NORTHERN VIRGINIA COMMUNITY COLLEGE
ANNANDALE CAMPUS

COURSE SYLLABUS –Fall 2015
MTH 173 Calculus with Analytical Geometry I
Lecture Section 036N
Meeting Time: MON WED 3:30 PM- 6:05 PM
Room: CA 303
Instructor: Kummit Nong
Office: CT 134
Phone: 703 – 764- 5027
E-Mail: knong@NVCC.EDU
Office Hours: M W 12:00 – 2:00 , and T 4:30 – 5:30
Appt Hours: M W 10:30 – 12:00 , and T R 11:30 – 12:30PM

WEBSITE : blogs.nvcc.edu/knong/mth173


OBJECTIVES: This course is primarily for the student in mathematics, engineering, sciences, and in other areas requiring strong mathematical backgrounds. The general purpose is to give the student a basic understanding of the concepts of differential and integral calculus and to prepare the student for the second semester of calculus.

PREREQUISITE: MTH 166 or MTH 164 or (1) satisfactory score on an appropriate proficiency examination and (2) two units of algebra, one unit of geometry, and one-half unit each of trigonometry and precalculus. The TI-83 or TI-84 calculator is recommended. TI-89 or higher are NOT allowed on exams.

DESCRIPTION: Presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and an introduction to integration along with their applications. Designed for mathematical, physical and engineering science programs. Lecture 5 hours per week.

The student should be able to:

- Define a function, the limit of a function at a point, continuity at a point and differentiability at a point
- State and show uses of the Mean Value Theorem
- Compute the derivatives of polynomials, rational functions, and composite algebraic functions, and trigonometric functions, natural logarithmic and exponential functions
- Differentiate implicitly
- Apply the techniques of differential calculus to the problem of curve sketching
- Apply differentiating techniques to find velocity and acceleration and to solve related rate and maximum/minimum problems
- Define the anti-derivative of a function and define the Riemann integral
- Interpret the relationship between anti-differentiation and differentiation
- State and apply the Fundamental Theorem of Calculus
- State the important properties of the integral
- Solve problems involving anti-derivatives and areas
- State and use the Mean Value Theorem for Integrals
• Use approximation techniques in computing the definite integral
• Obtain competency in the use of a graphing utility and CAS in the topics below
• Obtain a balanced understanding of all of the above concepts graphically, numerically, and symbolically

Grading:
Weekly Homework (15%), two exams (20% each), Computer Project (10%) and Final exam (35%)

• There will be three computer projects using (MATLAB or FREEMAT) through out the semester. You can turn in your report as many time before the due date to get 100%.
• Each exam, you allow to have a 3 inches by 5 inches note card, closed book, closed note.
• No make up on any exam.

Your score will be converted to a letter grade based on the following scale:
100–90 = A, 89-80 = B, 79- 70 = C, 69- 60 = D, and 59 or below = F.

IT IS ALL STUDENTS RESPONSIBILITY TO KNOW WHAT HAPPENED IN CLASS AND ALL THE DATELINE ANNOUNCE IN CLASS. ALL DATE LISTED BELOW MAY CHANGE WITHOUT PRIOR NOTICE.

Classroom Policies:
• All students must abide by those classroom policies specified by NVCC in its College Catalog at www.nvcc.edu/resources/stuhandbook/.
• Honest and respectful relationship with all members of the class
• Regular attendance is recommended. It is the student's responsibility to inform instructor of any necessary absence.
• Verbatim copying other students' homework is not acceptable. All solutions must reflect your style of problem solving.
• Additionally, please turn off all phones and electronic devices (or place them on Vibrate" mode) during class. If you need to use your phone for any reason, to include checking email or looking at something on the internet. Please do it outside in the hallway.
• NOVA is a place for learning and growing. You should feel safe and comfortable anywhere on campus. In order to meet this objective, you should let your Instructor, his/her supervisor, the Dean of Students or Provost know if any unsafe, unwelcome or uncomfortable situation arises that interferes with the learning process.
• Inform the instructor within the first two weeks of classes if you have special needs or a disability that may affect your performance in this course.

Academic Honesty: As specified in the College Catalog (see website above), students are expected to follow maintain the highest standard of honor in all scholastic work. Academic dishonest will not be tolerated.

Students With Disabilities: Students with disabilities are encouraged to contact a counselor for disability services in CA112 to discuss possible accommodations. Once proper documentation has been received from the counseling services, the student should schedule an appointment with me to discuss/apply recommended accommodations. All information is kept confidential and may increase your chances of academic success.
Civility Statement: To promote a community of scholarship and civility, everyone is expected to be respectful, tolerant and courteous towards others at all times, adhere to college policies and procedures, and respect college property. Creating a culture of civility both inside and outside the classroom is everyone's responsibility.

Important Date: Students' responsibility to follow all important dates can be found at https://www.nvcc.edu/calendars/academic.html#fall

FINAL EXAM:

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<tr>
<th>Sections</th>
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<tr>
<td>P1</td>
<td>1—80 optional</td>
<td>3.3</td>
<td>1—55 odd, 81—100 odd</td>
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<td>P2</td>
<td>1—73 optional</td>
<td>3.4</td>
<td>1—55 odd, 69—80 odd</td>
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<td>P3</td>
<td>1—92 optional</td>
<td>3.5</td>
<td>1—82 (multiple of 3), 92—102 odd</td>
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<td>Ap C1</td>
<td>ALL optional</td>
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<td>1—34 optional</td>
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<td>ALL optional</td>
<td>3.7</td>
<td>1—26 odd, 29—36 all</td>
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<td>Ap C3</td>
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<td>1.5</td>
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