NUAMES

North Campus

1465 Edvalson Street
Ogden, UT 84408

Phone: (801) 626-8600

WEBER STATE UNIVERSITY

CONTINUING EDUCATION
CONCURRENT ENROLLMENT

MATH 1050- COLLEGE ALGEBRA

(Math 1050 satisfies the QL Requirement)

Spring 2020 4 credit hours

Attention: Contact the College or University you wish to attend to confirm this Concurrent Enrollment course will meet your goals for fulfilling General Education requirements or will count toward your chosen major.

Web Resources: http://jefflongnuames.weebly.com/

Instructor's Name: Jeff Long

Instructor's Email: jelong@dsdmail.net

Telephone (school): (801) 626-6600

School Address: Building M-3 Room 100
Weber State University Ogden
1465 Edvalson Street
Ogden, UT 84408

Instructor Bio

My name is Jeff Long. Math was my best subject in school and the most satisfying. To me, working through problems is like solving puzzles. I grew up overseas in Afghanistan (before 40 years of war destroyed the country) and then the Philippines. I graduated from BYU with a Bachelor of Science degree in Mechanical Engineering then spent 20 years in the U.S. Navy as a submarine officer. When I retired from the navy, our family settled here in Utah where I spent two years building my own log home (from raw logs). Since I needed to pay for it, I went back to school for a year and a half to become a certified math teacher. I taught at Roy High School for 9 years. This is my sixth year at NUAMES. Seven years ago, I completed my Master of Mathematics degree at the Utah State University. In 2014, I was honored to be one of eight teachers in Utah to receive the Master Teacher Award from Math for America, a non-profit organization based in New York City. My wife and I are the proud parents of two grown children. I love reading, swimming, biking, kayaking, and walking our two standard poodles on the beautiful trails in the Ogden Valley where we live. I feel very fortunate to be able to work with this excellent faculty and teach math to such a great group of students at NUAMES (North)!

COURSE DESCRIPTION

Welcome to the world of vast possibilities opened to you by taking Math 1050. This course equips you with the understanding of college algebra needed for so many advanced courses in mathematics and the sciences. We hope you fully embrace this opportunity to prepare for your journey to become a mathematician, a scientist, a researcher, a business person, an engineer, or any number of other exciting thinkers.

This course covers a survey of college mathematics and is also a preparatory course for calculus. Topics from continuous mathematics include polynomial, rational, exponential and logarithmic functions, equations and their applications, absolute value, polynomial and rational inequalities, and nonlinear systems. Topics from discrete mathematics include matrices, matrix algebra and inverses, determinants, sequences and series. In addition, mathematics of rational functions, partial fraction decomposition and the binomial theorem will be covered.

PREREQUISITES

<table>
<tr><td>'C' average or better in each course: Secondary Math I, Secondary Math II and Secondary Math III.</td><td>AND one of the following</td><td>23 or higher on the Math portion of the ACT
OR
ALEKS score of 55-100
OR
Math ACCUPLACER: CLM score of 50 or above</td></tr>
<tr><td>OR</td><td colspan="2">'C' or better in Math 1010</td></tr>
<tr><td colspan="3">See: http://www.weber.edu/placement/math.html for more placement information</td></tr>
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TEXT BOOK

Algebra and Trigonometry. Sullivan, 8th edition (ISBN 0-13-15779-X.) or 10th edition (ISBN-13 978-0321998590 and ISBN-10: 0321998596.)

The textbook will be provided by NUAMES but must be returned at the end of the course.

CALCULATORS

Scientific and Graphing Calculators can be used in the classroom. However, only scientific calculators may be used on exams.

GRADING POLICY

Student's grades are divided into three portions:

a) Midterm Exam *(75 minute time limit)*:	20%	(Exam written by WSU)
b) Final Exam *(120 minute time limit)*:	30%	(Exam written by WSU)
c) Work in the Classroom:	50%	(Determined by HS Instructor)

A grade of C or better is considered passing and meets the prerequisite for the next math course. Student's final grades in all Concurrent Enrollment Mathematics courses will be determined using the following grading scale.

Regardless of overall score in the course, students must have a weighted exam average* of 65% to pass the course. It is the Weber State University Math Department policy that students attaining a weighted exam average less than 65% shall receive a grade no higher than a D for the course.

Students who earn a C- grade in the course and also pass the weighted exam average with better than a 65% may receive a C for the course at the individual teacher's discretion based on overall effort and performance in the course.

**The weighted exam average is computed by giving 40% weight to the WSU Midterm and 60% weight to the WSU Final.*

CE MATH GRADING SCALE	
A	$93 \leq x \leq 100$
A-	$90 \leq x < 93$
B+	$87 \leq x < 90$
B	$83 \leq x < 87$
B-	$80 \leq x < 83$
C+	$77 \leq x < 80$
C	$73 \leq x < 77$
C-	$70 \leq x < 73$
D	$60 \leq x < 70$
E	$0 \leq x < 60$

SCHEDULE

ACCOMMODATIONS

WSU CE DISABILITY INFORMATION FOR ALL CE SYLLABI

Disability Accommodation: PPM 3-34 notes: "When students seek accommodation in a regularly scheduled course, they have the responsibility to make such requests at the Center for Students with Disabilities before the beginning of the quarter [semester] in which the accommodation is being requested. When a student fails to make such arrangements, interim accommodations can be made by the instructor, pending the determination of the request for a permanent accommodation." **Weber State University Concurrent Enrollment students** who have a pre-established 504 Plan or IEP may continue using the accommodations established therein during CE courses, provided that the accommodations have proven effective and are reasonable for a university level course. Faculty, staff, parents, and students may contact WSU Disability Services at any point to discuss or verify accommodations for CE classes. CE students should discuss their accommodation needs with faculty as soon as possible. Most questions or situational issues can be discussed and subsequently resolved to meet the students' needs. Students should provide faculty with written (print or email) requests of accommodations for their approved 504 or IEP plan.

ACADEMIC HONESTY

Cheating in any form is not acceptable in this course nor any course. The student code for cheating can be found in the Weber State University Policy and Procedures Manual: https://www.weber.edu/ppm/Policies/6-22_StudentCode.html

If a student is caught cheating, the student will receive a zero for the assignment and will be reported to the NUAMES administration. If there is a second incident of cheating, the student will be referred to the Weber State University Dean of students and may be removed from the course.

CELL PHONE POLICY

The Weber State University Mathematics Department requires that all students to place their personal communication devices, such as cell phones, by the teacher while the student is taking the midterm and final exams. The communication devices must be on silent mode and may be returned only after the student has submitted their exam. If there is an extenuating situation where someone may need to contact the student during the exam, please ask that person to call the main office at (801) 626-6600. The main office will then contact the student through the math teacher. Cell phone use during class time is prohibited. I will confiscate cell phones if I see them in use. You may claim your confiscated cell phone from the main office at the end of the school day.

Classroom Portion of Grades count for 50% of the overall grade. (WSU's midterm and final exams count for the other half of the grade.) The in-class portion of the grades are calculated using the following percentages:

Homework	15%
Quizzes (10 total)	7%
Unit Tests (4 total)	28%

Homework I will post the assignments on my website. Most of these assignments are designed to practice your procedural understanding of mathematics. You must show your work to receive full credit. While obtaining the correct answer is important, I am much more interested in ***how*** you derive your answer. Consequently, homework problems that are submitted with just answers and no work to justify how the answer was derived will receive **no credit**. This policy is to help you prepare for the unit tests, and the Mid-term and Final Exams on which you **must show your work**. Problems that are non-computational will usually require a complete sentence or two to demonstrate your understanding. Each lesson has an associated homework assignment. I usually enter the grades for submitted homework that same day before I leave for the day. If a student's assignment is missing when I enter the grades, I will often provide a courtesy email to the student's parents to notify them that it is missing. Sometimes this is due to my error (homework assignments sticking together when I enter them, etc.) and other times it's because the assignment was not submitted.

Late Work: All late work will receive a 20% reduction in score. Late work is defined as any work turned in after its due date unless you are absent the day the assignment is due. If you are absent you will be expected to turn in your work on the next attended class period. An extended absence will be handled on a case by case basis. All late work for a specific unit (3/4,

5, 6, and 12/13) must be turned in before the unit test is taken. Any late work turned in after the respective test will receive a 50% grade reduction.

Tests: There will be a test at the end of each of the four units (3/4, 5, 6, and 12/13). Tests will be taken ***outside of class time.*** There will be no test retakes.

Quizzes: There will be 10 quizzes (see schedule). There will be no retakes on quizzes. If you are absent on the day a quiz is given, please see me to take the quiz. All quizzes combined count the same as one of the unit tests.

Mid-Term and Final Exam: There will be comprehensive, **timed** exams at the midterm and at the end of the course. These two exams are prepared by the Weber State University (WSU) Mathematics and Statistics Department. Only in the case of extenuating circumstances, approved by WSU and myself, will students be allowed to re-schedule an exam time. These tests are graded by Math 1050 instructors from other schools using a rubric provided by Weber State University to ensure fairness for all concurrent enrollment students.

I will not have an advanced copy to review before I administer the test. We will review some of the exams taken in prior years. The dates for the Midterm and Final exams are all taken on the same days for all WSU concurrent enrollment Math 1050 classes regardless of the students' respective high schools. These test days are:

Midterm: (A-day) Tuesday October 22nd and (B-day) Wednesday October 23rd during class time.

Final Exam: will be taken Wednesday January 8th at 3:00 PM.

YOU MUST TAKE THE RESPECTIVE EXAM ON ONE OF THOSE DAYS.

Extra Credit: There is no extra credit available for this course.

Initial and Final Assessments: ALEKS is an online learning and assessment program. In our CE Math 1050 course we will take an initial assessment during the first week of school. Upon completion, students will have a general idea of their areas of weakness. The program then allows self-guided individual learning and practice throughout the course. At the end of the course students will take a final assessment. The results of these assessments are not used in grade calculation for the course.

Research Study: Weber State University is conducting a research project to study the preparedness of high school math courses and the effectiveness of WSU Concurrent Enrollment Math. The study is being conducted by Dr. Lin Xiang and Dr. Jennifer Claesgens in the Center for Science and Math Education in the College of Science at Weber State University. This program and research is funded by the Utah System of Higher Education (USHE). The purpose of this study is to investigate whether, and how well, your placement in the concurrent enrollment math courses help you learn math and identify some factors that may influence your learning. The results of the initial ALEKS assessment are used in the study. If you decide not to participate in the research project you will still take the ALEKS placement test but your results will NOT be used in the study. A consent form for the study will be handed out in class and sent home. The consent form must be returned whether you choose to participate or not.

Course Incentive: Regardless of participation in the study, I am offering an incentive for CE Math 1050 students who use the ALEKS learning program. For every 30 topics "Mastered" beyond the initial assessment you will receive 1 "credit". Credits may be used to:

- Drop lowest homework assignment score (up to max of 2)
- Drop lowest quiz score (up to max of 2)
- Homework scores will be dropped before quiz scores

Extra help: I will make myself available for individualized help to anyone having difficulty with the course material. I will not be available during faculty meetings scheduled after school on the 2nd or 3rd Wednesday of the month (see my online schedule). I will not be available on early dismissal days nor after school on Fridays. I will be available on most other days:

(1) 7:00 AM – 7:30 AM (by appointment)
(2) 7:30 AM – 8:00 AM (just come see me)
(3) 11:00 – 11:40 AM (lunch time) (by appointment but I am usually in my classroom)
(4) 2:45 PM – 3:15 PM (just come see me)
(5) 3:15 PM – 4:15 PM (by appointment).

When I say "by appointment" it means that while I'm usually there during those times, it helps to make an appointment to ensure you don't waste a trip on the off chance that I have stepped out of my room. I want to help you so please don't be afraid to come for help. If you are struggling or have trouble "getting around to" completing your homework, I suggest that you come to my classroom during lunch time (I'll let you eat there) or right after school to complete your work.

Behavior: Students at NUAMES rarely have behavior issues. You're just a great bunch of people. I reserve the right to reassign seating to ensure everyone remains on task. If there is a behavior problem, it will be handled according to the following sequence of infractions:
1st offense: Student/teacher conference at the end of class;
2nd offense: I will contact your parents;
3rd offense: student/teacher contract;
4th offense: parent/teacher conference;
5th offense: referral to the administration.

By "offense" I mean a significant behavior problem. If I ask you to focus or stop talking, that's just me trying to keep you on task. I'll let you know if you need to stay after class to see me about your behavior.

Citizenship grades: are based upon the following areas:
(1) work habits in class, (2) respect, (3) accountability, and (4) attendance.

I will interpret the accountability portion, to mean that you "take ownership for your own education" and will assign citizenship grades as follows:
"H" (high): 0-2 missing HW assignments;
"S" (satisfactory): 3-4 missing assignments;
"N" (needs improvement): 5-6 missing assignments; or a significant number of late assignments.
"U" (unsatisfactory): more than 6 missing assignments.

For the **attendance** portion of the citizenship grade I will assign grades as follows:
"H" (high): 0-1 tardies;
"S" (satisfactory): 2 tardies;
"N" (needs improvement): 3-4 tardies (per 2019-2020 NUAMES policy);

"U" (unsatisfactory): 5 or more tardies, or 3 or more unexcused absences, or 6 or more parental excused absences (per 2019-2020 NUAMES policy)

If you are more than 5 minutes late I will not admit you to class without a note from the head secretary in the main office. Please be on time.

Feedback

Grades will be posted daily and made available for student and parental review on the Davis School District web site (http://www.davis.k12.ut.us/). Students may request a hardcopy progress report from the instructor at any time.

Resources

- On the web site http://jefflongnuames.weebly.com/ there are the following resources:
    - schedule of assignments
    - homework assignments (that are not from the textbook)
    - class notes
- Weber State University Canvas: https://cas.weber.edu
- Weber State tutoring services are also available: WSU Davis Room D2 214

WSU Drop Policy

According to WSU Concurrent Enrollment policy, a decision to drop a CE Math course must be finalized by (about) September 18. After that, students can withdraw from the class until (about) October 13 and will receive a 'W' on their college transcript. Beyond this point, a student will receive a grade for the course from the instructor at the end of the term. The grade earned in this course becomes part of a ***permanent college transcript*** at WSU. This transcript cannot be altered at any future point in time.

Grade Scale (provided by WSU)

Grade	Percent range	Remarks
A	93 - 100	Excellent work.
A-	90 – 92.9	
B+	87- 89.9	Good work.
B	83 – 86.9	
B-	80 – 82.9	
C+	77 – 79.9	Below class expectations but meets prerequisites
C	73 – 76.9	
C-	70 – 72.9	Does not meet follow-on math class prerequisite
D	60 – 69.9	Does not meet follow-on math class prerequisite
E (F)	0 – 59.9	Failure

Topic Schedule

				Math 1050 Spring Semester 2020	Homework
T	21-Jan	A	1	Review Algebra Concepts	**15:** 9-19 (odd) **26:** 65,73-78,90-94 **48:** 35, 57-61, 89-93 **56:** 25,33,39-41,77,92,93
Th	23-Jan	A	2	Review Algebra Concepts **ALEKS Pre-TEST (3 PM)**	**69:** 11-15,21,25,33,43,47,61, 63,73,79,85. **77:** 8, 15-18, 31-33, 46,47, 62, 63,71
Sa/Su					
M	27-Jan	A	3	1.6: Equations and Inequalities Involving Absolute Value	**138:** 7,10,11,13,20,21,27, 28,33,39,43,46,56,60,65,73
W	29-Jan	A	4	**Quiz #1,** 3.1, 3.2, Functions, The Graph of a Function	**219:** 15,16,21,24,33,39,44, 45,48,49,51,56,63,68,69,75 **227:** 9,11,14,15, 18,20,24,25
Fri	31-Jan	A	5	3.3: Properties of a Function	**239:** 21,24,26,27,29,33,35,38, 42,53,54,59
Sa/Su					
T	4-Feb	A	6		**249:** 17-25,28,31,36,41,42,47
Th	6-Feb	A	7	**Quiz #2**, 3.5: Graphing Techniques: Transformations	**261:** 8, 9, 13, 17, 22, 23,27, 28,31,32,39,41,49, 52,66
Sa/Su					
M	10-Feb	A	8	4.3, 4-4: Quadratic Functions and Their Properties, Quadratic Models; Building Quadratic Functions from Data	**302:** 11,13,21,27,30,35,38,46, 49,61,64 **310:** 3,6,8,9 11abcf,13,19
W	12-Feb	A	9	4.5: Inequalities Involving Quadratic Functions	**316:** 3,6,7,10,13,15,18,21,29, 31, 34
Fri	14-Feb	A	10	Unit 3/4 Review	HW handed out in class
Sa/Su					
M	17-Feb				
W	19-Feb	A	11	5.1: Polynomial Functions and Models, **Ch-1,3,4 Test (3 PM)**	**340:** 14,15,17,18,20,27,30,31, 39,45,50,57-60, 62,77,99abef
Fri	21-Feb	A	12	5.2: Properties of Rational Functions	**352:** 12,13,15,21,23,26,36,41, 44,45,46,49
Sa/Su					
T	25-Feb	A	13	5.3: The Graphs of Rational Functions	**366:** 7,10,15,18,21,26,29,33, 37,40,45,46
Th	27-Feb	A	14	**Quiz #3** 5.4: Polynomial and Rational Inequalities	**373:** 3,8,12,15,18,21,26,27,30, 33,38,53
Sa/Su					
M	2-Mar	A	15	R.6: Synthetic Division	**60:** 9,10,13,14,19,20,26
W	4-Mar	A/B	16	5.5: The Real Zeros of Polynomial Functions	**386:** 11,14,17,21,25,28,33,38, 45,50,53,57,62

Th	5-Mar	A	17	**Quiz #4**, 5.6: Complex Zeros; Fundamental Theorem of Algebra	**395:** 7,10,17,18,22,23,25,26, 33,34,38
Sa/Su					
M	9-Mar	A	18	Unit 5 Review	Homework will be handed out in class
W	11-Mar	A	19	6.1: Composite Functions **Unit 5 Test (3 PM)**	**407:** 7,10,11,16,19,33,36,41, 45,50
Fri	13-Mar	A	20	**Quiz #5**, Sample Midterm #1	HW handed out in class
Sa/Su					
T	17-Mar	A	21	Midterm Exam Review **MIDTERM EXAM (75 min) 3 PM**	
Th	19-Mar	A	22	6.2: One-to-One Functions; Inverse Functions	**419:** 9-22,24,29,31,36,39,41, 44,49,52,55,60,63
Fri	20-Mar	B	23	6.3: Exponential Function	**433:** 21,24,30,31,39,43,53,59, 64,68,71,75,81, 87,91,103
Sa/Su					
M	23-Mar			Teacher Pro Dev (no school)	
T	24-Mar	A	24	6.4: Logarithmic Function	**447:**27,29,64,65,71,74,79,81,84,87,92,106,123
Th	26-Mar	A	25	**Quiz #6**, 6.5: Properties of Logarithms	**457:** 7,9,14,17,33,36,43,51,55, 60,65,68,71
Sa/Su					
M-F				Spring Break	
Sa/Su					
M	6-Apr	A	26	6.6, 6.7: Logarithmic and Exponential Equations, Compound Interest	**463**: 9,14,21,25,31,33,36,45, 50,53 **473:** 3, 6, 11, 13, 18, 21, 25, 27,28, 31,36,44
W	8-Apr	A	27	6.8: Exponential Growth and Decay Models; Newton's Law; Logistic Growth and Decay Models	**484:** 1,4,5,8,9,12-23
Fri	10-Apr	A	28	Unit 6 Review	HW handed out in class
Sa/Su					
T	14-Apr	A	29	12.2: Systems of Linear Equations: Matrices **Unit 6 Test (3 PM)**	**862:** 7,11,17,20,37,42,52,53, 58,77
Th	16-Apr	A	30	12.3: Systems of Linear Equations: Determinants	**873:** 7,11,17,20,23,38,40,43,51
Sa/Su					
M	20-Apr	A	31	**Quiz #7**, 12.4: Matrix Algebra	**889:** 7,11,15,20,25,31,32,37,43, 44,55,59
W	22-Apr	A	32	12.5: Partial Fraction Decomposition	**898:** 13-15,19-21,35-37,45,46
Fri	24-Apr	A	33	**Quiz #8**, 12.6: Systems of Nonlinear Equations	**904:** 7,12,15,29,34,37,39,43,46
Sa/Su					

T	28-Apr	A	34	13.1: Sequences	**937:** 11, 16, 17, 19, 22, 28, 29, 33, 35, 41,44,53,56,61,64
Th	30-Apr	A	35	13.2: Arithmetic Sequences	**944:** 5,10,15,18,20,27,32,35,42, 49,57
Sa/Su					
M	4-May	A	36	**Quiz #9** 13.3: Geometric Sequences; Geometric Series	**954:** 11, 18, 19, 22, 26, 27, 31, 33, 36, 42, 43, 49, 52, 55, 58, 74, 75,91-94
W	6-May	A	37	13.5: The Binomial Theorem	**966:** 5,14,17,21,24,29,34,35,49
Fri	8-May	A	38	**Quiz #10,** Unit 12, 13 Review	HW (Final Exam Review #1) handed out in class
Sa/Su					
T	12-May	A	39	Final Exam Review #1 **Unit 12, 13 Test (3 PM)**	HW (Final Exam Review #2) handed out in class
Th	14-May	A	40	Final Exam Review #2	HW (Final Exam Review #3) handed out in class
Sa/Su					
M	18-May	A	41	Final Exam Review #3 **FINAL EXAM (120 minutes) (3 PM)**	
W	20-May	A	42	**ALEKS Post-Test**	
Fri	22-May	A	43	Review Final Exam Results	
Sa/Su					
M	25-May				
T	26-May	B		8am Video of students, yearbooks, LUAU	
W	27-May	A		Graduation	
Th	28-May	B		Lagoon Day	
Fri	29-May	A/B		End of school year (teacher checkout)	