Approved by the Board of Trustees

July 22, 2021

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Board Meeting

July 22, 2021

ESTABLISH THE BACHELOR OF SCIENCE IN LIBERAL ARTS AND SCIENCES IN ASTROPHYSICS, COLLEGE OF LIBERAL ARTS AND SCIENCES, URBANA

**Action:** Establish the Bachelor of Science in Liberal Arts and Sciences in

Astrophysics, College of Liberal Arts and Sciences

**Funding:** The Department of Astronomy is working with the College of Liberal Arts and Sciences to fund a strengthened laboratory component of ASTR 414, a required course for this program. Beyond this, no additional funding is needed, as anticipated enrollments from the program are not expected to make appreciable changes to class size, teaching loads, or student-faculty ratios. Students will utilize existing advising and career services.

The Chancellor, University of Illinois Urbana-Champaign, and Vice President, University of Illinois System with the advice of the Urbana-Champaign Senate recommends approval of a proposal from the College of Liberal Arts and Sciences to establish the Bachelor of Science in Liberal Arts and Sciences in Astrophysics (BSLAS in Astrophysics).

As modern astronomy is astrophysics, the proposed BSLAS in Astrophysics will provide students a pathway to a full astrophysics experience. Currently, students interested in astrophysics have been double majoring in Astronomy and Physics. With physics undergraduate education moving to the Grainger College of Engineering, as approved by the Board of Trustees in March 2021, the existing LAS Physics program will be phased out. As a result of this change, students will not be able to double major in Astronomy and Physics; rather, they would have to pursue a dual degree (Astronomy from LAS, Physics from Grainger Engineering), which requires an additional 30 credit hours and satisfaction of the requirements of both LAS and Grainger Engineering. The Physics minor alone does not give Astronomy majors enough flexibility to prepare fully for astrophysics graduate school. With the creation of the BSLAS in Astrophysics, the goal is to provide an unsurpassed rigorous preparation for students. Leveraging the strengths of the departments of Astronomy and Physics, the new program will provide students with one of the most flexible astrophysics options in the country. The BSLAS in Astrophysics will provide the rigorous preparation necessary for graduate study, and it prepares students for employment in technical or scientific fields.

Based on enrollment projections, the courses required for the BSLAS in Astrophysics have capacity to accommodate students in this program. With the rigorous requirements in physics and astrophysics this program will entail, it draws upon existing courses in Astronomy and Physics. Students in the program will need experience working with real data in an experimental or laboratory setting, and it is important for students to have direct access to modern astrophysics observations. As such, the Department of Astronomy plans to strengthen the laboratory component of one of the required courses, ASTR 414 (Astronomical Techniques) to include a richer experience in astronomical data acquired during the semester. Funding for the enhancements for this course will be covered by the Department of Astronomy and the College of LAS. Outside of the enhancements to ASTR 414, no new or additional facilities, significant improvements to existing facilities, or additional resources from the University Library are needed.

The Board action recommended in this item complies in all material respects with applicable State and federal laws, University of Illinois *Statutes*, *The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The Interim Executive Vice President and Vice President for Academic Affairs concurs with this recommendation. The University Senates Conference has indicated that no further Senate jurisdiction is involved.

The President of the University recommends approval. The action is subject to further review by the Illinois Board of Higher Education.