

Math 115 (college algebra): Topics Covered and Approximate Fall 2019 Schedule

Text: *College Algebra*, McGraw Hill, special UMass Math 115 edition.

week 0	Chap. R.2, R.3, R.4	students review on their own time (or cover in first class)
week 1	Chaps. 1.1 and 1.2	Linear Equations
week 2	Chap. 1.3 Chap. 1.4	Applications Linear Inequalities in One Variable
week 3	Chap. 1.5 Chaps. 1.6 and 1.7	Compound Inequalities Absolute Value Equations and Inequalities (section 1.7: light treatment only)
week 4	Chaps. 2.1, 2.2, 2.3	Linear Equations in Two Variables
week 5	Chaps. 2.5, 2.6, 2.7	Relations and Functions
week 6	Chaps. 3.1, 3.2, 3.3, 3.4	Solving Systems of Linear Equations in Two Variables
week 7	Chap. 4.1 Chaps. 4.2, 4.3, and 4.4.1 Test 1	Integer Exponents and Scientific Notation Polynomials on Chapters 1 and 2
week 8	Chaps. 4.5, 4.6, 4.7.1, 4.7.2	Factoring (in 4.7 light treatment—to top of page 385 only)
week 9	Chap. 4.8 Chaps. 5.1 and 5.2	The Zero Product Rule Rational Expressions (light treatment)
week 10	Chap. 5.3 Chaps. 5.5 and 5.6	Adding and Subtracting Rational Expressions Rational Equations
week 11	Chaps. 6.1, 6.2, 6.3 Test 2	Roots, Rational Exponents, Radicals on Chapters 3 and 4
week 12	Chaps. 6.4 to 6.7	Radicals (6.7.3 and 6.7.4: minimal coverage)
week 13	Chaps. 7.1, 7.2, and 7.3.1	Completing the Square, Quadratic Formula, Quadratic Form
week 14	Chaps. 7.4 and 7.5	Graphs of Quadratics (7.5 is very important)
week 15	Test 3 course review	on Chapters 5, 6, and 7
optional	Chaps. 4.7.3, 4.7.4, 4.7.5	Factoring Sum and Difference of Cubes
optional	5.4, 5.7	Complex Fractions, Variation
optional	7.3.2	Equation Reducible to a Quadratic
optional	8.1, 8.2, 9.1	Composition, Inverses, Circles
not in course	all chapters	anything to do with imaginary numbers (<i>i</i>)
all of course	anywhere	just state imaginary result as ‘no real solution’
not in course	Chap. 2.4	Applications of Linear Equations and Modelling
not in course	Chaps. 3.5, 3.6, 3.7	Inequalities in two variables, Equations in three variables
not in course	Chaps. 4.4.2, 4.4.3	Long and Synthetic Division of Polynomials
not in course	Chaps. 6.8, 7.6	Complex Numbers, Polynomial and Rational Inequalities

Sections of particular importance for Precalculus:

R.3.6, R.3.7, 1.3.2, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.6.1, 2.6.5, 4.1.1, 4.3.2, 4.6.2, 4.8.1, 5.3.4, 5.5.1, 6.2.1, 6.6.3, 7.1.1, 7.1.2, 7.2.2, 7.2.5, 7.4.4, 7.5.1 (especially page 627), and 7.5.2.

Pay particular attention to the skills in 4.1.1, 4.3.2, 4.6.2, 4.8.1, 5.5.1, 7.2.5, 7.4.4, and on page 627. Review them carefully.