

**Math 253, Calculus III Portland Community College** Winter 2018 Jeff Pettit Instructor

This schedule is tentative. We may go faster or slower as deemed beneficial by the instructor. Parts of Exams may require use of technology, including (and in addition to) a graphing calculator, GeoGebra or Maple and/or Microsoft Excel.

If you do not attend the first week of classes, you will likely be dropped from the class. If you wish to remain in the class, please contact the Instructor as soon as you can. See the following for further details: <http://www.pcc.edu/enroll/registration/policies.html#attendance>

Week	Topic	Sec	Homework
<b>Week 1</b> Jan 8 & 10	9.1: 3-Dimensional Coordinate System 9.2 Vectors	9.1 9.2	2,3,5,6,8,10,11,15,18,23,27,31,35-37,39 1-5,8,9,13,16,17,21,23,25,28,31,36,38,41,43
<b>Week 2</b> Jan 15 & 17	<b>No Class Monday, MLK Jr. Day</b> 9.3 The Dot Product	9.3	1,2,5,8,9,12,14,17,21,22,24,25,31,38,40,43,50
<b>Week 3</b> Jan 22 & 24	9.4 The Cross Product 9.5 Equations of Lines and Planes	9.4 9.5	1,3,5,6,7,11,13,17,18,20,22,25,26,29,32-34,36,39,41 1,3,5,7,10-13,16,20,21,23,24,27,35,37,41,43,48,50,52,56-58
<b>Week 4</b> Jan 29 & 31	9.6 Functions and Surfaces 9.7 Cylindrical and Spherical Coordinates	9.6 9.7	1,3,5,7,9,11,13,15,21,23,25,29 1,2,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31
<b>Week 5</b> Feb 5 & 7 <b>Exam 1</b> Wed covers material from Week1-4	8.1 Sequences <b>Exam 1 Wednesday</b>	8.1	1,3,5,9,12,19,25,28,31,35,38,41,43,49,51,56
<b>Week 6</b> Feb 12 & 14	8.2 Series 8.3 Integral & Comparison Tests; Estimating Sums	8.2 8.3	1,5,7,9,11,16,19,21,25,30,31,34,47,52,61 2,3,5,7,10,13,16,20,29,33,37,42
<b>Week 7</b> Feb 19 & 21 <b>Exam 2</b> handed out Wed covers lectures from Week 4-7	8.4 Other Convergence Tests 8.5 Power Series <b>Exam 2 Take Home Exam</b>	8.4 8.5	1,2,3,7,10,12,13,15,20,21,24,25,29,38 1,2,4,7,10,13,15,19,22,25,26,33,35
<b>Week 8</b> Feb 26 & 28	8.6 Representations of Functions as Power Series 8.7 Taylor and Maclaurin Series	8.6 8.7	1,3,5,7,11,17,21,23,28,37,38 3-5,7,10,13,16,20,23,26,30,37,42,45,50,55,61
<b>Week 9</b> Mar 5 & 7 <b>Exam 3</b> Wed covers lectures from Weeks 7-8	8.8 Applications of Taylor Polynomials <b>Exam 3 Wednesday</b>	8.8	1,3,7,15-17,21,24,29
<b>Week 10</b> Mar 12 & 14	Vector Project Presentations Review for Final Exam time permitting		
<b>Final Exam</b> Mon Mar 19	<b>Cumulative Final Exam, 9am – 11am, Monday, March 19</b> (No class Wednesday, March 21)		

**Portland Community College / Rock Creek Campus**  
**17705 NW Springville Rd,**  
**Portland Oregon 97229**

**Term/Course:** **Winter 2018 Math 253 CRN#10166 — Calculus III; 5 credits.**

**Class meets:** Monday and Wednesday 9:30am–11:50am in Bldg 2, RM 252

**Instructor:** Jeff Pettit

**Office:** Rock Creek Campus, Building 2, Room 244

**Office Hours:** T/Th noon-2:30 beginning in the Student Learning Center in Building 7, Room 218 and then in my office at around 1pm.

**Contact phone:** 503-867-2455 Please leave a detailed message or text with a clear summary of the math problem. I return calls/texts as soon as I can; I cannot share information over the phone other than anonymous help with math problems or general course information available to the public.

**E-mail:** jeffrey.pettit@pcc.edu I can only respond to confidential questions from your pcc.edu email account.

**Text:** Calculus, Concepts and Contexts 4<sup>th</sup> Edition, by James Stewart

**Important Dates:** Last day to drop the class with full refund: Saturday Jan 13  
Last day to drop the class and receive a W (withdraw) and last day to request P/NP Saturday Mar 3  
**Final Exam:** 9am-11am **Monday, Mar 19**  
Final grades available on my.pcc.edu: Tuesday, March 22

**Prerequisites:** MTH 252 completed with a C or better and its prerequisites

**Course Objectives:** Calculus III Topics include: infinite sequences and series (emphasis on Taylor series), an introduction to differential equations, and vectors in three space. Students will communicate their results in oral and written form. Graphing calculator required; TI89, TI92 or Voyage200 recommended. See the following link for detailed course content:  
<http://www.pcc.edu/ccog/default.cfm?fa=ccog&subject=MTH&course=253>

**Extra Help:** Extra help is available during the instructor's office hours and in the Learning Center. The Learning Center is located in Bldg 7, Room 218 and provides computers with Maple, study areas to work with other students as well as mathematics tutor(s). For free on-line tutoring and other support resources, see [www.pcc.edu/tutoring](http://www.pcc.edu/tutoring)

**Assignments:** Assignments include: homework; in-class group project(s); exams (including a take home exam); a group presentation on a topic of your choosing exploring multi-dimensional vectors and a final exam. Plan to spend 15 hours each week outside of class working on assignments, reading the text and studying for exams.

**Homework:** Work the textbook problems listed in the course schedule (see course calendar). The use of engineering paper is required for all work unless assignments are typed (if purchasing or using engineering paper will create difficulties for you, please contact me to discuss). Submit homework sets at the beginning of class on the day of exams to be evaluated and recorded. Homework will be evaluated for completeness (or near-completeness) and must be of sufficient quality and completeness to earn credit for exam corrections, generally 90% is expected to be complete for full credit and corrections. These problems have been assigned to help you practice the concepts covered in lecture.

- Exams:** In addition to the final exam, there will be 3 exams, two in-class and one take-home as indicated in the schedule. Other than take-home exam questions, some exam problems will be similar to homework problems and material found in the textbook. Others will focus on concepts learned from the homework and activities but put in a new context; if the material is learned well, the exams should be no harder than homework, but offer additional insight. Corrections are allowed on exams for students who have submitted at least 90% of their homework.
- Final Exam:** The final exam is a two-hour comprehensive examination. There are no corrections allowed on the final exam. The final exam score will replace the score of the lowest scoring exam of the previous three, assuming the final exam score is higher.
- Class Activities:** This is work done in class with other students. Evaluation scores earned on class activities may also be supplemented by participation in class discussions, at the instructor's discretion.
- Technology:** A graphing calculator is required. The TI-89, TI-92 plus or Voyage 200 is recommended. The Casio Classpad is also acceptable as well as the TI Inspire (with CAS). A Computer Algebra System (GeoGebra and also Maple) is available in the classroom to assist your work in this course. You will need to provide your own data storage.
- Web Page:** Most of the documents and all of your grades in this course will be posted on Desire2Learn.
- Evaluation of Work:** Homework submitted during exams will be checked on exam day for effort and completeness. A grade of 0, 1 or 2 will be assigned as follows: 0 if less than 50% of the problems have been attempted. 1 if 50% to 90% of the problems have been attempted and 2 if 90% to 100% of the problems have been attempted. The term "attempted" implies that **all work is shown, not simply answered**. A grade of 2 is required in order to correct exams.
- Attendance:** It is important that you attend all class meetings. Class time will be spent reviewing homework problems that were completed on the board, doing group activities, as well as lectures. Even though attendance is not recorded as part of your grade, excessive absences will indirectly affect your grade.
- Exam Corrections:** When you receive your graded exam, you may correct any/or all of the problems you did not earn full credit for **if you received a grade of 2 on your homework** set related to that exam. The problem is to be written on another piece of paper with **all** calculations shown for the solution. The rewritten problem will be graded by itself as if it were on the original exam. A **written explanation** stating why you missed the problem on the test is required. If your work is 100% correct, you will earn 50% of the points missed which will be added to your test score.
- Final Grades:** Final Grades are determined as follows:
- |                                |     |
|--------------------------------|-----|
| Classroom activities           | 10% |
| Homework submitted before exam | 10% |
| Exams 1, 2 and 3               | 40% |
| Group Project                  | 15% |
| Final Exam                     | 25% |
- 
- |               |           |   |
|---------------|-----------|---|
| Course Grade: | 90 - 100% | A |
|               | 80 - 89%  | B |
|               | 70 - 79%  | C |
|               | 60 - 69%  | D |
|               | below 60% | F |

- Communication:** You may communicate with me via email, text or phone. Unless a student has provided written permission, as a PCC Instructor, I can answer homework questions and general information, but I cannot reveal personal information (including grades as well as whether or not you are a student in the class) except in person or in response to requests from your PCC email account. I am not allowed to respond to questions from any other email address. I cannot verify your identity from phone calls or text, but can verify general non-private information, such as math tutoring or questions about the syllabus.
- Cell Phones:** If you feel you have special circumstances and need to leave your phone on during class, please turn it to vibrate or silent. If there is an emergency situation and you must use your phone during class time, please leave the classroom before accepting and/or conducting your call/text. Please refrain from electronic communication such as texting during class as it can distract the instructor and your classmates.
- Withdraws, P/NP, Audit:** If you find you need to withdraw from any (full-term) class at PCC, dropping it before the end of week one will refund your tuition and the course will not appear on your transcripts; dropping after week two but before the end of 80% of the course will result in a “Withdraw” on your transcripts; dropping after 80% of the course has been completed obligates the instructor to enter a grade. For more information see the following webpage:  
<http://www.pcc.edu/registration/dropping.html#drop>. There are other options other than letter grades including Pass/No-Pass and Audit. Programs and universities differ in how many transfer credits can be P/NP. Auditing requires attending 75% of lectures and requires full tuition. Please visit [my.pcc.edu](http://www.pcc.edu) to alter your grading option, and see the instructor to request an Audit. For more information, please see the following PCC links for dropping and grading guidelines:  
<http://www.pcc.edu/enroll/registration/dropping.html>  
<http://www.pcc.edu/resources/academic/standards-practices/documents/G301GradingMarch2011.pdf>
- Student Rights/Code of Conduct:** For your convenience, feel free to use the following link for a description of your student rights:  
<http://www.pcc.edu/about/policy/student-rights/student-rights.pdf#academic-integrity>  
<http://www.pcc.edu/about/policy/student-rights/student-rights.pdf#code-of-conduct>
- ADA Statement:** *PCC is committed to supporting all students. If you have an accommodation form from the Office for Student with Disabilities (OSD), please make arrangements to meet with me privately to discuss your needs. Accommodations are not retroactive, but begin when the instructor receives the OSD Approved Academic Accommodations form from the student. To request academic accommodations due to a disability please contact OSD at 971-722-7409 or 971-722-4341 to make an appointment with an OSD counselor. Use the following link for more information:* <http://www.pcc.edu/resources/disability>
- Sanctuary Statement:** PCC promotes the success, dignity, and worth of each individual by providing a safe environment where the examination of divergent ideas, experiences and systems of inequality adds depth to the learning experience. PCC strives to provide opportunity to all students and the appropriate level of support services to ensure the highest level of success. For more information and resources, see <https://www.pcc.edu/resources/undocumented-students/>