# Welcome!
# We're glad you're here!

**On this journey toward your major degree, we begin with a set of courses designed to provide you with multiple opportunities to build robust foundational knowledge and skills in chemistry.**

**With such knowledge and skills, you should be prepared to further excel in upper-level coursework that specializes your work in the specific major you have chosen.**

**LUC Chemistry is taking a modern, integrated approach to foundational coursework**

- **Aligns with the latest American Chemical Society (ACS) and American Association of Medical Colleges (AAMC) standards & guidelines**
- **Themes: structure-activity relationships; culture and practice of science; energy; polymers, proteins, and macromolecules; sustainability; chemical synthesis, purification, characterization, and analysis**

## Chemistry Curriculum Overview

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

# FOUNDATIONAL CHEM CURRICULUM

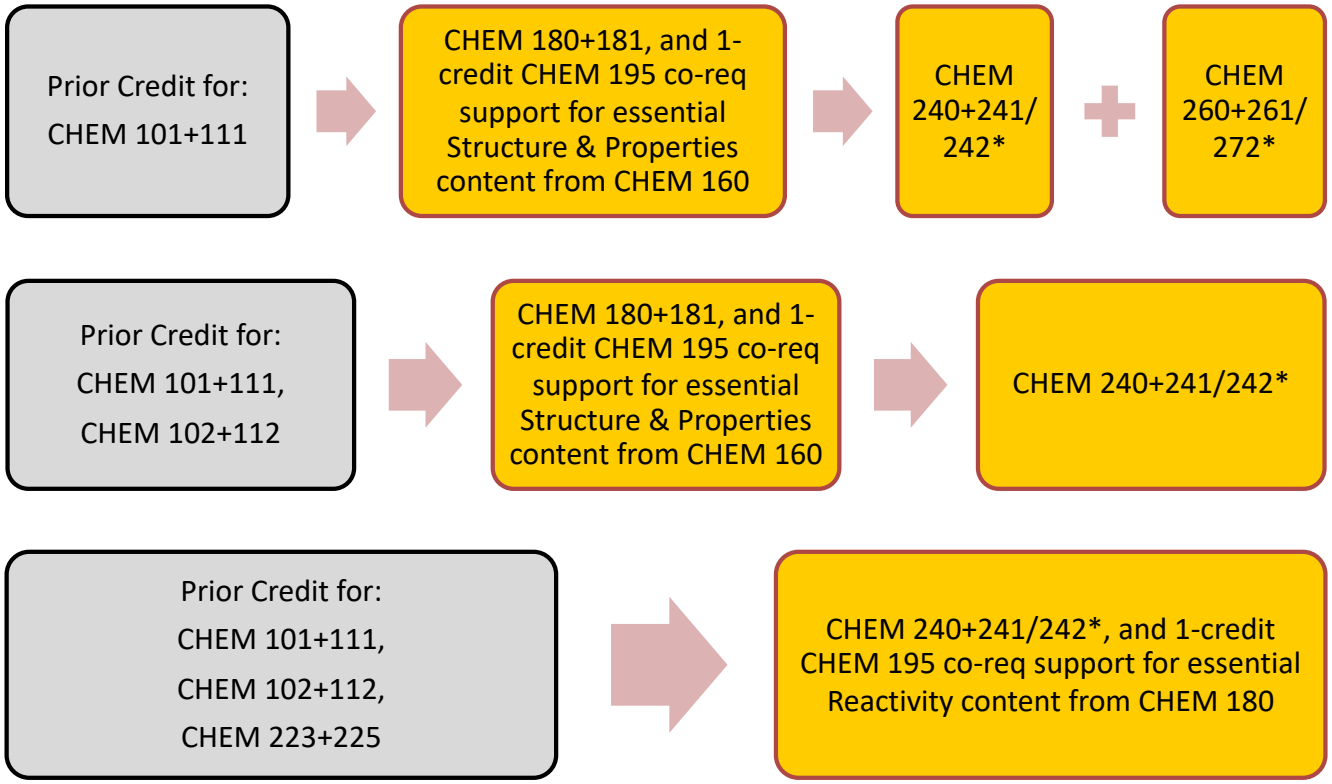
*An integrated approach to teaching the core ideas and practices in Chemistry*

All first-year students will begin the Chemistry sequence in the updated curriculum with CHEM 160+161 (replacing CHEM 101+111).

**Why did we make the changes?**

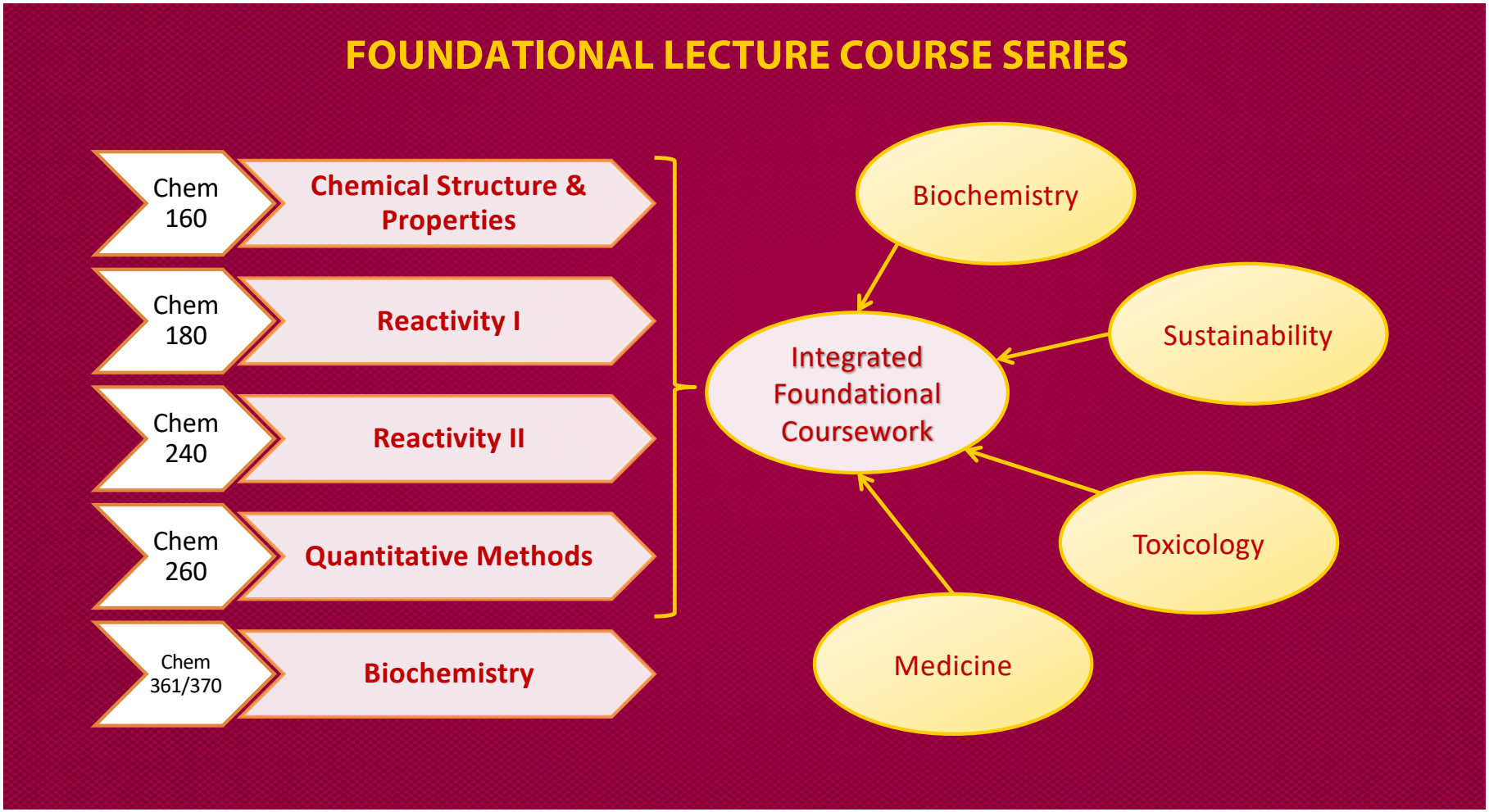
1. To modernize our approach to foundational chemistry coursework that develops relevant skills and applications.
2. To build a logical progression of topics and ideas, considering equity and flexibility for students.
3. To ensure that our curriculum continues to align with the latest American Chemical Society (ACS) and American Association of Medical Colleges (AAMC) standards & guidelines.

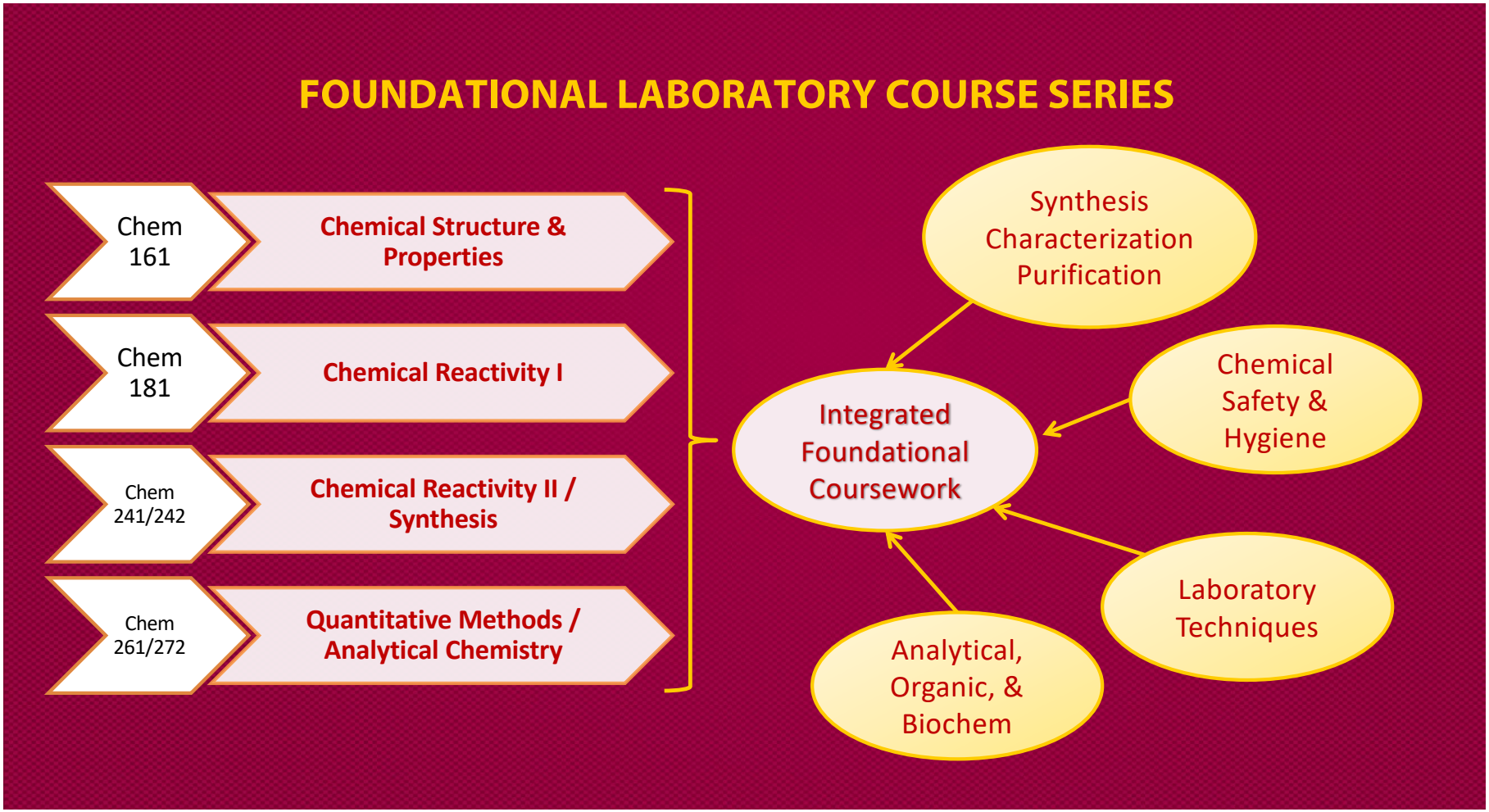
## Students who start the chemistry sequence with General Chemistry course(s) can continue in the LUC Foundational sequence as shown here:



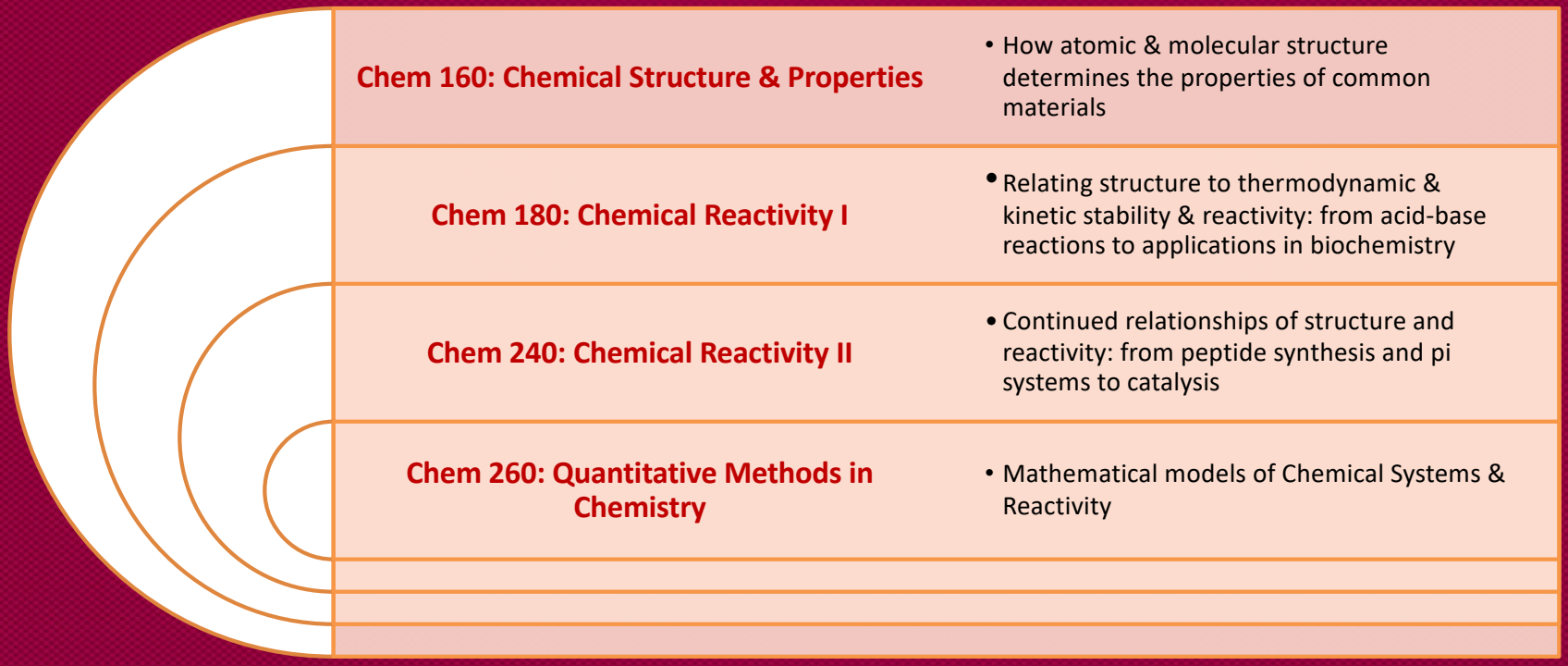

*Check LOCUS for specific 200-level laboratory course requirements for your degree track.

Students intending a pre-med track will continue to additional Biochemistry-specific coursework after completing the Foundational lecture/lab sequence.


FOUNDATIONAL LECTURE COURSE SERIES
Chem 160
Chemical Structure & Properties
Chem 180
Reactivity I
Chem 240
Reactivity II
Chem 260
Quantitative Methods
Chem 361/370
Biochemistry
Integrated Foundational Coursework
Biochemistry
Sustainability
Toxicology
Medicine


FOUNDATIONAL LABORATORY COURSE SERIES
Chem 161
Chemical Structure & Properties
Chem 181
Chemical Reactivity I
Chem 241/242
Chemical Reactivity II / Synthesis
Chem 261/272
Quantitative Methods / Analytical Chemistry
Integrated Foundational Coursework
Synthesis Characterization Purification
Chemical Safety & Hygiene
Laboratory Techniques
Analytical, Organic, & Biochem

# FOUNDATIONAL LECTURE COURSE SERIES



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|---|---|
| **Chem 160: Chemical Structure & Properties** | • How atomic & molecular structure determines the properties of common materials |
| **Chem 180: Chemical Reactivity I** | • Relating structure to thermodynamic & kinetic stability & reactivity: from acid-base reactions to applications in biochemistry |
| **Chem 240: Chemical Reactivity II** | • Continued relationships of structure and reactivity: from peptide synthesis and pi systems to catalysis |
| **Chem 260: Quantitative Methods in Chemistry** | • Mathematical models of Chemical Systems & Reactivity |