MAT 102

MAT 102 Intermediate Algebra

Course Description
This course includes the study of linear systems and applications; quadratic expressions, equations, functions, and graphs; and rational and radical expressions and functions.

Prerequisite: MAT 101, RDG 032.

3.0 Cr (3 lect/pres, 0 lab, 0 other)

Course Focus
Students will be presented with the objective. Students will then practice problems using the objective.


<table>
<thead>
<tr>
<th>MAT 102 CORE CURRICULUM COMPETENCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>All courses approved for the general education core curriculum help students develop communication skills and/or critical thinking.</td>
</tr>
</tbody>
</table>

This course develops communication skills, as demonstrated by the following:
- Graph linear and quadratic functions, interpret the graphs, and explain their properties using appropriate, clear, and precise mathematical symbols and terminology.
- Interpret and explain solutions of linear and quadratic equations and real world problems using appropriate, clear, and precise mathematical symbols and terminology.

This course develops critical thinking skills, as demonstrated by the following:
- Solve polynomial, rational, and radical equations using mathematical principles in a logical process.
- Apply mathematical principles in a logical process to solve real world problems involving polynomial functions.
Course Goals
The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives.

1. Introduce function notation
2. Identify domain and range of relations and functions
3. Evaluate functions
4. Graph functions *
5. Write equations of parallel lines
6. Write equation of perpendicular lines
7. Solve systems of equations by graphing
8. Solve systems of equations using elimination *
9. Solve systems equations using substitution
10. Solve percent problems
11. Solve ratio problems
12. Solve investment problems
13. Solve mixture problems
14. Solve rate problems
15. Factor sum and difference of two cubes
16. Review methods of factoring polynomials
17. Simplify rational expressions *
18. Evaluate rational expressions
19. Multiply rational expressions
20. Divide rational expressions
21. Divide polynomial by binomial
22. Add/Subtract rational expressions with common denominators
23. Add/Subtract rational expressions by finding LCD
24. Solve rational equations *
25. Solve equations for a specified variable
26. Solve proportion problems
27. Solve distance problems using rational equations
28. Simplify complex fractions
29. Solve rational inequalities
30. Simplify radical expressions *
31. Simplify expressions with rational exponents
32. Add, subtract radical expressions
33. Multiply radical expressions
34. Rationalize denominators of radical expressions
35. Solve radical equations
36. Solve applications involving radical equations

Student Contributions
Students will complete homework after each unit from the text and/or through online service.

Course Evaluation
Your final grade will be obtained from the average of your Homework, Unit quizzes, Unit tests, and Final Examination.
Course Schedule
The class meets for 2.5 lecture/presentation hours per week.

Developed: November 2011

ADA STATEMENT
The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

ACADEMIC MISCONDUCT
There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student’s responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the TCL Student Handbook, the Division Office, and the Learning Resources Center.

ATTENDANCE
The College’s statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

- Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Students taking an online/internet class must sign in and communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Reinstatement requires the signature of the division dean.
- In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student’s responsibility to initiate and complete the necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.
- When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdrawal the student with a grade of “W”, “WP”, or “WF” depending on the date the student exceeded the allowed absences and the student’s progress up to the last date of attendance or
- Under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
- Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
- A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.
A copy of TCL’s STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

HAZARDOUS WEATHER
In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVV 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVH 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. www.tcl.edu/textalert.asp

EMERGENCY TEXT MESSAGE ALERT
Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. Participants receive immediate notification of emergency events and weather cancelations via text messaging on their cell phones. Participants can also opt in to receive non-emergency news and announcements. Go to www.tcl.edu. On the homepage, click on “emergency TextAlert at TCL” and fill out the form or go to www.tcl.edu/textalert.asp

GRADING METHODOLOGY
The final grade must be 70 or more in order to pass the course and progress in the program. Students absent from an examination or presentation will receive a “0” grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given.

The student is responsible for notifying the instructor for the reason of the absence. It is also the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone.

If the instructor is not available, a message should be left on the instructor’s voice mail AND with another member of the faculty or administrative assistant. The make-up exam will be scheduled and the instructor will decide the method of examination. Messages sent by other students are unacceptable.

Revised: 9/25/2012

Reviewed/Approved by Dean of Arts & Sciences 9/26/2012