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	Proposed Changes
A MAT 111/112/118, 113, 214, 311	ω, γ,
A PHY 140, 145, 150, 240	ω, γ,
A CHM 120	ω, γ,
A ATM 209	ω,
A ATM 210/210Z	ις ,,
A ATM 211	ω,
A ATM 315	Revised course; see syllabus
A ATM 320	ι ,,
A ATM 321	A ATM 404 (same course, taken senior year)
A ATM 350	Now two credits (two days per week)
A ATM 410, 411 (Dynamics)	A ATM 316, 317, 418 (begins jr. year, three courses)
12 upper-level electives	(6.7)

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 is 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). ABIO 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

<u>Current Curriculum</u>	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	(6))

CLIMATE CONCENTRATION

<u>Current Curriculum</u> <u>Proposed Changes</u>

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, ""
APHY240, ""
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

Current Curriculum	Proposed Changes
Required courses:	
A BIO 121	(())
A BIO 122	(())
A BIO 123Z	(6)
ABIO 230	"Replaced by A BIO 212Y"
con	"Adding new required course ABIO 320"

Electives

new: "at least 9 credits from any BIO course equal to BIO 218 or higher")

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). Preregs: 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 CO₂, 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

<u>A ATM 315</u>

Date: Thu, 27 Oct 2011 16:20:49 +0000

From: "Plotnick, Steven" <<u>splotnick@albany.edu</u>>
To: Paul E. Roundy <<u>roundy@atmos.albany.edu</u>>

Cc: "Zhu, Kehe" <kzhu@albany.edu>, "Newman, Stacy A"

<snewman@albany.edu>

Subject: RE: environmental statistics course

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

Course Action Forms

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- 1. A ATM 301
- 2. A ATM 305
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- 4. A ATM 311
- 5. A ATM 315
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- 7. A ATM 321Y
- 8. A ATM 350
- 9. A ATM 400
- 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
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- 31. A GEO 221
- 32. A ATM 480
- 33. A ENV 480

University at Albany – State University of New York				
College of Arts and Sciences	Course Action	n Form	Proposal No1	
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & u		of: Number Title Credits X Other (specify): To be effective (semester/year): Fall		
Course Number Current: A ATM 301 Course Title: Surface Hydrology and Course Description to appear in Bulletin:	New: d Hydrometeorology		s: <u>3</u>	
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 descri	iption in Bulletin:			
Pre-requisite: ATM 210 or 210Z.				
If S/U is to be designated as the only grading sy This course is (will be) cross listed with (i.e., C		nere:		
This course is (will be) a shared-resources course	se 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)	7		Date	
Chris Thorncroft Chonast			12-16- 2011	
Approved by Chair(s) of Departments having cross-listed cours (PRINT NAME/SIGN)		ege (PRINT NAME/SIGN)	Date	
Chair of Academic Programs Committee (PRINT NAME/SIG	N) Date Dean of Grace	duate (Undergraduate) Studies (PF	RINT 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 Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as ap		Number Title Credits Other (specify):	Description X Prerequisites
Department: Atmos. and Environmental Sci.	(seme	ester/year): Fall 2	2012
Course Number Current: A ATM 305 Course Title: Global Physical Climatology Course Description to appear in Bulletin: Same as at present.	ew:	Credits:	3
Prerequisites statement to be appended to description in Bulle	tin:		
Co-requisites: A ATM 316, A ATM 315 or per	rmission of instr	ructor.	
If S/U is to be designated as the only grading system in the co This course is (will be) cross listed with (i.e., CAS ###):	urse, check here:		
This course is (will be) a shared-resources course with (i.e., C	AS ###):		
Explanation of proposal:			
Due to changes in the dynamics "core" (see curriculum revision narrative), the new appropriate corequisite 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 conferring:	ourses and which have	e certified that this p	proposal does not overlap their
Chair of Proposing Department (TYPE NAME/SIGN)			Date
Chris Thorncroft Chonal			12-16- 2011
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date	Dean of College (PRIN	T NAME/SIGN)	Date
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Unde	ergraduate) Studies (PRIN	T NAME/SIGN) Date

University at Albany – State University of New York					
College of Arts and Sciences Course Action Form Proposal No. 3					
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & under the course) Department: Atmos. and Environme		To	Number Title Credits Other (specify): be effective ester/year): Fall	I	Description Prerequisites
Course Number Course Title: Current: A ATM 211 Weather Analysis and		v:	Credits	. 4	
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 descri	ption in Bulletin	n:			
Same as at present					
If S/U is to be designated as the only grading sys. This course is (will be) cross listed with (i.e., CA		se, check here:			
This course is (will be) a shared-resources cours	e with (i.e., CA	S ###):			
Explanation of proposal: Minor update to course description					
Other departments or schools which offer simila offering:	r or related cou	rses and which hav	ve certified that this	proposal does no	ot overlap their
Chair of Proposing Department (TYPE NAME/SIGN)					Date
Chris Thorncroft CThomas					12-16- 2011
Approved by Chair(s) of Departments having cross-listed course (PRINT NAME/SIGN)	e(s) Date	Dean of College (PRIM	NT NAME/SIGN)		Date
Chair of Academic Programs Committee (PRINT NAME/SIG!	N) Date	Dean of Graduate (Und	lergraduate) Studies (PRI	NT NAME/SIGN)	Date

University at Albany – State University of New York			
College of Arts and Sciences Course Action Form Proposal No. 4			
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: X Title Credits Other (specify): To be effective (semester/year): Fall 2012			
Course Number Current: A ATM 311 New: Credits: 4 Course Title: Severe and Hazardous Weather and Forecasting Course Description to appear in Bulletin:			
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 Choncal 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 Cours	se Action Form	Proposal No.	5
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as a Department: Atmos. and Environmental Sci.	To be effect	x Prereques (specify):	
Course Number Current: A ATM 315 Course Title: Environmental Statistics	New:	Credits: 3	
Course Description to appear in Bulletin:			
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 M	AT 119. Recommend	ed: MAT 220	
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 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.			
offering:			
See support letter from the math department.			
Chair of Proposing Department (TYPE NAME/SIGN)			Date
Chris Thorncroft Approved by Chair(s) of Departments having cross-listed course(s)			12-16- 2011
(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. 6				
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description X Prerequisites		
Course Number Current: A ATM 320 Ne	w: Credits:			
Course Title: Atmospheric Thermodynamics	wCruits.			
Course Description to appear in Bulletin:				
Same as at present				
Prerequisites statement to be appended to description in Bulleti	n:			
A PHY 240; A ATM 316				
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	<u></u>			
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, 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.				
Other departments or schools which offer similar or related countries:	irses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRIN	T NAME/SIGN) Date		

University at Albany – State University of New York				
College of Arts and Sciences Course	Action Form	Proposal No. 7		
Please mark all that apply: New Course Revision of: Title Title Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: X Number Title X Prerequisites Credits Other (specify): To be effective (semester/year): Fall 2012				
Course Number Current: A ATM 321Y No.	w: 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 Bulleti	n:			
A ATM 316, 320 (the latter acceptable as a co-r	equisite)			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	\S ###):			
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 conffering:	irses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonast		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 Academia Programs Committee (PRINT NAME (SYCA))	Doon of Graduate (Undergood 111) Continue (DDA)	T NAME/CIONA		
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Undergraduate) Studies (PRIN	T 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 Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as appro-	Revision of: Number Title X Credits Other (specify): To be effective (semester/year): Fall 2	Description X Prerequisites	
Course Number Current: A ATM 350 New	·	2	
Course Title: Meteorological Datasets and Numer Course Description to appear in Bulletin:	rical Computation		
Same as at present			
Prerequisites statement to be appended to description in Bulletin	<u> </u>		
A ATM 211, 316			
If S/U is to be designated as the only grading system in the cours This course is (will be) cross listed with (i.e., CAS ###):	e, check here:		
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 cour offering:	ses and which have certified that this j	proposal does not overlap their	
Chair of Proposing Department (TYPE NAME/SIGN)		Date	
Chris Thorncroft Choncul		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 (PRIN	T NAME/SIGN) Date	

University at Albany – State University of New York					
College of Arts and Sciences	Course	Action Fo	rm	Proposal No	9
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & und Department: Atmos. and Environment		To	Number Title Credits Other (specify): be effective mester/year): Fall	X Descript X Prerequi	
Course Number Current: A ATM 400 Course Title: Synoptic Meteorology I Course Description to appear in Bulletin:	Nev_	v:	Credits	3	
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 statement to be appended to descript	ion in Bulletir	1:			
Prerequisites: A ATM 311, 317, 350					
If S/U is to be designated as the only grading system. This course is (will be) cross listed with (i.e., CAS)		se, check here:			
This course is (will be) a shared-resources course	with (i.e., CA	S ###):	-		
Explanation of proposal:					
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. 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 (PR	INT NAME/SIGN)		Date
Chair of Academic Programs Committee (PRINT NAME/SIGN)	Date	Dean of Graduate (U	ndergraduate) Studies (PRI	NT NAME/SIGN)	Date

University at Albany – State University of New York				
College of Arts and Sciences Course Action Form Proposal No10				
Please mark all that apply: New Course Revision of: Number X Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: Number X Credits Other (specify): To be effective (semester/year): Fall 2012	Description Prerequisites			
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:	ording them			
Chair of Proposing Department (TYPE NAME/SIGN)	Date			
Chris Thorncroft Chonad	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 Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description X Prerequisites		
Course Number Current: A ATM 409	w: Credits:	_		
Course Title: Atmospheric Precipitation Process				
Course Description to appear in Bulletin:				
Same as at present				
Prerequisites statement to be appended to description in Bulleti	n:			
A ATM 316, 320; A MAT 311				
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):				
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Change of prerequisites to reflect the change in				
Other departments or schools which offer similar or related counffering:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRIN	T NAME/SIGN) Date		

University at Albany – State University of New York				
College of Arts and Sciences Course Action Form Proposal No. 12				
Please mark all that apply: New Course Revision of: X Number X Description Cross-Listing Title X Prerequisites Shared-Resources Course Credits Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Fall 2012				
Course Number Current: A ATM 410 New: A ATM 316 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)				
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, 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. 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 Choncel 12-16-				
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 No13				
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: X Number Title X Prerequisites Credits Other (specify): To be effective (semester/year): Fall 2012				
Course Number Current: A ATM 411 New: A ATM 317 Credits: 3 Course Title: Dynamic Meteorology II				
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: 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:				
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) Date				
Chris Thorncroft Choncal 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 Fo	rm	Proposal No	14
Please mark all that apply: X New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface &	• • •	To	Number Title Credits Other (specify): be effective nester/year): Fall	Major Requi	cription requisites rements
Course Number Current: Course Title: Dynamic Meteorology		v: A ATM 4	18 Credits:	3	
Course Description to appear in Bulletin:	, 111				
Application of the governing equat flow over topography, organized co layer; mathematics and description	onvection and	severe weath	er, and the atn	nospheric boun	dary
Prerequisites statement to be appended to desc	cription in Bulletin	1:			
Prerequisites: A ATM 317, 320					
If S/U is to be designated as the only grading s. This course is (will be) cross listed with (i.e., 4)	-	se, check here:			
This course is (will be) a shared-resources cou	ırse with (i.e., CA	S ###):			
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)	1				Date
Chris Thorncroft Choncel	1				12-16- 2011
Approved by Chair(s) of Departments having cross-listed cou (PRINT NAME/SIGN)	rrse(s) Date	Dean of College (PRI	NT NAME/SIGN)		Date
Chair of Academic Programs Committee (PRINT NAME/SI	(GN) Date	Dean of Graduate (Un	dergraduate) Studies (PRI	NT NAME/SIGN)	Date

University at Albany – State University of New York				
College of Arts and Sciences Course Action Form Proposal No15_				
Please mark all that apply: New Course Revision of: Number Title X Prerequisites Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci.				
Course Number Current: A ATM 421	ew: Credits:			
Course Title: Tropical Meteorology				
Course Description to appear in Bulletin:				
Same as at present				
Prerequisites statement to be appended to description in Bullet	in:			
Prerequisites: A ATM 316				
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rrse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Due to changes in the dynamics sequence (316, 316, Dynamics I.				
Other departments or schools which offer similar or related co- offering:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonast		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 (PRI)	NT NAME/SIGN) Date		
Date (TAINT NAME OF THE PROPERTY OF THE PROPER	Scan of Graduate (Ondergraduate) Studies (FRI)	Date Date		

University at Albany – State University of New York				
College of Arts and Sciences Course	Proposal No. 16			
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description X Prerequisites		
Course Number Current: A ATM 450 No				
Course Number Current: A ATM 450 No Course Title: Computer Applications in Atmos	ew: Credits: Dheric Science			
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bullet	in:			
Prerequisites: A ATM 316, 350				
If S/U is to be designated as the only grading system in the 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 ne ATM 350 to the curriculum Other departments or schools which offer similar or related co				
offering:	arbos and which have certified that this	proposal does not overlap then		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonal		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 (PRIN	VT NAME/SIGN) Date		
, ((1)			

University at Albany – State University of New York			
College of Arts and Sciences Course	Proposal No17		
Please mark all that apply: New Course Cross-Listing Shared-Resources Course X Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall	Description Prerequisites 2012	
Course Number Current: A ENV/GEO 435 Ne	w: Credits:	: 3	
Course Title: Geohydrology			
Course Description to appear in Bulletin:			
Prerequisites statement to be appended to description in Bulleti	n.		
Trerequisites statement to be appended to description in Buriet			
If S/U is to be designated as the only grading system in the cou	rse, 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 narr			
Other departments or schools which offer similar or related counffering:	urses and which have certified that this	proposal does not overlap their	
		_	
Chair of Proposing Department (TYPE NAME/SIGN)		Date	
Chris Thorncroft CThomas		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 (PRI	NT NAME/SIGN) Date	

University at Albany – State University of New York				
College of Arts and Sciences Course	Proposal No. 18			
Please mark all that apply: New Course Cross-Listing Shared-Resources Course X Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description Prerequisites		
Course Number Current: A GEO 223/223Z No.	w: Credits:			
Course Title: Introductory Field Geology Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bullet	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Deactivate course (see curriculum revision nari				
Other departments or schools which offer similar or related counffering:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Choncel		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		
Choice of Academic Decourse Committee (DDINT NAME (SCON)	Door of Croducts (Hader and Late) Surdia (Man	TE NAME/CION)		
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Undergraduate) Studies (PRIN	T NAME/SIGN) Date		

University at Albany – State University of New York				
College of Arts and Sciences Course Action Form Proposal				
Please mark all that apply: New Course Revision of: Number Description Prerequisites Shared-Resources Course X Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci.				
Course Number Current: A GEO 330 Ne	w: Credits:	3		
Course Title: 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 is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CAS ###):				
Explanation of proposal:				
Deactivate course (see curriculum revision nari				
Other departments or schools which offer similar or related countries:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRIN	T NAME/SIGN) Date		
Date (CALLY INSTERNATION DATE	Dean of Graduate (Gradegraduate) Studies (FRII)	Date Date		

University at Albany – State University of New York				
College of Arts and Sciences Course	e Action Form	Proposal No. 20		
Please mark all that apply: New Course Cross-Listing Shared-Resources Course X Deactivate / Activate Course (boldface & underline as apply the course) Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description Prerequisites		
Course Number Current: A GEO 331 No	ew: Credits:	1		
Course Title: Field excursions in Structural Geo	ology			
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bulleti	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Deactivate course (see curriculum revision nari				
Other departments or schools which offer similar or related confering:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRIN	T NAME/SIGN) Date		

University at Albany – State University of New York				
College of Arts and Sciences 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 application) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description Prerequisites		
Course Number Current: A GEO 332 No	w: Credits:	1		
Course Title: Structural Geology Laboratory				
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bullet	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	\s ###):			
Explanation of proposal:				
Deactivate course (see curriculum revision nari	rative)			
Other departments or schools which offer similar or related conffering:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft CThonal		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 (PRIN	T NAME/SIGN) Date		

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 X Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description Prerequisites			
Course Number Current: A ENV/GEO 466 Ne	w: Credits:	3			
Course Title: Marine and Estuary Systems Course Description to appear in Bulletin:	7				
Prerequisites statement to be appended to description in Bulleti	n·				
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:				
This course is (will be) a shared-resources course with (i.e., CA	AS ###):				
Explanation of proposal:					
Deactivate course (see curriculum revision nari					
Other departments or schools which offer similar or related counffering:	arses and which have certified that this	proposal does not overlap their			
Chair of Proposing Department (TYPE NAME/SIGN)		Date			
Chris Thorncroft Chomal		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 (PRIN	T 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-Listing Shared-Resources Course X Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: Number Title Credits Credits Other (specify): To be effective (semester/year): Fall 2012					
Course Number Current: A GEO 470 Ne	w: Credits:	4			
Course Title: Tectonics Course Description to appear in Bulletin:	· ·				
Prerequisites statement to be appended to description in Bulleti	n:				
If S/U is to be designated as the only grading system in the cou This course is (will be) cross listed with (i.e., CAS ###):	rse, check here:				
This course is (will be) a shared-resources course with (i.e., CA	AS ###):				
Explanation of proposal:					
Deactivate course (see curriculum revision narr					
Other departments or schools which offer similar or related counffering:	irses and which have certified that this	proposal does not overlap their			
Chair of Proposing Department (TYPE NAME/SIGN)		Date 12.16			
Chris Thorncroft Chonad		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 (PRI	NT NAME/SIGN) Date			

University at Albany – State University of New York				
College of Arts and Sciences Course	Action For	m	Proposal No	24
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app Department: Atmos. and Environmental Sci.	To h	Number Title Credits Other (specify): De effective ester/year): Fall 2	Major requireme	cription requisites ents
Course Number Current: A GOG 304 Ne	·w:	Credits:	3	
Course Title: Climatology				
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bulleti	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Change from required course in Climate concer				
Other departments or schools which offer similar or related counffering:	ırses and which hav	ve certified that this p	proposal does not o	verlap their
Chair of Proposing Department (TYPE NAME/SIGN)				Date
Chris Thorncroft Chonad				12-16- 2011
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date	Dean of College (PRIN	IT NAME/SIGN)		Date
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Und	ergraduate) Studies (PRIN	T NAME/SIGN)	Date

University at Albany – State University of New York				
College of Arts and Sciences Course	e Action Form	Proposal No. 25		
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as apple) Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description Prerequisites Major requirements 2012		
Course Number Current: A ENV 105	w: Credits:	3		
Course Title: Introduction to Environmental Sc				
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bulleti	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CAS ###).	 .S ###):			
Explanation of proposal:				
Course should be removed from list of required ATM 315; see ENV B.S. narrative)				
Other departments or schools which offer similar or related countries:	arses and which have certified that this	proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRI	NT 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 app Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (s To be effectiv (semester/year)	· · · · · · · · · · · · · · · · · · ·		
Course Number Current: A ENV 306 Ne	w:	Credits: 3		
Course Title: Climate Variability and Change				
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bulleti	n:			
Prerequisite(s): A MAT 113 or 119 or T MAT 1 permission of instructor.	19; А АТМ 210. Со-1	equisite: A ATM 315 or		
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CAS ###/).	 .S ###):			
Explanation of proposal:				
Update to pre-requisites, now requiring revised				
Other departments or schools which offer similar or related counffering:	rses and which have certified	that this proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		12-16- 2011		
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date	Dean of College (PRINT NAME/SI	GN) Date		
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Undergraduate) S	udies (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 Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits Other (specify): To be effective (semester/year): Fall 2	Description X Prerequisites			
Course Number Current: A ENV 327 Ne					
Course Title: Meteorological and Environmenta					
Course Description to appear in Bulletin:					
Prerequisites statement to be appended to description in Bulleti	n:				
Pre-requisite(s): A MAT 113 or 119 or T MAT	119; A PHY 140 or 141 or TF	PHY 141; A ATM 210.			
If S/U is to be designated as the only grading system in the cou This course is (will be) cross listed with (i.e., CAS ###):	rse, check here:				
This course is (will be) a shared-resources course with (i.e., CA	AS ###):				
Explanation of proposal:					
Update to pre-requisites, removing Physics that is <i>not</i> 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 countries:	irses and which have certified that this	proposal does not overlap their			
Chair of Proposing Department (TYPE NAME/SIGN)		Date			
Chris Thorncroft Chonad		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 (PRIN	VT NAME/SIGN) Date			

University at Albany – State University of New York				
College of Arts and Sciences Course	Action Form	ı	Proposal No.	28
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app Department: Atmos. and Environmental Sci.	ropriate) X C	Number Fitle Credits Other (specify): effective er/year): Fall 20	Pre Major Requires	scription requisites ments
Course Number Current: A BIO 230 Ne	w:	Credits:	3	
Course Title: People and Resources in Ecologica				
Course Description to appear in Bulletin:				
Prerequisites statement to be appended to description in Bulleti	n:			
If S/U is to be designated as the only grading system in the course is (will be) cross listed with (i.e., CAS ###):	rse, check here:			
This course is (will be) a shared-resources course with (i.e., CA	AS ###):			
Explanation of proposal:				
Course should be removed from list of required				
Other departments or schools which offer similar or related counffering:	arses and which have c	certified that this p	roposal does not o	overlap their
Chair of Proposing Department (TYPE NAME/SIGN)				Date
Chris Thorncroft Choncal				12-16- 2011
Approved by Chair(s) of Departments having cross-listed course(s) (PRINT NAME/SIGN) Date	Dean of College (PRINT N	NAME/SIGN)		Date
Chair of Academic Programs Committee (PRINT NAME/SIGN) Date	Dean of Graduate (Undergr	raduate) Studies (PRINT	T 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 Revision of: Number Title Prerequisites Shared-Resources Course Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Revision of: Number Title Credits X Other (specify): Major Requirements To be effective (semester/year): Fall 2012					
Course Number Current: A BIO 212Y Ne	w: Credits:	4			
Course Title: Genetics Course Description to appear in Bulletin:					
Prerequisites statement to be appended to description in Bulleti	n:				
If S/U is to be designated as the only grading system in the cou This course is (will be) cross listed with (i.e., CAS ###):	rse, check here:				
This course is (will be) a shared-resources course with (i.e., CA	S ###):				
Explanation of proposal:					
Course should be added to list of required course.					
Other departments or schools which offer similar or related countries:	rses and which have certified that this	proposal does not overlap their			
Chair of Proposing Department (TYPE NAME/SIGN)		Date			
Chris Thorncroft Chonad		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 (PRIN	T NAME/SIGN) Date			
Date	Dean of Graduate (Ondergraduate) Studies (PRIN	THERESOLD DATE			

University at Albany – State University of New York					
College of Arts and Sciences Course Action Form Proposal No. 30					30
Please mark all that apply: New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & u		To	Number Title Credits Other (specify): be effective mester/year): Fall 2	Major Requirement	ription quisites nts
Course Number Current: A BIO 320	New	<i>7</i> :	Credits:	3	
Course Title: Ecology Course Description to appear in Bulletin:					
Prerequisites statement to be appended to descri	ption in Bulletin	:			
If S/U is to be designated as the only grading sy:	stem in the cour	ce check here			
This course is (will be) cross listed with (i.e., CA		se, check here.			
This course is (will be) a shared-resources cours	se with (i.e., CAS	S ###):	-		
Explanation of proposal:					
Course should be added to list of reconstruction. Other departments or schools which offer similar					erlan their
offering:				proposal dolor not over	oraș men
Chair of Proposing Department (TYPE NAME/SIGN)					Date
C-1 ()					12-16-
Chris Thorncroft Approved by Chair(s) of Departments having cross-listed course (PRINT NAME/SIGN)		Dean of College (PR	INT NAME/SIGN)		2011 Date
7		-8- (-1			
Chair of Academic Programs Committee (PRINT NAME/SIG	N) Date	Dean of Graduate (U	ndergraduate) Studies (PRIN	NT 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: New Course Revision of: Number X Description Cross-Listing Title X Prerequisites Shared-Resources Course X Credits Deactivate / Activate Course (boldface & underline as appropriate) Department: Atmos. and Environmental Sci. Fall 2012				
Course Number Current: A GEO 221 New: Credits: 3 Course Title: Minerals, Rocks and Geological Time Course Description to appear in Bulletin:				
Course Description to appear in Bulletin: 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.				
Prerequisites statement to be appended to description in Bulletin:				
Pre-requisite: A CHM 120 or 130 or T CHM 130; 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:				
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. 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 Choncel 12-16-				
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				
Dilly				

University at Albany –	State University of New York	(
College of Arts and Sciences Course	Action Form	Proposal No. 32		
Please mark all that apply: X New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits ropriate) To be effective (semester/year): Fall	Description Prerequisites 2012		
Course Number Current: A ATM 480 Ne	w: Credits	: 1-4		
Course Title: Special Topics in Atmospheric Sci	ence			
Course Description to appear in Bulletin:				
In-depth analysis of a special topic in atmosph	eric science. May be repea	ited if topic changes.		
Prerequisites statement to be appended to description in Bulleti	n:			
Co-requisite: A ATM 316, and permission of instr				
If S/U is to be designated as the only grading system in the cou	rse, 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 ###):	.S ###):			
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 countries:	arses and which have certified that this	s proposal does not overlap their		
Chair of Proposing Department (TYPE NAME/SIGN)		Date		
Chris Thorncroft Chonad		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 (PRI	NT NAME/SIGN) Date		

University at Albany – State University of New York					
College of Arts and Sciences Course	Action Form	Proposal No33			
Please mark all that apply: X New Course Cross-Listing Shared-Resources Course Deactivate / Activate Course (boldface & underline as app Department: Atmos. and Environmental Sci.	Revision of: Number Title Credits ropriate) Other (specify): To be effective (semester/year): Fall	_			
Course Number Current: A ENV 480 New: Credits: 1-4					
Course Title: Special Topics in Environmental S	cience				
Course Description to appear in Bulletin:					
In-depth analysis of a special topic in environ	mental science. May be re	peated if topic changes.			
Prerequisites statement to be appended to description in Bulleti	n:				
Prerequisite: A ATM 210 or 210Z, and permission					
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 countries:	rses and which have certified that thi	s proposal does not overlap their			
Chair of Proposing Department (TYPE NAME/SIGN)		Date			
Chris Thorncroft Chonast		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 (PF	RINT NAME/SIGN) Date			