Lake-Sumter State College Course Syllabus

Course Information:

Course Prefix and Number:	**MAC 2313**
Course Title:	Calculus with Analytic Geometry III
CRN:	20522
Credit Hours:	4
Semester:	Spring 2020

Class Days, Location, Time: MTWRF, The Villages High School, room 220, 10:30 – 11:20

Course Description: This is the third course in a three-semester sequence, which continues with MAC 2312 and concludes with MAC 2313. The following topics will be covered in this semester sequence: two- and three-dimensional vectors and the geometry of space, vector functions, partial derivatives, multiple integration, calculus of vector fields. NOTE: A graphing calculator is required.

Instructor Information:

Item	Instructor Information
Name	Mary Ann Robertson
E-Mail	robertsm@LSSC.edu or mary.robertson@tvcs.org
Office Location	The Villages High School, The Villages, FL room 220
Phone	(352) 259-3777 ext. 1220
Office Hours	MTWRF 2:45 – 4:00

Vital Communication Information:

For e-mail, please note that all students are required to use Lakehawk Mail for official college e-mail communications. See the college webpage for instructions on activating Lakehawk Mail.

Sending a private message using the MESSAGES tool in Canvas is always the most secure method of contacting your Instructor.

Please remember that any phone contact with your Instructor should be of a professional nature. Please always leave a clear, concise, but detailed message with your contact and class information. Always follow up a phone call with a written account via Canvas Message or e-mail.

Prerequisites/Co-requisites:

- Prerequisites: C or higher in MAC 2312
- Co-requisites: None

Textbook & Other Course Materials:

Required:
Calculus Early Transcendentals, Stewart, 8/e, Cengage Learning

A graphing calculator is also required. The TI-84 is recommended, but any graphing calculator that does not perform symbolic manipulation is acceptable. TI-89 and TI-92 are not allowed. TI-Nspire is allowed if it has the TI-84 overlay.

Technology Requirements:

- Canvas is a required component of this course. Students unfamiliar with Canvas are expected to complete the Student Orientation course located in Canvas within the first week of classes.
- Major writing assignments need to be created and saved in a file format that is compatible with Microsoft Word. If using a word processing program other than Word, it is the student's responsibility to adhere to all formatting and submission requirements. Please ask for help if you are unsure how to save a file in a Word-compatible format.
- See the LSSC student Technology Help Desk website for more information on how to obtain Microsoft Office 365 as an LSSC student.
- Reliable Internet connection is required. A high-speed internet connection is best. You may use the computers in our Learning Centers as needed.
- You are required to register for MyMathLab to access the homework that is to be completed for this course. Your course will be linked to MyMathLab through Canvas, so you will not need a course ID. If you already have a MyMathLab account from a previous course, you may use the same login information but may need to purchase a new access code.

Course Student Learning Outcomes:

The following outcomes will be assessed in this course. An "outcome" is defined as something the student takes with them beyond this course. After successful completion of this course, the student will:

1.) Demonstrates and applies knowledge of two- and three-dimensional vectors and the geometry of space.

2.) Demonstrates knowledge of a variety of vector functions.

3.) Demonstrates and applies knowledge of partial derivatives.

4.) Demonstrates and applies knowledge of multiple integration.

5.) Demonstrates and applies knowledge of the calculus of vector fields.

Course Objective:

Objectives are defined as what the course will do and/or what the students will do as part of the course.

This course is designed to prepare the student with rigorous mathematical applications in the applied sciences requiring an understanding and application of the calculus principles.

Institutional Policies & Procedures:

Academic Integrity:

The successful functioning of the academic community demands honesty, which is the basis of respect for both ideas and persons. In the academic community, there is an ongoing assumption of academic integrity at all levels. There is the expectation that work will be independently thoughtful and responsible as to its sources of information and inspiration. Honesty is an appropriate consideration in other ways as well, including but not limited to the responsible use of library resources, responsible conduct in examinations, and the responsible use of the Internet. See college catalog for complete statement.

Important Information for Students with Disabilities:

Any student with a documented disability who requires assistance or academic accommodations should contact the Student Accessibility Services immediately to discuss eligibility. The Student Accessibility Services (SAS) is located on the Leesburg Campus, but arrangements can be made to meet with a student on any campus. An appointment can be made by calling 352-365-3589 and specific information about SAS and potential services can be found at [Student Accessibility Services](#).

Privacy Policy (FERPA):

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part99) is a Federal law that protects the privacy of a student's education records. In order for your information to be released, a form must be signed and in your records located in the Admissions/Registrar's Office.

Zero-Tolerance for Violence Statement:

Lake-Sumter State College has a policy of zero tolerance for violence as stated in College Board Rule 2.17. Appropriate disciplinary action will be taken in accordance with Board Rule 2.17.

Attendance/Withdrawal Policies:

Initial Attendance:

Initial attendance will be entered at the end of the second week of the semester/mini-mester. A student who has not met initial attendance requirements will be marked as "not-attending" and administratively withdrawn from the class. The withdrawn student is still financially responsible for the class (see the [college catalog)](#) for more details.

Withdrawal:

Once the Add/Drop period passes, students deciding to discontinue class attendance and/or online participation have the responsibility for formal withdrawal by the withdrawal deadline.

Withdrawal Deadline:

Monday, March 23, 2020

Instructor Policies:

- All answers must be in "**simplified form**" whether specified or not. For example, all fractions must be reduced. You will be expected to simplify answers in the same manner that I demonstrate in class.
- If you are disruptive, then disciplinary actions in accordance with the VHS student handbook will be implemented.
- Turn off all cell phone ringers and other non-required electronic devices (i.e. laptop, iPod, mp3, blackberry, etc.) before class. Students using unauthorized electronic devices during class will received disciplinary actions in accordance with the VHS student handbook.
- If you are unexcused tardy to class and I am giving a test, then you have only the remaining class time to complete the test, as do the students who were on time.
- If you are caught cheating, you will either fail the assignment/test/quiz or fail the course, at the discretion of the instructor. **No warning will be given.**

Your Expectations of Me:

- ❖ I will treat you with courtesy and respect.
- ❖ I will respond to your telephone calls and e-mails within a reasonable period of time.
- ❖ I will be prepared for class.
- ❖ I will return papers within a reasonable period of time.

❖ I will do my best to help you prepare for future classes.
❖ I will model proper presentation and problem-solving techniques.
❖ I will model high standards of academic honesty and integrity.

My Expectations of You:

❖ You will treat me and your classmates with courtesy and respect.
❖ You will come to class prepared – having completed the appropriate assignments.
❖ You will contact me if you have questions or if you don't understand something.
❖ You will do your best to master this material and to submit work that you are proud to put your name on.
❖ You will display high standards of academic honesty and integrity.
❖ You are expected to participate in class.
❖ You will come to class on time and won't leave early.

Late Work/Extensions:

Make-up tests will be given at the discretion of the instructor. Call or email me prior to the test date and GET A RESPONSE from me before you make plans to take a make-up test. If you are absent due to an emergency, then email me as soon as possible or have your parent email me. **There is no make up for quizzes, exams, or tests, except under documented circumstances such as hospital stay, doctor excuse, police report, or military assignment, etc... Students are expected to contact their instructor prior to class if they must be absent from a test for any reason. Each situation will be determined on a case-by-case basis by your instructor. Extensions are not possible unless permitted by SAS.** Quiz, exam, or test make up will be administered on campus by the instructor or a proctor and are **not** eligible for "at home" completion.

Classroom Etiquette:

See instructor policies.

Grading Information:

Grading Scale:

A 90-100%
B 80-89%
C 70-79%
D 60-69%
F 59% and below

Methods of Evaluation:

Your grade is based on four components: in class paper tests, possibly quizzes, online homework, and a departmental final exam.

Assignment Overview & Grade Breakdown:

Category	Description	Points or %
Tests	You will have 4 Tests in this course	70%

Category	Description	Points or %
Participation	Class Participation and Homework	10%
Final Exam	You will have a cumulative final exam. Your final exam grade may also be used to replace a low test grade but not a zero for an unexcused absence for a test.	20%
	Total	100%

Tentative Course Calendar MAC 2313 SPRING 2020 – CRN 20522

Week	Week of …	Tests or other important information
1	**Jan 6 Ch. 12 Vectors & Geometry of Space** 12.1 Three Dimensional Coordinate Systems, 12.2 Vectors, 12.2 The Dot Product, 12.4 The Cross Product, 12.5 Equations of Lines and Planes.	
2	**Jan 13** 12.6 Cylinder and Quadric Surfaces, **Ch. 13 Vector Functions** 13.1 Vector Functions and Space Curves, 13.2 Derivatives and Integrals of Vector Functions	
3	**Jan 20** 13.3 Arc Length and Curvature, 13.4 Motion in Space: Velocity and Acceleration. **TEST #1**	**TEST #1 – Chapters 12 – 13 all sections**
4	**Jan 27 Ch. 14 Partial Derivatives** 14.1 Functions of Several Variables 14.2 Limits and Continuity, 14.3 Partial Derivatives	
5	**Feb 3** 14.4 Tangent Planes and Linear Approximations, 14.5 The Chain Rule, 14.6 Directional Derivatives and the Gradient Vector	
6	**Feb 10** 14.7 Maximum and Minimum Values **TEST #2**	**TEST #2 – Chapter 14 sections 1-7**
7	**Feb 17 Ch. 15 Multiple Integrals** 15.1 Double Integrals over Rectangles, 15.2 Double Integrals over General Regions, 15.3 Double Integrals in Polar Coordinates.	
8	**Feb 24** 15.6 Triple Integrals, 15.7 Triple Integrals in Cylindrical Coordinates, 15.8 Triple Integrals in Spherical Coordinates	
9	**Mar 2** 15.9 Change of Variables in Multiple Integrals. **TEST#3**	**TEST #3 – Chapter 15 sections 1-3, 6-9)**
10	**Mar 9 Ch. 16 Vector Calculus** 16.1 Vector Fields, 16.2 Line Integrals, 16.3 The Fundamental Theorem for Line Integrals	
	Mar 16 SPRING BREAK	
11	**Mar 23*** 16.4 Green's Theorem, 16.5 Curl & Divergence, 16.6 Parametric Surfaces and Their Areas.	***Monday, March 23 is the last day to withdraw from this course.**
12	**Mar 30** 16.7 Surface Integrals **TEST #4**	**TEST #4 – Chapter 16 sections 1-7**
13	**Apr 6** 16.8 Stokes Theorem, 16.9 The Divergence Theorem	
14	**Apr 13 Final Exam Review**	
15	**Apr 20** Study for Final exam	**FINAL EXAMS April 21-22-23**

Syllabus Disclaimer:

Information contained in this syllabus is, to the best knowledge of this instructor, considered correct and complete when distributed to the student. The instructor reserves the right, acting within policies and procedures of Lake-Sumter State College, to make necessary changes in course content or instructional techniques without prior notice or obligation to the student.