MATH 232 – Scientific Calculus II

Spring, 2008

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Dr. Lester Caudill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office:</td>
<td>205 Jepson Hall</td>
</tr>
<tr>
<td>Phone:</td>
<td>289-8083</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:lcaudill@richmond.edu">lcaudill@richmond.edu</a></td>
</tr>
<tr>
<td>Office Hours:</td>
<td>M: 2pm-3pm</td>
</tr>
<tr>
<td></td>
<td>R: 10am-12noon</td>
</tr>
<tr>
<td></td>
<td>F: 2pm-3pm</td>
</tr>
<tr>
<td></td>
<td>and by appointment</td>
</tr>
</tbody>
</table>

Course Website:

http://www.mathcs.richmond.edu/~caudill/localhome_links/s08node2.html

Blackboard Learning System: Materials, such as assignments and supplemental readings, will be made available through the Blackboard Learning System, which is a password-protected website. To access Blackboard, use the following URL:

https://blackboard.richmond.edu

Specific instructions for logging in and navigating Blackboard are attached.

Text: Calculus Concepts and Contexts, Third Edition, by James Stewart. In addition, there will be a number of instructor-provided supplements.

Class Computers and DyKnow: Each day in class, we will use a special computer program called DyKnow (which is short for “Dynamic Knowledge Transfer”). Among other things, this program will take many of your class notes for you, so you can focus on understanding the lesson, instead of worrying about writing every single word and chalk-stroke. THIS IS A VERY GOOD THING!

Assignments: Homework will be collected daily and graded periodically. Students are allowed to consult with one another provided everyone does their share.

Computer Work: A number of assignments will involve the use of the computer software packages Mathematica and Microsoft Excel. No special knowledge of computers is necessary for the course.

Seminars: There are six (as of January 14) < 1-hour seminar sessions scheduled this semester in a program entitled, Research Introductions. Each session consists of two members of the UR faculty in science, math, and computer science, who take turns telling about their fields of research, in a way that everyone can understand. As a member of this class, you are expected to attend two of these < 1 hour-long sessions. Further details on
this assignment are forthcoming. The schedule for these seminars can be found at [http://news.richmond.edu/as/2008/AS_research_introductions_spring_2008.html](http://news.richmond.edu/as/2008/AS_research_introductions_spring_2008.html).

**Exams:** There will be three in-class exams and a (comprehensive) final exam. The exams will be given on the following dates:
- **Exam 1:** Monday, February 11.
- **Exam 2:** Friday, March 21.
- **Exam 3:** Friday, April 18.
- **Final Exam:** Tuesday, April 29, 2pm - 5pm

**Grading Policy:**
- Homework: 15%
- Exams (each): 20%
- Final Exam: 25%

**Attendance:** Students are expected to attend all class meetings. If an absence is unavoidable, you are still responsible for all material covered and assignments made. **THERE ARE NO MAKE-UP EXAMS.** If an exam is missed, and the excuse is offered within 24 hours, and the excuse is allowed, then the grade on the Final Exam will replace the exam grade. A student who must miss an exam because of a University-sponsored activity should notify me as soon as possible, as you may be able to arrange to take the exam early (but **not** late).

**Academic Honesty:** Students are to abide by the official University policy on academic honesty. Each student will be required to sign their exam papers, thereby signifying their compliance with the University Honor Pledge.

**Symbolic Reasoning Field-of-Study Statement:**
MATH 232 is an introduction to calculus, the mathematical language of change, with a special focus on its relevance to the sciences. Calculus is used to model phenomena in a surprisingly wide variety of applications, in such areas as the physical and biological sciences, economics, epidemiology, and personal finance. In addition, this course includes a significant introduction to linear algebra and discrete dynamical systems.

Students in MATH 232 will be expected to develop skills in formulating problems, solving them, and communicating their solutions to others (usually in written form). Successful formulation of a problem often requires that the student recognize how the basic concepts of calculus are involved in the problem at hand, and be able to translate the problem into appropriate symbolic form. This process of formulation and solution helps students to develop analytical skills applicable to a wide variety of situations. Some problems are designed to have students construct and analyze mathematical models of real world phenomena, while other problems help students make conceptual leaps from specific examples to general principles.
How to Access Assignments on Blackboard

The non-textbook assignments, as well as other materials, for our course are posted in the Blackboard Learning System. This is a secure website that requires you to log in. Follow the steps below each time you need to access course materials from Blackboard.

1. Go to the website https://blackboard.richmond.edu. Click the “User Login” button.
2. Log in with the same username and password you use for your regular UR student account.
3. Under “My Courses”, you should see a link to our course. Click on it.
4. The next page you see will include a list of recent announcements that are relevant to the course. Be sure to read them – I’m assuming you did.
5. On the left side of the current page is a set of links, inside a teal-looking box. The links that will be most important to us will be:
   a. Course Information: Here you will find general information and the Course Schedule and Assignments updates.
   b. Course Documents: Here you will find the daily DyKnow class notes, as well as any exam prep materials.
   c. Assignments: Here, shockingly enough, you will find all assignments that do not come directly from our textbook.
6. From here, you should be able to find your way to the particular item you seek. Just follow the relevant links.
7. When you find the what you want, click on the accompanying link. In the resulting window, choose “Save”, and save it to your Netfiles account. Then, go to the saved copy, and double-click on it to open it properly.
8. When finished downloading, exit Blackboard by clicking “Logout” at the top of the window.