Instructor Information

- Name:
- Office phone:
- Office location:
- E-mail address:
- Office Hours:
  Monday:
  Tuesday:
  Wednesday:
  Thursday:
  Friday:

Course Description

An introduction to mathematical topics applicable to a variety of academic areas. Topics include linear functions and graphs, linear inequalities and graphs, systems of equations, matrices and matrix algebra, linear programming, set theory, logic, and conversion between binary, decimal, and hexadecimal.

3 credit hours
*This is part of the general education core.

Prerequisite: Level 2 placement or higher in Math or concurrent enrollment in MATH 0845.

Materials Required

The following materials are required:

- **MyMathLab Access Code**: MyMathLab Access Code is required to access homework and tests from www.coursecompass.com. The access code can be purchased from the bookstore ISBN 0-321-19991-X or from the website directly by using a credit or debit card. An e-textbook is included in the online software.

- **Calculator**: TI-83/84 (plus) graphing calculator
Optional items:

- **Textbook and MyMathLab Access Code:**
  

  OR

- **Textbook only:**
  

**Course Outcomes**

Upon completion of this course, the student will be able to:

1. Solve problems using mathematics, and determine if solutions are reasonable.
   
   a. Solve applications of set theory and logic and determine if the solutions are reasonable.

2. Apply mathematical concepts to solve real-life problems using formulas (deduction) and interpret the meaning of the solution.
   
   a. Use systems of equations and linear programming to solve application problems and interpret the meaning of the solution.

3. Construct meaningful connections (transfer of knowledge) between mathematics and other disciplines.

4. Apply technology for mathematical reasoning and problem solving.
   
   a. Use technology to perform matrix algebra, solve systems of equations, and solve applications problems.

5. Analyze data/graphs by using mathematical modeling and/or statistical reasoning.
   
   a. Analyze linear functions and graphs by using mathematical modeling.

**Attendance**

Attendance: A student is expected to attend all scheduled classes and laboratories. Absences in a course may affect a student’s final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student’s final grade. Per TBR policy, a student who does not officially drop or withdraw from a course, but receives a failing grade, will receive an “FA” if the last day of attendance was earlier than two-thirds into the part-of-term. That date equates to the last day to withdraw from the course. The last day for a student to withdraw from a course is Wednesday, November 1.
Grading

The determination of your final grade is based on the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>100 points</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100 points</td>
</tr>
<tr>
<td>4 Tests</td>
<td>600 points (150 points each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 points</td>
</tr>
</tbody>
</table>

There will be 4 tests and a final exam for this course. Tests will not be administered after the test date. If a test is missed, the final exam for the course will count double. If any additional tests are missed, the student will receive a zero on the tests. A student that completes all tests, but scores poorly on one test, can replace that test grade by the final exam grade, provided the final exam grade is higher than the lowest test grade. Homework and Quizzes are completed in MyMathLab. Homework and quizzes are due on the day of the relevant test, usually at the moment that test starts. Late work will not be accepted – no exceptions. There is no extra credit in this course.

The final letter grade is based on the following scale:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>900-1000</td>
<td>A</td>
</tr>
<tr>
<td>800-899</td>
<td>B</td>
</tr>
<tr>
<td>700-799</td>
<td>C</td>
</tr>
<tr>
<td>600-699</td>
<td>D</td>
</tr>
<tr>
<td>0-599</td>
<td>F</td>
</tr>
<tr>
<td>FA</td>
<td>failure, attendance related</td>
</tr>
<tr>
<td>FN</td>
<td>failure, never attended class</td>
</tr>
</tbody>
</table>

Per TBR policy, a student who does not officially drop or withdraw from a course, but receives a failing grade, will receive an “FA” if the last day of attendance was earlier than two-thirds into the part-of-term. That date equates to the last day to withdraw from the course.

D2L Brightspace/NSOnline and myNSCC email

It is the student’s responsibility to check D2L and MyNSCC email on a regular basis. These are the official communication channels between the college and students. Students are responsible for the information communicated through those channels. D2L contains specific course information and MyNSCC contains information important for other purposes.

Technology Statement

Nashville State’s classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in
online discussions, and access various course materials through Desire2Learn (D2L)
course shells. Computers are available for student use at each campus during campus
open hours.

**ADA Compliance Statement**

Nashville State complies with the Americans with Disabilities Act. If you wish to request
any special accommodations for any courses in which you are enrolled, contact the
Access Center at 615.353.3741 or 615.353.3721.

**Classroom Misconduct**

Nashville State Community College has a zero tolerance policy for disruptive conduct in
the classroom. Students whose behavior disrupts the classroom will be subject to
disciplinary sanctions. The Nashville State Student Code of Conduct policy is available at
http://www.nscc.edu/content/resources/Student_Code_of_Conduct_Policy.pdf.

Please be aware that children are not allowed in class or unattended on campus.

**Academic Misconduct**

Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct
is prohibited. Students are responsible for understanding and aiding by the Academic
Misconduct Policy in the Nashville State Student Code of Conduct that can be found at
http://www.nscc.edu/content/resources/Student_Code_of_Conduct_Policy.pdf.

In addition to other possible disciplinary sanctions that may be imposed through regular
college procedures as a result of academic dishonesty the instructor has the authority to
assign an “F” or a “Zero” for the exercise, paper, or examination or to assign an “F” for
the course. Students may appeal through the appropriate college grade appeal procedures.

**Academic Early Warning System**

Nashville State Community College has implemented an Early Warning System to notify
students via e-mail about academic problems such as poor classroom attendance, poor
performance on assignments/tests, poor communication skills, late/missing assignments,
and/or lack of classroom participation. *Please note that Early Warning Alerts do not
affect a student’s academic standing.

**RAVE Emergency Alert System**

Emergency events can happen at any time and Nashville State Community College wants
to be able notify students if and when they occur. For this reason, all students have been
enrolled in the free RAVE alert system. If you have not already done so, please log in at
https://getrave.com/login/nscc to confirm and update your contact information and
notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you haven't received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you. Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

Inclement Weather Policy:

Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations.

When classes are cancelled, an online assignment will be posted in NS Online. Check NS Online for a message from your instructor regarding your online assignment requirements.

Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.

Class Cancellation Policy

If the class is cancelled, the instructor will notify all students by posting in the NSOnline/D2L course, e-mailing through NSOnline/D2L, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access NSOnline/D2L to complete classwork and the assignment that will be posted in the course D2L site.
Topics Covered:

Number bases (not in textbook)
Arithmetic with Number Bases
1.1 Slopes and Equations of Lines
1.2 Linear Functions and Applications
Test 1
2.1 Solution of Linear Systems by the Echelon Method
2.2 Solution of Linear Systems by the Gauss-Jordan Method
2.3 Addition and Subtraction of Matrices
2.4 Multiplication of Matrices
2.5 Matrix Inverses
Test 2
3.1 Graphing Linear Inequalities
3.2 Solving Linear Programming Problems Graphically
3.3 Applications of Linear Programming
7.1 Sets
7.2 Applications of Venn Diagrams
Test 3
6.1 Statements
6.2 Truth Tables and Equivalent Statements
6.3 The Conditional and Circuits
6.4 More on the Conditional
6.5 Analyzing Arguments and Proofs
6.6 Analyzing Arguments with Quantifiers
Test 4