**Syllabus Spring 2014  Calculus for Engineers 1 (MAC 2281)  4 credits**

**Prerequisite:** MAC 1140 and MAC 1114 with a minimum grade of C, or MAC 1147 with a minimum grade of C, or a minimum score of 65 on the ALEKS placement test. Knowledge of College Algebra, Trigonometry, and Geometry is essential to succeed in calculus.

<table>
<thead>
<tr>
<th>Instructor: Bal K Khadka</th>
<th>Website: <a href="http://math.fau.edu/bkhadka/">http://math.fau.edu/bkhadka/</a></th>
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</thead>
<tbody>
<tr>
<td>E-mail Address: <a href="mailto:bkhadka@fau.edu">bkhadka@fau.edu</a></td>
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<td>CRN: 18518</td>
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<td>Lecture: T &amp; R (2:00-3:20 ED 112) Lab: M (2:00-3:50 IS 113)</td>
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<td>Office: GS211H</td>
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<tr>
<td>Office Hours: M (12:00-2:00pm), T (12:00-2:00pm) &amp; R (1:00-2:00pm) or by an appointment.</td>
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**Description:** Topics include limits, continuity, differentiability, differential approximation, optimization, curve sketching, transcendental and inverse functions, mean value theorem, L'Hopital's Rule, introduction to integration and development of problem-solving skills. 


**Objectives, Learning Outcome Goals:** Upon successful completion of the course the student will be able to solve problems in the following areas and achieve the quantitative skills required for courses requiring Calculus 1:

- Limits
- Continuity
- Differentiation
- Curve sketching
- Transcendental and inverse functions
- The Mean Value theorem
- L'Hôpital’s rule
- Related rates and related rates problems
- Optimization problems
- Introduction to integration, including the Fundamental Theorem of Calculus.
- The application of mathematical modeling to other disciplines and real-world problems using a variety of functions.

**IFP General Education Outcomes:**

1. Knowledge in several different disciplines;
2. The ability to think critically;
3. The ability to communicate effectively;
4. An appreciation for how knowledge is discovered, challenged, and transformed as it advances; and
**General Education:** This course satisfies, in part, the general education requirements for Foundations of Mathematics and Quantitative Reasoning. [http://www.science.fau.edu/student_services/student_info_gen_edu.php](http://www.science.fau.edu/student_services/student_info_gen_edu.php)

**Software:** Students must purchase access to a web-based learning and assessment system called MyMathLabPlus. To access MyMathLabPlus, log on to FAU’s Blackboard ([http://bb.fau.edu](http://bb.fau.edu)), click on the link to this course, and then click on the link to MyLabsPlus. The first time through, you must “agree” to Pearson’s License Agreement, and then enter an access code. This code can be purchased at the bookstore or by credit card or PayPal directly from Pearson. If you wish, you can obtain a temporary access code (valid for 21 days) by clicking on the Temporary Access link; after 21 days you will need to purchase or provide a purchased access code. If you have any difficulties, please contact Pearson help desk.

Please use email to communicate with the instructor about problems you might be having on specific HW exercises. Use the “Ask My Instructor” button so he/she will get exactly the problem with the numbers you were using. In response to your questions, he/she might refer you to a specific example in the text. Most of the HW problems follow closely example problems in the textbook. Please look.

**TEXTBOOK:**
MAC 2281 -Briggs & Cochran, Calculus: Early Transcendentals (2011 Copyright) has been selected as the textbook. Topics to be covered are detailed by the homework assignments on MLP. You will have access to the on-line homework system as well as an electronic version of the textbook through MyLabsPlus. It is not necessary to purchase a hard copy of the textbook unless you wish to do so.

**Attendance Policy:** Regular attendance is expected, including active involvement in all class sessions, and professional conduct in class. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in university-approved activities. It is the student's responsibility to notify the instructor prior to any anticipated absence, and within a reasonable amount of time after an unanticipated absence.

**Tutoring:** Free tutoring is available in the Math Learning Center (MLC), room GS211. For the schedule visit [http://www.math.fau.edu/MLC/](http://www.math.fau.edu/MLC/). Many of the GTAs in the MLC have been or are instructors in the course. They know the material. Take advantage of this.

**Course Grade:** The course grade will be calculated using the table below. Grades will be posted on Blackboard and/or on MyMathLabPlus. Check your grades regularly to make sure they correctly reflect your scores in the course. Save all of your worksheets and exams and give them to the instructor at the end of an exam.

<table>
<thead>
<tr>
<th>Percentage Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>&gt;=93</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
</tr>
<tr>
<td>80-82</td>
<td>B</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
</tr>
<tr>
<td>70-76</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>&lt;= 59</td>
<td>F</td>
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COMPONENTS of the COURSE GRADE:

**Attendance & ALEKS (10%)**: Students are required to take a special ALEKS assessment during the first two lab sessions. A score of 85% earns full credit. This is NOT the placement test. Instructions for how to register and/or practice for this assessment are posted on Blackboard. Prepare by reviewing your algebra and trigonometry. A student with two consecutive absences without appropriate documentation will get 0 credit for attendance.

**Homework (5%)**: Homework assignment and their due dates are listed in MMLP. They should be done on time as their main value is that they prepare you best for both the quiz and test questions that follow. The summary OUTLINE on Blackboard lists the ones to be done each week.

**Quizzes (20%)**: Quizzes are given that cover each of the HW assignments and classnotes. The quiz chapters are announced in class.

**Practice Quizzes**: A timed Practice Quiz (PQ) is due before each exam. Each such PQ can be taken only once. These PQ scores will NOT be counted in your final grade. These are to help you get prepared for the exams. They are usually longer than the exam but timing is arranged to model what you might get on an exam. Most of the problems on the PQ have direct counter-parts in the HW. Review your HW and then test yourself with the PQ.

**Exams (40%)**: Four unit exams will be given on the days and times shown on on MMLP. Every exam will count towards your final grade. Students are only allowed a number 2 pencil, eraser and scrap paper. Any other items (e.g. cell phones) must be placed in a bag and set at the front or back of the room. Entrance to the exam requires a valid picture identification card: Only FAU Owl Cards, U.S. Passports, or Florida Driver’s Licenses will be accepted!

**Final Exam (25%)**: There will be a 150 minute cumulative final exam. Time and place to be announced and posted on Blackboard. You must take the final exam to receive a passing grade!

Any challenge to a grade for a quiz or exam problem must be made before you leave the room.

**Makeup Exams**: Makeup exams will be given only under circumstances which coincide with university policy (see link below under attendance). If you have a conflict you must advise your instructor and request to take a make-up in advance (NOT after) the scheduled exam if that is at all possible. Approval for a makeup exam must be obtained from your instructor in ALL cases.

[http://www.fau.edu/academic/registrar/catalog/academics.php#policiesall](http://www.fau.edu/academic/registrar/catalog/academics.php#policiesall)

**Academic Honesty:** Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at [http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf](http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf).

**Students With Disabilities:** In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) and follow all OSD procedures. In Boca Raton, SU 133 (561-297-3880); in Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305). OSD website at [http://www.osd.fau.edu](http://www.osd.fau.edu).

This syllabus is subject to reasonable changes at the discretion of the instructor.