CASPER COLLEGE COURSE SYLLABUS

COURSE NUMBER & TITLE: MATH 2200 - 01 *Calculus I*

SEMESTER: Fall 2015

LECTURE HOURS: 5   **CREDIT HOURS:** 5

CLASS TIME: 8 – 8:50 a.m.   **DAYS:** MTWThF   **ROOM:** PS 109

INSTRUCTOR'S NAME: Tracey Hollister

E-MAIL: thollister@caspercollege.edu

INSTRUCTOR'S OFFICE: PS 129   **PHONE:** 268-2545

OFFICE HOURS: See page 7

Course Description: Introduction to the calculus of single variables. Cover derivatives of polynomial, trigonometric, exponential, and logarithmic functions. Includes limits, applications of derivatives, and related theorems.

Statement of Prerequisites: A "C" or better in Math 1405 or Math 1450; or an ACT composite Math score of 27 or better; or a COMPASS exam score in the Trigonometry domain of 61-100, within the past year.

Goal: The student will be introduced to and practice the theory stated in the course description. Our study will include theory, method and application. We want to know WHY it works, HOW it works, and WHERE it can be applied. Students may also use technology to develop conceptual understanding and work problems that are difficult to do by hand.

Outcomes: (From Casper College General Education Outcomes; 1-8)
(#1)Demonstrate effective oral and written communication, (#3) solve problems using critical thinking and creativity, (#6) use appropriate technology and information to conduct research, and (#8) use quantitative analytical skills to evaluate and process numerical data
> *NOTE: Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.*

Course Objectives: Students should:
1. Be able to analyze limits numerically, algebraically, and graphically.
2. Be able to use the definition of the derivative. They should understand the derivative as a slope to a curve and as a rate of change.
3. Be able to calculate derivatives symbolically using the power, quotient, chain, and product rule as well as implicit differentiation.
4. Be able to use differential calculus to solve at least two of the following applications areas: error analysis, related rates, optimization, and motion problems.
5. Be able to use differential calculus to analyze curves.
6. Be able to use technology (both calculator and CAS) to analyze problems involving differential calculus.
7. Be able to apply the definition of the definite integral and understand the relationship between the definite integral and the concept of area.

METHODOLOGY: (Please turn off all cell phones, tablets, I-pods, I-pads, etc…)

The first item of discussion in class will be to go over any questions. There is no such thing as a stupid question. However, there is such thing as an ill prepared "I wasn't listening" question so PLEASE, PLEASE, PLEASE, **PREPARE yourself** and **THEN** ask questions. I will give you ample opportunity to ask questions so **be prepared**!

You are responsible for everything taught in class whether present or not. I recommend that you study with the **intent to *UNDERSTAND and not to just 'get by.'***

EVALUATION CRITERIA:

I. FROM THE BOOK: Homework **from the book** will be assigned daily, but will <u>not</u> be collected.

Since I am not collecting the assignments, students are responsible for correcting their own work. You may:

      i. Visit me with questions.

      ii. Use the MLC; reference the answer booklet and grade your own

      iii. Check the odd answers in the back of the book. (It is a good idea to do this for all assignments)

Remember you are in college and it is your **RESPONSIBILITY** to complete the homework, regardless of whether or not I collect it. Moreover, if you find yourself having more than 3 questions on your homework assignment, PLEASE visit my office before the next class so we can get them taken care of. Being a student is a full-time job. It is your education and your responsibility to learn as much mathematics as possible. I am here as your guide and helper.

II. QUIZZES: We will have between 10-16 quizzes worth 10 points each that replicate the assigned homework. Some quizzes will be without the aid of technology, so prepare yourself. At the end of the semester, I will take your top 10 quiz scores. (100 points)

III. DERIVATIVE SKILLS QUIZ: Since differentiation is the main concept of Calculus I and carries over into Calculus II this quiz must be passed with a 90% or better. If you have not passed the skills quiz by the end of the semester you <u>will not pass the class</u>. (50 points)

V. TECHNOLOGY: It is our goal to expose ourselves to a computer algebraic system. These systems are useful to help check problems and/or work problems that are not easily done by hand. We may have between $1 – 3$ technology assignments each worth between $10 – 20$ points.

IV. IN-CLASS WORK: It is possible we may have in class assignments. These assignments are often based on participation and cannot be made up. (10 points each)

VI. PROJECT: If we do a project you will be required to do a 5-10 minute class presentation on a topic of your choice where differential or integral calculus can be used outside of the classroom. The presentation would be worth 50 points.

VII. TESTS: There will be approximately 4-5 exams and a final. They will be announced at least a week in advance. If you do poorly on a test or miss one completely, I will replace your lowest test grade with your final exam score (given it is higher). (100 points each)

EVALUATION CRITERIA continued:

* QUIZZES, TESTS, IN CLASS WORK, etc… MUST BE NEAT WITH ALL YOUR WORK SHOWN!!
Work that is not neat/organized can and will receive an automatic zero. (Also reference HW expectations)

***Grades are determined by:

$$\frac{YOURS \quad POINTS}{TOTAL-POINTS-IN-CLASS}$$

GRADING SCALE:

90 – ⇑	A
89 – 80	B
79 – 70	C
69 – 60	D
59 - ⇓	F

REQUIRED TEXT, READINGS and MATERIALS:

1. **Calculus: Early Transcendentals, 2nd Edition** by Briggs, Cochran & Gillett
   a. ISBN: 13-978-0-321-94734-5
2. Internet access. You can access the internet at multiple locations around campus
3. Loose leaf **GRAPH** and notebook paper
4. Ruler
5. Colored pencils or pens
6. Calculator(s)
   a. Scientific calculator
   b. **NOTE:** **You will be asked to demonstrate nearly ALL concepts without the use of a graphing calculator, so do not to become dependent on this tool. Moreover, calculators with a C.A.S., i.e. any graphing calculator, will not be allowed on the exams**.

OPTIONAL MATERIAL:
1. A graphing calculator: If there is a need for a graphing calculator, I will use a TI-84 calculator, Wolf-Ram, or GSP. It is okay to use a different calculator, however learning new functions will be up to you.
2. MyMathLab (MML) access code – this will come with a new book or can be purchased by itself. (Having the code gives you access to an e-book)
3. 3 ring binder – at least 2.5 inches

SCHEDULE OF COURSE CONTENT: See the BLUE assignment sheet(s) given in class.

CLASS POLICIES:

I. Electronics:
   a. IPhones, IPads, IPods, Blackberries, cell phones etc. are to be **turned off**. If you are expecting an urgent call, please let me know ahead of time.

   b. **Text messaging, Facebooking, emailing, or any type of 'updating' is not allowed for any reason in class**.

   c. Laptops/tablets may be used in class to take notes, however, if it is found that you are using the laptop for other purposes—it is expected that you will immediately shut down and put it away. If the laptop is disruptive in class (this is at the instructor's discretion), you will be asked to put it away.

II. Attendance, Preparedness & Participation:
   a. Attendance is crucial to student success. However, being in the seat doesn't guarantee a passing grade! It is expected that you will have regular attendance. If you know you are going to gone, my best advice for an absence is to see **me in my <u>office</u> PRIOR** to leaving to make appropriate arrangements.

   b. It is important that you not fall behind. Students who get behind on their assignments are often unsuccessful in the course. If something happens in your life that makes it a real hardship for you to meet deadlines, please stop by my office, email me, or call **BEFORE** you are so far behind you can't finish the course. I'm here to help you learn and reach your goals, and I'm always willing to work with my students to make that happen.

   c. When you've missed a class, it is your responsibility to contact classmates and/or see me in my office to get the information you missed. The best place to talk to me about a missed class is **<u>in my office</u>**.

   d. **MAKE-UP HW, QUIZZES & TESTS DNE = DO NOT EXIST!!!**

   e. **<u>In case of an emergency</u>**: If you are injured, have a family emergency, are called to jury duty or subpoenaed as a witness in a legal action or <u>unable to make it to class for **two or more days**</u> first contact me immediately and then contact the Vice President of Student Services, GW 412A or 268-2210. Notice will be sent to all your instructors.

III. Last date to change to Audit Status or to Withdraw with a W Grade: Thursday November 12, 2015

STUDENT RIGHTS & RESPONSIBILITIES: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

Academic Dishonesty: (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu . The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

What if I need HELP ???

We have a variety of resources on campus:

1. Come to me – ask me any question or stop by just to chat ☺
2. **Math Learning Center in PS 104**. We are fortunate to have this resource available to us. The MLC has student helpers,staff, videos, extra books and computers to accomodate any learning style.
3. MML – My Math Lab has numerous videos, study tools, step-by-step instructions, extra practice problems, extra tests and quizzes, etc…
4. Internet – search for videos. Some popular sites are:
    a. Khan Academy
    b. That Tutor Guy
    c. Educationalportal.com
    d. Wolf Ram Alpha
5. Ask a friend. Sometimes someone in class can explain it in a different way, so you can understand it better.
6. Go to a past instructor. We all welcome familiar faces.

"My will shall shape my future. Whether I fail or succeed shall be no man's doing but my own."

– Elaine Maxwell

Getting a college degree is a JOB that takes time and work. Make it a priority.

ASSIGNMENT (HW, quizzes, tests, and all written work) EXPECTATIONS:
1. DO ALL work in pencil - we are all human (I hope so ☺) and make mistakes, thus it is a good idea to use pencil not pen; assignments with scribble and scratch marks are not an acceptable form of collegiate work.
2. DO include the original problem if working a problem from a worksheet.
3. DO work on a separate sheet of paper when given a worksheet.
4. DO number each problem.
5. DO skip lines between each problem.
6. DO each individual problem vertically, i.e. work in a downward manner.
7. DO SYW – Show Your Work
    a. Words of wisdom from a civil engineer and project manager: *"Presentation matters, you can be the best technical person in the world and be correct, but if you cannot convey it properly to the right person at the right time, none of it matters."*
8. DO use your calculator appropriately.
9. DO use graph paper when graphing is required.
10. DO use paper – do not try to scrunch it all on the front side of one piece of paper.
11. DO underline your final answer with 2 colored lines.
12. DO use a ruler where appropriate.
13. DO fold all assignments lengthwise in half i.e. fold it so the heading is on the inside and in half, then put your full name on the outside. (This is due to FERPA/privacy laws)

Work will NOT be accepted if:
1. It is late.
2. It is done in pen.
3. There is no work when work is requested.

GENERAL CLASS EXPECTATIONS: We are all here for the same reason – to learn, master and feel better about our math skills, therefore please **respect one another and every individual's right to learn**.

1. DO turn OFF all cell phones.
2. DO sit as close to the door as possible if you are chronically late.
3. DO listen. Please be considerate when someone else is asking a question – **listen** – you may learn something you didn't know.
4. DO ask questions. If you have a question while I am lecturing, ask me.
5. DO throw away your trash at the end of class, not during.

I am here every day and welcome questions, comments, or just plain conversation – feel free to stop by!

☺ See you there…PS129.

☺Welcome ☺
Below are my Office Hours
*** If you cannot make one of the listed times listed please let me know so we can schedule a different time. ***

NAME: Tracey E. Hollister **OFFICE:** PS 129 **SEMESTER:** FALL 2015 **DEPARTMENT:** Mathematics **EXT:** 2545 **DIVISION:** Physical Science					
	MONDAY	**TUESDAY**	**WEDNESDAY**	**THURSDAY**	**FRIDAY**
7 - 7:50AM					
8 - 8:50 AM	MATH 2200-01 Calculus I PS 109	MATH 2200-01 Calculus I PS 109	MATH 2200-01 Calculus I PS 109	MATH 2200-01 Calculus I PS 109	MATH 2200-01 Calculus I PS 109
9 - 9:50 AM	MATH 0920-01 Elementary Algebra PS 109	MATH 0920-01 Elementary Algebra PS 109	MATH 0920-01 Elementary Algebra PS 109	MATH 0920-01 Elementary Algebra PS 109	
10 -10:50AM	OFFICE HOUR		OFFICE HOUR		OFFICE HOUR
11-11:50AM		OFFICE HOUR		OFFICE HOUR	
12-12:50PM			OFFICE HOUR		
1-1:50 PM	MATH 0930-02 Intermediate Algebra PS 107	MATH 0930-02 Intermediate Algebra PS 107	MATH 0930-02 Intermediate Algebra PS 107	MATH 0930-02 Intermediate Algebra PS 107	
2 -2:50 PM		MATH DEPARTMENT MEEETING			
DISTANCE ED.	MATH 1400-N1 Pre-Calculus Algebra				

NOTE: I am usually in my office when I am not teaching; please feel free to stop by. ☺