Studying Mathematics at St. Olaf

The study of mathematics at the college level will almost certainly be different from your high school experiences. The biggest difference is probably the amount of work you will need to do on your own outside of class. A typical college course will address the same amount of material in one semester (about 38 class periods) as you would see in a full year of high school math. Try thinking of your math class as one fourth of your academic "job." This should mean spending at about ¼ of your 8 to 12 hour academic day – two or three hours per day (including class time) on your mathematics.

In addition, you will probably find that there is a greater emphasis on *why* things happen the way they do as opposed to *how* things are done. This means your study will require significant amounts of *thinking* about the material in addition to *doing* problem sets. There is a BIG difference between just getting assigned problems done and *studying the ideas*.

What follows is a list of **THE FIVE BIGGIES**. These are the five things that have proven to be most helpful to the Oles who preceded you in successfully studying mathematics (and lots of other things).

- **READ AHEAD** – The more you know going into a class period the more you will get out of it. If you've seen the terminology, studied the graphs, examples, proofs and diagrams, and compiled a list of questions you hope to have answered in class, you will be ready to notice the subtleties of the topic from your instructor's input on the topic. After all, that's what you should be paying your instructors for, not for telling you things you can figure out for yourself.

- **GO TO CLASS** – Duh!? You might be surprised how many times you will be tempted to sleep in or get a paper for another class written instead of going to math class – Bad Idea! Remember how quickly the course must go to finish in 38 class periods.

- **STUDY FREQUENTLY** – Overloading your short-term memory in study marathons is just about the worst thing you can do. "Do it 'til it's done" may sound good, but you should give your subconscious a chance to help you out too. You may actually finish the reading assignment and get most of the problems right by way of a marathon session, but you'll hold on to the ideas much better if you bring them to mind frequently. After all, tests are just "bringing it back to mind" so why not practice that? Your two or three hours of study between class sessions should comprise at least three or four different study sessions.

- **STUDY COLLABORATIVELY** – "Two (or three?) heads are better than one" and it will usually help your understanding substantially if you have to explain your thinking to someone else and listen to their explanations. It's also easier to keep going in a focused small group than it is on your own. A study buddy or study group is not just a good idea for test week, but for every week!

- **GET HELP** – when things don't make sense, make use of your instructor's office hours, the Math Clinics and the Academic Support Center to keep yourself on track without getting too far behind. The sooner problems are addressed, the higher the probability that everything will work out well. Check out the FAQ on getting help in math at

If you have questions or want more tips on studying math, talk to your instructor, or call the Academic Support Center at x3288 to set up an appointment with either an Academic Assistant with experience in mathematics, or with Peder Bolstad, the Analytical Skills Coordinator.