

UMBC UGC Change in Existing Course: PHYS 305, Stellar Astrophysics

Date Submitted: 11/XX/2009

Proposed Effective Date: Fall 2010

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COURSE INFORMATION:

change		current	proposed
<input checked="" type="checkbox"/>	Course Number(s)	PHYS 305	PHYS 405
<input type="checkbox"/>	Formal Title		
<input type="checkbox"/>	Transcript Title ($\leq 24c$)		
<input type="checkbox"/>	Recommended Course Preparation		
<input type="checkbox"/>	Prerequisite	PHYS 122	PHYS 304
<input type="checkbox"/>	Credits		
<input type="checkbox"/>	Repeatable?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	Max. Total Credits		
<input type="checkbox"/>	If yes, how many total credits?		
<input type="checkbox"/>	Grading Method(s)	<input type="checkbox"/> Reg (A-F) <input 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:

A survey of the life and death of stars. Topics include star formation, stellar structure and evolution, stellar death (white dwarfs, neutron stars, and black holes), supernovae, binary star systems, and accretion onto compact objects.

PROPOSED CATALOG DESCRIPTION: x no changes change in description

RATIONALE FOR CHANGE:

This change is part of a major restructuring of the undergraduate and graduate astronomy courses offered by the Physics Department. We have already introduced PHYS 304, a calculus based introduction to astronomy. Knowledge of PHYS 304, a prerequisite for the proposed PHYS 405, saves a significant amount of time used up until now to introduce basic astrophysical concepts. This allows us to delve much deeper into the most current issues of stellar astrophysics, and bring the level of the course to what is commonly described as advanced undergraduate/first year graduate course. The textbooks that will be considered for the course are Stellar Interiors by Hansen, Kawaler, and Trimble and Modern Stellar Astrophysics by Carol and Ostlie. They are commonly used in advanced undergraduate and first year graduate courses (e.g. MIT <http://ocw.mit.edu/OcwWeb/Physics/8-901Spring-2006/CourseHome/index.htm>)