

Course Syllabus for Advanced Organic Chemistry II
CHEM 5322 (CRN 28629)/CHEM 6322 (CRN 28628)
Spring Semester 2022

Meeting time:	MWF 7:30 am – 8:20 am
Location:	CCSB 1.0204
Instructor:	Dr. Katja Michael
Office:	CCSB 2.0414
Email:	kmichael@utep.edu (preferred method of contact)
Phone:	(915)747-5240
Office hours:	after appointment
Texts:	“Organic Synthesis with Carbohydrates” Geert-Jan Boons, Karl H. Hale, Blackwell Science, 2000, ISBN 0-6320-4508-6, “Organic Chemistry” by Janice Gorzynski Smith, 5 th edition, McGrawHill (textbook plus Solutions Manual); “Carbohydrate Chemistry” by Benjamin G. Davis and Anthony J. Fairbanks, Oxford Science Publications, ISBN 0-19-855833-3, as well as original articles.
Course objective:	Students will become familiar with some advanced aspects and topics of organic chemistry that go beyond undergraduate curricula. Topics that will be covered are: carbon-carbon bond forming reactions, pericyclic reactions, polymers, green chemistry, and aspects of carbohydrate chemistry, such as orthogonal protecting group strategies, glycosidic bond formation, and stereoelectronic effects. Students will also practice their oral communication skills in science by presenting a paper or topic, and they will also learn how to construct a hypothesis-driven research proposal (aims, hypothesis, experimental approach).
Curriculum:	<ol style="list-style-type: none">1. Carbon-carbon bond forming reactions (Smith book, chapter 26)2. Pericyclic reactions (Smith book, chapter 27)3. Synthetic polymers including green chemistry (Smith book, chapter 30)4. Carbohydrate Chemistry (Boons & Hale book; Davis & Fairbanks book)5. Student presentations on various topics [e.g. DNA-encoded libraries, stapled peptides, antibody-drug conjugates (ADC), proteolysis targeting chimeras (PROTACs), catalytic antibodies, phage-display libraries with expanded genetic code, aptamer technology, solid phase carbohydrate synthesis, native chemical ligation (NCL), microplastics]6. Student research proposals
<u>Important Dates and Policies</u>	
01/19/2022	First day of this class
02/02/2022	Census day
02/21/2022	Exam 1 (Extra credit available) - in person at CCSB 1.0204
03/14/2022 – 03/18/2022	Spring break, no classes
03/28/2022	Exam 2: (Extra credit available) - in person at CCSB 1.0204
04/01/2022	Course drop deadline (last day to drop class with W) According to UTEP and College of Science policies, no requests for a withdrawal will be approved after that date. Students can always petition the Registrar for a complete withdrawal from <u>all</u> courses pending documentation.
03/25/2022	Cesar Chavez Day – no classes
05/04/2022	Last class of this course
Grading:	Students will be graded based on exam 1 (15%), exam 2 (15%), their topic presentation (30%), their proposal presentation (30%) and their in-class participation (10%).
Disability:	If you have a disability, please contact UTEP’s Center for Accommodations and Support Services. For those who qualify, there are certain mechanisms of assistance in place.

COVID-19 PRECAUTION STATEMENT

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are

encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.