◎ Required fields for input syllabus on mySNU: *, **
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**Course Keywords	Environmental Science, Environmental Engineering, Water Chemistry, Organic Chemistry, Water Contaminant, Environmental Organic Chemistry						
*1. Goals	Various contaminants exist in natural as well as engineered water systems. Understanding the characteristics and fate of those contaminants is crucial for researches and applications of environmental engineering approaches. In this course, students will study the types and the characteristics of substances that degrade water quality, and mechanisms that determine the fate of the substances including phase partitioning, mass transfer, reactions, mixing, and dispersion. Students will get an in-depth understanding of mechanisms related to the fate of organic contaminants through organic chemistry approaches and analyze the fate of the contaminants at various settings of water environments. In addition to the lecture given by the instructor, the students will study, present, and discuss about sub-topics relevant to the course as well as their own research in order to fulfill the needs on background knowledge for those who have different research interests.						
**2. Reading Materials	Textbooks	Handout (electronic, slides) Davis & Masten					
	References						
**3. Course Schedule	Lecture Method	☐Flipped learning ☒Theory-driven ☒Discussion-oriented ☐Project-based ☐Others					
	W1: Introduction / Water and water chemistry W2: Organic chemistry background I & II W3: Organic chemistry background III & IV W4: Chemical transformations / Redox reactions I W5: Redox reactions II & III W6: Nucleophilic reactions I & II W7: Nucleophilic reactions III / Photochemical reactions I W8: Photochemical reactions II & III W9: Phase equilibrium I & II W10: Phase equilibrium III / Phase equilibrium example W11: Interphase mass transfer I & II W12: Interphase mass transfer I / Final Review W13: Final exam / Student presentation & paper discussion W14: Student presentation & paper discussion W15: Student presentation & paper discussion						
*4. Evaluation	Grading Method	Absolute evaluation, Relative evaluation					
	Grading Type	A~F, S/U					
	Item	Attendance	Assignment	Midterm	Final	Presentation & Discussion	Total
	Rate	10%	20%		40%	30%	100%
	Note				paper test		
	Attendance Policy	Students who are absent more than 1/3 of class days will receive “F” or “U” grade.Students whose attendance is acknowledged can be exceptions. (Academic Grading Regulations, Guidance of Attendance and Grading for Early Employed Students)					
	Other	Other matters pertaining to the evaluation method such as regulations on cheating, whether and how alternative tests are made, and whether feedback for assignments or tests is provided					
5. Quota Exceeding Course Registration	Capacity						
6. Guideline for Students	Prerequisite Courses						
	Requirements						
	Office Hours						
7. Support	For Lectures	○ Visual Impairment: Make textbooks(digital textbook, braille textbook, enlarged textbook etc.), Allow note takers ○ Physical Disability: Make textbooks(digital textbook), Allow note takers and assistants ○ Hearing Impairment: Allow note takers and translators, Allow lecture recording ○ Health Impairment: Excuse absence due to health problems, Allow note takers					