course Action Form Proposal No. 25

Please mark all that apply:

New Course  Revision of: Number Description
Cross-Listing  Title Prerequisites
Shared-Resources Course  Credits
Deactivate / Activate Course (boldface & underline as appropriate)  X Other (specify): Major requirements
Department: Atmos. and Environmental Sci.

Course Number: Current: A ENV 105
New: 
Credits: 3

Course Title: Introduction to Environmental Science

Course Description to appear in Bulletin:

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: [ ]

This course is (will be) cross listed with (i.e., CAS ###): 

This course is (will be) a shared-resources course with (i.e., CAS ###): 

Explanation of proposal:

Course should be removed from list of required courses in ENV B.S. degree (will be replaced by ATM 315; see ENV B.S. narrative)

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) 

Chris Thorncroft

Date: 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) 

Date 

Dean of College (PRINT NAME/SIGN) 

Date 

Chair of Academic Programs Committee (PRINT NAME/SIGN) 

Date 

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) 

Date 

University at Albany – State University of New York

College of Arts and Sciences 

Course Action Form 

Proposal No. 26 

Please mark all that apply: 

New Course 
Cross-Listing 
Shared-Resources Course 
Deactivate / Activate Course (boldface & underline as appropriate) 

Revision of: 

Number 
Title 
Credits 
Other (specify): 

Description 

Prerequisites 
Department: Atmos. and Environmental Sci.  
To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: A ENV 306</th>
<th>New:</th>
<th>Credits: 3</th>
</tr>
</thead>
</table>

Course Title: Climate Variability and Change

Course Description to appear in Bulletin:

---

Prerequisites statement to be appended to description in Bulletin:

Prerequisite(s): A MAT 113 or 119 or T MAT 119; A ATM 210. Co-requisite: A ATM 315 or permission of instructor.

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ##): 

This course is (will be) a shared-resources course with (i.e., CAS ##):

Explanation of proposal:

**Update to pre-requisites, now requiring revised statistics course (A ATM 315)**

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) 

Chris Thorncroft 

12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date  

Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date  

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York

College of Arts and Sciences 

Course Action Form 

Proposal No. 27 

Please mark all that apply: 

- New Course 
- Revision of: Number, Title, Credits, Prerequisites 
- Cross-Listing 
- Shared-Resources Course 
- Deactivate / Activate Course (boldface & underline as appropriate) 
- Other (specify):
Department: Atmos. and Environmental Sci.  To be effective (semester/year): Fall 2012

Course Number Current: A ENV 327  New:  Credits: 3

Course Title: Meteorological and Environmental Measurement

Course Description to appear in Bulletin:

Same as at present

Prerequisites statement to be appended to description in Bulletin:

Pre-requisite(s): A MAT 113 or 119 or T MAT 119; A PHY 140 or 141 or TPHY 141; A ATM 210.

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Update to pre-requisites, removing Physics that is not calculus based as an acceptable pre-requisite. In addition, ATM 210 is added as a prerequisite, since fundamental atmospheric science is necessary in order to learn instrumentation. ATM 210 is required for both the environmental science and atmospheric science majors, so this added prerequisite shouldn’t pose an enrollment problem.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  Date

Chris Thorncroft  12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  Date  Dean of College (PRINT NAME/SIGN)  Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)  Date  Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  Date

University at Albany – State University of New York

College of Arts and Sciences  Course Action Form  Proposal No. 28

Please mark all that apply:

New Course  Revision of:  Number  Description

Cross-Listing  Title

Shared-Resources Course  Credits

Deactivate / Activate Course (boldface & underline as appropriate)  X  Other (specify): Major Requirements
Department: Atmos. and Environmental Sci.

To be effective (semester/year): Fall 2012

Course Number: Current: A BIO 230 New: 
Credits: 3

Course Title: People and Resources in Ecological Perspective

Course Description to appear in Bulletin:

---

Prerequisites statement to be appended to description in Bulletin:

---

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Course should be removed from list of required courses in ENV B.S. degree (BIO concentration)

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date
Chris Thorncroft 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)
Date Dean of College (PRINT NAME/SIGN) Date

Chair of Academic Programs Committee (PRINT NAME/SIGN) Date Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date

University at Albany – State University of New York

College of Arts and Sciences 

Course Action Form 

Proposal No. 29

Please mark all that apply:

New Course
Cross-Listing
Shared-Resources Course
Deactivate / Activate Course (boldface & underline as appropriate)

Revision of: Number Description
Title Prerequisites
Credits

Other (specify): Major Requirements
Department: Atmos. and Environmental Sci.  
To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: A BIO 212Y</th>
<th>New:</th>
<th>Credits: 4</th>
</tr>
</thead>
</table>

Course Title: Genetics

Course Description to appear in Bulletin:

---

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

**Course should be added to list of required courses in ENV B.S. degree (BIO concentration)**

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft  
12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  
(Date)

Dean of College (PRINT NAME/SIGN)  
(Date)

Chair of Academic Programs Committee (PRINT NAME/SIGN)  
(Date)

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
(Date)

University at Albany – State University of New York

**Course Action Form**  
Proposal No. 30

Please mark all that apply:

- New Course
- Cross-Listing
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)
- Number
- Title
- Credits
- Description
- Prerequisites
- Other (specify): Major Requirements
Department: Atmos. and Environmental Sci.

To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number Current: A BIO 320</th>
<th>New:</th>
<th>Credits: 3</th>
</tr>
</thead>
</table>

Course Title: Ecology

Course Description to appear in Bulletin:

---

Prerequisites statement to be appended to description in Bulletin:

---

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

**Course should be added to list of required courses in ENV B.S. degree (BIO concentration)**

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

---

Chair of Proposing Department (TYPE NAME/SIGN)

Chris Thorncroft

12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s)

(PRINT NAME/SIGN)

Date

Dean of College (PRINT NAME/SIGN)

Date

Chair of Academic Programs Committee (PRINT NAME/SIGN)

Date

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)

Date

University at Albany – State University of New York

College of Arts and Sciences

Course Action Form

Proposal No. 31

Please mark all that apply:

<table>
<thead>
<tr>
<th>New Course</th>
<th>Cross-Listing</th>
<th>Shared-Resources Course</th>
<th>Deactivate / Activate Course (boldface &amp; underline as appropriate)</th>
</tr>
</thead>
</table>

Revision of: Number X Description

X Title

Credits

X Prerequisites

Other (specify):
Physical properties, composition and structure of common rock-forming minerals; processes controlling the origin, composition, and emplacement of common igneous rocks; weathering and downslope transport, depositional facies and origin of common sedimentary rocks; formation and exhumation of metamorphic rocks; physical and bio-stratigraphy, quantitative methods for geological age determination. Two lectures each week.

Pre-requisite: A CHM 120 or 130 or T CHM 130; or permission of instructor.

Course will be taught by new instructor, Steve Howe. Prerequisites have changed as some of previously required courses are no longer on being offered. We have also removed the lab section from this course, reducing it from 4 to 3 credits.

We have also removed the prerequisite of ENV 105, as it is no longer required for the environmental science major.
Department: Atmos. and Environmental Sci.  
To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: A ATM 480</th>
<th>New:</th>
<th>Credits: 1-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Title:</td>
<td>Special Topics in Atmospheric Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Description to appear in Bulletin:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In-depth analysis of a special topic in atmospheric science. May be repeated if topic changes.

Prerequisites statement to be appended to description in Bulletin:

Co-requisite: A ATM 316, and permission of instructor.

If S/U is to be designated as the only grading system in the course, check here: 

This course is (will be) cross listed with (i.e., CAS ##): 

This course is (will be) a shared-resources course with (i.e., CAS ##): 

Explanation of proposal:

*With incoming new faculty and occasional visiting faculty, we would like to be able to offer additional elective courses for undergraduates on a special topic related to the expertise or interest of the instructor.*

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

---

Chair of Proposing Department (TYPE NAME/SIGN)  
(Date)  
Chris Thorncroft  
12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  
(Date)  
Dean of College (PRINT NAME/SIGN)  
(Date)  
Chair of Academic Programs Committee (PRINT NAME/SIGN)  
(Date)  
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
(Date)  

---

University at Albany – State University of New York

Course Action Form  
Proposal No. 33

<table>
<thead>
<tr>
<th>Please mark all that apply:</th>
</tr>
</thead>
<tbody>
<tr>
<td>X New Course</td>
</tr>
<tr>
<td>Cross-Listing</td>
</tr>
<tr>
<td>Shared-Resources Course</td>
</tr>
<tr>
<td>Deactivate / Activate Course (boldface &amp; underline as appropriate)</td>
</tr>
</tbody>
</table>

Revision of: Number  
Title  
Credits  
Prerequisites  
Description  
Other (specify):
### Course Details

**Department:** Atmos. and Environmental Sci.  
**To be effective (semester/year):** Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current</th>
<th>New</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A ENV 480</td>
<td></td>
<td></td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Course Title:** Special Topics in Environmental Science

**Course Description to appear in Bulletin:**
In-depth analysis of a special topic in environmental science. May be repeated if topic changes.

**Prerequisites statement to be appended to description in Bulletin:**
Prerequisite: ATM 210 or 210Z, and permission of instructor.

**If S/U is to be designated as the only grading system in the course, check here:**

**This course is (will be) cross listed with (i.e., CAS ###):**

**This course is (will be) a shared-resources course with (i.e., CAS ###):**

**Explanation of proposal:**
With incoming new faculty and occasional visiting faculty, we would like to be able to offer additional elective courses for undergraduates on a special topic related to the expertise or interest of the instructor.

**Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:**

---

**Chair of Proposing Department (TYPE NAME/SIGN)**  
**Date**  
Chris Thorncroft  
12-16-2011

**Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)**  
**Date**  
Dean of College (PRINT NAME/SIGN)  
Date

**Chair of Academic Programs Committee (PRINT NAME/SIGN)**  
**Date**  
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
Date

---

University at Albany – State University of New York

**Course Action Form**

**Proposal No.** 34

Please mark all that apply:

- New Course
- Cross-Listing
- Shared-Resources Course
- Deactivate / Activate Course (boldface & underline as appropriate)
- Revision of:
  - Number
  - Title
  - Credits
  - Other (specify):
- Description
- Prerequisites
Department: Atmos. and Environmental Sci.  

To be effective (semester/year): Fall 2012

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Current: A ENV201</th>
<th>New:</th>
<th>Credits: 3</th>
</tr>
</thead>
</table>

Course Title: Environmental Analysis

Course Description to appear in Bulletin:

Same as before but with prerequisite ENV 105 removed

Prerequisites statement to be appended to description in Bulletin:

Prerequisites: none

If S/U is to be designated as the only grading system in the course, check here: ❏

This course is (will be) cross listed with (i.e., CAS ###):

This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Remove the prerequisite of ENV 105 as it is no longer required for the environmental science major.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN): Chris Thorncroft  

Date: 12-16-2011

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN):

Date:  

Dean of College (PRINT NAME/SIGN):  

Date:  

Chair of Academic Programs Committee (PRINT NAME/SIGN):  

Date:  

Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN):  

Date:  

University at Albany – State University of New York

College of Arts and Sciences

Course Action Form

Proposal No. 35

Please mark all that apply:

New Course  ❏ Cross-Listing  ❏ Shared-Resources Course  ❏

Revision of:  ❏ Number  ❏ Title  ❏ Credits

X Prerequisites
Deactivate / Activate Course (boldface & underline as appropriate)  
Other (specify):  

Department:  
Atmos. and Environmental Sci.  

To be effective (semester/year):  
Fall 2012  

Course Number  
Current: ENV 250  
New: ------  
Credits: 3  

Course Title: Sustainable Development: Energy and Resources  

Course Description to appear in Bulletin:  

Same as before but with prerequisite ENV105 or ATM 100 removed  

Prerequisites statement to be appended to description in Bulletin:  

If S/U is to be designated as the only grading system in the course, check here:  

This course is (will be) cross listed with (i.e., CAS ###):  

This course is (will be) a shared-resources course with (i.e., CAS ###):  

Explanation of proposal:  

Remove the prerequisite of ENV 105 or equivalent, as it is no longer required for the environmental science major.  

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:  

Chair of Proposing Department (TYPE NAME/SIGN)  
Chris Thorncroft  
12-16-2011  

Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN)  
Date  
Dean of College (PRINT NAME/SIGN)  
Date  
Chair of Academic Programs Committee (PRINT NAME/SIGN)  
Date  
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN)  
Date  

University at Albany – State University of New York  
College of Arts and Sciences  
Course Action Form  
Proposal No. 36  

Please mark all that apply:  
New Course  
Cross-Listing  
Shared-Resources Course  
Deactivate / Activate Course (boldface & underline as appropriate)  
Revision of:  
Number  
Title  
Credits  
X Prerequisites  
Other (specify):
Department: Atmos. and Environmental Sci.
Course Number Current: ENV 490 New: ----- Credits: 3
Course Title: Major Topics in Environmental Science
Course Description to appear in Bulletin:

Same as before but with prerequisite ENV105 removed

Prerequisites statement to be appended to description in Bulletin:

If S/U is to be designated as the only grading system in the course, check here: □
This course is (will be) cross listed with (i.e., CAS ###):
This course is (will be) a shared-resources course with (i.e., CAS ###):

Explanation of proposal:

Remove the prerequisite of ENV 105, as it is no longer required for the environmental science major.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

Chair of Proposing Department (TYPE NAME/SIGN) Date
Chris Thorncroft 12-16-2011
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date
Dean of College (PRINT NAME/SIGN) Date
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date
Dean of Graduate (Undergraduate) Studies (PRINT NAME/SIGN) Date