COURSE: MATH 181 – CALCULUS I
SECTIONS: Sections 2002, 2003, and 3001
CREDIT: 4 Credit Hours
TIME: MW: 2:00 pm – 3:50 pm and 6:00 pm – 7:50 pm (Cheyenne)
  TR: 9:00 am – 10:50 am (West Charleston)
LOCATION: Cheyenne: S-108 (2 pm), Cheyenne: S-125 (6pm), and West Charleston:
  C-276
INSTRUCTOR: Chris King
OFFICE: S-143 B (Cheyenne Campus)
OFFICE HOURS: MW: 11:30 am – 12:30 pm and 4:00 pm – 4:30 pm (Cheyenne Campus)
  TR: 8:00 am – 9:00 am (West Charleston Math Resource Center)
EMAIL: christopher.king@csn.edu
WEBSITE: http://sites.csn.edu/cking

COURSE DESCRIPTION:
Differentiation and integration of algebraic and transcendental functions with
applications.

PREREQUISITES AND TRANSFERABILITY:
Math 126 AND Math 127 or Math 128 all with a grade of C or better; or a satisfactory
ACT/SAT/Placement Test score

TEXTBOOK:
University Calculus Elements with Early Transcendentals by Hass, Weir, and Thomas,
1st Ed.

CALCULATORS:
A graphing calculator is required for this course. TI-83 or 84 Plus is recommended. NO
TI-89 or any calculator with symbolic manipulation capability is allowed.

OBJECTIVES:
Upon completion of the course, the student should be able to:
  a. Analyze the concept of function limits and continuity.
  b. Differentiate functions using fundamental rules.
  c. Perform differentiation techniques such as the general power rule, chain rule,
     product rule and quotient rule.
  d. Evaluate definite and indefinite integrals.
  e. Differentiate and integrate transcendental functions.
  f. Apply and extend all concepts.
ATTENDANCE:
In order to be successful in this class, attendance is critical. Come to class prepared. Each student should read the section(s) to be discussed during the lecture, bring paper, pencils or black/blue pens etc. I do NOT have extra pens, pencils, or paper to give you. In addition, I don’t loan out my calculator. It is your responsibility to make sure that you have a calculator with you at all times. If you miss class, it is your responsibility to obtain missed material and to get the assignment from another student. Please turn off electronics devices before entering the classroom. If you come to class late, please be courteous and quiet. Do not disrupt the class. No eating is allowed in the classroom.

IF YOU QUIT ATTENDING AND DO NOT OFFICIALLY WITHDRAW, YOU WILL RECEIVE A GRADE BASED ON WHAT YOU HAVE EARNED IN THE CLASS. IT IS THE POLICY OF CSN THAT THE INSTRUCTOR CAN NOT ISSUE “W” TO A STUDENT.

HONESTY:
The instructor assumes honesty on the part of all students; however, cheating, plagiarism, and other acts of academic dishonesty are held as serious offenses. Instructors have the responsibility to report any such incident in writing to the administration. Students should refer to http://www.csn.edu/pages/3342.asp for more information about academic dishonesty and integrity.

COUNSELING/ADVISING:
The purpose of counselors and advisors is to help students select courses, complete degree audits, obtain transfer information, and provide personalized assistance in developing educational and vocational plans appropriate to personal interests and abilities of each student. Contact information: CHARLESTON Bldg. D – Lobby, 651-5670; CHEYENNE E-107 Student Services Area, 651-4049; HENDERSON Bldg. B - Student Services Area, 651-3165

FACULTY E-ALERT (THE ELECTRONIC EARLY WARNING SYSTEM):
The Faculty E-ALERT system is used by faculty members as a confidential means to submit, to Retention Services, the names of students having academic problems in a class so that they can be offered timely assistance. Faculty places the referral through CSN’s restricted Web Grading system. The E-Alert System is managed by the Office of Student Retention Services.

MATH RESOURCE CENTERS:
The Math Resource Centers offer FREE individual and group, drop-in tutoring assistance in various levels of math and science. Contact information: CHARLESTON Bldg. K – Room 406, 651-7615; CHEYENNE Room 2651, 651-4088; HENDERSON Bldg. C – Room 119, 651-3167.
RETENTION/STUDENT SUCCESS SERVICES:
Trained specialists/advocates help students assess personal strengths and limitations, determine the root of a variety of academic struggles, develop college success strategies, implement action plans, provide tools to navigate the educational system, show the availability campus and community resources, and give direction on how to connect to campus life. Contact information: CHARLESTON Bldg. B-119, 651-7367; CHEYENNE E-120 Student Services Area, 651-2626; HENDERSON Bldg. B – 130, 651-3103.

TRIO STUDENT SUPPORT SERVICES:
The Trio Student Support Services Center offers support for first-generation and disabled college students, providing information for financial aid eligibility, tutoring, academic advising, career exploration, college-transfer assistance, and the development of college success strategies. Contact information: CHEYENNE E-109, 651-4441.

TUTORIAL SERVICES:
All CSN students are offered an unlimited amount of free tutoring. To make arrangements for this benefit, you must take your semester schedule to Tutorial Services at the campus of your choice, and activate your CSN student email account. The earlier you apply for help, the more likely you are to succeed. Contact information: CHARLESTON Bldg. D – Room 203, 651-5732; CHEYENNE E-201 (Library), 651-4232; HENDERSON Bldg. C – Computer Lab, 651-3125.

GRADING:
GRADING BREAK DOWN:
3 Regular Tests: 100 points each
2 Skill Tests: 100 points each
2 Projects: 50 points each
Homework: 150 points
Comprehensive Final Exam: 250 points

GRADING SCALE:
A: Above 899.4
B: 799.5 – 899.4
C: 699.5 – 799.4
D: 599.5 – 699.4
F: Below 599.5

EXAMS:
Regular exams: There will be 3 regular in-class exams. The dates of these exams are listed in the schedule. Each regular exam will be designed to test your understanding of the material covered in class and in the homework assignments. There will be no makeup on a missed exam for any reason.
Skill exams: There will be 2 skill in-class exams. The dates of these exams are listed in the schedule. The first skill exam will test your knowledge over derivatives and the second will test your knowledge over integration. There will be no makeup on a missed exam for any reason. Here are the guidelines for the skill exams:

- These tests will have 20 questions and the answers will be graded strictly right or wrong.
- You will have two changes to pass this test. To pass you need to get 16 out of 20 right.
- During the first time taking the exam, if you get 16 out 20 questions correct, you will receive 100% for the test. If you don’t get 16 questions correct, you fail and must retake the test.
- On the second time taking the exam, if you get 16 or more questions correct, the highest you can make is 80%. If you get less than 16 questions correct, you will get the score that you earn.
- All second testing for the skill exams must be completed within 1 week of when the exam is returned to the class.
- The second chance can be done in the testing center or on the set day after class.
- If you miss the first time the skill exam is given, you automatically be graded on the conditions for the second testing for the skill exam.

Final exam: There will be 1 in-class comprehensive final exam. The date of this exam is listed in the schedule. There will be no makeup on a missed exam for any reason. Since the final exam is comprehensive, you will have the opportunity to replace one of your lowest regular exam score with the score that you make on the final exam, provided you score higher on the final than your lowest regular exam score. If you miss more than one regular exam, you will get a zero for each one missed with no chance to make-up/replace the grade.

HOMEWORK: There will be assignments that will be provided from the textbook for practice. For the assignments that will count toward the homework points, these will be assignments that I will make up and post on my website. The assignments will need to be printed off and completed by the next class meeting.

PROJECTS: There will be projects in this course that will be applications of material that is covered in the course. The projects will be in-class or out of class group activities. For each project, students will be asked a series of questions that will guide them through it. Students will work as a group to answer the questions within the project during the allotted time. If a student misses a project day, there will be no chance to make up the project. It is extremely important to ensure that you are present on these days.
STUDYING: some hints for studying/learning Mathematics are:

a. Attend every class and pay attention.

b. Practice is the key to success. Learning Math is an active process. You must work problems; the general rule of thumb is for students to spend 2 hours of time outside of class for every hour inside class. Utilize tutors, computer tutorials, and other study aids.

c. Mistakes are a natural part of the learning process. Do not be frightened by them, but profit by them.

d. Keep up with assignments. Moderate daily study is much more effective than intensive stretches before an examination. Do not cram for an exam.

e. Ask questions.

IMPORTANT DATES:

January 19th        MLK Holiday
January 20th       Spring Semester Begins
February 16th     President’s Day Holiday
March 6th           Last day to apply for Spring 2015 Graduation
March 16 – 22    Spring Recess
April 3rd        Last day to change from credit to audit
April 3rd            Last day to withdraw from a class with a “W”
May 17th              Spring Semester Ends

CLASSROOM BEHAVIOR:

Instructors have the responsibility to set and maintain standards of classroom behavior appropriate to the discipline and method of instruction. Students may not engage in activity that the instructor deems disruptive or counterproductive to the goals of the class. Instructors have the right to remove offending students from class. Repetition of the offense may result in expulsion from the course. PLEASE TREAT ALL OTHER STUDENTS WITH RESPECT. AS A MATTER OF COMMON COURTESY TO OTHER STUDENTS AND THE INSTRUCTOR, PLEASE:

a. Turn off cell phones or place on vibrate. Leave the room if necessary to answer phones. There will be NO cell-phone, headset, internet use or texting during this class.

b. Do not disrupt class by talking to your neighbor. There are to be no “sidebar” conversations.

c. Be on time to class and attend all classes. Do not schedule appointments, etc. during scheduled class times.

d. Don’t just walk out of class: it is rude and disruptive. If you have a prior commitment, which absolutely has to be made for a time during class, inform the instructor at the beginning of the class.

e. Don’t waste class time asking the instructor to re-do material you were absent for or did not complete in the homework: use videos, computer tutorials, tutors, or instructor office hours.

f. Pay attention. Participate fully in class activities.
g. In the event that a student finds another student’s words, actions or demeanor offensive, please inform instructor.

Student’s Rights:
Student’s rights and responsibilities pertaining to CSN policies and services can be found in the College Catalog and on the CSN website http://www.csn.edu/pages/660.asp

DRC:
If you have a documented disability that may require assistance, you will need to contact the Disability Resource Center (DRC) for coordination of your academic accommodations. The DRC is located in Student Services on each campus. For Henderson the number is 651-3795, and the Cheyenne number is 651-4045. For those students who would like to earn a little extra cash, stop by the DRC to fill out a job interest card. The DRC office hires students as note takers, proctors, scribes and research assistants as needed.

Libraries:
The libraries offer many workshops that may or may not pertain to this class throughout the semester. The schedule can be found at www.csn.edu/LibraryWorkshops or by calling 651-5729 for more information.

SAFETY:
Please note emergency exits. Please inform instructor of any environmental hazards. A copy of the Mathematics departmental safety plan is on file at the Mathematics Department office at the Cheyenne campus.
<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review of Graphs and Models / Functions</td>
<td>Review</td>
</tr>
<tr>
<td>2</td>
<td>Inverse Functions</td>
<td>Review</td>
</tr>
<tr>
<td>3</td>
<td>Exponential and Logarithmic Functions</td>
<td>Review</td>
</tr>
<tr>
<td></td>
<td>*Test 1 – February 2\textsuperscript{nd} (January 29\textsuperscript{th})</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rates of Change/Limit Laws</td>
<td>1.3, 1.4</td>
</tr>
<tr>
<td>5</td>
<td>Precise Definition of a Limit</td>
<td>1.5</td>
</tr>
<tr>
<td>6</td>
<td>Continuity and One-Sided Limits</td>
<td>1.6, 1.7</td>
</tr>
<tr>
<td>7</td>
<td>Limits Involving Infinity</td>
<td>1.8</td>
</tr>
<tr>
<td>8</td>
<td>Tangents and Derivatives at a Point</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>*Test 2 – February 18\textsuperscript{th} (February 12\textsuperscript{th})</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Derivative as a Function/Derivative Rules</td>
<td>2.2, 2.3</td>
</tr>
<tr>
<td>10</td>
<td>Rate of Change/Derivative of Trig</td>
<td>2.4, 2.5</td>
</tr>
<tr>
<td>11</td>
<td>Exponential Function/The Chain Rule</td>
<td>2.6, 2.7</td>
</tr>
<tr>
<td>12</td>
<td>Implicit Differentiation/Inverse Function/Logs/Inverse Trig</td>
<td>2.9-2.11</td>
</tr>
<tr>
<td></td>
<td>*Skill Test 1 – March 9\textsuperscript{th} (March 5\textsuperscript{th})</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Related Rates</td>
<td>2.12</td>
</tr>
<tr>
<td>14</td>
<td>Extrema Values of Functions</td>
<td>3.1</td>
</tr>
<tr>
<td>15</td>
<td>Rolle’s Theorem / Mean Value Theorem</td>
<td>3.2</td>
</tr>
<tr>
<td>16</td>
<td>Increasing/Decreasing Functions / First Derivative Test</td>
<td>3.3</td>
</tr>
<tr>
<td>17</td>
<td>Concavity / Second Derivative Test</td>
<td>3.4</td>
</tr>
<tr>
<td>18</td>
<td>Optimization Problems</td>
<td>3.6</td>
</tr>
<tr>
<td>19</td>
<td>L'Hopital’s Rule</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>*Test 3 – April 8\textsuperscript{th} (April 7\textsuperscript{th})</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Antiderivatives</td>
<td>4.1</td>
</tr>
<tr>
<td>21</td>
<td>Integration by Substitution</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>*Skill Test 2 – April 22\textsuperscript{nd} (April 21\textsuperscript{st})</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Definite Integrals</td>
<td>4.3, 4.4</td>
</tr>
<tr>
<td>23</td>
<td>Integration by Substitution</td>
<td>4.6</td>
</tr>
<tr>
<td>24</td>
<td>Area/Riemann Sums</td>
<td>4.2</td>
</tr>
<tr>
<td>25</td>
<td>The Fundamental Theorem of Calculus</td>
<td>4.5</td>
</tr>
<tr>
<td>26</td>
<td>Area Between Curves</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>*Final Exam – May 11\textsuperscript{th} (May 12\textsuperscript{th})</td>
<td></td>
</tr>
</tbody>
</table>

Note: Date in the parentheses is for Tuesday and Thursday class.

Disclaimer
* The instructor reserves the right to modify the above schedule as necessary. It is the student’s responsibility to be aware of any changes made. The instructor also reserves the right to change the schedule in any manner at any time with written notification.
I, ___________________(Print your name), acknowledge that I have read the syllabus and understand what is expected of me in this class. I agree to the policies set forth for this class with my signature.

Signature:____________________________________