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## ***Fundamentals of Organic Chemistry, Part I***

Live Webinar on March 4, 2026, from 10:00 AM to 2:15 PM ET

### Instructor Biography

#### **Jack Duggan, PhD, Middlesex Community College**

Jack Duggan has over 30 years of teaching experience in the fields of civil/environmental engineering and environmental chemistry. He has been a Professor of Engineering and Associate Dean of STEM at Endicott College, and a Professor and Chair of Civil Engineering at Wentworth Institute of Technology. Currently, Dr. Duggan is an Adjunct Professor of Engineering Science at Middlesex Community College. Prior to academia, Dr. Duggan was an environmental engineer for 14 years with the Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup. He is a Registered Environmental Engineer in the Commonwealth of Massachusetts. He earned a BS in chemical engineering from Clarkson University, a MS in civil engineering from the University of Massachusetts (UMASS) Lowell, and a PhD in chemistry from UMASS Lowell.

## ATTACHMENT B: Course Agenda

### *Fundamentals of Organic Chemistry, Part I—Wednesday, March 4, 2026*

- 10:00-10:05 AM     **Welcome & Introduction** (*LSPA Moderator*)
- 10:05-11:45 AM     **Introduction**
- Background: History and Current State of the Organic Chemical
  - Industry (resources, syntheses, distribution)
  - Review of Relevant Chemistry Fundamentals (atomic theory, bonding, periodic table, physical states)
  - Nomenclature Part I (alkanes, alkenes, aromatics, PAHs, isomers)
- 11:45 AM-12:00 PM   **Questions & Answers**
- 12:00-12:30 PM     **Break**
- 12:30-2:00 PM     **Nomenclature Part II** (functional groups, other chemical classes)
- Physical/Chemical Properties Part I (trends in molecular weight, density)
  - Units (common units for air, water and solid media and conversion methods)
- 2:00-2:15 PM     **Questions & Answers**
- 2:15 PM             **Webinar Adjourns**

### *Fundamentals of Organic Chemistry, Part II—Wednesday, June 3, 2026*

- 10:00-10:05 AM     **Welcome & Introduction** (*LSPA Moderator*)
- 10:05-11:45 AM     **Physical/Chemical Properties Part II** (solubility, VP, LEL/UEL, flash point)

11:45 AM-12:00 PM **Questions & Answers**

12:00-12:30 PM **Break**

12:30-2:00 PM **Petroleum Products** (production, formulations, and bulk properties) and **Partitioning** (enhanced solubility, Hc, Kow, Koc, Kd, sorption, natural attenuation)

2:00-2:15 PM **Questions & Answers**

2:15 PM **Webinar Adjourns**