

# Organic Chemistry Plus MasteringChemistry with eText -- Access Card Package, 9/e

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January 29, 2016 ©2017

Paper Bound ISBN: 9780321971371

with MasteringChemistry ISBN: 9780321971128

ModifiedMastering SACC ISBN: 9780134130002

Loose Leaf Version ISBN: 9780134160382

#### A Student-Centered Approach to Learning and Studying Organic Chemistry

Wade & Simek's Ninth Edition of Organic Chemistry presents key principles of organic chemistry in the context of fundamental reasoning and problem solving. Authored to complement how students use a textbook today, new Problem Solving Strategies, Partially Solved Problems, Visual Reaction Guides and Reaction Starbursts encourage students to use the text before class as a primary introduction to organic chemistry as well as a comprehensive study tool for working problems and/or preparing for exams. With unparalleled and highly refined pedagogy, this Ninth edition gives students a contemporary overview of organic principles and the tools for organizing and understanding reaction mechanisms and synthetic organic chemistry.

# Personalize learning with MasteringChemistry

MasteringChemistry from Pearson is the leading online homework, tutorial, and assessment system, designed to improve results by engaging students before, during, and after class with powerful content. Instructors ensure students arrive ready to learn by assigning educationally effective content before class, and encourage critical thinking and retention with in-class resources such as Learning Catalytics<sup>™</sup>. Students can further master concepts after class through traditional and adaptive homework assignments that provide hints and answer-specific feedback. The Mastering gradebook records scores for all automatically graded assignments in one place, while diagnostic tools give instructors access to rich data to assess student understanding and misconceptions.

Mastering brings learning full circle by continuously adapting to each student and making learning more personal than ever—before, during, and after class.

#### **Before Class**

• NEW! Organic Chemistry Dynamic Study Modules focus on general chemistry remediation, acid-base chemistry, functional groups, nomenclature, and key mechanisms. The modules help students study effectively on their own by continuously assessing their activity and performance in real time. Here's how it works: students answer a set of questions and indicate their confidence level for each answer. The questions repeat until students answer them all correctly and confidently. Once completed, the module explains the key concept. Dynamic Study Modules are available as graded assignments for prior to class, and are accessible on smartphones, tablets, and computers.

#### ■ NEW! Pearson eText 2.0 features include:

- Available on smartphones and tablets
- Seamlessly integrated videos and other rich media
- Accessible (screen-reader ready)
- Configurable reading settings, including resizable type and night reading mode
- Instructor and student note taking, highlighting, bookmarking, and search and are accessible on smartphones, tablets, and computers.

#### **During Class**

■ NEW! Learning Catalytics<sup>™</sup> generates class discussion, guides your lecture, and promotes peer-to-peer learning with real-time analytics. MasteringChemistry with eText now provides Learning Catalytics—an interactive student response tool that uses students' smartphones, tablets, or laptops to engage them in more sophisticated tasks and thinking. Instructors can:

- Pose a variety of open-ended questions that help students develop critical thinking skills around structure and reactivity in organic chemistry with 10 new Learning Catalytics questions for each chapter of Organic Chemistry, Eighth Edition.
- · Monitor responses to find out where students are struggling
- Use real-time data to adjust the instructional strategy and engage students during class
- Manage student interactions by automatically grouping students for discussion, teamwork, and peer-topeer learning
- Instructor and student note taking, highlighting, bookmarking, and search and are accessible on smartphones, tablets, and computers.

#### **After Class**

NEW! MasteringChemistry's Organic Chemistry Drawing Tool is a customized version of Java Free MarvinSketch that accommodates the diversity of structures and reaction mechanisms inherent to learning organic chemistry while providing students with a wrong answer specific feedback. This educational version of MarvinSketch has been customized in response to input from hundreds of undergraduate students. The drawing tool includes comprehensive MasteringChemistry tutorials, specific to drawing with MarvinSketch, that equip students to start quickly drawing organic structures and mechanisms to complete homework. The tutorials cover how to accurately draw reaction mechanisms, how to modify answers, and how to use the palette. All mechanism-based problems provide feedback specific to each step of the reaction, and new visual cues help clarify exact placement of arrows, enable selection of the electron, and highlight which bonds have been formed or broken.

# Assignable, textbook specific skill building tutorials guide students through the toughest topics in organic chemistry including:

- Acids and Bases (after chapter 2)
- Using Molecular Models (after Chapter 3)
- Interconverting Structural Representations (after Chapter 4)
- Drawing Curved Arrows (after Chapter 5)
- Drawing Resonance Contributors (after chapter 8)
- Drawing Curved Arrows in Radical Systems (after Chapter 13)
- Synthesis and Retrosynthetic Analysis (after Chapter 17)
- Rate Changes and Kinetics (Appendix II)
- Configurable reading settings, including resizable type and night reading mode
- Instructor and student note taking, highlighting, bookmarking, and search and are accessible on smartphones, tablets, and computers.

■ NEW! Six NMR/IR Spectroscopy simulations (a partnership with ACD labs) allow professors and students access to limitless spectral analysis with guided activities that can be used in the lab, in the classroom, or after class to study and explore spectra virtually. Activities authored by Mike Huggins, University of West Florida, prompt students to utilize the spectral simulator and walk them through different analyses and possible conclusions.

**1500 automatically graded questions** can be assigned as homework or practice. These questions are specific to the Eighth Edition and the majority requires drawing structures and reactions.

**Enhanced end-of-chapter problems** now includewrong-answer specific feedback on all mechanism problems so students have the opportunity to practice and test their understanding of organic reactivity outside of class with the help and ease of an updated drawing tool and detailed feedback on their work.

## About the Book

Organic Chemistry offers the following features to facilitate learning:

Highly refined presentation and features present key principles of organic chemistry in the context of fundamental reasoning and problem solving.

■ New! Expanded coverage of Acid/Base Chemistry in Chapter 2 and separation of the material on Substitution and Elimination into two distinct chapters allow students to build upon their existing knowledge and move through their first mechanisms with greater clarity and with more opportunities to test and apply their understanding without getting overwhelmed.

**NEW! Problem Solving Strategies** have been added and explicitly highlighted in each chapter, including new strategies for resonance, acid-base equilibria, and multistep synthesis.

**NEW! Green chemistry** is emphasized with presentation of less-toxic, environmentally friendly reagents in many situations, such as oxidation of alcohols with bleach rather than with chromium reagents.

**NEW! Chapter Openers** focus on applications discussed in the chapter, with introductions and images for a more enticing, contemporary presentation.

**NEW! Reaction Starbursts** appear before the end of chapter material of every 'reaction-based chapter' to help students better understand and mentally organize reactive similarities and distinctions.

**NEW! Visual Guides to Organic Reactions** place the reactions covered in major chapters within the overall context of the reactions covered in the course.

**NEW! Over 100 new problems** include more synthesis problems and problems based on recent literature.

**20 Key Mechanism boxes** highlight the fundamental mechanistic principles that recur throughout the course and are the basis for some of the longer, more complex mechanisms. Each describes the steps of the reaction in detail with a specific example to reinforce the mechanism and a concluding problem to help students absorb these essential reactions.

• Over 50 Mechanism boxes help students understand how specific reactions occur by zooming in on each individual step in detail.

**UPDATED!** Art has been revised throughout to provide consistency and clarity in the text, giving students access to detailed representations of molecular and orbital art.

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- 2. Acids and Bases: Functional Groups
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- 24. Amino Acids, Peptides, and Proteins
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