

PSEO College Algebra

SI 152 Course Syllabus

Spring 2011 (January 3 – April 29)

3 Semester Credit Hours

Mrs. Maite

B.S. Math Education; M.A. Mathematics

Website: <http://www.maitespace.com>

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Office Hours: By appointment, or as schedule allows

Instructor's Schedule	Period	Class
	Before School (6:55 – 7:15)	Available for help, if not assigned A.M. duty
	1 st (7:20 – 8:09)	Algebra 2
	2 nd (8:12 – 8:57)	PSEO Algebra
	3 rd (9:00 – 9:45)	Prep/Calculus Learning Lab
	4 th (9:48 – 10:33)	AP Calculus
	5 th (10:36 – 11:21)	Algebra 2
	6 th (11:24 – 12:09)	Lunch (Available for help, with notice)
	7 th (12:12 – 12:57)	Honors Algebra 2
	8 th (1:00 – 1:45)	Algebra 2
	9 th (1:48 – 2:33)	Collaboration w/ Math Dept
	After School (2:35 – 2:55)	Available for help, if not assigned P.M. duty or meeting

Course Text College Algebra: A Concise Course, Larson, Hostetler, and Hodgkins (copyright 2006)

Course Content and Objectives

Topics of Study for SI 152 College Algebra

- Unit 1: Functions and Graphs
- Unit 2: Polynomial and Rational Functions
- Unit 3: Exponential and Logarithmic Functions
- Unit 4: Systems of Equations and Inequalities
- Unit 5: Matrices and Determinants
- Unit 6: Sequences, Series, and Probability

Upon successful completion of this course, the student will...

- be prepared for a calculus course.
 - demonstrate an understanding of and satisfactory level of solving mathematical problems that involve the topics listed above.
 - demonstrate critical thinking skills requisite for first year college level algebraic computations.
 - demonstrate habits of careful mathematical computation.
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Attendance and Participation Requirements**Absences, Tardies, and Preparation for Class**

You should spend at least 2 hours preparing for each hour of class. You will be asked to contribute to discussion and present solutions to assigned problems. You are expected to attend every class. Students who miss more than 20% of the 75-day course, which is 15 classes, prior to Thursday, April 28, 2011 will automatically fail the class with Ohio Christian University. There are no exceptions to this policy. Three tardies are equivalent to one absence and will count toward the limit of 15 total absences. NOTE: Regardless of whether the absences are excused or unexcused, every time you miss a class, it will count toward the limit of 15 total absences.

Course Grades**Homework, Quizzes, Midterm Tests, and Final Exam**

Your final grade will be calculated using the following weighted categories:

- **20% = HW & Quizzes**
- **50% = Midterm Tests** (5 or 6 unit tests, as time permits)
- **30% = Final Exam**

Your final grade will be determined using the scale below:

Grading Scale

A: 94 – 100

A-: 90 – 93

B+: 87 – 89

B: 83 - 86

B-: 80 - 82

C+: 77 - 79

C: 73 - 76

C-: 70 – 72

D+: 67 – 69

D: 63 – 66

D-: 60 – 62

F: 50 – 59

Tips for Success**Online Resources and Graphing Calculators**

- Utilize the online resources accompanying the textbook for this class. In particular, use the student success organizers to guide your preparation for each class, and take the ACE practice tests for every section to test your mastery of the content. Easy links to these items are available on Mrs. Maite's website at <http://www.maitespace.com>.
 - Appendix A in the textbook provides an overview of the most valuable features on a graphing calculator. Knowing how to use these features enables you to explore mathematics more easily and to a greater depth. So while a graphing calculator is not required, it is highly recommended as a learning tool; however, if you choose to use a graphing calculator, it is up to you to learn its capabilities and practice using them.
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Course Calendar**Tentative Schedule**

The course calendar provides a tentative class schedule, and topics and assignment may be adjusted as the class progresses. Updated daily agendas and assignments will be made available online at <http://www.maitespace.com>.

January 2011

Monday	Tuesday	Wednesday	Thursday	Friday
<p>3 Introduction to PSEO College Algebra Course Overview and Expectations; Introduction to §1.1 Graphs of Equations</p>	<p>4 §1.1 Graphs of Equations HW: p. 12: 3, 4, 8, 9, 15, 17, 18, 20 – 22, 25 – 31, 33, 37, 40, 41, 44, 47 – 56, 59, 64, 69, 74, 75, 78 – 86, 89, 90, 93</p>	<p>5 §1.2 Lines in the Plane HW: p. 24: 1, 3, 4, 10, 13, 15, 16, 19, 24, 29, 30, 32, 34, 35, 37, 39 – 41, 43, 45 – 47, 50, 53, 55, 57, 58, 60, 62 – 65, 68, 69, 73, 76</p>	<p>6 §1.3 Linear Modeling and Direct Variation HW: p. 35: 1, 5, 8, 10, 11, 14, 15, 17 – 19, 21, 24, 28, 30, 31, 33 – 36, 38 – 40, 45, 50</p>	<p>7 §1.4 Functions HW: p. 48: 1 – 4, 6 – 8, 10 – 12, 13, 16, 17 – 23 odd, 26 – 29, 31, 34, 36, 37, 39, 41 – 43, 45, 47, 50 – 55, 58 – 62, 66 – 68, 71</p>
<p>10 Review Mid-Chapter Quiz HW: p. 53: 1 – 21</p>	<p>11 Quiz #1 §1.1 - §1.4</p>	<p>12 CHS EXAM SCHEDULE; No Class</p>	<p>13 §1.5 Graphs of Functions HW: p. 61: 1 – 17, 21, 23, 27 – 30, 34 – 36, 39, 42, 43, 46, 49, 50, 52, 54, 57, 60; §1.6 Transformations of Functions HW: p. 71: 3 – 48 every 3rd, 49 – 52, 54, 56 – 59</p>	<p>14 CHS EXAM SCHEDULE; No Class</p>
<p>17 MARTIN LUTHER KING, JR. DAY NO CLASS</p>	<p>18 §1.7 The Algebra of Functions HW: p. 80: 2 – 4, 6, 8, 11 – 25 odd, 26, 27, 29, 31, 35 – 38, 41, 43 – 45, 47, 50 – 52</p>	<p>19 §1.8 Inverse Functions HW: p. 91: 3 – 18 every 3rd, 20, 23, 24, 27, 31, 38, 39, 42 – 48 even, 51, 54, 59, 61</p>	<p>20 Review Practice Chapter Test HW: p. 101: 1 – 18</p>	<p>21 Review Final Chapter Summary</p>
<p>24 Chapter 1 Test</p>	<p>25 §2.1 Quadratic Functions and Models HW: p. 112: 1 – 11, 14 – 16, 18 – 21, 24 – 39 every 3rd, 45, 48, 50, 51, 55</p>	<p>26 §2.2 Polynomial Functions of Higher Degree HW: p. 123: 2 – 8 even, 9, 12, 15, 17, 19, 20, 22, 24 – 42 every 3rd, 47, 49, 55, 58</p>	<p>27 §2.3 Polynomial Division HW: p. 133: 3 – 36 every 3rd, 37, 39, 41, 45, 49, 51, 54, 55, 59 – 62, 64, 65 – 71 odd</p>	<p>28 §2.4 Real Zeros of Polynomial Functions HW: p. 145: 1, 4, 6, 7, 10, 13, 15, 16, 19, 23, 25, 27 – 30, 37, 38, 41 – 45</p>
<p>31 Review Mid-Chapter Quiz HW: p. 150: 1 – 12</p>				

February 2011

Monday	Tuesday	Wednesday	Thursday	Friday
	1 Quiz #2 §2.1 - §2.4	2 §2.5 Complex Numbers HW: p. 159: 3 – 75 every 3 rd	3 §2.6 The Fundamental Theorem of Algebra HW: p. 167: 3 – 48 every 3 rd , 53, 59, 61, 62	4 §2.6 The Fundamental Theorem of Algebra HW: p. 167: 3 – 48 every 3 rd , 53, 59, 61, 62
7 §2.7 Rational Functions HW: p. 177: 2, 3, 6, 9, 10, 13 – 20, 22, 24, 27, 31, 36, 39, 44, 49, 53, 55	8 Review Practice Chapter Test HW: p. 187: 1 - 15	9 Review Chapter Summary	10 Chapter 2 Test	11 §3.1 Exponential Functions HW: p. 198: 3 – 48 every 3 rd , 53
14 §3.2 Logarithmic Functions HW: p. 209: 3 – 72 every 3 rd	15 §3.2 Logarithmic Functions HW: p. 209: 3 – 72 every 3 rd ; §3.3 Properties of Logarithms HW: p. 217: 3 – 99 every 3 rd	16 §3.3 Properties of Logarithms HW: p. 217: 3 – 99 every 3 rd	17 SUBSTITUTE TEACHER Review Mid-Chapter Quiz HW: p. 220: 1 - 19	18 Quiz #3 §3.1 – §3.3
21 PRESIDENTS' DAY NO CLASS	22 §3.4 Solving Exponential and Logarithmic Equations HW: p. 229: 3 – 93 every 3 rd	23 §3.4 Solving Exponential and Logarithmic Equations HW: p. 229: 3 – 93 every 3 rd	24 §3.5 Exponential and Logarithmic Models HW: p. 239: 1, 3, 6, 8, 13, 14, 18, 21, 24, 26, 27, 33, 34, 36	25 Review Practice Chapter Test HW: p. 250: 1 - 20
28 Review Chapter Summary				

March

Monday	Tuesday	Wednesday	Thursday	Friday
	1 Chapter 3 Test	2 §4.1 Solving Systems Using Substitution HW: p. 261: 3 – 24 every 3 rd , 25, 30, 33, 37, 42, 49	3 §4.2 Solving Systems Using Elimination HW: p. 272: 3 – 24 every 3 rd , 25, 27, 35, 37	4 Review Mid-Chapter Quiz HW: p. 276: 1 - 8
7 §4.3 Linear Systems in Three or More Variables HW: p. 285: 1, 3 – 36 every 3 rd	8 §4.4 Systems of Inequalities HW: p. 297: 3 – 45 every 3 rd	9 Review Practice Chapter Test HW: p. 305: 1 - 14	10 Review Chapter Summary	11 Chapter 4 Test
14 OGT WEEK §5.1 Matrices and Linear Systems HW: p. 318: 1 – 33 odd, 47, 51, 55	15 OGT WEEK §5.1 Matrices and Linear Systems HW: p. 318: 1 – 33 odd, 47, 51, 55	16 OGT WEEK §5.2 Operations with Matrices HW: p. 332: 3 – 39 every 3 rd , 42, 47 – 53 odd	17 OGT WEEK §5.2 Operations with Matrices HW: p. 332: 3 – 39 every 3 rd , 42, 47 – 53 odd	18 OGT WEEK Extra day to catch-up with shortened exam week periods
21 §5.3 The Inverse of a Square Matrix HW: p. 343: 3, 6, 12 – 27 every 3 rd , 39, 40, 43, 48, 53	22 Review Mid-Chapter Quiz HW: p. 347: 1 - 20	23 Quiz #4 §5.1 - §5.3	24 §5.4 The Determinant of a Square Matrix HW: p. 355: 1 – 39 every 3 rd	25 §5.5 Applications of Matrices and Determinants HW: p. 364: 3 – 24 every 3 rd
28 Review Practice Chapter Test HW: p. 373: 1 - 20	29 Review Chapter Summary	30 Chapter 5 Test	31 §6.1 Sequences and Summation Notation HW: p. 383: 3 – 72 every 3 rd	

April 2011

Monday	Tuesday	Wednesday	Thursday	Friday
				1 §6.2 Arithmetic Sequences and Partial Sums HW: p. 392: 3 – 30 every 3 rd , 31, 34, 37, 39 – 42, 44, 47, 50, 53, 57, 63, 70, 75
4 §6.2 Arithmetic Sequences and Partial Sums HW: p. 392: 3 – 30 every 3 rd , 31, 34, 37, 39 – 42, 44, 47, 50, 53, 57, 63, 70, 75	5 §6.3 Geometric Sequences and Series HW: p. 401: 3 – 24 every 3 rd , 31 – 34, 36, 41, 44, 47, 49, 51, 54, 56	6 §6.3 Geometric Sequences and Series HW: p. 401: 3 – 24 every 3 rd , 31 – 34, 36, 41, 44, 47, 49, 51, 54, 56	7 §6.4 The Binomial Theorem HW: p. 410: 3 – 30 every 3 rd , 44, 45	8 Review Mid-Chapter Quiz HW: p. 412: 1 – 22
11 Quiz #5 §6.1 - §6.4	12 §6.5 Counting Principles HW: p. 420: 3 – 42 every 3 rd	13 §6.5 Counting Principles HW: p. 420: 3 – 42 every 3 rd	14 §6.6 Probability HW: p. 431: 3 – 33 every 3 rd	15 Review Practice Chapter Test HW: p. 441: 1 – 13, 15 – 20
18 Review Chapter Summary	19 Chapter 6 Test	20 Review Practice Cumulative Test for Chapters 1 - 3 HW: p. 251: 1 – 21	21 SPRING BREAK	22 SPRING BREAK
25 Review Practice Cumulative Test for Chapters 4 – 6 HW: p. 442: 1 – 18	26 Summary Review for Final Exam	27 CHS EXAM SCHEDULE; No Class	28 Final Exam	29 CHS EXAM SCHEDULE; No Class