

MAC 2313: *Calculus III with Analytic Geometry*
TWR 1:00 – 2:45 in SA 219
Summer 2016

- Instructor: Daniel J Bueller
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Instructor Webpage: <http://www.spcollege.edu/instructors/id/2208>
Course Webpage: <http://mycourses.spcollege.edu>
- Text: *Calculus*, 10e, by Larson and Edwards
- Prerequisite: MAC 2312 or appropriate score on the SPC mathematics placement test.
- Course Description: This course is designed to follow Calculus with Analytic Geometry II. Topics include vectors in the plane and space, three-dimensional surfaces, various coordinate systems, vector-valued functions, differential calculus of functions of several variables, gradients, directional derivatives, applications of partial derivatives, multiple integration, vector analysis, line integrals, surface integrals and applications.
- Course Goals:
1. The student will apply concepts of the geometric properties and calculus concepts involving surfaces, two- and three- dimensional vectors, vector-valued functions, planes, lines and the cylindrical and spherical coordinate systems.
 2. The student will apply the concepts of limits, continuity, differentiability and the chain rule to functions of several variables.
 3. The student will apply the theory of the calculus of functions of several variables to applied problems.
 4. The student will apply the extension of the concept of the “definite integral” to a two- and three-dimensional setting and understand the theoretical development with respect to Riemann sums.
 5. The student will apply concepts of multiple integrals to applied problems.
 6. The student will demonstrate the concepts of vector analysis to applied problems.
- Calculators: Graphing calculator use is encouraged for this course preferably the TI-83 Plus or TI-84 Plus. Symbolic calculators like the TI-89 and some TI-Nspires are prohibited during tests as are cell phone calculators. Graphing calculators may not be permitted on a test depending on the material. Three dimensional graphing calculators are prohibited during tests.
- Tests: There will be 5 tests throughout the semester (see calendar for test dates). If one’s final exam score is higher than their lowest test score, then the final exam will replace said lowest test score.

Homework: Homework problems are listed on a separate sheet. Homework will be turned in and checked for completion on each test day.

Attendance: Students will be credited with 1 attendance point for all class periods in which new material will be covered if they arrive on-time (within the first five minutes of class) and stay through the duration of class.

Final Exam: Thursday July 21st. This exam is comprehensive. The final may be exempt if both the student's test average and overall grade going into the exam is at least an 80%.

Grading:	<u>Category</u>	<u>Points</u>
	Tests	500
	Homework	60
	Attendance	20
	Final exam	120

Grading Scale: A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%
A: 540-600 B: 480-539 C: 420-479 D: 360-419 F: 0-359
NOTE: Those who exempt the final will have their averages computed out of 580 points.

Extra Credit: Students taking the final exam may obtain up to 14 points of extra credit by completely reworking each of the five tests and turning them in on the day of the Final Exam.

Important Dates: May 20th – Last day to drop course and receive a refund
June 24th – Withdrawal deadline to receive a grade of "W"

Attendance Policy: The college-wide attendance policy is included in the Syllabus Addendum www.spcollege.edu/central/asa/addendum.htm. The policy notes that each instructor is to exercise professional judgment and define "active participation" in class (and therefore "attendance"), and publish that definition in each syllabus. For this class, attendance is defined as the student attending every class and arriving/leaving on time. The student may be subject to administrative withdrawal from the course with a grade of WF if they are deemed, by the Instructor, to be not participating. Not participating can take any of the following forms:

- Being absent for the majority of classes through the first three weeks.
- Amassed 4 or more unexcused absences by the withdraw deadline.
- Have an overall grade of less than 50% after the withdraw deadline.

Resources:

Learning Support Commons – Tutoring:

- Location: TE 200
- Phone: (727) 341-3512
- Web site: <http://www.spcollege.edu/SPG/LSC/>

WebAssign – E-book and supplemental exercises:

- Web site: WebAssign.com
- Course ID: spcollege 9393 2137
- Code: may be purchased in lieu of textbook or in addition to it

Khan Academy – Mini video lectures:

- Web site: KhanAcademy.org

Wolfram Alpha – Mathematica powered symbolic calculator:

- Web site: WolframAlpha.com

Calc Chat – Worked solutions to odd exercises from the textbook

- Web site: CalcChat.com

Title	Dean of Mathematics	Academic Chair of Mathematics
Name	Jimmy Chang	David Kolonoski
Office	SP/G SA 215	SP/G SA 215
Phone	(727) 341-4305	(727) 341-4757

Survey of Instruction: The student survey of instruction is administered in courses each semester. It is designed to improve the quality of instruction at St. Petersburg College. All student responses are confidential and anonymous and will be used solely for the purpose of performance improvement.

Contingency Plan: In case of a natural disaster or an otherwise unforeseen event that would disrupt the delivery of classes on campus for an extended period of time, we will continue the course as planned via teaching and assessment materials to be uploaded via MyCourses.

Other Policies and Miscellanea:

- It is the student's responsibility to be aware of anything announced in class or sent via MyCourses email whether or not they attended class or checked their email.
- Should there be a scheduling conflict on a test day, the student may take the test early or late only if the make-up test is arranged before the original test is given. To ensure a make-up test the student must at least contact the instructor in some way prior to the administration of the normally scheduled test. There will be no exceptions to this rule (car troubles, sickness, etc.). Should a test be missed the student will receive a zero.
- Make-up tests may only be scheduled during the Instructor's office hours. The student must be aware that they are subject to the potential for distractions in taking a test in the Instructor's office. If a student is not able to appear around the Instructor's schedule, then the student will be unable to make up a test.
- Students will not receive attendance points for absences, excused or otherwise.
- Homework will be considered late if it is not turned in on the prescribed day. Late homework will be accepted for half credit.
- If the instructor makes a mathematical mistake in class, then the first student to point it out will receive 1 bonus point on their next test.
- No extra credit will be given except for what has been laid out in the syllabus.
- The instructor will use discretion in rounding up or down final grades based on the student's overall participation: attendance, contribution to the class atmosphere, doing homework problems on the board, visiting the instructor during office hours if needed, etc. and test performance.
- Grades will be earned based on the grading scale and grading outline listed above. There will be no deviations from this. It is; therefore, inappropriate for students to ask for a grade at the end of the semester in which they do not have enough points for. Amount of time spent studying, needing to pass the class to graduate, needing a certain GPA for a scholarship, etc. will not be factored into actual point totals which determine grades.
- Semester points may not be obtained after the Final Exam is given.
- The instructor reserves the right to make any changes to the syllabus or course schedule if absolutely necessary and in the best mutual interest of the students and instructor.
- All college policies regarding student conduct, academic honesty, students with disabilities, withdrawals, etc. apply in this course. Please refer to the student handbook for more details.

What do I expect from you?	What can you expect from me?
Arrive in class on time with a good attitude and be prepared to learn and participate	Arrive in class on time with a good attitude and be prepared to clearly teach the lesson
Positively contribute to the classroom setting	Create an environment conducive to learning
Spend 2 hours in homework per 1 hour in class	Grade and return assignments promptly
Give yourself a chance to succeed	Invest in your success
Check MyCourses for emails on a regular basis	Reply to emails in a timely manner
Respect all policies outlined in the syllabus	Remain within the parameters of the syllabus

Homework Assignments

eoo = every other odd problem

Section	Page	Exercises
11.1	755	1-77 odd, 81, 83
11.2	763	1-91 odd (omit 81)
11.3	773	1-41 odd, 51, 59, 61, 63, 67
11.4	781	1-37 odd (omit 31), 41, 51
11.5	790	1-93 odd
11.6	802	1-39 odd
11.7	809	1-91 odd, 97
12.1	821	1-37 odd, 45-61 eoo, 63-77 odd, 87
12.2	830	1-65 odd
12.3	838	1-17 eoo, 19-35 odd, 39, 45
12.4	848	1-27 odd, 35, 39, 41, 45, 47, 53, 65
12.5	860	1-13 odd, 23-29 odd, 33-57 eoo, 81
13.1	876	1-9 odd, 13-37 eoo, 45-49, 51, 53, 55
13.2	887	5-31 odd, 43-53 odd, 61, 63
13.3	896	1-37 eoo, 39-53 odd, 57-81 eoo, 87-93 odd
13.4	905	1-19 odd, 25, 29, 31
13.5	913	1-35 odd, 47
13.6	924	1-27 odd, 31, 35, 39, 47, 49, 61
13.7	933	1-51 odd
13.8	942	1-19 odd, 27-30, 33, 39, 41, 45
13.9	949	1-17 odd
13.10	958	1-15 odd, 19-39 eoo
14.1	972	1-61 odd
14.2	983	5-33 odd, 45-57 odd
14.3	991	1-33 odd, 41, 43, 45
14.4	1000	1-21 odd (omit 11, 19), 27-35 odd
14.5	1007	1-17 odd, 25, 27
14.6	1017	1-27 odd (omit 9), 37, 39, 41, 53-65 odd (omit 57)
14.7	1025	1, 3, 5, 9-25 odd, 31, 35, 37, 39, 41
15.1	1049	1-5, 7, 9, 15-43 eoo, 45, 51, 53, 57-63 odd, 69-75 odd
15.2	1061	1-39 odd (omit 19, use Math 9 on 33)
15.3	1072	1, 3, 5, 9, 13, 15, 17-33 eoo
15.4	1081	1, 5, 7, 11, 13, 17, 21-27 odd
15.5	1091	1-7, 9, 17-41 odd (omit 29)
15.6	1104	1, 3, 5, 11-27 odd
15.7	1112	1-15 odd
15.8	1119	1-17 odd

Office Hours:

Days	Time	Location
TWR	10:00 – 10:30	SA 220
	3:00 – 3:45	SA 220
TR	3:45 – 6:00	SA 220

Tentative Course Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
MAY	MAY 16	17 Syllabus, 11.1	18 11.2, 11.3	19 11.4, 11.5	20 Last day to withdraw with refund
	23	24 11.6, 11.7	25 Review for Test 1	26 Test 1 (11.1-11.7)	27
	30	31 12.1, 12.2	JUNE 1 12.3, 12.4	2 12.5, Review for Test 2	3
JUNE	6	7 Test 2 (12.1-12.5)	8 13.1, 13.2	9 13.3, 13.4	10
	13	14 13.5, 13.6	15 13.7, 13.8	16 13.9, 13.10	17
	20	21 Review for Test 3	22 Test 3 (13.1-13.10)	23 14.1, 14.2	24 Last day to withdraw with a "W"
	27	28 14.3, 14.4	29 14.5, 14.6	30 14.7, Review for Test 4	JULY 1
JULY	4	5 Test 4 (14.1-14.7)	6 15.1, 15.2	7 15.3, 15.4	8
	11	12 15.5, 15.6	13 15.7, 15.8	14 Review for Test 5	15
	18	19 Test 5 (15.1-15.8)	20 Review for Final	21 Final Exam	22