

## UMBC UGC Change in Existing Course: BIOL 483 – Evolution: From Genes to Genomes

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Proposed Effective Date: Spring 2016

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**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)	BIOL 483	
<input type="checkbox"/>	Formal Title	Evolution: From Genes to Genomes	
<input type="checkbox"/>	Transcript Title (≤30c)	Evolution: From Genes to Genomes	
<input checked="" type="checkbox"/>	Recommended Course Preparation	You must have completed BIOL 142, BIOL 302 and STAT 350 with a grade of “C” or better	
<input checked="" type="checkbox"/>	Prerequisite <b>NOTE:</b> Unless otherwise indicated, a prerequisite is assumed to be passed with a “D” or better.		You must have completed BIOL 142, BIOL 302, BIOL 303 and STAT 350 with a grade of “C” or better
<input type="checkbox"/>	Credits	4.00	
<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	4.00	<b>Max. Total Credits:</b> 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 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:

This is a combined lecture and hands-on computing course that study the applications of evolutionary theory to the exploration and analysis of phenotypic and biological sequence data. We will begin by building a sound conceptual basis for the theory of evolution, including an introduction to population genetics and phylogenetics. The course consists of one hour lecture, one hour group discussion of current papers in evolution and a two hour computer lab per week. Biological sequence data is analyzed in the computer laboratories to illustrate evolutionary principles and provide practice for data analysis and interpretation. Students will be required to write a review of the literature on a topic in evolution related to their own interests and give presentations on their topic during the last half of the semester.

**PROPOSED CATALOG DESCRIPTION** (no longer than 75 words): 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:

“The BIOL core courses are in a sequence BIOL 141-> BIOL 142 -> BIOL 302 -> BIOL 303, with BIOL 303 serving as a capstone course for the Biology core. The curriculum was designed such that only after completing this course and showing mastery of the core course content, would students move on in the major and take 400 level courses. However, we have a number of 400 level courses offered that do not explicitly require the content of BIOL 303 for student success

in the course and therefore do not currently have it listed as an academic prerequisite. Some students have been taking these courses before completing BIOL 303 and the core, and some of these students have gone on to fail BIOL 303 two times, showing that they do not have mastery of the material and perhaps should be in another major. We would like to make BIOL 303 a prerequisite for all of our 400 level courses, regardless of content, to make this maneuver impossible. We prefer students to show they should be in the major before taking these upper level courses.”