

MATH 123- U820T- CALCULUS I
4 Credit Hours
Online via D2L
The University of South Dakota
Summer 2018

- **Instructor:** Catalin Georgescu, Associate Professor, PhD.
Department of Mathematical Sciences
217 Patterson Hall, 414 E Clark Street
Vermillion, SD 57069
- **Time:** May 14th-June 22nd
- **Instructional Method:** This course will be instructed online via *WebAssign* at <http://www.webassign.net/> and Desire2Learn (abbreviated as D2L) at <http://d2l.sdbor.edu>
- **Email:** catalin.georgescu@usd.edu or D2L Course Mail (preferred)
- **Office hours: Office hours: Tuesdays and Thursdays 11:00 a.m.-12:00 p.m. CT**
These will be live sessions via *Blackboard Collaborate* in which you will have the opportunity to directly address questions to me and listen to other students' questions. Attendance is not mandatory, but it is highly recommended. There will be a link about how to access these live sessions on D2L. I also recommend using a **USB multi-media headset** (earphones with a microphone) so that you can ask questions instead of typing them.
- **Catalog Course Description:** The study of limits, continuity, derivatives, applications of the derivative, antiderivatives, the definite and indefinite integral, and the Fundamental Theorem of Calculus.
- **Important Dates:** Drop/Add date: **May 17th**, for full refund. **June 11th**, drop with a W Day.
- **Prerequisite:** Math 115 (Precalculus) or appropriate mathematics placement or consent of instructor.
- **Course goals:**

Board of Regents Goal # 5: *Students will understand and apply fundamental mathematical processes and reasoning.*

1. Use mathematical symbols and mathematical structure to model and solve real world problems.

- Students will learn fundamental concepts of Calculus (and of Mathematics in general) (limit, continuity, differentiability, integrability) and will learn how to use them in real

life situations based on a variety of techniques and applications (implicit differentiation, optimization, graphing functions, computing areas, volumes, work).

2. As a result of taking this course students will demonstrate appropriate communication skills related to mathematical terms and concepts.

- Communication skills will be developed and assessed via the tests that will be given, where students will be required to express themselves in a rigorous, organized manner.

3. As a result of taking this course students will demonstrate the correct use of quantifiable measurements of real world situations.

- Most of the so-called word problems in this book require a correct use of units. Each chapter of the book contains applied exercises where the student can practice the theoretical skills gained in that section.

Course Requirements:

1. **Course Materials:** WebAssign web access code: Students **are required to purchase** *Calculus- Enhanced WebAssign Access* (by Cengage) code. This may be bought as a stand-alone access code from the bookstore (ISBN: 9781285858265). For that, follow the link **Order books** from the webpage <http://www.usd.edu/usd-online/courses/summer-2018/online-courses-h-n>. You will need a high speed internet connection. Once you registered for our course, you will have access to an interactive e-book, supplementary materials, homework, quizzes, chapter tests, the final exam, and the course grades. We will cover chapters 1 through 5 from Stewart's Calculus 8th Edition. Some sections will be skipped, see the tentative schedule below.

Obtain WebAssign code access and enroll in our course by Monday, May 14, so there is no delay in completing coursework. You will be dropped from the course if you do not have access to the course by Friday May 18th.

2. **Optional Materials:**
 - **EBK Study Guide.** ISBN-13: 9781305465565; this study guide can be found following the same link as above.
3. **Calculators:** A graphing calculator is required for the course. A TI-83 or TI-84 graphing calculator is recommended. Nevertheless any calculator or device that does symbolic calculation will not be allowed (like TI-89, TI-92, TI-NSpire).

Those students who continue on to register for the online Math 125 Calculus II course in the summer of 2018 will be able to use their WebAssign access code.

Expectations:

Students:

This is a very fast pace course. To get good results, your effort should be significant and sustained.

- Check D2L daily for messages, assignments, etc.
- Utilize D2L email to contact personally.
- Use the discussion board to post questions on class content and procedures.
- Complete all assignments in the required time frame, before the specified due date, and students are expected to work ahead of the recommended Course Schedule, submitting each assessment at least one day before it is due to avoid potential conflicts. This is fast pace course so it is very important to keep up with all assignments.
- Use proper email and chat etiquette when using D2L and during *Blackboard Collaborate* sessions. You can be expelled from the course for inappropriate behavior. See also policies implemented.
- In case of serious emergencies that put you in the impossibility to complete assignments, I expect to be notified right away. Remember that you should expect to provide some proof regarding the occurrence of that event.

Instructor:

- Be available to answer students' questions, by promptly replying to your email (within at most 24 hours during weekdays, at most 48 hours during weekends).
 - Fairness and honesty in all aspects of the course.
 - Abide by all policies contained in this syllabus and those by the Online Orientation Guide, The University of South Dakota, and the South Dakota Board of Regents.
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Policies implemented:

1. **Freedom in learning:** Under Board of Regents and University policy student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact the dean of the college or school that offers the class to initiate a review of the evaluation.

2. **Diversity and Inclusive Excellence:** "The University of South Dakota strives to foster a globally inclusive learning environment where opportunities are provided for diversity to be recognized and respected."

3. **Academic Integrity policy:** "The College of Arts and Sciences considers plagiarism, cheating, and other forms of academic dishonesty inimical to the objectives of higher education. The College supports the imposition of penalties on students who engage in academic dishonesty, as defined in the "Conduct" section of the University of South Dakota Student Handbook.

No credit can be given for a dishonest assignment. A student found to have engaged in any form of academic dishonesty may, at the discretion of the instructor, be:

a. Given a zero for that assignment. b. Allowed to rewrite and resubmit the assignment for credit. c. Assigned a reduced grade for the course. d. Dropped from the course. e. Failed in the course.”

3. Disability Accommodation: Any student who feels s/he may need academic accommodations or access accommodations based on the impact of a documented disability should contact and register with Disability Services during the first week of class. Disability Services is the official office to assist students through the process of disability verification and coordination of appropriate and reasonable accommodations. Students currently registered with Disability Services must obtain a new accommodation memo each semester.

Please note: if your home institution is not the University of South Dakota but one of the other South Dakota Board of Regents institutions (e.g., SDSU, SDSMT, BHSU, NSU, DSU), you should work with the disability services coordinator at your home institution.

Ernetta L. Fox, Director

Disability Services, Room 119 Service Center

(605) 677-6389

Web Site: www.usd.edu/ds

E-mail: disabilityservices@usd.edu

Evaluation Procedures:

- All assessments are WebAssign assessments and are due according to the dates listed on our Course Schedule. Due dates are in Central Time. They are all available from the beginning of the course.
- Extensions on quizzes, chapter tests or final exams are in general not permitted, except emergency situations when some proof will be required and if extension is allowed (this is solely to my discretion) the score will receive a 10% penalty.

1. Homework: After you cover the theoretical part of each section, you should attempt the corresponding homework. This homework is not graded and will have an unlimited number of attempts. But the homework is a crucial ingredient in understanding the material and the quizzes and exams will contain similar problems.

2. Quizzes: Each quiz is based on problems from the associated sections. There are a total of ten quizzes – two quizzes for each chapter. **You are allowed up to 3 attempts on each quiz**, and after submitting each attempt, you will be able to see your score and which questions were answered correctly and which questions were answered incorrectly. Only your highest quiz score attempt will be used for a particular quiz grade. Quiz attempts can be completed any time before the due

date. Submitting each quiz at least one day before it is due gives you time to clear up any mistakes in mathematical thinking and you may take advantage of making another attempt on a quiz to earn a better quiz score as well as avoid having a zero recorded as a quiz grade.

3. Tests and Final Exam: Complete the associated quizzes prior to accessing each chapter test. Each chapter test is based on problems from the associated quizzes. The final exam includes material from chapters two through five. You will be allowed up to two hours to complete each proctored chapter test and final exam. **Your lowest score out of the six total proctored assessments will be dropped. If you complete the five chapter tests but do not complete the final exam, then the resulting final exam score of 0% will be dropped.** In this way, the final exam is optional. If you complete all six proctored assessments (each chapter test and the final exam), then your lowest score out of the six assessments will be dropped. Complete and submit each chapter test or final exam assessment at least one day before the due date to avoid potential conflicts and to avoid receiving a zero score.

Quizzes	300 Points=10×30 Points
Chapter Tests	500 Points=5×100 Points
Final Test	100 Points
Total	800 Points

Grade	Points
A	720-800
B	640-719
C	560-639
D	480-559
F	Below 480

Most of the assignments have a higher score than the one indicated above. This allows for the possibility of getting a bonus on your quizzes and tests.

You can check your current grade in WebAssign. Final letter grades will be recorded in WebAdvisor.

Proctoring: Students are required to take the chapter tests and final exam online within *WebAssign Lockdown Browser* in the presence of an approved proctor. There are some system requirements for this Lockdown Browser to work. Refer to instructions in WebAssign. Also download the proctor/test form found on the course homepage of D2L or at <http://www.usd.edu/cde/up;oad/Proctor-Form.pdf>

For students who complete and submit the proctor form for proctor approval, the Continuing Education staff will verify your proctor and e-mail a password to your proctor the week prior to each chapter test and final exam and you must schedule your chapter tests and final exam with your proctor at least two business days in advance. **It is your responsibility to contact your proctor to see if your password has arrived.**

You will not be allowed to have any assistance, notes, books (in any form), cell phones, calculators which do symbolic manipulation or any additional electronic resources while taking any chapter tests or final exam. Prior to taking any proctored assessment, be sure to have a reliable internet connection with appropriate WebAssign downloads including *WebAssign Lockdown Browser* (which prohibits student access to online resources) installed on the computer utilized during testing. Also be sure that you have the allowed two-hour time frame available without interruptions. **Do not exit out of the assessment as you will not be allowed to resume the assessment** and you will be blocked from all WebAssign assessments which will cause you delay. When completing a proctored assessment, occasionally go to another problem on the assessment to avoid having the computer “go to sleep”. Click on *Submit* to submit your assessment. Your proctor will sign a document attesting that you completed the assessment in his/her presence. **Failure to include your proctor’s signature may result in a zero on the chapter test or final exam**, so make sure this is done for each chapter test and final exam.

- If you live in one of the listed locations Proctor Centers, you must use the testing center and contact the site nearest you to schedule your chapter tests and final exam at least 24 hours in advance. You do not need to fill out the proctor form.
- If you will not be taking proctored assessments at a Proctor Center, you will need a proctor. You must complete and submit the proctor form for proctor approval before or on Friday, May 18th. You may send the completed Proctor Form to Continuing Education at the fax number found on the Proctor Form.
- Only an approved proctor or proctor from a Proctor Center will permit you access to a chapter test or final exam.

Tentative Course Outline:

Week	Date	Topic/Suggested way of covering the material	Assessment Due:
1	MAY 14	1.1 Four Ways to Represent a Function. 1.2 A catalog of essential functions.	
	15	1.3 New functions from old functions. 1.4 The tangent and velocity problems.	
	16	1.5 The limit of a function. 1.6 Limit laws	
	17	1.8 Continuity.	Due by 11:59 pm CT, May 17: Quiz 1 Sec 1.1-1.5;
	18	2.1 Derivatives and Rates of Change. 2.2 The Derivative as a Function	

2	21	2.3 Differentiation Formulas.	
	22	2.4 Derivatives of Trigonometric Functions.	Due by 11:59 pm CT, May 22: Quiz 2 Sec 1.6,1.8;
	23	2.5 The Chain Rule	
	24	2.6 Implicit Differentiation.	
	25	2.7 Rates of Change	Due by 11:59 pm CT, May 25: Test 1 (Chapter 1)
3	28	2.8 Related Rates.	
	29	3.1 Maximum and Minimum Values. 3.2 The Mean Value Theorem	Due by 11:59 pm CT, May 29: Quiz 3 Sec 2.1-2.5;
	30	3.3 Derivatives and Shape of the Graph 3.4 Limits at Infinity.	Due by 11:59 pm CT, May 30: Quiz 4 Sec 2.6-2.8;
	31	3.5 Summary of Curve Sketching	
	JUNE 1	3.7 Optimization Problems.	Due by 11:59 pm CT, June 1: Test 2 (Chapter 2)
4	4	3.8 Newton's Method	Due by 11:59 pm CT, June 4: Quiz 5 Sec 3.1-3.4;
	5	3.9 Antiderivatives.	
	6	4.1 Areas and Distances 4.2 The Definite Integral	
	7	4.3 The Fundamental Theorem of Calculus	Due by 11:59 pm CT, June 7: Quiz 6 Sec 3.5,3.7,3.8,3.9;
	8	4.4 Indefinite Integral.	Due by 11:59 pm CT, June 8: Test 3 (Chapter 3)
5	11	4.5 Substitution Rule.	
	12	5.1 Areas between curves.	Due by 11:59 pm CT, June 12: Quiz 7 Sec 4.1-4.3;
	13	5.2 Volumes.	
	14	5.3 Volume by Cylindrical Shells.	Due by 11:59 pm CT, June 14: Quiz 8 Sec 4.4-4.5;
	15	5.4 Work. 5.5 Average Value of a function.	Due by 11:59 pm CT, June 15: Test 4 (Chapter 4)
6	18		
	19		Due by 11:59 pm CT, June 19: Quiz 9 Sec 5.1;
	20		Due by 11:59 pm CT, June 20: Quiz 10 Sec 5.2-5.5;
	21		Due by 11:59 pm CT, June 21: Test 5 (Chapter 5)
	22		Due by 11:59 pm CT, June 22: Final Exam (Comprehensive)