

## UMBC UGC Instructions for Change in Existing Course Form (Revised 4/2016)

**Course number & title:** Enter the current course number and title of the course at the top of the page.

**Date submitted:** The date that the form will be submitted to the UGC.

**Effective date:** The semester that the change will be effective, if approved.

**Contact information:** Provide the contact information of the Chair or UPD of the department housing the course. If the course is not housed in a department or program, then provide the same information for the head of the appropriate academic unit. (See UGC Procedures.) If another faculty member should also be contacted for questions about the request and be notified about UGC actions on the request, include that person's contact information on the second line.

**Course information:** Provide all of the current information for this course. Check the "change" column for aspects of the course that will be changed by this proposal and provide the specific changes. Unchanged fields may be left blank under the "proposed" column. *Note: all 300- and 400-level courses must have prerequisites or recommended preparation.*

**Course number:** For cross-listed courses, provide all the numbers for the course.

**Transcript title:** Limited to 30 characters, including spaces. Leave the current transcript title blank if this is not known.

**Recommended Course Preparation:** *Please note that all 300 and 400 level courses should have either recommended course preparation(s) or prerequisite(s) and that 100 or 200 level courses may have them.*

Here fill in what previous course(s) a student should have taken to succeed in the course. These recommendations will NOT be enforced by the registration system. Please explain your choices in the "rationale" (discussed below).

**Prerequisite:** *Please note that all 300 and 400 level courses should have either recommended course preparation(s) or prerequisite(s)* Here fill in course(s) students need to have taken before they enroll in this course. These prerequisites will be enforced through the registration system. Please explain your choices in the "rationale" (discussed below).

**NOTE:** Please use the words "AND" and "OR", along with parentheses as appropriate, in the lists of prerequisites and recommended preparation so that the requirements specified will be interpreted unambiguously.

**NOTE:** Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.

**# of credits:** To determine the appropriate number of credits to assign to a course please refer to the [UMBC Credit Hour Policy](#) which articulates the standards for assignment and application of credit hours to all courses and programs of study at UMBC regardless of degree level, teaching and learning formats, and mode of instruction.

**Maximum 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.

**Grading method(s):** Check all that apply.

**Current catalog description:** Provide the course description as it appears in the current undergraduate catalog or since the last UGC-approved change.

**Proposed catalog description:** If this proposal involves a change in the course description, provide the exact wording of the course description as it will appear in the next undergraduate catalog. Course descriptions should be a) no longer than 75 words, b) stated in complete sentences, and c) avoid reference to specific details that may not always pertain (e.g., dates, events, etc.). Leave blank if this proposal does not change the course description. Course descriptions should not repeat information about prerequisites (which are always listed alongside the course description).

**Rationale:** Provide a brief explanation for the need for the proposed changes.

**Cross-listed courses:** Requests to change cross-listed courses must be accompanied by letters of support via email from all involved department chairs. Proposals for the addition of a cross-listing to an existing course must include as a part of the rationale the specific reason why cross-listing is appropriate. Email from all involved department chairs is also required when cross-listing is removed and when a cross-listed course is discontinued. Please note that Special Topics cannot be cross-listed.

*Note: the UGC form is a Microsoft Word form. You should be able to enter most of the information by tabbing through the fields. The document is protected. In the rare case that you need to unprotect the document, use the password 'ugcform'. Beware that you will lose all the data entered in the form's fields if you unlock and lock the document.*

## UMBC UGC Change in Existing Course: ENCH 310

Date Submitted:

Proposed Effective Date: Fall 2017

	Name	Email	Phone	Dept
Dept Chair or UPD	Mark Marten	marten@umbc.edu	5-3439	CBEE
Other Contact	Mariajose Castellanos	mariajose@umbc.edu	5-8151	CBEE

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

change		current	proposed
<input checked="" type="checkbox"/>	Course Number(s)	ENCH 310	ENCH 410
<input checked="" type="checkbox"/>	Formal Title	Environmental Chemistry and Biology	Environmental Chemistry
<input checked="" type="checkbox"/>	Transcript Title (≤30c)	Env Chem & Biol	Environmental Chemistry
<input checked="" type="checkbox"/>	Recommended Course Preparation	ENCH 210	ENCH 210
<input checked="" type="checkbox"/>	Prerequisite <b>NOTE:</b> Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	CHEM 351 MATH 225	CHEM 102 passed with a C or better and MATH 225 passed with a C or better and Co-requisite: ENCH 300
<input checked="" type="checkbox"/>	# of Credits Must adhere to the <a href="#">UMBC Credit Hour Policy</a>	3	3
<input checked="" type="checkbox"/>	Repeatable?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/>	Max. Total Credits	6	<b>6 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 checked="" type="checkbox"/>	Grading Method(s)	<input checked="" type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail	<input checked="" type="checkbox"/> Reg (A-F) <input type="checkbox"/> Audit <input type="checkbox"/> Pass-Fail

### CURRENT CATALOG DESCRIPTION:

This course presents chemical and biological principles in the context of manmade and natural systems. Equilibrium and kinetic concepts are reinforced through the use of chemical equilibrium and kinetic models. Surface and colloid chemistry are also discussed. At the end of the course, the student will be able to understand the basic chemical and biological phenomena that control the fate of pollutants in the environment.

**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.)

This course presents chemical principles in the context of natural and engineered systems. Chemical equilibrium concepts associated with acids, bases, dissolved gases, aqueous complexes, solid precipitates, and redox-active species are covered, and reinforced through the use of advanced chemical equilibrium modeling software. At the end of the course, the student will be able to understand the basic chemical phenomena that control the fate of pollutants in environmental systems and in drinking water/wastewater treatment plants.

### RATIONALE FOR CHANGE:

We propose to remove biological concepts from the course, as these concepts are covered elsewhere in our curriculum (e.g., ENCH 414). The inclusion of an advanced chemical equilibrium modeling component and project using MINEQL+ (a software package widely used by consultants and researchers) is justification for the

change in course number from ENCH 310 to ENCH 410. The MINEQL+ projects will involve contaminant fate, sustainable chemistry, and/or resource recovery from waste streams.