
Calumet College



of Saint Joseph

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Calumet College of St. Joseph is a Catholic institution of higher learning dedicated to the academic, spiritual and ethical development of undergraduate and graduate students. Informed by the values of its founding religious community, the Missionaries of the Precious Blood (C.P.P.S.), the College promotes the inherent dignity of all people, social justice, an ethic of service, student empowerment, opportunity, and lifelong learning.

COURSE SYLLABUS, Fall 2018**Course: MATH 310 A Calculus III**

Instructor Information:	
Instructor Name	Carrie Hutton
Office Number:	302
Phone Number:	219-473-4284
Email:	chutton@ccsj.edu
Hours Available:	<ul style="list-style-type: none">• M/W 7:30 – 8:30 a.m., 12:00 – 2:00 p.m.• T/R 7:30 – 8:30 a.m., 12:00 – 3:00 p.m.• Please note that meetings and appointments can affect these hours.• Additional office hours are available by appointment
Instructor Background: B.S. Actuarial Science, Indiana University; M.S. Mathematics and Statistics, Purdue University; M.S.E. Engineering, Purdue University; Ed.D Leadership in Education, American College of Education	

Course Information:	
Course Time:	Tuesday and Thursday 3:30 – 5:30 PM
Classroom:	TBD
Prerequisites:	MATH 231 with a grade of 'C' or better, or an equivalent Accuplacer score
Required Books and Materials:	Stewart, J. <u>Calculus</u> ; Ed 8 Cengage ISBN: 9781285740621 **It is strongly recommended that you have a Texas Instrument 84 (TI-84) for this class.

Learning Outcomes/ Competencies:

Through appropriate assessments students will demonstrate that they are able to:

1. **Remember** the necessary steps and procedures for computing vector operations, vector functions, partial derivatives, and multiple integrals.
2. **Understand** what each computation means on a conceptual level. Students will also understand the historical context within which calculus was developed.
3. **Apply** their understanding of the concepts and use appropriate computations to solve problems in physics, economics, chemistry and biology.
4. **Analyze** problems in physics, economics, chemistry and biology to determine appropriate methods for solving them.
5. **Evaluate** proposed solutions with respect to commonly accepted practices used in physics, economics, chemistry and biology.
6. **Create** and demonstrate appropriate solutions to discovery projects applying calculus methods in their chosen field of study.

Course Description: This is the standard third-semester college Multivariate Calculus course. Topics include vectors and the geometry of space, vector functions, partial derivatives, and multiple integrals. Students will study the applications of the afore mentioned topics in geometry, science, and business.

Learning Strategies:

Group discussions, lecture, and lots of practice. The objective is to promote your understanding of mathematics concepts and to enable you to apply them in a meaningful way. You are encouraged to rely on logical thinking, rather than on memorization. It is VERY important that you READ the sections of the textbook, STUDY the examples and WORK problems. **Active participation in class** and utilization of services such as the CCSJ Student Success Center will help ensure your success.

It is also suggested that you utilize Khan Academy for additional help on homework outside of the classroom.

Experiential Learning Opportunities:

Applications of course material.

Assessments:		
Exams	Chapter Exams (12, 13, 14, 15)	40% of grade
Cumulative Final Exam	Chapter 12 – Chapter 15	20% of grade
Textbook Homework	Assigned Weekly per schedule	10% of grade
Recitation Problems	Weekly	30% of grade
Class Participation:	<p>Tests and Quizzes:</p> <ul style="list-style-type: none"> • Four <u>chapter tests</u> will be given during the term and <u>one comprehensive final exam</u> during exam week. • You will be allowed to use one piece of paper (8 ½ x 11), one side only, of notes on your chapter tests. • You will be allowed to use one piece of paper (8 ½ x 11), both sides, of notes on your final exam. • You will be allowed to use a calculator on all exams (you really, REALLY, REALLY should have a graphing calculator). • You will NOT be allowed to use any electronic devices on an exam or recitation (i.e. phone, tablet, etc.). • Thoughtful completion of your homework should be done to practice and prepare for your exams and recitation. <p>Written homework and Recitation assignments:</p> <ul style="list-style-type: none"> • Homework is critical to your success in this course. The written homework is meant to serve as practice for the exams. • Your written homework should be neat and organized. Problems should be copied from the book and all necessary work should be shown. Answers without work will not be given credit. • Recitation assignments can be completed with the help of homework problems and notes from class. • Recitation assignments will be done in class, with no make-ups. The lowest 2 recitation assignment scores will be dropped. 	

	<ul style="list-style-type: none"> • Students may use a calculator but no electronic devices on recitation assignments. • It is expected that you will spend 8-12 hours outside of class each week practicing math. You must practice to succeed. • NO LATE HOMEWORK will be accepted, for any reason, period. You are welcome to turn it in early, but never late. 	
Grading Scale:		
100 – 92: A 91 – 90: A- 89 – 88: B+ 87 – 82: B 81 – 80: B- 79 – 78 : C+ 77 – 72: C 71 – 70 : C- 69 – 68: D+ 67 – 62: D 61 – 60: D- 59 and below F		

Responsibilities	
Attending Class	<p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have more responsibilities to keep up and meet the objectives of this course.</p> <p style="text-align: center;"><i>Eighty percent of success is showing up.</i> -Woody Allen</p> <p>Attendance is important and is expected. You are responsible for all material covered in class, including announcements of assignments and quizzes. If you miss class, you must contact the instructor by email (chutton@ccsj.edu) within 24 hours. The instructor is more than willing to meet you halfway on this, but remember that there are TWO halves. You are allowed to miss 2 classes, without penalty. After that, every class that you are absent from will result in a one (1) percentage point loss from your final grade. You should 'save' your two absences for emergencies. If you are more than 15 minutes late to class, that will count as an absence. BE PRESENT, BE ON TIME.</p>
Turning In Your Work	<p>You cannot succeed in this class if you do not turn in all your work on the day it is due.</p>
CCSJ Student Honor Code	<p>This course asks students to reaffirm the CCSJ Student Honor Code:</p> <p>I, as a student member of the Calumet College academic community, in accordance with the college's mission and in a spirit of mutual respect, pledge to:</p>

	<ul style="list-style-type: none"> • Continuously embrace honesty and curiosity in the pursuit of my educational goals; • Avoid all behaviors that could impede or distract from the academic progress of myself or other members of my community; • Do my own work with integrity at all times, in accordance with syllabi, and without giving or receiving inappropriate aid; • Do my utmost to act with commitment, inside and outside of class, to the goals and mission of Calumet College of St. Joseph.
Using Electronic Devices	Electronic devices are out of place in the classroom. Please keep them silent and put away during class. Additionally, NO ELECTRONIC DEVICES OF ANY KIND ARE TO BE USED ON RECITATION, QUIZ, OR EXAM PROBLEMS.
Doing Your Own Work	<p>If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>Using standard citation guidelines, such as MLA or APA format, to document sources avoids plagiarism. The Library has reference copies of each of these manuals, and there are brief checklists in your Student Handbook and Planner.</p> <p>PLEASE NOTE: All papers may be electronically checked for plagiarism.</p>
Withdrawing from Class	After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.

Tracking Your Progress	Your midterm grade will be available on MyCCSJ between Weeks 6 and 8. Be sure to see how you're doing and follow up with your instructor.
Sharing Your Class Experience	At the end of the term, you will have the opportunity to evaluate your classroom experience. These confidential surveys are essential to our ongoing efforts to ensure that you have a great experience that leaves you well prepared for your future. Take the time to complete your course evaluations – we value your feedback!

Resources	
Student Success Center:	The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.
Disability Services:	Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a “reasonable accommodation” because of a disability, contact the Disability Services Coordinator at 219-473-4349.
CCSJ Book Rental Program	The CCSJ Book Program ensures that everyone has the right course materials on the first day of class to be successful. You pay a book rental fee each semester, and in return, receive all the materials for all your classes prior to the beginning of classes. At the end of the semester, simply return the books.

	For traditional students, the Book Rental Program is conveniently located in the library, where students can pick up and return their books. For students in accelerated programs and graduate programs, books will be delivered to their homes and they can return them by mail. For more information, see http://www.ccsj.edu/bookstore . All books must be returned at the end of the semester or you will incur additional fees, which will be charged to your student account.
CCSJ Alerts:	Calumet College of St. Joseph's emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College's website at: http://www.ccsj.edu/alerts/index.html . In addition, you can check other media for important information, such as school closings: Internet: http://www.ccsj.edu Radio: WAKE – 1500 AM, WGN – 720 AM, WIJE – 105.5 FM, WLS – 890 AM, WZVN – 107.1 FM, WBBM NEWS RADIO 78 TV Channels: 2, 5, 7, 9, 32
Student Assistance Program	Through a partnership with Crown Counseling , Calumet College of St. Joseph provides a free Student Assistance Program (SAP) to current students. The SAP is a confidential counseling service provided to students for personal and school concerns which may be interfering with academic performance and/or quality of life. The SAP counselor is available on campus once a week and off-site at the Crown Counseling offices in Crown Point or Hammond. For more information, contact Kerry Knowles SAP Counselor , at 219-663-6353 (office), 219-413-3702 (cell), or kerryk@crowncounseling.org .

Emergency Procedures

MEDICAL EMERGENCY

EMERGENCY ACTION

1. Call 911 and report incident.
2. Do not move the patient unless safety dictates.
3. Have someone direct emergency personnel to patient.
4. If trained: Use pressure to stop bleeding.
5. Provide basic life support as needed.

FIRE

EMERGENCY ACTION

1. Pull alarm (located by EXIT doors).
2. Leave the building.
3. Call 911 from a safe distance, and give the following information:
 - Location of the fire within the building.
 - A description of the fire and how it started (if known)

BUILDING EVACUATION

1. All building evacuations will occur when an alarm sounds and/or upon notification by security/safety personnel. **DO NOT ACTIVATE ALARM IN THE EVENT OF A BOMB THREAT.**
2. If necessary or if directed to do so by a designated emergency official, activate the building alarm.
3. When the building evacuation alarm is activated during an emergency, leave by the nearest marked exit and alert others to do the same.
4. Assist the disabled in exiting the building! Remember that the elevators are reserved for persons who are disabled. **DO NOT USE THE ELEVATORS IN CASE OF FIRE. DO NOT PANIC.**
5. Once outside, proceed to a clear area that is at least 500 feet away from the building. Keep streets, fire lanes, hydrant areas and walkways clear for emergency vehicles and personnel. The assembly point is the sidewalk in front of the college on New York Avenue.
6. **DO NOT RETURN** to the evacuated building unless told to do so by College official or emergency responders.

IF YOU HAVE A DISABILITY AND ARE UNABLE TO EVACUATE:

Stay calm, and take steps to protect yourself. If there is a working telephone, call 911 and tell the emergency dispatcher where you are **or** where you will be moving. If you must move,

1. Move to an exterior enclosed stairwell.
2. Request persons exiting by way of the stairway to notify the Fire Department of your location.
3. As soon as practical, move onto the stairway and await emergency personnel.
4. Prepare for emergencies by learning the locations of exit corridors and enclosed stairwells. Inform professors, and/or classmates of best methods of assistance during an emergency.

HAZARDOUS MATERIAL SPILL/RELEASE

EMERGENCY ACTION

1. Call 911 and report incident.
2. Secure the area.
3. Assist the injured.
4. Evacuate if necessary.

TORNADO

EMERGENCY ACTION

1. Avoid automobiles and open areas.
2. Move to a basement or corridor.
3. Stay away from windows.
4. Do not call 911 unless you require emergency assistance.

SHELTER IN PLACE

EMERGENCY ACTION

1. Stay inside a building.
2. Seek inside shelter if outside.
3. Seal off openings to your room if possible.
4. Remain in place until you are told that it is safe to leave.

BOMB THREATS

EMERGENCY ACTION

1. Call 911 and report incident.
2. If a suspicious object is observed (e.g. a bag or package left unattended):

- Don't touch it!
- Evacuate the area.

TERRORISM AND ACTIVE SHOOTER SITUATIONS

EMERGENCY ACTION

1. Call 911 and report intruder.

RUN, HIDE OR FIGHT TIPS:

1. **Prepare** – frequent training drills to prepare the most effectively.
2. **Run and take others with you** – learn to stay in groups if possible.
3. **Leave the cellphone.**
4. **Can't run? Hide** – lock the door and lock or block the door to prevent the shooter from coming inside the room.
5. **Silence your cellphone** -- use landline phone line.
6. **Why the landline?** It allows emergency responders to know your physical location.
7. **Fight** – learn to “fight for your life” by utilizing everything you can use as a weapon.
8. **Forget about getting shot – fight!** You want to buy time to distract the shooter to allow time for emergency responders to arrive.
9. **Aim high** – attack the shooter in the upper half of the body: the face, hands, shoulder, neck.
10. **Fight as a group** – the more people come together, the better the chance to take down the shooter.
11. **Whatever you do, do something** – “react immediately” is the better option to reduce traumatic incidents.

Course Schedule:

I reserve the right to change this schedule to meet the needs of the class.

Date	Topic	Homework Assigned	Homework Due Date/Time
8-28-18	12.1 Three-Dimensional Coordinate Systems 12.2 – Vectors	Textbook p. 882 Review Exercises #1-7, 9-12, 15-24	9-18-18 at the beginning of class
8-30-18	12.2 Vectors 12.3 The Dot Product		
9-4-18	12.3 The Dot Product 12.4 The Cross Product		
9-6-18	12.4 The Cross Product 12.5 Equations of Lines and Planes		
9-11-18	12.5 Equations of Lines and Planes 12.6 Cylinders and Quadric Surfaces		
9-13-18	12.6 Cylinders and Quadric Surfaces Recitation Review		
9-18-18	Exam I (Chapter 12)		Textbook homework is due TODAY at the beginning of class
9-20-18	13.1 Vector Functions and Space Curves 13.2 Derivatives and Integrals of Vector Functions	Textbook p. 922 Review Exercises #2, 5, 6, 8, 9, 13, 17, 18, 19	10-4-18 at the beginning of class

9-25-18	13.2 Derivatives and Integrals of Vector Functions 13.3 Arc Length and Curvature		
9-27-18	13.3 Arc Length and Curvature 13.4 Motion in Space: Velocity and Acceleration		
10-2-18	13.4 Motion in Space: Velocity and Acceleration Recitation Review		
10-4-18	Exam II (Chapter 13)		Textbook homework is due TODAY at the beginning of class
10-9-18	14.1 Functions of Several Variables 14.2 Limits and Continuity	Textbook p. 1022 Review Exercises #9, 10, 11, 13, 14, 16, 19, 20, 21, 22, 25 – 29, 51 – 54, 59 - 62	11-6-18
10-11-18	14.2 Limits and Continuity 14.3 Partial Derivatives		
10-16-18	14.3 Partial Derivatives 14.4 Tangent Planes and Linear Approximations		
10-18-18	14.4 Tangent Planes and Linear Approximations 14.5 The Chain Rule		
10-23-18	14.5 The Chain Rule 14.6 Directional Derivatives and the Gradient Vector		

10-25-18	No Class – Instructor Absence		
10-30-18	14.6 Directional Derivatives and the Gradient Vector 14.7 Maximum and Minimum Values		
11-1-18	14.8 Lagrange Multipliers Recitation Review		
11-6-18	Exam III (Chapter 14)		Textbook homework is due TODAY at the beginning of class
11-8-18	15.1 Double Integrals over Rectangles 15.2 Double Integrals over General Regions	Textbook p. 1102 Review Exercises #3 – 8, 19, 20, 21-25, 29- 32, 35, 36, 41	12-6-18
11-13-18	15.2 Double Integrals over General Regions 15.3 Double Integrals in Polar Coordinates		
11-15-18	15.4 Applications of Double Integrals		
11-20-18	No Class – Fall Break		
11-22-18	No Class – Fall Break		
11-27-18	15.4 Applications of Double Integrals 15.5 Surface Area		
11-29-18	15.5 Surface Area 15.6 Triple Integrals		
12-4-18	15.6 Triple Integrals Recitation Review		
12-6-18	Exam IV (Chapter 15)		Textbook homework is due TODAY at the beginning of class
12-11-18	Review for Final Exam		
12-13-18	Final Exam		

