Syllabus: Calculus II

Course Description
This second course in calculus broadens and deepens the understanding of this beautiful subject begun in the previous course. After an overall review, we introduce some basic differential equations; we discuss infinite series, and power series representations of functions; we engage in a detailed study of parametric equations and polar coordinates and apply this to the classical study of conics; we begin to generalize to higher dimensions with basic vector material and the theory of vector-valued functions; we conclude with an introduction to functions of several variables and partial differentiation. This course is eligible for dual enrollment credit for junior and senior diploma students. Homework will average 3 - 5 hours per week.

Attendance and Participation
Both attendance and participation are vital parts of this course; therefore, students are required to attend class sessions and participate actively in discussions. Students are expected to view archives of any missed classes, and are responsible for obtaining any notes or assignments.

Students will be given quarterly grades for both participation and attendance:

- Fifteen percent of the final grade will be attributed to *relevant class participation*. This includes raising one's hand, commenting regularly via microphone/webcam, and using the chat box regularly to contribute to the academic conversation.
- Five percent of the final grade will be attributed to *class attendance*. Being present, being on time, and readiness for class are all factors to be considered in the class attendance grade. *Excused* absences will not detrimentally impact attendance grades.

Grading rubrics are located in the Course Documents folder in each course page.

Assignments & Exams
Homework is assigned daily and there will be occasional quizzes. Each chapter will end with a test and there will be an assessment at the end of each semester. Homework assignments deepen learning by allowing the student to practice techniques discussed in class. Additionally, homework helps the student frame questions to present during the following class, and this intellectual process also deepens learning. The course will move at a brisk pace through fairly demanding material. The best approach will be to stay current with the schedule by completing assignments in a timely manner as they are assigned and not falling behind.

While the final assessment will emphasize material from the second semester, there will be some material from the first semester as part of the problem solving process.

All exams should be taken in one sitting and proctored by an adult. Unless directed by the teacher, students are not permitted to use any helps, books, notes, calculators or the Internet on any portion of exams. All exams are due at 11:55 PM ET on the date shown. Specific instructions will be provided by the instructor.

Evaluation

The final grade is determined on the following basis:

- Class Attendance 5%
- Relevant Class Participation 15%
- Homework 10%
- Quizzes 5%
- Exams 30%
- Midterm/Final Assessment 35%

Grading Scale

The following grading scale will apply for all assignments and final grades. 100% – 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 0% = F. All grades are rounded to the nearest whole number.

Late Work

If a student fails to submit any assessment by the due date, it is considered "late."

- Assignments submitted 0-24 hours late will result in a 10 point reduction off earned grade.
- Assignments submitted 24-48 hours late will result in a 20 point reduction off earned grade.
- Assignments submitted 48-72 hours late will result in a 30 point reduction off earned grade.
- Assignments over 72 hours late will not be accepted and the student will receive a zero.
- Parent may request an extension from their child's teacher *prior to the due date* or in the case of an emergency.

While we love grace and the opportunity to exercise it, we also desire to instill a sound sense of responsibility in our students, hence these expectations pertaining to late work.

Exam/Test Retakes

Any student may retake a failed assessment (except quizzes), but can score no higher than 70% on the retake. Retakes must be submitted within one week of

the returned, failed test. If the retake is not submitted within one week, the original failing grade will stand.

Academic Dishonesty
Cheating on any assignment is considered academic dishonesty. This includes plagiarism in any form. Cheating will be dealt with in the following manner:

- If a student is caught cheating, he will receive a zero on the assignment and will be placed on academic probation for the remainder of the school year.
- If the same student is caught cheating again, he will likely be expelled.
- No refunds will be granted for students who are expelled due to cheating.
- A Disciplinary Action Form will be submitted by the student's teacher for any instance of academic dishonesty.

Textbooks/Materials
The books needed for the class can be purchased through Veritas Press. It is extremely important that the student has the correct version/edition of these materials.

Calculus II Course Kit (003588)

- Calculus: Early Transcendental Functions, 5th Ed. (290170)*
- Calculus 5th Ed. Solutions Guide Vol. 1(290171)*

*Indicates an item that is used in more than one year and/or in other disciplines.

The following is required:

- Graphing calculator - TI-83 or higher

The following is recommended:

- A digital tablet is recommended but not required for this course. Many students have found a digital tablet to be useful when wanting to write on the whiteboard in the online classroom, and have therefore deemed the investment a worthy one.

Course Calendar
See Course Assignment Sheet, located on course page, for class dates, breaks and all assignments and assessments. Class dates and breaks can also be found on the current academic year calendar.