MATH 161 Syllabus

Instructor: Hilary Smallwood, Weber 18C,   **Email**: smallwoo@math.colostate.edu
Lectures: MTWRF 7:30-9:10 in Wagar 232
Websites: RamCT: ramct.colostate.edu
WeBWorK: https://courses1.webwork.mss.org/webwork2/colostate-math161/
Office Hours and location: As posted on RamCT, in Weber 17
Prerequisite: MATH 160, MATH 124.
Textbook: Weir and Hass. *Thomas' Calculus*, Twelfth Edition, Pearson Education Inc, 2010 (www.pearsoned.com) or *Thomas' Calculus, Custom Edition for CSU*. Pearson Learning Solutions, 2010.
Calculator TI-83 or better recommended.
Course Content: Sequences, Convergence, Series, Inverse Functions, Exponentials and Logarithms, Integration, Proper and Improper Integrals, Power Series and Taylor Series, Polar Coordinates, Complex Numbers.
Labs: In Weber 205/206. Lab sessions will be announced. We will use the computer algebra software Maple for symbolic computations and for plotting. Previous knowledge of a programming language is not required.
Quizzes: Will be announced in class at least one day before. Expect on average one quiz per week. There will not be a quiz the last week of class.
Exams: (during class hours)
Midterm Exam 1: Monday July 1
Midterm Exam 2: Monday July 15
Midterm Exam 3: Monday July 29
Final Exam: Friday August 9
No calculators, books, notes etc. during the exams.
Grading:

	Points
Midterm Exam 1:	100
Midterm Exam 2:	100
Midterm Exam 3:	100
Final Exam:	200
Lab reports:	80
Quizzes:	100
Calc I Gateway Assignment:	20
WeBWork/ Weekly Worksheets/ Attendance:	100
Total:	800

Point Range	Grade
720-800	A
640-719	B
560-639	C
480-559	D
0-479	F

Tentative syllabus (with section numbers):

Week 1: 6/17-6/21	10.1 Sequences, Convergence
	10.2 Series
	10.3 The harmonic series
Week 2: 6/24-6/28	7.1 Inverse functions
	7.2 Natural logarithm
	7.3 Exponential function
	7.4 Exponential growth and decay
Week 3: 7/1-7/5	7.5 L'Hôpital
Exam 1	7.6 Inverse trigonometric functions
	8.1 Integration by parts
Week 4: 7/8-7/12	8.4 Partial fractions
	8.7 Improper integrals
	10.3 Integral test
	10.4 Comparison test
Week 5: 7/15-7/19	10.5 Ratio test
Exam 2	10.6 Alternating series, abs. and cond. conv.
	10.7 Power series
	10.8 Taylor and Maclaurin series
Week 6: 7/22-7/26	10.9 Convergence of Taylor series
	11.1 Parametrization of plane curves
	11.2 Arc length and area
Week 7: 7/29-8/2	11.3 Polar coordinates
Exam 3	11.4 Graphing in polar
	11.5 Area and arc length in polar
Week 8: 8/5-8/9	A.7 Complex numbers
Final Exam	Review

Academic Integrity:

Credible Scholarship requires academic integrity, a direct result of responsible research and writing habits. As with all ethically driven behavior, such habits – and their foundational underpinnings – are not innate. They are learned and – through practice – honed to a point where they become second nature, a character trait both much valued and much sought after in the professional world. Preparing for success in your chosen profession begins with developing and practicing these habits. One follows the other: Academic integrity lays the groundwork for professional integrity. Quote from Colorado State University Student Conduct Code, Article III:

> Any student or student organization found to have committed or to have attempted to commit the following misconduct is subject to disciplinary sanction. Academic misconduct including but not limited to: cheating, plagiarism, unauthorized possession or disposition of academic materials, falsification, or facilitation of acts of misconduct. Plagiarism includes the copying of language, structure, images, ideas, or thoughts of others and is related only to work submitted for credit.