1	**Course title**	Organic chemistry for non-chemistry majors
2	**Course number**	0303233
3	**Credit hours (theory, practical)**	3
	Contact hours (theory, practical)	3
4	**Prerequisites/corequisites**	General chemistry-1
5	**Program title**	B. Sc.
6	**Program code**	
7	**Awarding institution**	
8	**School**	School of science
9	**Department**	Chemistry department
10	**Level of course**	Second year
11	**Year of study and semester (s)**	2020-2021, first semester
12	**Final Qualification**	
13	**Other department (s) involved in teaching the course**	-
14	**Language of Instruction**	English
15	**Date of production/revision**	12 / 10 / 2020

16. Course Coordinator: A. Hussein + M. Al-Aref

Office numbers, office hours, phone numbers, and email addresses should be listed.
aqhussein@ju.edu.jo ; meqdadya@ju.edu,jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.
M. Mubarak:

B. Sweileh:

A. Qaroush:

18. Course Description:

The course covers the following topics:
1) Bonding and isomerism.
2) Alkanes and Cycloalkanes
3) Alkenes and alkynes

4) Aromatic compounds
5) Cycloalkanes and their stereochemistry.
6) Organic halogen compounds
7) Alcohols and phenols
8) Ethers and epoxides
9) Aldehydes and ketones
10) Carboxylic acids and their derivatives
11) Amines

19. Course aims and outcomes:

A- Aims:

a) Assign hybridization, bond polarity, formal charge, resonance structures, molecular shape, isomerism and conformations of simple organic molecules.

b) Derive IUPAC and common names for simple organic compounds based on functional groups.

c) Know and recall reactions of major organic functional groups, and design simple syntheses.

d) Suggest reaction mechanisms for simple organic reactions.

B- Intended Learning Outcomes (ILOs):

Upon completion of this course students will be able to

1) Assign polarities, hybridization, formal charge and draw structures of organic compounds i
2) Classify organic compounds according to functional groups
3) Use IUPAC rules to name organic compounds
4) Identify isomers and conformations.
5) Provide products and suggest mechanisms of reactions of major functional groups.
6) devise synthetic routes for simple organic compounds.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Bonding and Isomerism (chapter 1) bonding, formal charge, polar bonds, resonance, isomerism	Week 1		1+3	First Exam and Final Exam	Organic Chemistry , A Brief Course, Hart, Hadad Craine and Hart Houghton Mifflin, 13th Ed.
Alkanes and cycloalkanes (chapter 2) structure and naming alkanes	Week 2		1+2+3		
conformations & isomerism in alkanes & cycloalkanes	Week 3		4		
Alkenes and alkynes (Chapter 3) naming, geometric	Week 4+5		3+4		

isomerism, reactions					
Aromatic Compounds (chapter 4) structure, naming, resonance energy, reactions, substituent effects	Week 6		3+5		
Stereoisomerism (chapter 5) chirality, enantiomers, diastereomers, meso forms	Week 7		4		
Organic Halogen Compounds (chapter 6) nucleophilic substitution, elimination reactions	Week 8		5	Second Exam and Final Exam	
Alcohols and Phenols(chapter 7) naming, rections, preparation	Week 9+10		3+5		
Ethers and Epoxides (chapter 8) naming, reactions, preparation, Grignard reagent	Week 11		3+5+6		
Aldehydes and Ketones (chapter 9) naming, reactions, preparation	Week 12+13		3+5+6	Final Exam	
Carboxylic Acids and Their Derivatives (chapter 10) naming, reactions, preparation	Week 14		3+5+6		
Amines (chapter 11) naming, reactions, preparation	Week 15		5+6		

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

1- Live online recorded lectures and live discussions on Microsoft Teams
2- Chatting on Microsoft Teams and E-Learning platform
3- Recorded videos on selected topics not covered in lectures
4- Online office hours for discussions and problem solving

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
Two online Exams (50%) + Final Exam (50%)

23. Course Policies:

A- Attendance policies: University bylaw applied

B- Absences from exams and handing in assignments on time: University bylaw applied

C- Health and safety procedures: Lectures are conducted online

D- Honesty policy regarding cheating, plagiarism, misbehavior: University bylaw applied

E- Grading policy: Unified for all sections, University bylaw applied

F- Available university services that support achievement in the course:

24. Required equipment: (Facilities, Tools, Labs, Training….)

25. References:

Required book (s), assigned reading and audio-visuals:
Organic Chemistry, a brief course
Hart,Hadad, Craine, and Hart; 13th Edition

26. Additional information:

Name of Course Coordinator : Ahmad Q. Hussein Signature: ---------- Date: 1/10/2020

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------