



Course Syllabus

Spring 2022

Course Prefix/Number: MATH 095 03/04

Course Title: PREPARATORY

MATHEMATICS

Class Meeting Times: TRU 09:00-09:50AM

TRU 10:00-10:50

Instructional Modality: ONLINE/ONSITE

Class Location: G301

Instructor: LEEN TAHA

Office Location: A322

Office Phone: 3707

Email: LTAHA@AUK.EDU.KW

Office Hours: LISTED BELOW

AUK Mission Statement

The American University of Kuwait is a liberal arts institution dedicated to teaching, learning, and scholarship. The University offers programs that provide students with the knowledge and skills necessary for lifelong learning and professional success. AUK enriches society by fostering an environment that encourages critical thinking, effective communication, personal growth, service, and leadership.

College of Arts & Sciences Mission Statement

The College of Arts and Sciences (CAS) is committed to cultivating lifelong learning that empowers students to pursue technical competency in professional fields, self-awareness, a sense of civic and moral responsibility, and a breadth of vision in the tradition of liberal arts education. The College offers quality undergraduate programs leading to a bachelor's degree.

Department of Mathematics and Natural Sciences Mission Statement

The Department of Mathematics and Natural Sciences is committed to excellence in teaching, research, and scholarly activities. The department prepares AUK students in different disciplines with the fundamental scientific and analytical skills critical to a quality liberal education. The department strives to prepare students to be successful in their careers and promotes lifelong learning.

Course Description:

This course is given at the elementary level. Topics include a review of basic algebra, linear equations and inequalities in one and two variables, graphs, exponents and polynomials, factoring and quadratics, rational expressions and equations, and systems of linear equations. Prerequisite: Placement Test.

Textbook: (Purchase ACCESS CODE only from AUK eCampus Store)

Intermediate Algebra, 12th Edition, Marvin L. Bittinger, Pearson, 2014.

Additional Resources: Lecture notes and practice worksheets will be posted on Moodle to supplement textbook and MyLab material.

Course Objectives:

This course is designed to help the student:

1. Establish a clear understanding of numbers and their properties.
2. Use algebraic methods to solve linear equations and inequalities in one variable.
3. Develop the basic concepts of linear equations in two variables.
4. Establish a clear understanding of the patterns of factoring and how factoring is used to solve equations.
5. Use mathematical laws to perform operations on polynomial expressions.
6. Understand methods for solving different types of equations.

Student Learning Outcomes:

Upon successful completion of the course, students should be able to:

1. Solve linear equations and inequalities.
2. Apply the laws of exponents and use operations to simplify algebraic expressions.
3. Graph and write linear equations in two variables.
4. Solve systems of linear equations in 2 variables.
5. Factor polynomial expressions and solve equations by factoring.
6. Add, subtract, multiply, divide, simplify, and solve rational expressions and equations.
7. Simplify radical expressions and solve basic equations containing radicals.
8. Solve quadratic equations using the quadratic formula.

Methodology:

Classes will meet 3 days per week online/onsite depending on your student ID and the schedule determined by the Registrar. The material will be presented in live lecture form via Moodle – Zoom with topics taken from your text and supplemented through other sources. The material will also be presented via videos, PowerPoint Presentations and worksheets supplemented through MyLab. There will be evaluations/assessments, in-class, online, OR take-home assessments that will be collected for grading. Assignments will be posted on MyLab – categorized as either “assignments” or “quizzes”.

OFFICE HOURS: SUNDAY, TUESDAY, THURSDAY : 08:40-09:00AM, 09:50-10:00, 11:50-01:00PM, 01:50-02:00PM ,02:50-03:10PM

Class Attendance:

The American University of Kuwait recognizes that class attendance is an important element of students' classroom success. Students are expected to attend all classes, laboratories, and/or required fieldwork. Because excessive absences prevent students from receiving full course benefit, and disrupt orderly course progress, AUK has established the following policy on class attendance:

Any student who misses MORE THAN 15% of class sessions of any course during a semester should expect to receive an (FN), unless s/he submits documented evidence to the course instructor of inpatient medical care, death of an immediate family member, academic instructional activities, or national athletic activities. If excused, students are required to satisfy all coursework due or assigned during their absence, as determined by the course instructor. If a student does not submit documented evidence for her/his absence exceeding the limit, it is the student's responsibility to withdraw from the

course by the specified deadline, as indicated on the Academic Calendar. Students who withdraw from a course receive a grade of “W.” Students who do not withdraw from a course nor submit supporting documents for excessive absences should expect to receive a grade of “FN” (failure for non-attendance).”

On-site Attendance: Depending on schedule, you are required to be present in class on the week designated for you to be on campus.

Online Attendance: Depending on schedule, you are required to be present online, with camera switched on the week designated for you to be online.

Students attending classes online must turn their cameras on at eye level, or risk being removed from the class session.

MASKS are to be worn properly all the time when on campus grounds. Repeated violations of the MASK policy will result in removal from class and/or campus.

Evaluation Standards:

Student evaluation will be based on the following performance criteria:

1. Correct use of concepts, laws, formulas, and principles.
2. Appropriate use of language, terminology, and nomenclature
3. Accuracy of language, calculations, and simplifications.
4. Adequate interpretation of solutions to problems.
5. Presentation of homework and assessments.

Assessment: The final grades for the semester will be weighted as follows:

Evaluation:

<u>Category</u>	<u>Weight</u>
<u>MyLab Assignments, Participation</u>	<u>10%</u>
<u>MyLab Assessments/Quizzes</u>	<u>20%</u>
<u>Exam 1 – Midterm Exam</u>	<u>30%</u>
<u>Exam 2 – Final Exam</u>	<u>40%</u>

AUK Official Grading Scale:

Letter Grade	Percentage	University Points
A	94-100	4.0
A-	90-93	3.7
B+	87-89	3.3
B	84-86	3.0
B-	80-83	2.7
C+	77-79	2.3
C	74-76	2.0
C-	70-73	1.7
D+	67-69	1.3
D	64-66	1.0
D-	60-63	0.7
F	0-59	0.0

CLARIFICATION:

PARTICIPATION: Attendance and in class assignments.

MYLAB Assignments: MyLab assignments found under Homework on MyLab.

MYLAB Quizzes: Timed MyLab assignments to be completed with the support of notes, textbook, or any supporting material. Found under Quizzes/Tests Tab on MYLAB.

Exams: taken during class time – further info will be emailed. Exam 1 (midterm) will be on campus, Exam 2 (Final Exam, compulsory, comprehensive) will be on campus.

Calculator usage is prohibited on Assignments, Quizzes, Assessments.

Note: To pass the course, your grade should be at least **60%**.

Disability Accommodations:

AUK provides equal and inclusive educational environment in order to enable all students to meet and perform requisite academic standards and to participate in the opportunities and activities of its community. If you believe you can benefit from accommodations for a learning, physical, or mental health disability, [click here to book a session through the Counseling Center/Disability Services Booking Page](#), to ask about disability services at AUK, initiate an accommodation plan, or receive disability services. You can also email counseling@auk.edu.kw if you need assistance in booking a session.

Academic Integrity:

Academic integrity is the foundation of an academic community and without it none of the educational goals of the university can be achieved. All members of the AUK community are responsible for its academic integrity. Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. The current policies are described in the AUK Academic Honesty Policy available from Students Center.

Code of Academic Honesty and Integrity:

Upon admission to the American University of Kuwait, students agree to act responsibly in all areas of academic, personal and social conduct and to take full responsibility for their individual and collective action. Such regulations are found in the American University of Kuwait Catalogue, Student Handbook, and the AUK website at www.auk.edu.kw. Any question of interpretation regarding the code of academic honesty and Integrity shall be reported to the appropriate academic dean. The Code shall be reviewed annually at the discretion of the academic deans. Any student or student organization found to have committed the cited violations or misconduct, either on or off campus, is subject to the disciplinary sanctions outlined in adjudication procedures.

Plagiarism:

The term “plagiarism” includes, but is not limited to, an attempt of an individual to claim the work of another as the product of his or her own thoughts regardless of whether that work has been published. Plagiarism includes, but is not limited to, quoting improperly or paraphrasing text or other written materials without proper citation on an exam, term paper, homework, or other written

material submitted to an instructor as one's own work. Plagiarism also includes handing in a paper to an instructor that was purchased from a term paper service or downloaded from the Internet and presenting another person's academic work as one's own.

Cheating:

The term "cheating" includes but is not limited to, copying homework assignments from another student; working together with another individual on a take-home test or homework when not approved by the instructor, looking at and/or copying text, notes or another person's paper during an examination when not permitted to do so. Cheating also includes the giving of work information to another student to be copied and/or used as his or her own. This includes but is not limited to giving someone answers to exam questions either when the exam is being given or after having taken an exam; informing another student of specific questions that appear or have appeared on an exam in the same academic semester; giving or selling a term paper, report, project or other restricted written materials to another student.

Academic Support:

Learning Support Services focuses on empowering students to become independent and successful learners by developing their literacy skills, enhancing their understanding, and helping them improve their academic and study skills. Learning Support Services is comprised of two centers: the Tutoring Center and the Writing Center. The Tutoring Center provides free academic support in various subjects to AUK student. Email: tutoringcenter@auk.edu.kw.

The Writing Center provides multilingual support (English, Arabic, French, and Spanish) through individual or small-group consultations. Email: writingcenter@auk.edu.kw

Class Policies-

1. Participation and attendance are essential to your success in this class. Asking questions and keeping up with assignments will be critical to your understanding of material. It is the students' responsibility to find out about assigned tasks in the event they miss a lecture.
2. Be on time. Please make arrangements to log in early to avoid any connectivity issues. Lectures will be open 5 minutes before class is set to begin. If you are scheduled to attend on campus, please be on time.
3. In the case of an emergency, you may attend online. Please provide official documentation proving inability to be in class.
4. Every week an assignment or quiz will be submitted for grading. Assignments will be completed using **MyLab**. Guidelines will be emailed to clarify submissions and MyLab registration. **No late assignments** will be accepted. For "live"/ "real time" assessments/evaluations – no make-ups unless official medical documentation is provided or proof of inability to connect. Calculator usage is prohibited throughout the semester for assignments, quizzes, and assessments.
5. All **assignments and quizzes** will be administered using the online service **MyLab**. This lab is directly connected to your textbook and provides a wide variety of services to students. You will have online access to your textbook, tutorials, and sample practice problems. Access to the service must be acquired within the first week of classes and is available to purchase online and through the AUK Bookstore.
6. **Academic Honesty:** If you submit work that you did not complete by yourself, or if you are caught cheating on an exam or a homework assignment, you will receive a grade of 0. You may also be subject to further disciplinary action, since such behavior is an offence under AUK's Student Code of Conduct (Section 4, Dishonesty and False Representation).
7. **Submission guidelines**
 - Messy, hard to follow work will not be graded.
 - Your name and student ID must be written on the work to be submitted. No name = no grade.
 - Online submissions of Assessments must be in PDF format sent by email. Download an app called CamScanner or ScanBot to convert photos into PDFs.
8. **Two Exams** will be given this semester – the midterm and comprehensive, compulsory final exam as per the AUK Final Exams schedule. The assessments may be in the format of "live"/ "real time assessment" online or on campus. Missing a "live"/ "real time" assessment will result in a grade of *zero, unless official documentation is provided.*
9. Check your emails regularly, all communication and announcements are made via email.
10. Please email me during business hours – (8AM-5PM) and expect a reply within 24 business hours.
11. To schedule meetings during my office hours – email me 24 hours in advance to schedule an appointment. Once I receive your request, a link for the meeting will be sent.
12. Effective eLearning requires the following:

- Steady internet connection.
- Computer, laptop, or tablets. Phones can be used as a backup.
- Microphones and headsets.
- Cameras.
- A quiet space.
- Other requirements as indicated by the instructor.

13. Video-recording of class sessions (by instructors and/or students) is prohibited.

14. The privacy of the session is to be maintained (no other members of the household should be available during the session).

15. Professional physical appearance is expected during online classes. All participants in the online class should ensure proper attire and setting (blurred background can be used to accommodate settings).

16. Please be sure to use your official AUK email account, write your full name, and indicate which class and section you are taking (**Class ###, DAY/TIME section**) when you send me an email. If you have a question, please check the syllabus first and if your question is not answered there, then please feel free to send an email and I will be happy to clarify. I respond to questions **via email** within 24 hours of receiving them.

Receipt of Course Syllabus MATH 095

I (Print your Name)Student ID have registered for MATH 095, I have received a copy of the Course Syllabus.

I know that the Language of Instruction at AUK is English. If I have problems understanding a technical term used in math I will refer to the text's glossary. If having done this I still fail to understand then I will ask for an explanation of the meaning. All my conversations and submissions will be conducted and written in English.

I understand that I can reach the instructor via e-mail, and that I can virtually meet with the instructor by appointment. I also understand that should I have *any* doubt about requirements in this course *I am responsible for seeking clarification.*

I know that all written communication to and from the instructor regarding this course will be handed out in class or sent via my AUK e-mail. I understand that I must check my AUK e-mail regularly (i.e. before every class) for any important information about this course sent to me from the instructor. I note that failure to check my e-mail does not constitute an excuse for lack of information, misunderstanding, etc.

I know that I am responsible for learning. I will be present in class during the week that permits me to be on campus (determined by Registrar)

I know that virtual attendance is expected. I know that a poor virtual attendance record may result in a lower course grade.

I know that participation is different from virtual attendance. I must come to class prepared, ready and willing to ask and answer questions relevant to the topic at hand. I must bring the course textbook/learning portfolio, a calculator and my own writing materials to take notes during the class.

I know that I am free to raise questions at any time, but that I must show courtesy to my peers and instructor. I must behave as a professional. I understand that disruptive behavior in class is not acceptable. I know that Mobile phones are to be turned off during class and that cell/mobile phones are not allowed during assessments.

I know that I must take assessments when they are scheduled. I know that no make-up assessments will be given, nor will additional projects be assigned to increase a grade before or after an exam or quiz, or at the end of the semester.

I know that students caught cheating, or using a mobile phone will get an "F" for that assessment.

I have been given a copy of this statement for my retention and future reference.

I know cameras must be switched on. I must be seated in a quiet place. I will not record any part of the session and respect my peers' and instructor's privacy.

Effective eLearning requires the following:

- Steady internet connection.
- Computer, laptop, or tablets. Phones can be used as a backup.
- Microphones and headsets.
- Cameras.
- A quiet space.
- Other requirements as indicated by the instructor.

Video-recording of class sessions (by instructors and/or students) is prohibited. The privacy of the session is to be maintained (no other members of the household should be available during the session).

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MASKS are to be worn properly all the time when on campus grounds. Repeated violations of the MASK policy will result in removal from class and/or campus.

Professional physical appearance is expected during online classes. All participants in the online class should ensure proper attire and setting (blurred background can be used to accommodate settings).

Course objectives, expectations and the grading policy have been explained.

____ / ____ / ____

Signature

Date

Spring 2022 Schedule *		
Week	Odd University ID numbers (ending with 1, 3, 5, 7, 9) For example: S00012345	Even University ID numbers (ending with 0, 2, 4, 6, 8) For example: S0003456
February 9-17	Online (All Students)	
February 20-24	On-campus	Off Campus: Online study only
February 27 – March 3	University Closed (National Liberation Days - Prophet's Ascension - Spring Break)	
March 6-10	Off Campus: Online study only	On-campus
March 13-17	On-campus	Off Campus: Online study only
March 20-24	Off Campus: Online study only	On-campus
March 27-31	Midterm Exams – on campus	Off Campus-Asynchronous instruction
April 3-7	Off Campus-Asynchronous instruction	Midterm Exams – on campus
April 10-14	On-campus	Off Campus: Online study only
April 17-21	Off Campus: Online study only	On-campus
April 24-28	On-campus	Off Campus: Online study only
May 1-5	University closed (Eid El-Fitr)	
May 8-12	Off Campus: Online study only	On-campus
May 15-19	On-campus	Off Campus: Online study only
May 22-26	Off Campus: Online study only	On-campus
May 29 – June 2	On-campus	Off Campus: Online study only
June 5-9	Final exams -On Campus (All Students)	
*Schedule is subject to change per Private Universities Council decisions		
Online Classes will be held in real time, i.e. synchronously, according to class schedule. Moodle , the university's mandated learning management system (LMS) is the main gateway to access online classes at AUK.		

- Students who have special medical cases preventing them from physically attending classes are requested to submit a medical report certified by the Ministry of Health to Student Affairs by email: studentaffairs@auk.edu.kw .

Course Objectives

M095.1 Linear Equations with One Variable:

At the end of this course a student will be able to

Code	Objective	Prerequisite
M095.1.1	Identify whether a value is a solution to an equation in one variable	
M095.1.2	Solve a two steps linear equation with whole numbers	
M095.1.3	Solve a two steps linear equation with integers	
M095.1.4	Solve a two steps linear equation with fractions	
M095.1.5	Solve linear equation using additive principles	
M095.1.6	Solve linear equations using multiplicative principles	
M095.1.7	Solve linear equations with multiple occurrence of a variable	
M095.1.8	Solve a linear equation in a fractional form	
M095.1.9	Recognize a linear equation with no solutions	
M095.1.10	Recognize a linear equation with infinitely many solutions.	
M095.1.11	Solve for one variable in a linear equation of multiple variables.	

M095.2 Linear Inequations with One Variable:

At the end of this course a student will be able to

Code	Objective	Prerequisite
M095.2.1	Graph a linear inequality on the number line	
M095.2.2	Represent a number line graph as an interval	
M095.2.3	Solve a linear inequality using additive principles	
M095.2.4	Solve linear inequality using multiplicative principles	
M095.2.5	Solve and graph a conjunction of inequalities	
M095.1.6	Solve and graph a disjunction of inequalities	
M095.2.7	Use the symbol of the empty set to denote a no solution	

M095.3 Linear Equations with Two Variables:

At the end of this course a student will be able to

Code	Objective
M095.3.1	Identify the ordered pair associated with a given point on the coordinate plane
M095.3.2	Plot a point on the coordinate plane given its associated ordered pair.
M095.3.3	Identify a solution to a linear equation in two variables
M095.3.4	Find a solution to a linear equation in two variables
M095.3.5	Graph a linear equation of the form $y = mx + b$

M095.3.6	Identify the equation of a vertical line
M095.3.7	Identify the equation of a horizontal line
M095.3.8	Find the x –intercept and the y –intercept of a linear equation
M095.3.9	Find the slope of a line given two points on the line
M095.3.10	Identify a vertical or horizontal line from two points on the line
M095.3.11	Find the equation of a line in the form $y = mx + b$ given a slope and a point on the line
M095.3.12	Find the equation of a line in the form $y = mx + b$ given two points on the line
M095.3.13	Identify if two slopes are parallel by looking at their slopes
M095.3.14	Identify if two lines are perpendicular by looking at their slopes
M095.3.15	Find the equation of a line parallel to a given line and passing through a given point
M095.3.16	Find the equation of a line perpendicular to a given line and passing through a given point

M095.4 Linear Inequalities with Two Variables:

At the end of this course a student will be able to

Code	Objective
M095.4.1	Identify solutions to a linear inequality in two variables
M095.4.2	Graph a linear inequality in the coordinate plane

M095.5 Absolute Value:

At the end of this course a student will be able to

Code	Objective
M095.5.1	Identify an absolute value equation with no solutions
M095.5.2	Solve an absolute value equation with absolute value on one side
M095.5.3	Solve an absolute value equation with absolute value on both sides
M095.5.4	Identify an absolute value inequality with special cases
M095.5.5	Solve an absolute vale inequality of the form $ ax + b < c$
M095.5.6	Solve an absolute vale inequality of the form $ ax + b \leq c$
M095.5.7	Solve an absolute vale inequality of the form $ ax + b > c$
M095.5.8	Solve an absolute vale inequality of the form $ ax + b \geq c$

M095.6 System of Equations:

At the end of this course a student will be able to

Code	Objective
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M095.6.1	Identify solutions to a system of linear equations
M095.6.2	Graphically solve a system of linear equations
M095.6.3	Identify graphically a system of equations with no solutions
M095.6.4	Identify graphically a system of equations with infinite number of solutions
M095.6.5	Solve a system of linear equations using substitution
M095.6.6	Solve a system of linear equations using elimination with addition
M095.6.7	Solve a system of linear equations using elimination with multiplication and addition
M095.6.8	Identify analytically a system of linear equations with no solution
M095.6.9	Identify analytically a system of linear equations with infinite number of solutions

M095.7 Polynomials:

At the end of this course a student will be able to

Code	Objective
M095.7.1	Evaluate a one variable expression using the product rule of exponents
M095.7.2	Evaluate a one variable expression using the power rule of exponents
M095.7.3	Evaluate a one variable expression using the quotient rule of exponents
M095.7.4	Evaluate multivariable expressions with positive exponents
M095.7.5	Evaluate multivariable expressions with negative exponents
M095.7.6	Identify the coefficients in a polynomial
M095.7.7	Identify the degree of a polynomial
M095.7.8	Evaluate a polynomial function given numerical inputs
M095.7.9	Evaluate the sum of two polynomials
M095.7.10	Evaluate the difference of two polynomials
M095.7.11	Evaluate the product of two polynomials
M095.7.12	Use the quadratic identities to find the resulting polynomial
M095.7.13	Use the cubic identities to find the resulting polynomial

M095.8 Factorization:

At the end of this course a student will be able to

Code	Objective
M095.8.1	Prime factorize integers
M095.8.2	Find the GCF and LCM of two integers
M095.8.3	Find the GCF and LCM of a finite number of integers
M095.8.4	Find the GCF of two multivariable monomials
M095.8.5	Find the GCF of a finite number of multivariable monomials

M095.8.6	Factor out the GCF of a multivariable polynomial
M095.8.7	Factor a four term polynomial by grouping
M095.8.8	Reorder a four term polynomial to factor by grouping
M095.8.9	Factor a polynomial by factoring out the GCF and then by grouping.
M095.8.7	Factor a polynomial using the quadratic identities
M095.8.8	Factor a polynomial using the cubic identities
M095.8.9	Factor a polynomial using the GCF and then the quadratic or cubic identities

M095.9 Rational Expressions:

At the end of this course a student will be able to

Code	Objective
M095.9.1	Write a rational expression in proper form
M095.9.2	Multiply rational expressions made up of multivariate monomials
M095.9.3	Multiply rational expressions made up of linear expressions
M095.9.4	Multiply rational expressions made up of quadratic polynomials
M095.9.5	Divide rational expressions made up of multivariate monomials
M095.9.6	Divide rational expressions made up of linear expressions
M095.9.7	Divide rational expressions made up of quadratics polynomials
M095.9.8	Add or subtract two fractions with different denominators
M095.9.9	Add or subtract rational expressions made up of multivariate monomials
M095.9.7	Add or subtract rational expressions made up of linear expressions
M095.9.8	Add or subtract rational expressions made up of quadratic polynomials
M095.9.9	Simplify a fraction having the numerator and denominator as the sum of rational expressions
M095.9.10	Solve a rational equation that simplifies into a linear equation

M095.10 Radicals and Rational Exponents:

At the end of this course a student will be able to

Code	Objective
M095.10.1	Find the square root of a rational perfect square
M095.10.2	Find the radical of a rational perfect square
M095.10.3	Find the n^{th} radical of a number a by writing it as $a = b^n$
M095.10.4	Convert between radical form and exponent form