



Principles in Manufacturing Mathematics
BMM 140 - 3 Credits

Day(s): Mondays

Time(s):

Classroom Number:

Instructor: Al Pucino
Email address:

Office Hours: **Phone number:**

Prerequisite/Co-requisites: Foundation MAT 095

Course Description

This course begins with a review of basic operations of numbers, fractions and decimals. It then covers the practical mathematics that every machinist is expected to use in the shop in the creation of machined parts and maintenance of tools and f

understanding of:		
Mathematical conversions	Calculate the conversion between common fractions and decimals	Homework/quiz assignment , mid-term, final
Power & Roots	Calculate powers and roots of numbers.	Homework/quiz assignment , mid-term, final
Number ratios, proportions and percentages	Explain and calculate ratios, proportions and percentages.	Homework/quiz assignment , mid-term, final
Unit conversions	Specify and convert units of measure	Homework/quiz assignment , mid-term, final
Solution of Equations	Determine the solutions of equations	Homework/quiz assignment , mid-term, final
Measurement Devices	Operate measurement devices	Homework/quiz assignment , mid-term, final
Algebraic equations	Employ the fundamentals of algebra	Homework/quiz assignment , mid-term, final
Use of mathematics in machining	Apply formulas to cutting speeds and revolutions	Homework/quiz assignment , mid-term, final
Plane Geometry	Apply the fundamentals of plane geometry	Homework/quiz assignment , mid-term, final
Areas	Calculate geometric figures areas	Homework/quiz assignment , mid-term, final
Trigonometry	Apply the principles of trigonometry	Homework/quiz assignment , mid-term, final

Cartesian Coordinates

help. The College has many resources to assist you in your academic endeavors. Please avail yourself to them.

9. Attitude: **Attitude is everything**. Come prepared to contribute, learn, share your perspectives and teach. It will make all the difference between an exciting semester or just another course for credit.

Attendance Policy

Attendance Policy: You are expected to attend all class sessions on time. Tardiness or leaving early will be considered a ½ cut. No more than ONE absence is permitted without affecting the participation portion of your grade. Any student experiencing TWO or more absences should immediately contact thenl6836rr(t t411.

2. Connect your comments to what you are learning in the course. Integration of required course materials to support your contributions is expected. Additional inclusion of outside references is strongly encouraged. Cite your sources
3. Reply to other students, however, you should

Jan 11, 2016	addition, subtraction, multiplication and division and decimal fractions	Smith & Peterson Sec. 1 pp. 1- 30 (168 minutes) Homework: Section 1 Unit 1: 4. (C, F) 5. (E, G) 7. (I) 8. (D) 9. (E), 10. (A) Unit 2: 4, & 7 Unit 3: 7.(D) 8.(A,C) Unit 4: 7.(B,D) 11.(C) 13. Unit 5: 9. 13. 15.	instructor covering: Common fractions addition, subtraction, multiplication and division and decimal fractions
Wk 2 Jan 18, 2016	HOLIDAY		
Wk 3 Jan 25, 2016	Combined operations of common fractions; decimal fractions	Reading: Smith & Peterson Sec. 1 pp. 31 – 64 SKIP UNIT 7 (150 minutes) Homework: Section 1 Unit 6: 7. (B, J) 8. (D) & 10. Unit 8: 7. 10. 15. 20. 27. 31. 35. 58. Unit 9: 15. 19. 26. 29. 33. Unit 10: 7. (G) 8. (D) & 12. (D) Unit 11: 7. (C) Unit 12: 7. (B)	Quiz problems provided by the instructor covering: Combined operations of common fractions; decimal fractions.
Wk 4 Feb 1, 2016	Decimal fractions, powers and roots	Smith & Peterson pp. 64 – 88 (114 minutes) SKIP UNIT 16 Homework: Section 1 Unit 13: 10. & 13. Unit 14: 8. 9. & 11. Unit 15: 8.	

		Unit 25: 7. (B) 10. (A) 13. (B) Unit 28: 7. (K) 8. (A)	
Wk 7 Feb 22, 2016	HOLIDAY	No Class (micrometers & calipers to be covered elsewhere)	None
Wk 8 Feb 29, 2016	Algebraic operations and equations Review for Mid-Term Exam	Reading: Smith & Peterson pp. 209-230 (144 minutes) Homework: Section 4 Unit 37- 8. 14. (A) 15. (A) 19. (E) 21. (B) 23. (A) Unit 38- 7. (A) 8. (C) 9. (C) 10. (C) 11. (C) 12. (H) 13. (G) 14. (I) 15. (H) 16. (B) 17. (E) 21 Unit 39- 12. 17. 23. 36. 46. 66. 79	Quiz problems provided by the instructor covering: Algebraic operations and equations. (60 minutes)
Wk 9 Mar 7, 2016	Mid-term	Mid-term In class after mid-term Reading: Smith & Peterson pp. 238 – 258 (126 minutes) Homework: Section 4 Unit 40- 9. 27. 39. 51. 59. 70. 88. 100. 112. 119. 124. 136. 145. Unit 41- 8. 10. 16. 28. (C) 29. (B) 30. (A, B) 31. 33. 36. 39. 46.	
Wk 10 Mar 14, 2016	Solutions to equations, applications to machining	Reading: Smith & Peterson pp. 258 – 297 (186 minutes) Skip Unit 46 Homework: Section 4 Unit 42- 48. 53. 64. 83. 91. 113. & 117. Unit 43- 7. 12. 18. 33. 42. 55. 63. (A) 64. (A) 66. 70. 83. 92. Unit 44- 8. 15. 20. 26. 37. 51. 56. 62. & 64. Unit 45- No Problems	Quiz problems provided by the instructor covering: Solutions to equations, applications to machining

		(126 minutes)	
Wk 15 Apr 18, 2016	Final Exam		

in alternate locations. The Academic Success Center provides two testing rooms for students to make up tests that have been previously dropped off by their instructor. These rooms are located in the center.

Scheduling Exams:

Students should contact the Academic Success Center to schedule an appointment in advance. Students can walk-in or call 860-913-2090 to schedule their exam. It is strongly recommended that students reserve a testing room in advance and confirm that their exam has been delivered to the center.

Students are also welcome to take their test without reserving a room; however, if both rooms are occupied or if they are scheduled to be occupied before the student would finish their test (given the time allotted by their teacher), the student will be unable to take their test and will instead be asked to make a reservation or to return when a room becomes available.

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