COURSE: MATH 182 – CALCULUS II  
SECTION: Section 3002  
CREDIT: 4 Credit Hours  
TIME: Tuesday and Thursday 6:00 pm – 7:50 pm  
LOCATION: West Charleston B-139  
INSTRUCTOR: Chris King  
OFFICE: S-143 B (Cheyenne Campus)  
OFFICE HOURS: MW: 1:00 pm – 2:00 pm (Cheyenne Campus), TR: 4:30 pm – 6:00 pm (West Charleston Math Resource Center)  
EMAIL: christopher.king@csn.edu  
WEBSITE: http://sites.csn.edu/cking

COURSE DESCRIPTION:  
Topics include further applications and techniques of integration with applications, polynomial approximations, sequences, and series.

PREREQUISITES AND TRANSFERABILITY:  
Math 181 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 differential equations.  
  b. Evaluate solids of revolutions and arc lengths.  
  c. Perform integration techniques such as integration by parts, trigonometric integrals, trigonometric substitution, partial fractions, and using tables.  
  d. Analyze indeterminate forms and work with L’Hopital’s Rule.  
  e. Evaluate sequences, series, tests of convergence/divergence, and Taylor Polynomials.  
  f. Find the slope of a tangent line to a polar graph and to a curve given by a set of parametric equations.  
  g. Find the arc length of a polar graph and of a curve given by a set of parametric equations.
h. Find the area of a surface of revolution (parametric and polar form).
i. 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.
RENTENTION/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:
The Tutorial Services’ mission is to foster a positive and caring learning atmosphere that supports classroom instruction and overall student success. One-on-one tutoring and drop-in labs are available – visit www.csn.edu/tutoring for more information. Tutors are available in most subjects to provide learning support and help you improve your academic motivation and performance, enhance your self-esteem and confidence as an independent learner, and achieve your educational, professional and personal goals. Register for FREE and UNLIMITED one-on-one tutoring and schedule appointments at www.mywco.com/csntutoring or contact one of our offices at: Charleston Campus – (Room D-203 - 651-5732) – Cheyenne Campus (Room S-247 - 651-4232) – Henderson Campus (Room B-201 - 651-3125).

GRADING:
GRADING BREAK DOWN:
3 Test: 150 points each
2 Projects: 50 points each
Homework: 150 points
Comprehensive Final Exam: 300 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: There will be three in-class exams and a comprehensive, in-class final exam. The dates of these exams are listed in the schedule. Each 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. Since the final exam is comprehensive, you will have the opportunity to replace your lowest exam score with the score that you make on the final exam, provided you score higher on the final than your lowest 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 are group activities that require students to work together to complete the required tasks. 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.

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:
August 25th Classes begin
September 1st Labor Day
October 10th Last day to apply for Fall 2014 Graduation
October 31st Nevada Day
November 3rd Final date to withdraw from class
November 11th Veteran’s Day
November 27th – 30th Thanksgiving Holiday
December 17th 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.

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.

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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Area Between Two Curves</td>
</tr>
<tr>
<td>2</td>
<td>Volume: The Disk Method</td>
</tr>
<tr>
<td>3</td>
<td>Volume: The Shell Method</td>
</tr>
<tr>
<td>4</td>
<td>Arc Length and Surfaces of Revolution</td>
</tr>
<tr>
<td>5</td>
<td>Work (Optional)</td>
</tr>
<tr>
<td>6</td>
<td>Moments, Centers of Mass, and Centroids (Optional)</td>
</tr>
</tbody>
</table>

**Test 1: September 16th**

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Basic Integration Rules</td>
</tr>
<tr>
<td>8</td>
<td>Integration by Parts</td>
</tr>
<tr>
<td>9</td>
<td>Trigonometric Integrals</td>
</tr>
<tr>
<td>10</td>
<td>Trigonometric Substitution</td>
</tr>
<tr>
<td>11</td>
<td>Partial Fractions</td>
</tr>
<tr>
<td>12</td>
<td>Integration by Tables and Other Integration Techniques</td>
</tr>
<tr>
<td>13</td>
<td>Indeterminate Forms and L'Hopital's Rule</td>
</tr>
<tr>
<td>14</td>
<td>Numerical Integration</td>
</tr>
<tr>
<td>15</td>
<td>Improper Integrals</td>
</tr>
</tbody>
</table>

**Test 2: October 16th**

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Sequences</td>
</tr>
<tr>
<td>17</td>
<td>Series and Convergence</td>
</tr>
<tr>
<td>18</td>
<td>The Integral Test and p-Series</td>
</tr>
<tr>
<td>19</td>
<td>Comparisons of Series</td>
</tr>
<tr>
<td>20</td>
<td>Alternating Series</td>
</tr>
<tr>
<td>21</td>
<td>The Ratio and Root Tests</td>
</tr>
<tr>
<td>22</td>
<td>Taylor Polynomials and Approximations</td>
</tr>
<tr>
<td>23</td>
<td>Power Series</td>
</tr>
<tr>
<td>24</td>
<td>Representation of Functions by Power Series</td>
</tr>
<tr>
<td>25</td>
<td>Taylor and Maclaurin Series</td>
</tr>
</tbody>
</table>

**Test 3: November 20th**

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Slope Fields and Euler's Method</td>
</tr>
<tr>
<td>27</td>
<td>Differential Equations: Growth and Decay</td>
</tr>
<tr>
<td>28</td>
<td>Differential Equations: Separation of Variables</td>
</tr>
<tr>
<td>29</td>
<td>The Logistic Equation</td>
</tr>
<tr>
<td>30</td>
<td>First-Order Linear Differential Equations</td>
</tr>
<tr>
<td>31</td>
<td>Conics and Calculus</td>
</tr>
<tr>
<td>32</td>
<td>Plane Curves and Parametric Equations</td>
</tr>
<tr>
<td>33</td>
<td>Parametric Equations and Calculus</td>
</tr>
<tr>
<td>34</td>
<td>Polar Coordinates and Polar Graphs</td>
</tr>
</tbody>
</table>

**Final Exam: December 11th**

**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.
Turn In During the 1st Week of Class
Math 182

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: _______________________________