

## introduction

**S**ynthesis & Reactivity 1 is the second course in the chemistry curriculum at Dickinson. The laboratory component of Synthesis & Reactivity 1 will not be a typical "Organic Chemistry" lab. This course will emphasize synthetic reactions in which a product will be obtained by each student; however, yield and purity are not part of your lab grade. *Instead, your grade will be determined to a large degree on how well you understand the chemistry and theory of the reactions.* As a result, you should focus on the chemistry that is taking place, and the methods and techniques used in the lab. The lab syllabus has been designed to ensure that experiments are performed in lab at about the same time as the corresponding lecture sections are being covered in the lecture portion of the course.

**M**any of the "discovery" aspects of BenchChem will be continued in the Synthesis & Reactivity 1 lab. Experiments have been designed to include a problem-solving component which will require you to analyze your results, and perhaps, those of your classmates and arrive at some generalizations. Other experiments will require you to determine the identity of your product, based on information found in reference texts. In short, "cookbook" experiments have been avoided; to achieve maximum benefit from the lab (and receive a better grade!), it is critical that you understand what is occurring in the reaction vessel. Thus, pre-lab preparation is critical to knowing what is happening in your flask. Your lab grade will include a quiz component (15%) that may include questions such as what type of reaction is being performed or what compound is the limiting reagent. Prior to each experiment, you should prepare a "reaction scheme" in your notebook, including the quantities (in mg or mL) of each reagent and solvent and the number of equivalents of each reagent. To ensure that you have prepared for the experiment, you will show the reaction scheme to your instructor or TA prior to the beginning of each experiment (10%). This ensures that when you arrive in lab, you will already know what quantities of reagents and solvent you need to obtain. Then, as the experiment proceeds, you will enter the procedure and your observations and data. Your lab instructor will periodically check your lab notebook after experiments for compliance with standard chemistry norms (30%). There is always room for individual taste in how a notebook is organized, but it should be in a form which is acceptable to a practicing chemist.

**I**n order to demonstrate your understanding of the completed experiments, three lab reports will also be required (3 @ 15% = 45%). These reports provide you with an opportunity to communicate, in an effective manner, your understanding in written form by simply answering the questions at the end of each experiment. These reports must be typed, word-processed or submitted on a Macintosh disc. Structures, chemical equations and mechanisms may be hand-drawn. If a spectrum is required, submit a photocopy with your lab report and leave the original with your notebook.

**S**tudents have more control over their lab grade than any other portion of this course. You will have up to four weeks to prepare lab reports and reasonable care will lead to a good grade for your notebook. It is our belief that students who put forth an honest effort will learn more from their lab experience and receive a better grade.

### summary of lab grading

<b>notebooks</b>		30%
<b>lab reports</b>	(3 @ 15%)	45%
<b>quizzes</b>	(at least 3 times)	15%
<b>pre-lab preparation</b>	(weekly)	10%
	<b>total</b>	100%

**remember:** the lab grade comprises a significant portion of your overall grade in the course and thus represents a reasonable method to improve your course grade!