

## Chemistry 111 - Introduction to Green Chemistry

Instructor: Dr. Cory M. DiCarlo

Lecture will be at 2:30 PM - 5:20 PM on Thursdays in Mackinac Hall A1155

My Office Hours: Monday 1PM - 1:30 PM and 5PM - 5:30PM, Wednesday 1PM - 1:30PM,  
Thursday 1 - 2PM, Friday 2 - 2:30 PM

Overall Subject Matter: Green Chemistry, known also as sustainable chemistry, is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. The course presents basic concepts of green chemistry and engineering. It is not applicable for chemistry majors or minors. Fulfills Physical Sciences Foundations.

### Organization of the class:

The focus of the course is on understanding green chemistry - the chemistry of reducing or eliminating the hazards associated with chemicals needed in modern manufacturing and processes. In order to understand green chemistry, we must first understand the basics of chemistry. This will constitute the first unit of the course. We will spend the majority of our time beyond this first unit investigating various sources of chemical hazard and possible green alternatives. The textbook will serve as reference material during this process, but you will need to supplement with additional sources, such as book and journals from our library holdings as well as internet sources.

We will have an exam after the first unit covering the basics of chemistry. Subsequent evaluation will take the form of short student group presentations on a topic covered in each of three green chemistry units, participation in class discussions and presentations, and a final individual presentation on a topic. **Significant outside of class work is required for this course! Please do not leave work for the last minute!**

### Schedule

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Topic:	Time Span
Unit 1 - The basics of chemistry	Weeks 1 - 2
1 Hour exam over unit 1 at the beginning of class on week 3	
Unit 2 - The ozone layer and climate change	Weeks 3 - 5
8 minute group presentations will comprise class time for week 6	
Unit 3 - The fate of chemicals in the environment	Week 7 - 8
<b>---Spring Break---</b>	
8 minute group presentations will comprise class time for week 10	
Unit 4 - Toxicity and chemical design	Week 11 - 13
8 minute group presentations will comprise class time for week 14	
Week 15 and our Final Exam time will be used for our final individual topic presentation	

## Evaluation

Exam	20%	
Each 8 minute presentation	10%	(30% total)
Presentation evaluation	4%	(12% total)
Final Presentation	28%	
Final evaluation	10%	

## Grade Distribution

A	A-	B+	B	B-	C+	C	C-	D+	D	F
100-92	92-90	90-88	88-82	82-80	80-78	78-72	72-70	70-68	58-60	60-0

## Presentations

For your own group's presentations:

Your group should provide the following at the start of the class period where you give your presentation:

- An outline of what you will talk about
- Each group member's name
- Your assigned group number for this presentation
- The evaluation of each group member's participation in preparing for the presentation (Form)

For your evaluation of each other group's presentations:

You individually will evaluate the presentation given on several categories as assigned in the evaluation handout. You will be graded on how accurately and honestly you evaluate the presentations of your fellow students. Consistently evaluating all presentations with top marks will not result in a high mark for this portion of your grade!

Grade for presentations:

Your grade for the presentation will be based on the outline your group provided, the depth and accuracy of knowledge conveyed, your group member's evaluation of your participation in the preparation of the talk, and the quality of the presentation of the information. The evaluations given by your fellow students who listen to the talk will be responsible for a portion of the grade for the presentation.

## Presentation outlines

Outlines should follow an outline format as described in class with references following at the end. Each outline should provide enough space for comments and should take up approximately one full page. Outlines must be typed, not handwritten.

## Missing Presentations

Missing a presentation will result in a mark of zero for that unit for both your presentation grade and for your evaluation grade unless a serious and documented excuse is given. There is no time for makeup presentations during the semester. You must be at and participate in your group's talk to receive points for the presentation.