

UMBC UGC Change in Existing Course: PHYS405 Stellar Astrophysics

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Proposed Effective Date: Fall 2018

	Name	Email	Phone	Dept
Dept Chair or UPD	Terrance Worchesky	worchesk@umbc.edu	56779	Physics
Other Contact	Eileen Meyer	meyer@umbc.edu	52534	Physics

COURSE INFORMATION: (please provide all information in the “current” column, and only the information changing in the “proposed” column)

change		current	proposed
<input type="checkbox"/>	Course Number(s)	PHYS405	
<input type="checkbox"/>	Formal Title	Stellar Astrophysics	
<input type="checkbox"/>	Transcript Title ($\leq 30c$)		
<input type="checkbox"/>	Recommended Course Preparation		
<input checked="" type="checkbox"/>	Prerequisite NOTE: Unless otherwise indicated, a prerequisite is assumed to be passed with a “D” or better.	PHYS304	PHYS324 with a C or better
<input type="checkbox"/>	# of Credits Must adhere to the UMBC Credit Hour Policy	3 credits	
<input type="checkbox"/>	Repeatable?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Max. Total Credits	3 credits	Max. Total Credits: This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.
<input type="checkbox"/>	Grading Method(s)	<input checked="" type="checkbox"/> Reg (A-F) <input checked="" type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail	<input type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

CURRENT CATALOG DESCRIPTION:

An advanced survey of the formation and evolution of stars that stresses the underlying physics. Topics include Jeans theory of star formation, nuclear processes, radiative and convective energy transfer in the stellar atmosphere. Also included is a study of phases of advanced evolution that include, pulsation, mass loss, and supernovae, stellar remnants (white dwarfs, neutron stars, black holes), binary stars, mass transfer, and structure of the accretion disk

PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences): leave blank if no changes are being proposed to the catalog description. NOTE: information about prerequisites should NOT appear in the catalog description.)

RATIONALE FOR CHANGE:

This course (along with all Astrophysics electives) will require successful completion of PHYS 324 “Modern Physics” with a grade of C or better. This change allows for a more thorough exploration of basic concepts in astrophysics, which heavily rely on the material in Modern Physics, and reflects that PHYS 405 is a 400-level course appropriate for juniors and seniors.