Junior Mth164/MTH 176, Pre-Calculus 2 and Calculus 1

Fall/Spring 2012-2013, Moore Lecture, CBGS

Julia Jones, Teacher

Chesapeake Bay Governor’s School of Marine and Environmental Science

Course Syllabus

Instructor Contact Information
Name: Julia Jones
Email: JJones@cbgs.k12.va.us.edu
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Instructor Availability:
Between 10:30-3:30 M-F
After Home school by appointment M-F
10:30-12:30 Sat by appointment

Response Time:
You can reach me by e-mail or text to the above personal number. I respond quickly to text messages but please put your course name and number in the subject line in both cases to expedite response. i.e. Jon Anderson MTH 164 can we meet for tutoring on Jul 3.
(I do not have full access to either device during the hours of 7:30 to 10:30. I usually respond within 24 hours during the week and 48 on weekends)

Course Description:
1st Semester MTH 164: Presents trigonometry, analytic geometry, and sequences and series.
2nd Semester MTH 175: a placement recommendation for MTH 175 and four units of high school mathematics including Algebra I, Algebra II, Geometry and Trigonometry or equivalent.

Class Meeting Times:
TWF 9:15-10:30 Blue week (we start on Blue week on Sept 4)
TTTHF 9:15-10:30 Green week

Exam Date: June 4-6 (day to be announced)

Other Dates of Importance:
1st semester: Labor Day Aug 31, Sept3, Thanksgiving Nov 21-25, Christmas Dec 24-Jan 2
2nd semester: Winter holidays Jan 21, Feb 18, Spring Break March 26-April 7, Memorial Day May 27.

****In case of an emergency that affects the meeting schedule for this class or the instructor’s availability, information will be announce on the radio and TV. Please sign up for RCC alert because if the college is closed the CBGS classes will be closed

Course Credit: 3 credits each semester for a total of 6 credits

Prerequisites:
1st Semester MTH 163 or equivalent.
2nd Semester Placement recommendation for MTH 175 and four units of high school mathematics including Algebra I, Algebra II, Geometry and Trigonometry or equivalent.
Objectives
As a result of the learning experience in this course, the student should be able to:

Math 164
- Evaluate trigonometric and inverse trigonometric functions
- Use trigonometric formulas to prove trigonometric identities, solve triangles, and trig equations
- Graph conic sections
- Create sequences and series (including arithmetic and geometric)
- Use a graphing utility as an aid in problem solving

Math 175
- Understand Limits, including asymptote and unbounded behavior
- Calculate limits using algebra
- Estimate limits from graphs and data
- Understand one-sided limits
- Understand continuity in terms of limits
- Learn the concept of the derivative—numerically, graphically and analytically
- Understand instantaneous vs average rate of change
- Learn to use tangent lines to a curve at a given point
- Understand speed, velocity and acceleration
- Understand related rates
- Be able to apply differentiation rules
- Understand maxima and minima (global/absolute, local/relative)
- Understand points of inflection
- Learn the characteristics of graphs of $f$, $f'$, $f''$ and their relationships to each other
- Be able to analyze curves: increasing/decreasing, concave up/down, notion of monotonicity
- Be able to optimize use of applications

Method of Instruction
The course content will be taught primarily through Moore’ Pedagogy style where the students will have a series of lectures one day with interactive self-paced interactive worksheets with ample class time being reserved for student questions and evaluation. Homework will be assigned on a regular basis covering material from the lectures and/or the textbook. Each student is expected to study the assigned material and to work all the assigned homework problems before coming to each class. Your success in the course will depend on it.

Instructional Materials

Graphing Calculator – A graphing calculator is an essential tool for this course and each student is expected to have one. The TI-83+ or TI-84 (silver edition) model is recommended because that is the model that will be used for demonstrations in class. The TI-92, TI-89 and similar calculators that possess a CAS (computer algebra system) WILL NOT BE PERMITTED ON TESTS. IF you choose to use a Casio, please understand it will not be covered in class.

Grading and Evaluation /Testing Policy
Supplies: You will want a 3-ring binder for each semester. All materials I give you (quizzes, tests, level worksheets, handouts ...) will be three-hole punched and need to be kept in your binders. BE ORGANIZED. Your homework done on loose leaf paper will have a section in this notebook. The notebooks will be collected at the
end of the nine-weeks and possible during the nine-weeks. You will also want a **spiral notebook** for examples given in class. Points will be awarded throughout the year for the following graded assignments: Quizzes & Tests, Projects, Level Worksheets, Participation, and Attitude & Effort. You should keep track of your grades in your Grade Tracker sheet in the front of your notebook binder. At any given time, you can figure out your current grade by dividing all the points you have earned by the total number of possible points.

Since mathematics is a process, I will be grading your work as well as the final answer. Therefore, you must show your work. Never leave a question Blank. We will have some take home and some in class test.

The following grading scale will be used to determine your final grade:

- **90-100%**  A
- **80-89%**  B
- **70-79%**  C
- **60-69%**  D
- **Below 60%**  F

**Attendance Policy**

Students are expected to attend ALL classes. Attendance will be reported to parents on interims and grade reports. In the event of five (5) or more absences in a marking period, a parent conference will be requested.

**Other Electronic Devices:**

Cell phones need to be off during class and out of sight. Texting will not be allowed during class time. Electronic media players (e.g. PDA, iPod, MP3 players) are not allowed to be used during class time or tests. Students may not use computers (PC, MAC, laptop or handheld) at any time during the class period or tests unless permission is granted by instructor. All other electronic devices not deemed appropriate by the instructor will not be allowed during class time. If a student violates the policy the first time the device will be taken and returned at the end of class and parents will be notified. The second offense will result in the cell phone being help after the second day of school. Additional violations will be sent to the home school as a third offense and actions will be determined by the school policy of cell phone use.

**Learning Sequence**  Will be placed on the Blog at the beginning of each Unit.