## Calculus II

## MATH 2153-003

Time and Place: MWF 9:30-10:20 a.m. in PS 355
Professor: Igor E. Pritsker
Office: MSCS 524
Office Hours: MWF 10:30-11:30
Office Phone: 744-8220
E-mail:igor@math.okstate.edu
Web: http://www.math.okstate.edu/~igor/math2153/math2153_spring2011.html
Textbook: Calculus (Early Transcendentals) by J. Stewart, 6th ed. (customized for OSU)

Grading: We have three semester tests and the Final Exam. The break up of your course grade is as follows:

| Tests 1-3 | $60 \%$ (20\% each) |
| :--- | :--- |
| Homework | $15 \%$ |
| Final Exam | $25 \%$ |

Your grade will be determined according to the scale

| A | $90-100$ |
| :--- | :--- |
| B | $80-89$ |
| C | $70-79$ |
| D | $60-69$ |
| F | 59 and lower |

Note that the above numbers are percentages of the highest possible score in the course.
Attendance is mandatory in this class.
Homework will be given online via WebAssign system. Please enroll into our WebAssign section using the
Class Key okstate 3208 1000. You must complete each homework assignment and submit it before the due date. Late work will not be accepted.

## WebAssign page

## WebAssign guides and tutorials

MLRC stands for the Mathematics Learning Resource Center located on the 4th floor of classroom building. You can receive invaluable tutoring help at MLRC.

## Recommended Learning Method:

- Before we start any section, read it in the textbook. Keep a list of questions you encounter while studying.
- When we cover this material in class, ask me any prepared or unprepared question and resolve any difficulty you might have had.
- Start working on the assigned homework immediately after we covered the necessary topics. It is
helpful to read the text again before doing your homework, and in case you have difficulties with a problem.
- Write down a detailed solution of every problem. Use tutorial assistance at MLRC and/or come to my office hours if needed.

Make-up Exams are given only in cases of serious illness or extreme emergency that prevents you from taking a test at the specified time. You have to contact me before the test and communicate all circumstances. Furthermore, you must appear in person, with supporting documents, to discuss the situation as soon as possible.

Calculator: A graphing calculator is not required, but may be used at your preference. You can check out TI-83 or TI-83 Plus from the Department of Mathematics (MSCS 401) free of charge. However, no calculator is allowed on examinations.

University Syllabus Attachment: Contains drop deadlines and procedures, as well as many other important dates and university policies.

## Schedule

| Week | Date | Sec | Page | Topic |
| :---: | :---: | :---: | :---: | :---: |
| 1 | M, Jan 10 | 7.1 | 453 | Integration by Parts |
|  | W, Jan 12 | 7.1-2 | 453, 460 | Integration by Parts and Trigonometric Integrals |
|  | F, Jan 14 | 7.2 | 460 | Trigonometric Integrals |
| 2 | M, Jan 17 |  |  | Martin Luther King Jr. Day |
|  | W, Jan 19 | 7.3 | 467 | Trigonometric Substitution |
|  | F, Jan 21 | 7.3 | 467 | Trigonometric Substitution |
| 3 | M, Jan 24 | 7.4 | 473 | Integration of Rational Functions by Partial Fractions |
|  | W, Jan 26 | 7.4 | 473 | Integration of Rational Functions by Partial Fractions |
|  | F, Jan 28 | 7.5 | 483 | Strategy for Integration |
| 4 | M, Jan 31 | 7.8 | 508 | Improper Integrals |
|  | W, Feb 2 | 7.8 | 508 | Improper Integrals |
|  | F, Feb 4 | 8.1 | 525 | Arc Length |
| 5 | M, Feb 7 | 8.2 | 532 | Area of a Surface of Revolution |
|  | W, Feb 9 | 8.3 | 539 | Applications to Physics and Engineering |
|  | F, Feb 11 |  |  | Review |
| 6 | M, Feb 14 |  |  | Test 1 (7.1-7.5, 7.8, 8.1-8.3) |
|  | W, Feb 16 | 11.1 | 675 | Sequences |
|  | F, Feb 18 | 11.1-2 | 675, 687 | Sequences and Series |
| 7 | M, Feb 21 | 11.2 | 687 | Series |
|  | W, Feb 23 | 11.3 | 697 | The Integral Test and Estimates of Sums |
|  | F, Feb 25 | 11.3 | 697 | The Integral Test and Estimates of Sums |
| 8 | M, Feb 28 | 11.4 | 705 | The Comparison Tests |
|  | W, Mar 2 | 11.4-5 | 705, 710 | The Comparison Tests and Alternating Series |
|  | F, Mar 4 | 11.5 | 710 | Alternating Series |
| 9 | M, Mar 7 | 11.6 | 714 | Absolute Convergence and the Ratio and Root Tests |
|  | W, Mar 9 | 11.6 | 714 | Absolute Convergence and the Ratio and Root Tests |
|  | F, Mar 11 | 11.7 | 721 | Strategy for Testing Series |
| 10 | Mar 12-20 |  |  | Spring Break |
| 11 | M, Mar 21 |  |  | Review |
|  | W, Mar 23 |  |  | Test 2 (11.1-11.7) |
|  | F, Mar 25 | 11.8 | 723 | Power Series |
| 12 | M, Mar 28 | 11.8 | 723 | Power Series |
|  | W, Mar 30 | 11.9 | 728 | Representation of Functions as Power Series |
|  | F, Apr 1 | 11.10 | 734 | Taylor and Maclaurin Series |
| 13 | M, Apr 4 | 11.10 | 734 | Taylor and Maclaurin Series |
|  | W, Apr 6 | 10.1 | 621 | Curves Defined by Parametric Equations |
|  | F, Apr 8 | 10.2 | 630 | Calculus with Parametric Curves |
| 14 | M, Apr 11 | 10.2 | 630 | Calculus with Parametric Curves |


|  | W, Apr 13 | 10.3 | 639 | Polar Coordinates |
| :---: | :---: | :---: | :---: | :---: |
|  | F, Apr 15 | 10.3 | 639 | Polar Coordinates |
| 15 | M, Apr 18 | 10.4 | 650 | Areas and Lengths in Polar Coordinates |
|  | W, Apr 20 |  |  | Review |
|  | F, Apr 22 |  |  | Test 3 (11.8-11.10, 10.1-10.4) |
| 16 | M, Apr 25 | 10.5 | 654 | Conic Sections |
|  | W, Apr 27 | 10.5 | 654 | Conic Sections |
|  | F, Apr 29 | Final Review |  |  |
| 17 | M, May 2 |  |  | Final Exam (PS 355, 8-9:50 a.m.) |

