

Standard Institutionally Developed College: N/A

EDGE Compatible: No

Pre-requisites

Co-requisites

CHEM 1152 - Survey of Organic Chemistry and Biochemistry (201003)

Course Description

Selected laboratory exercises paralleling the topics in CHEM 1152. The laboratory exercises for this course include basic principles of organic chemistry, hydrocarbons, hydrocarbon derivatives, heterocyclic rings and alkaloids, carbohydrates, lipids and fats, proteins, nucleic acids, and intermediary metabolism.

Course Length

	Minutes	Contact Unit
Lecture:	0	
Lab 2:	0	
Lab 3:	2250	
Practicum/Internship:	0	
Clinical:	0	
Total:	2250	1

Semester Credit Hours: 1

Competencies

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Laboratory Safety	0	0	60	0	0	60	0
2	Basic Principles of Organic Chemistry	0	0	225	0	0	225	0
3	Hydrocarbons	0	0	308	0	0	308	0
4	Hydrocarbon Derivatives	0	0	307	0	0	307	0
5	Heterocyclic Rings and Alkaloids	0	0	225	0	0	225	0
6	Carbohydrates	0	0	225	0	0	225	0
7	Lipids and Fats	0	0	225	0	0	225	0
8	Proteins	0	0	225	0	0	225	0
9	Nucleic Acids	0	0	225	0	0	225	0

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
10	Intermediary Metabolism	0	0	225	0	0	225	0
	Totals for Course CHEM 1152L - Survey of Organic Chemistry and Biochemistry Lab (version 201203):	0	0	2250	0	0	2250	1

Learning Outcomes

Laboratory Safety

Order	Description	Learning Domain	Level of Learning
1	Discuss and apply laboratory exercises encompassing the appropriate practice of laboratory precautions and laboratory safety.	Cognitive	Comprehension

Basic Principles of Organic Chemistry

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing basic principles of organic chemistry.	Cognitive	Synthesis

Hydrocarbons

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing hydrocarbons.	Cognitive	Synthesis

Hydrocarbon Derivatives

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing hydrocarbon derivatives.	Cognitive	Synthesis

Heterocyclic Rings and Alkaloids

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing heterocyclic rings and alkaloids.	Cognitive	Synthesis

Carbohydrates

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing carbohydrates.	Cognitive	Synthesis

Lipids and Fats

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing lipids and fats.	Cognitive	Synthesis

Proteins

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing proteins.	Cognitive	Synthesis

Nucleic Acids

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing nucleic acids.	Cognitive	Synthesis

Intermediary Metabolism

Order	Description	Learning Domain	Level of Learning
1	Perform and apply laboratory exercises encompassing intermediary metabolism.	Cognitive	Synthesis

References

Order	Reference Type	Description
1	Book with Author(s) Listed	Hein, M., Peisen, J. & Ritchey, J.. (2008). Introduction to general, organic, and biochemistry laboratory manual. (9th). New York, NY: John Wiley & Sons.