**Course Information**

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| **Title:** | Intermediate Algebra |
| **Section:**  **CRN:** | T5  30169 |
| **Credits:** | Three |
| **Room:** | D212 |
| **Day/Time:** | M 6:00 p.m. – 8:45 p.m. |

**Text book:**  Elementary and Intermediate Algebra, 5th edition by Baratto and Bergman

**COURSE DESCRIPTION:** thisIntermediate Algebra course cultivates understanding and different representation of functions. this course covers linear, quadratic, exponential, rational, radical functions, equations and expressions and operations on them with emphasis on modeling and solving real world problems.

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**Required Materials:**

* The textbook is: Elementary and Intermediate Algebra, 5th edition by Baratto and Bergman. You may choose to either use an electronic version of the text of a print copy of the text.
* Notebook with at least 3 sections or binder preferably graph paper)
* Pencils and color pens
* Calculator

**Attendance:**

Attendance in classes is strongly recommended. *I will teach a class only once;* you are responsible for getting the class notes, homework, and any other assignments from another student and completing that work by the next class after any missed class. Short unannounced quizzes may be given, and they cannot be made up. Written homework that is due on a day you do not attend class cannot be turned in late. Keep in mind that I will be also teaching another section of the same course on Monday, from 6:00 to 8:45 pm in Rm. 212, but this class will be two weeks behind in material, compared to our Friday class. (First Day in this class will September 10th)

**Attendance at exams is mandatory.** You will be informed of the dates of tests at least one week in advance. Make-up exams may be given *with my prior consent*. If you must miss an exam, please speak with me before the date of the exam so that arrangements can be made.

**Office Hours: Monday: 5:00 pm – 5:55 pm**;

**Email** [ilavruk@trcc.commnet.edu](mailto:ilavruk@trcc.commnet.edu) or [lavruki@newlondon.org](mailto:lavruki@newlondon.org)

**Contact:**

All communication will occur by email. Please make sure that your email address in MyCommNet is accurate. Check your email regularly to be informed of any changes in schedule.

**Resources:**

1. Visit me during office hours or schedule an appointment with me if you have any questions.
2. One of your greatest resources is each other. I encourage you to get to know your classmates and **exchange contact information**.
3. TASC (the combined Tutoring Center and Writing Center) is located in room C-117. TASC provides free **one-to-one or group tutoring** in math as well as in many other subject areas. TASC also has **textbooks** (both old and current) and many **handouts** available for student use.

**Grading Policy:**

Your final grade will be based on scores in three categories: tests and exams, homework, and classwork.

**Tests and Quizzes (approximately 50% of final grade)**

Throughout the semester there will be three/four Tests, several quizzes. Tests & quizzes schedule will be known to you at least one week prior to the scheduled Test/Quiz.

**Final Exam: (25 % of your grade)**

Final Exam will be given on the last day of the semester.

**Graded Homework & classwork assignments (approximately 15 % of your grade):**

You are responsible for completing assignments from the book on daily basis and possible additional work/sheets distributed by professor. You will receive a grade based on the percentage of the homework graded or checked by the instructor.

**Classwork (approximately 10% of final grade)**

Attendance and participation in classwork is required to be successful in this class. Each class you will earn points by showing up on time and being ready at the beginning of class, participating in all aspects of the class, including mini classwork project and/or classwork assignments and working for the entire class time.

Letter grade equivalents are listed below:

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| **Grade** | **Weighted Average of Categories** |
| A# | 93-100 |
| A-# | 90-92 |
| B+# | 87-89 |
| B# | 83-86 |
| B-# | 80-82 |
| C+# | 77-79 |
| C# | 73-76 |
| C-# | 70-72 |
| D# | 65-69 |
| F# | Below 65 |

**Homework:**

Most of the homework will be assigned from the book. I will indicate which questions I will be checking. Though I cannot possibly check every problem that you do, it is in your best interest to complete as many practice problems as possible. Graded homework could be either given from the textbook or work/sheets distributed by the professor.

The expectation is that you are spending 2 hours of reading and doing homework for this class for every “academic” hour we meet in class. We meet about 3 “academic” hours per week, therefore you should expect to spend ***at least* 4-6 hours per week** on this class, outside of class meetings, every week!

**Extra Credit:**

There will be no extra credit assignments, but some of the tests/quizzes might include Extra credit questions.

**Class Conduct:**

In addition to the rules and policies previously stated in this syllabus, students are asked to:

* Be respectful of each person,
* Do not use cell phones, beepers, or similar devices during class. Please silence these devices. If you have a situation where you absolutely must be able to take a call, please notify me before class. Texting during class will negatively affect your grade.
* From the TRCC Student Handbook: “*The College has the right and responsibility to take appropriate action when a student's conduct directly and significantly interferes with the College's educational mission and the rights of others to pursue their educational objectives in an environment conducive to learning.*”

Such action will, at minimum, be the dismissal of the student from the remainder of class that day.

* No food or drinks will be allowed in the classroom/Computer Lab.

**Class Cancellation:**

**If class is cancelled by the school (i.e. “snow day”)**, pay attention to radio and TV announcements, call the college’s main phone number 860-215-9000, or visit the college’s home web page

[**http://www.trcc.commnet.edu/president/policies/weather.shtml**](http://www.trcc.commnet.edu/president/policies/weather.shtml)

**If class is cancelled by the instructor**, a notice will be placed on the classroom door. If time permits, students may be notified by a message via email.

**MyCommNet Alert: MyCommNet** is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather. All students are encouraged to sign up for myCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site. [http://www.trcc.commnet.edu/div\_it/educationaltechnology/Tutorials/myCommNetAlert/MIR3.html](https://www.mail.commnet.edu/owa/redir.aspx?C=a90b94c325424acebc5fc69a405eb4e5&URL=http%3a%2f%2fwww.trcc.commnet.edu%2fdiv_it%2feducationaltechnology%2fTutorials%2fmyCommNetAlert%2fMIR3.html)

**Non-Discrimination Policy**

Please refer to this site for details:

[**http://www.trcc.commnet.edu/president/policies/college\_policies.shtml#Affirmative**](http://www.trcc.commnet.edu/president/policies/college_policies.shtml#Affirmative)

**Academic Integrity:**

Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person’s ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work; clearly document the sources of the material you use from others; and act at all times with honor. At TRCC, we expect the highest standards of academic honesty. The Board of Trustees’ Proscribed Conduct Policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism. A full copy of the college’s academic integrity policy is in the school’s catalog and in the student handbook.

**Disabilities:**

If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

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| **TRCC Disabilities Service Providers**  Counseling & Advising Office  Room A-119 | | | |
| **Matt Liscum**  (860) 383-5240  [**mliscum@threerivers.edu**](mailto:mliscum@threerivers.edu) | | * Physical Disabilities * Sensory Disabilities * Medical Disabilities * Mental Health Disabilities | |
| **Elizabeth Willcox, Advisor**  (860) 215-9289  Room A113 | * Learning Disabilities * ADD/ADHD * Autism Spectrum | |

**Digication**: All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool student will have opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios. See this site for further details: [**http://www.trcc.commnet.edu/Div\_IT/EducationalTechnology/Digication.shtml**](http://www.trcc.commnet.edu/Div_IT/EducationalTechnology/Digication.shtml)

**College Withdrawal Policy:**

You may withdraw from this class any time up to and including December 9 (online)/ December 7 in person and you will receive a W grade on your transcript. However, you must complete a withdrawal form in the Registrar’s Office at the time of withdrawal; *if you merely stop attending classes you will be assigned a grade of F or N* depending on the date you stop attending. Any eligibility for refund of tuition is based on the date that the registrar receives the withdrawal.

**Course Objectives and Outcomes**

At the completion of MAT\*137, the student will be able to do the following —

**Linear Functions**

1. Provide multiple representations (e.g., words, symbols, graphs, tables) of linear functions by hand and/or using technology.
2. Determine identifying characteristics of linear functions.
3. Model and solve real world applications with linear functions (e.g., car depreciation) and systems of linear equations.

**Quadratic Functions and/or Expressions**

1. Provide multiple representations of quadratic functions or expressions by hand and/or using technology.
2. Determine identifying characteristics of quadratic functions or expressions (e.g., factors).
3. Evaluate, simplify, and perform operations on quadratic functions or expressions.
4. Solve quadratic equations algebraically (e.g., factoring, completing the square, and quadratic formula with rational solutions) and/or graphically.
5. Solve real world applications involving quadratic equations and functions.

**Exponential Functions and/or Expressions**

1. Provide multiple representations (e.g., tables, graphs, symbols) of exponential functions or expressions by hand and/or using technology.
2. Determine identifying characteristics of exponential functions or expressions.
3. Evaluate, simplify, and perform operations on exponential functions or expressions.
4. Identify real world applications involving exponential functions and/or solve graphically.

**Rational Functions and/or Expressions**

1. Provide multiple representations of simple rational functions or expressions by hand and/or using technology.
2. Determine identifying characteristics of rational functions or expressions.
3. Evaluate, simplify, and perform operations on simple rational functions or expressions.
4. Solve simple rational equations algebraically and/or graphically.
5. Solve real world applications involving rational functions.

**Radical Functions and/or Expressions**

1. Provide multiple representations of simple radical functions or expressions by hand and/or using technology, with primary emphasis on square root.
2. Determine identifying characteristics of radical functions or expressions.
3. Evaluate, simplify, and perform operations on simple radical functions or expressions.
4. Solve simple radical equations algebraically and/or graphically.
5. Solve real world applications involving radical functions.
6. Identify imaginary numbers.

**Mathematical Practices**

* 1. Make sense of problems and persevere in solving them.
  2. Reason abstractly and quantitatively.
  3. Construct viable arguments and critique the reasoning of others.
  4. Model with mathematics.
  5. Use appropriate tools strategically.
  6. Attend to precision.
  7. Look for and make use of structure.
  8. Look for and express regularity in repeated reasoning

**Section Topic Exercises**

**Ch. 6 09/10/18; 09/17/18; 09/24/18**

6.1 An Introduction to factoring p. 486: # 9, 13, 31, 39, 43, 59, 67, 71, 79, 82

6.2 Factoring special products p. 497: # 1, 6, 13, 23, 25, 43, 51, 53, 59, 60, 65, 69

6.3 Factoring: Trial and Error p. 507 & 508: # 17, 22, 43, 53, 54, 57

6.4 Factoring: The ac method p. 517 & 518: # 2, 15, 21, 31, 32, 38, 40, 59, 60, 78, 82

6.5 Factoring strategies p. 524 & 525: # 1, 17, 23, 31, 43, 44, 53, 59, 77, 81

6.6 Factoring and problem solving p. 537 - 539: # 5, 10, 21, 35, 45, 53, 58, 72, 90

**Test # 1 (Ch. 6) 10/08/18; (Tentative)**

**Ch. 7** **10/01/18; 10/08/18; 10/15/18**

7.1 Roots and radicals p. 560 & 570: # 1, 9, 14, 38, 49, 50, 57, 58, 69, 72

7.2 Simplifying radical expressions p. 573: # 1, 2, 10, 26, 27, 41, 49, 71, 72

7.3 Operations on radicals p. 584 - 587: # 1, 6, 11, 20, 33, 58, 61, 67, 75, 89

7.4 Solving radical equations p. 593 & 594: # 4, 8, 9, 16, 26, 27, 40, 48

7.5 Rational exponents p. 603 & 604: # 1, 5, 6, 15, 23, 33, 46, 53, 65, 69

7.6 Complex numbers p. 611 & 612: # 1, 5, 11, 15, 27, 36, 40, 51, 55

**Test # 2: Ch. 7: 10/29/18 (Tentative)**

**Ch. 8 10/22/18; 10/29/18; 11/05/18**

8.1 Solving quadratic equations p. 633 - 635: # 1, 8, 11, 22, 34, 35, 46, 55, 63, 83

8.2 The quadratic formula p. 651 - 653: # 2, 5, 8, 21, 29, 46, 55, 72, 73

8.3 An introduction to parabolas p. 665 - 667: # 1, 2, 3, 9, 14, 21, 25, 35, 45

8.4 Quadratic equations and problem-solving. p. 678 - 679: # 1, 3, 6, 23, 31, 35, 37

**Ch. 9 11/12/18; 11/19/18; 11/26/18;**

9.1 Simplifying rational expressions p. 699 - 700: # 2, 10, 18, 25, 36, 48, 67, 74, 79

9.2 Multiplying and dividing rational expressions p. 710 - 711: # 2, 6, 11, 17, 28, 34, 37, 44

9.3 Adding and subtracting rational expressions p. 721 - 723: # 1, 11, 23, 33, 36, 43, 55, 60

9.6 Rational equations and problem-solving. p. 762 - 765: # 2, 3, 18, 25, 51, 61, 67, 81,

**Test # 3 Ch. 8-9: 12/03/18 (Tentative)**

**Ch.10 12/03/18; 12/10/18;**

10.4 Exponential functions p. 819 - 821 : # 1, 2, 3, 10, 25, 37, 51, 59

10.7 Logarithmic and exponential equations p. 859 - 861 : # 1, 2, 14, 21, 31, 39, 47, 53, 57

**FINAL EXAM: To be determined**

**Disclaimer**

The instructor maintains the right to adjust the course syllabus as needed. The syllabus provides a tentative framework.

Exact Dates for all test will be announced two weeks prior to the test.

**Homework assignment might be changed/adjusted during class.**