

APPROVED BY SENATE

05/04/2015



Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Revision to the BSLAS in Astronomy

SPONSOR: Tony Wong, Associate Professor of Astronomy, 244-4207, wongt@illinois.edu.

COLLEGE CONTACT: Karen Carney, Associate Dean, College of LAS, 333-1350, kmcarney@illinois.edu

BRIEF DESCRIPTION:

300- and 400-level physics courses will automatically qualify as advanced astronomy electives, and will no longer require a major substitution form. In addition, majors will no longer be required to take ASTR 401, Scientific Writing for Astronomy (a one-credit Advanced Composition add-on requiring concurrent registration in ASTR 404, 405, 406, or 414) and would therefore be free to select any approved Advanced Composition course (including the new senior thesis course, ASTR 490).

JUSTIFICATION:

Allowing relevant upper-level physics courses to automatically qualify as advanced astronomy electives will help reduce unnecessary paperwork, since many of our majors are already taking advanced physics, in part because of limited astronomy offerings at the 300+ level. By placing physics on par with astronomy in this regard, we emphasize the importance of a strong physics background for those considering further study in astronomy, and may encourage more physics majors to consider a double major in astronomy by reminding them that physics courses can count toward an astronomy major (though the same courses cannot be used to fulfill advanced hour requirements for both majors). We will continue to allow, with advisor approval, substitutions for courses in other fields (e.g. statistics, computer science, and chemistry) that can also strengthen an astronomy education.

Dropping the ASTR 401 requirement makes sense because a new senior thesis course, ASTR 490, will meet the needs of students with a strong interest in research, and other students may be better served by taking an Advanced Composition course outside of Astronomy, depending on individual career goals. Many of our majors are actually double majors and so have easy access to Advanced Composition courses through the other major. Currently ASTR 401 is taught in two sections every semester, effectively as an overload, and dropping it from the required course list would give the department the flexibility to schedule it less often or with smaller enrollments.

BUDGETARY AND STAFF IMPLICATIONS:

1) Resources

- a. How does the unit intend to financially support this proposal?
We anticipate no new expenses from this proposal.
- b. How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?
Dropping the ASTR 401 major requirement should lead to some reduction in faculty workload, although likely compensated by the introduction of the senior thesis course (ASTR 490).
- c. Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.
No.
- d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.
Not applicable, since no additional resources are being requested.

2) Resource Implications

- a. Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.
None for the changes proposed.
- b. Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units. (*A letter of acknowledgement from units impacted should be included.*)
We do not anticipate any impact on Physics courses since many of our majors are already taking advanced physics courses.
- c. Please address the impact on the University Library (*A letter of estimated impact from the University Librarian must be included for all new program proposals. If the impact is above and beyond normal library business practices, describe provisions for how this will be resourced.*)
No impact expected, students will use existing library subscriptions.
- d. Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)
No impact expected.

DESIRED EFFECTIVE DATE: Fall 2015

STATEMENT FOR PROGRAMS OF STUDY CATALOG (new information in **RED**):

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: astronomy@illinois.edu

Minimum required major and supporting course work normally equates to **47-48** hours.

General education: Students must complete the [Campus General Education requirements](#).

Minimum hours required for graduation: 120 hours

Departmental distinction. A student majoring in astronomy may earn distinction or high distinction by attaining a minimum grade point average of 3.4 or 3.75, respectively, in required major courses (defined in the table below) taken at UIUC. For highest distinction, in addition to meeting the minimum requirements for high distinction, a senior thesis (ASTR 490) must be completed with strong endorsement by the research supervisor. Questions about eligibility for distinction status should be directed to an astronomy adviser before the senior year.

Astronomy Core		
ASTR 210	Introduction to Astrophysics ¹	3
Select three of the following:		9-10
ASTR 404	Stellar Astrophysics	
ASTR 405	Solar System and IS Medium	
ASTR 406	Galaxies and the Universe	
ASTR 414	Astronomical Techniques	
Select at least 12 hours of 300- or 400-level ASTR or PHYS courses ^{2,3}		12
Supporting Technical Courses		
Physics		12
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	
Mathematics		11
MATH 221	Calculus I ⁴	
MATH 231	Calculus II	

- ¹ *Students without a background in physics or astronomy are encouraged to take [ASTR 121](#) and [ASTR 122](#) during their freshman year.*
- ² *Other 300- or 400-level technical classes, e.g. chemistry, computer science, engineering, **or statistics** can be substituted with academic adviser approval.*
- ³ *A maximum of 4 hours of credit in [ASTR 390](#) (or equivalent "Independent Study" course, such as [PHYS 497](#), ~~with academic adviser approval~~) can be counted towards this requirement.*
- ⁴ *[MATH 220](#) may be substituted for [MATH 221](#). [MATH 220](#) is appropriate for students with no background in calculus.*

Twelve hours of 300- and 400-level Astronomy/Physics courses must be taken on this campus.

~~All foreign language requirements must be satisfied.~~

CLEARANCES: (Clearances should include signatures and dates of approval. These signatures must appear on a separate sheet. If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)

Signatures:



Unit Representative: _____

11/25/14

Date: _____



College Representative: _____

3/4/15

Date: _____

Appendix A:
Comparative Table of Proposed Changes

Current Hours	Current Requirements	Proposed Hours	Proposed Requirements
3	ASTR 210	3	ASTR 210
1	ASTR 401		
9-10	Select three of the following: ASTR 404, 405, 406, 414	9-10	Select three of the following: ASTR 404, 405, 406, 414
12	300- or 400-level ASTR courses	12	300- or 400-level ASTR or PHYS courses
12	PHYS 211, 212, 213, 214	12	PHYS 211, 212, 213, 214
11	MATH 221, 231, 241	11	MATH 221, 231, 241
48-49	Total Hours	47-48	Total

From: "Selen, Mats A" <mats@illinois.edu>
Subject: Re: proposed change to astronomy major
Date: April 10, 2015 at 11:54:21 PM CDT
To: "Wong, Tony" <wongt@illinois.edu>
Cc: "Selen, Mats A" <mats@illinois.edu>

Hi Tony,
Thank you for your email. I support this change to your major.

Mats

Mats Selen
Professor of Physics and Associate Head for Undergraduate Programs
University of Illinois
mats@illinois.edu
217-333-4173 (office)
217-898-3834 (cell)

From: <Wong>, Tony <wongt@illinois.edu>
Date: Thursday, April 9, 2015 at 1:31 PM
To: Mats Selen <mats@illinois.edu>
Subject: proposed change to astronomy major

Dear Mats,

The astronomy department is proposing a change to its major requirements that will allow all 300- and 400-level physics courses to qualify as advanced astronomy electives (see attachment). This basically formalizes current practice, in which we must fill out a major substitution form for each student, sometimes multiple times. Our majors are required to take 12 hours of advanced astronomy electives, and typically about half of these are taken in Physics.

The Senate Educational Policy committee has recommended that Physics provide a note that sufficient capacity exists in its courses to accommodate these students. My feeling is that there will be little if any increase in astronomy majors taking physics courses (most prefer to take astronomy courses when available, or are already double majoring in physics). However, there is the possibility of some astronomy majors enrolling in PHYS 419, since as part of the same revision we are also eliminating the ASTR 401 requirement (so that our majors can take any Composition II for Gen Ed). FYI, we currently have 63 majors in total, of which 10 are double physics-astronomy majors.

We are happy to work with you to limit the set of courses that automatically qualify if you or your colleagues would prefer.

I'd appreciate hearing from you soon. I'm sorry that you folks were not consulted earlier, we should have anticipated this concern.

Thanks,
Tony
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Tony Wong
Associate Professor
Department of Astronomy, MC 221
University of Illinois
Urbana, IL 61801
Phone: (217) 244-4207
Email: wongt@illinois.edu



**Senate Educational Policy Committee
Proposal Check Sheet**

PROPOSAL TITLE (Same as on proposal): Revision to the BSLAS in Astronomy

PROPOSAL TYPE (select all that apply below):

A. Proposal for a NEW or REVISED degree program. Please consult the Programs of Study Catalog for official titles of existing degree programs.

1. Degree program level:

Graduate Professional Undergraduate

2. Proposal for a new degree (e.g. B.S., M.A. or Ph.D.):

Degree name, "e.g. *Bachelor of Arts or Master of Science*": _____

3. Proposal for a new or revised major, concentration, or minor:

New or Revised Major in (name of existing or proposed major): BSLAS in Astronomy

New or Revised Concentration in (name of existing or proposed concentration): _____

New or Revised Minor in (name of existing or proposed minor): _____

4. Proposal to rename an existing major, concentration, or minor:

Major Concentration Minor

Current name: _____

Proposed new name: _____

5. Proposal to terminate an existing degree, major, concentration, or minor:

Degree Major Concentration Minor

Name of existing degree, major, or concentration: _____

6. Proposal involving a multi-institutional degree:

New Revision Termination

Name of existing Illinois (UIUC) degree: _____

Name of non-Illinois partnering institution: _____

Location of non-Illinois partnering institution:

State of Illinois US State: _____ Foreign country: _____

- B. Proposal to create a new academic unit (college, school, department, program or other academic unit):

Name of proposed new unit: _____

- C. Proposal to rename an existing academic unit (college, school, department, or other academic unit):

Current name of unit: _____

Proposed new name of unit: _____

- D. Proposal to reorganize existing units (colleges, schools, departments, or program):

1. Proposal to change the status of an existing and approved unit (e.g. change from a program to department)

Name of current unit including status: _____

2. Proposal to transfer an existing unit:

Current unit's name and home: _____

Proposed new home for the unit: _____

3. Proposal to merge two or more existing units (e.g., merge department A with department B):

Name and college of unit one to be merged: _____

Name and college of unit two to be merged: _____

Proposed name and college of new (merged) unit: _____

4. Proposal to terminate an existing unit:

Current unit's name and status: _____

- E. Other educational policy proposals (e.g., academic calendar, grading policies, etc.)

Nature of the proposal: _____

Revised 10/2012

UNIVERSITY OF ILLINOIS
AT URBANA - CHAMPAIGN

EP.15.73

Office of the Provost and Vice Chancellor
for Academic Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820



April 1, 2015

Gay Miller, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Miller:

Enclosed is a copy of a proposal from the College of Liberal Arts and Sciences to revise the BSLAS in Astronomy.

Sincerely,

A handwritten signature in cursive script that reads "Kathryn A. Martensen".

Kathryn A. Martensen
Assistant Provost

Enclosures

c: A. Elli
K. Carney
T. Wong

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

RECEIVED

APR 01 2015

Office of the Provost

College of Liberal Arts and Sciences
Office of the Dean

2090 Lincoln Hall
702 S. Wright Street, MC-448
Urbana, IL 61801



April 1, 2015

Kathryn Martensen
Associate Provost
Office of the Provost and Vice Chancellor for Academic Affairs
207 Swanlund Administration Building
MC-304

Dear Kathy:

The Committee on Courses and Curricula on behalf of the Faculty of the College of Liberal Arts and Sciences has voted to approve the following proposal:

Revision to the BSLAS in Astronomy

Please address all correspondence concerning this proposal to me. This proposal is now ready for review by the Senate Educational Policy Committee for proposed implementation in Fall 2015.

Sincerely,

A handwritten signature in black ink that reads "Karen M. Carney".

Karen M. Carney
Associate Dean

enclosure

C: Professor Tony Wong
Professor Brian Fields