

Portland Community College
APPRENTICESHIP AND TRADES
Swan Island Trades Center/STC 100
6400 N Cutter Circle, Portland, Oregon 97217
971-722-5650 or 971-722-5652

APR 162: Calculations for the Trades

Term:	Spring 2023	Dates:	04/03/23 - 06/12/23
CRN:	21030	Credits:	4
Day/ Time:	Mondays, 5:30-9:20 pm <i>Synchronous meeting 5:30 pm – 7:30 pm</i>	Location:	Remote

Instructor: Skyler Stearns

Cell: 503-553-9779, text is best

Email: Skyler.stearns@pcc.edu

Phone: 971-722-3332

Office Hours: By appointment via Zoom

Course description: Covers measurements and calculations used in industrial and commercial facilities settings. Focuses on the use of fractions, decimals, powers, roots, algebraic equations, geometry, and trigonometry to perform calculations for equipment repair, maintenance, installation, and operation. Audit available.

Required Materials:

- TEXTBOOK: Elementary Technical Mathematics – Dale Ewen, 12th Edition, ISBN: 978-1-337-63058-0
- Scientific calculator (Texas Instruments TI-30XA or similar), calculator apps OK provided you know how to use them.

Prerequisites: MTH 20 or completion of any course for which it is a prerequisite, or department permission.

Attendance: This class will meet weekly on Zoom each Monday from 5:30 – approximately 7:30 pm, with about 2 additional hours of video lessons per week. Class attendance is for credit and will be taken manually at each Zoom session. You must be present when attendance is taken to receive credit. For registered apprentices, class sessions plus online hours are 4 total class hours per session.

Homework: Assigned each day, to be completed and checked by the student. Completed homework will receive eight points if handed in on time and six points if handed in late. No late assignments will be accepted during finals week.

Quizzes and Tests: There will be a weekly quiz, a midterm, and a final exam.

Course Grade: Students in a registered Apprenticeship must take all credit courses for a letter grade. A pass/no pass or Audit option is not valid. Your final grade will be calculated as follows:

Category	Final grade weight	Final Course grade	
Attendance	7%	90-100%	A
Homework	8%	80-89%	B
Quizzes	35%	70-70%	C
Midterm	25%	60-69%	D
Final Exam	25%	0-59%	F

NOTE: The midterm and final exam are **REQUIRED**. If you do not complete the exams, you will not pass the course.

Tentative Schedule/ flexibility statement:

This is a rough guide to course content during the term. The calendar, content, & assignments may be modified as needed in response to institutional, weather, or class situations. Please be in class for exact sections and homework assignments. If you are absent, check Announcements after class each day to find out what you missed.

Monday			In Class	Online
Week 1:	4/3	Fundamentals, binary	Course overview, syllabus, etc.	Chapters 1, Chapter 16
Week 2:	4/10	Fundamentals	HW Q&A, Quiz 1	Chapter 2, Chapter 3
Week 3:	4/17	Ohm's Law, Measurement	HW Q&A, Quiz 2	Ohm's Law (Not from textbook), Chapter 4
Week 4:	4/24	Basic Algebra	HW Q&A, Quiz 3	Chapter 5, Chapter 6
Week 5:	5/1	Ratio, proportion, & graphing	HW Q&A, Quiz 4	Chapter 7, Chapter 8
Week 6:	5/8	HW Q&A	Midterm Exam	
Week 7:	5/15	Systems, Factoring, & Quadratic equations	Midterm Q & A	Chapter 9, Chapter 10, Chapter 11
Week 8:	5/22	Geometry, Trigonometry	HW Q&A, Quiz 5	Chapter 12, Chapter 13
Week 9:	5/29	Memorial Day: No Class		
Week 10:	6/5	Trigonometry	HW Q&A, Quiz 6	Chapter 14
Week 11:	6/12	Final Exam	Final Exam	Final Exam

PCC Policies

Dropping/Withdrawing from class: If you decide to drop this class, you must do so using MyPCC **by Tuesday, April 11th** to get your money back. If you drop the class later, or if you stop attending class, you will be charged the full tuition amount.

PCC Grading Guidelines www.pcc.edu/resources/student-records/grading/

Student Rights and Responsibilities: [The Student Rights and Responsibilities Handbook](#) establishes students' freedoms and protections as well as expectations of appropriate behavior and ethical academic work. The Handbook includes items such as the Policy on Student Rights and the Student Code of Conduct.

Title IX/Non-Discrimination statement: Title IX is a federal law that prohibits sex-based discrimination in public education. Portland Community College is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you believe you have encountered sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, veteran status, sex, sexual orientation, gender identity, or disability please contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu.

PCC is a sanctuary college. PCC serves students of any immigration status. For more information and resources, see www.pcc.edu/resources/undocumented-students/.

Academic Integrity: PCC does not allow cheating. If you cheat on a test, turn in work that is not your own, or copy (plagiarize) any material, you will receive a zero (no credit) for the assignment. Cheating may also cause you to fail the course.

Disability services: If you have a disability and need an accommodation, please make arrangements to meet with me outside of class. PCC students requesting accommodations must provide documentation of disability and work with Disability Services at 971-722-4341.

Special needs: If you need any special help to be successful in this class, please speak to me during the first week of class. Let me know if you have physical challenges (for example: problems with seeing or hearing), or learning or emotional challenges.

Bad weather: PCC may cancel remote classes when the weather causes significant power outages or connectivity issues in the area. If weather has caused disruptions, please check TV or radio news stations for closure if possible, or go to www.pcc.edu and look at the top of the page for weather information. You can also sign up for Flash Alerts on your mobile device at <http://flashalert.net/signup.html>

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