MGF 1106 Topics in Mathematics  
Fall 2012  

Instructor: Jennifer Denson  

Class Website: http://www.hccfl.edu/faculty-info/jdenson3.ASPX  

Contact Information:  
Email: jdenson3@hccfl.edu  

1. Please try to find the answers to our informational questions on the class website BEFORE sending an email to me. There is a frequently asked questions link that you will find helpful.  

2. Please include your name, your student ID, the class that you are enrolled in, and the question that you need answered in all emails.  

3. Emails missing your name or the class you are enrolled in may not be answered.  

4. Emails sent through WebAssign will not be responded to.  

5. Always email through your hawknet account. Emails sent through a personal email account will not be responded to.  

Office: BTECH112  
Office Hours: MW 2:00-2:30pm, 3:45-5:30pm, 8:15-8:30pm; TR 3:45-4:30pm, 8:15-8:30pm; online  

Class Schedule:  
<table>
<thead>
<tr>
<th>Section</th>
<th>Day/Time</th>
<th>Location</th>
<th>Course Compass Course ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>32749</td>
<td>MW 5:30-6:45pm</td>
<td>BACA107A</td>
<td>denson97138</td>
</tr>
</tbody>
</table>

Course Description:  
Topics include finite and infinite sets, logic, deductive and inductive reasoning, geometry, counting methods, probability and statistics. Studying these topics will develop a broader base of mathematical knowledge and prepare students for the mathematics portion of the College Level Academics Skills Test (CLAST). This course may be used to satisfy part of the mathematics general education requirement for the A.A. degree.  

Textbook and Materials:  
2. Graphing calculator. (No symbolic calculators, such as the TI-89, TI-89+, TI-92, HP48, or TI-Inspire).  
3. Course Compass Access Code  

Grading System:  

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams 1-5</td>
<td>60%</td>
<td>A</td>
<td>100-90%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>10%</td>
<td>B</td>
<td>80-89%</td>
</tr>
<tr>
<td>4 Highest Quizzes</td>
<td>15%</td>
<td>C</td>
<td>70-79%</td>
</tr>
<tr>
<td>Homework</td>
<td>15%</td>
<td>D</td>
<td>60-69%</td>
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<tr>
<td></td>
<td></td>
<td>F</td>
<td>0-59%</td>
</tr>
</tbody>
</table>

Grading Scale:
Instructional Methods:

1. **Exams. There will be no makeup exams.**
   There will be five in-class exams and one final exam. The average of the five in class exam grades is 60% of your final grade in the course; the final is 10% of your final grade in the course. If you miss a test, the grade for that test could be replaced by the grade from your final exam. If you take all the tests and score higher on the final exam than your lowest test score, the final exam grade will replace your lowest test score if you are eligible. More than one test missed will mean a zero on that test. Exams in this course will be reviewed in class and then collected; students do not keep their exams. Exams in this course will be reviewed in class and then collected; students do not keep their exams.

   **The final is multiple choice – you will need scantron #882-E.**

2. **Quizzes. There will be no makeup quizzes.**
   There will be five online quizzes, given **online through course compass.** The average of your four highest quizzes will be 15% of your overall grade. The **lowest quiz grade will be dropped**, so that you can miss one quiz without affecting your grade.

3. **Homework. There will be no makeup homework.**
   Homework assignments for each section will be online through COURSE COMPASS. The average of your homework grades will be 15% of your final grade in the class. It is very important that students register themselves in their COURSE COMPASS program within the first 2 days of class. If any student has any difficulty with his or her home computer, he or she may go to any Brandon Campus computer lab, the Math Lab (BLRC 200) or Student Success Center (BACA 207) and use the school computers to do the online homework.

**ACADEMIC SUCCESS CENTER:**
The Math Lab is located in BLRC 200. The Math Lab phone number is 253 – 7839. All services are free to HCC students! The Math Lab will be open to all students on a walk-in basis, but each student will need to sign in every time they enter the lab. In order for students to receive consistent instruction, students need to bring with them their class notes when requesting assistance.
Course Policies:

1. *There will be no makeup exams, quizzes, activities, or homework.

2. *There will be no extension of due dates on exams, quizzes, activities, or homework for individual students. All assignments must be completed by the due date. Once the due date has passed, the assignment can not be completed for credit.

3. The only possible extra credit points are the bonus question on the exams. THERE ARE NO ADDITIONAL EXTRA CREDIT OPPORTUNITIES IN THIS CLASS. Emails requesting extra credit opportunities WILL NOT be answered.

4. Bring a calculator and writing utensil to each exam.

5. ALL WORK MUST BE SHOWN ON EACH PROBLEM FOR FULL CREDIT.
   Exact answers must be given for full credit on problems, except when students are instructed to round. This holds for all exams, quizzes, activities, and projects. Exact

6. Students must check their official HCC email address for course announcements. Students must also check the course website for course announcements and course materials.

7. You must submit the quiz once you have started it. Once you are in a quiz, the following actions will end your attempt to complete the quiz and a zero will be issued for that quiz:
   a. x out of the quiz
   b. Close the quiz and come back later.
   c. Open a new browser window on the same computer while the quiz is running
   d. Walk away for an extended amount of time and begin it later.

   If you do not click submit on a quiz, you will be locked out of the quiz and all future assignments. If you become locked out of quizzes/hw you must email me. Lockouts after quiz 1 will result in automatic zeros.

8. If you do not click on a course compass assignment before the due date has passed, then you can not open the assignment after the due date. Assignments will not be opened for students to view after due dates have passed.

9. All grade corrections (hw/quiz/activity/test/project…) must occur by the end of your final exam. Grade corrections will not made once your final exam is submitted.

10. The grades posted in MML/WebAssign do not reflect your overall grade in this course, nor do they reflect your correct homework average nor your correct quiz average.

* These policies hold under all conditions, including but not limited to death, illness, computer issues, error in WebAssign or Course Compass, shut down or failures of WebAssign or Course Compass, compatibility issues with WebAssign or Course Compass, any and all other occurrences...The reason why you are allowed to drop a quiz and multiple attempts per quiz is to account for the above experiences. Same on HW. Same on Activities. The reason why the final can replace one test is to account for the above experiences.
### MGF1106 TENTATIVE CLASS SCHEDULE

**Last day to drop/add:** August 24, 2012  
**Last day to withdraw:** October 26, 2012

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>SECTION/ EVENT</th>
<th>DATE HW DUE IN MML</th>
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<tbody>
<tr>
<td>1</td>
<td>8/20</td>
<td>2.1</td>
<td>9/4</td>
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<tr>
<td>2</td>
<td>8/22</td>
<td>2.2-2.3</td>
<td>9/4</td>
</tr>
<tr>
<td>3</td>
<td>8/27</td>
<td>2.4-2.5</td>
<td>9/4</td>
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<tr>
<td></td>
<td></td>
<td>Quiz 1 due online (2.1-2.3)</td>
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<tr>
<td>4</td>
<td>8/29</td>
<td>Review</td>
<td></td>
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<tr>
<td>5</td>
<td>9/5</td>
<td>Test One</td>
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<tr>
<td>6</td>
<td>9/10</td>
<td>3.1-3.3</td>
<td>9/23</td>
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<tr>
<td>7</td>
<td>9/12</td>
<td>3.4-3.5</td>
<td>9/23</td>
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<tr>
<td>8</td>
<td>9/17</td>
<td>3.6-3.7</td>
<td>9/23</td>
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<td>Quiz 2 due online (3.1-3.5)</td>
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<tr>
<td>9</td>
<td>9/19</td>
<td>3.7, Review</td>
<td>9/23</td>
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<tr>
<td>10</td>
<td>9/24</td>
<td>Test 2</td>
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<tr>
<td>11</td>
<td>9/26</td>
<td>10.1-10.2</td>
<td>10/14</td>
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<tr>
<td>12</td>
<td>10/1</td>
<td>10.3-10.4</td>
<td>10/14</td>
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<td>13</td>
<td>10/3</td>
<td>10.4-10.5</td>
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<td>Quiz 3 due online (10.1-10.3)</td>
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<td>14</td>
<td>10/8</td>
<td>10.5-10.6</td>
<td>10/14</td>
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<td>15</td>
<td>10/10</td>
<td>Review</td>
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<tr>
<td>16</td>
<td>10/15</td>
<td>Test 3</td>
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<tr>
<td>17</td>
<td>10/17</td>
<td>11.1-11.2</td>
<td>11/4</td>
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<tr>
<td>18</td>
<td>10/22</td>
<td>11.3-11.4</td>
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<td>11.5-11.6</td>
<td>11/4</td>
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<td>20</td>
<td>10/29</td>
<td>11.7-11.8</td>
<td>11/4</td>
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<td>Quiz 4 due online (11.4-11.6)</td>
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<td>21</td>
<td>10/31</td>
<td>Review</td>
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<td>22</td>
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<td>11/26</td>
<td>12.6</td>
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<td>Quiz 5 due online (12.1-12.4)</td>
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<td>28</td>
<td>11/28</td>
<td>Test 5</td>
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<tr>
<td>29</td>
<td>12/3</td>
<td>Review</td>
<td></td>
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<tr>
<td>30</td>
<td>12/10</td>
<td>Final Exam from 5:00 – 6:50pm Scantron #882-E</td>
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College Policies:

1. **ACADEMIC DISHONESTY POLICY:** The Mathematics Department at the Brandon campus follows the zero tolerance policy on cheating as described in the HCC Student Handbook. This includes cheating on any work that contributes to your grade. Students found violating this policy will receive a zero on that assignment that cannot be replaced and may be referred to Student Services for disciplinary actions.

2. **Attendance Policy:** Attendance will be taken every class. Absences in excess of 10% of the total class meetings may result in a failing grade. Also, these absences will result in veterans being reported to the VA. It is extremely important to be on time to class. All early departures should be discussed and cleared with the instructor prior to class. Students are always responsible for letting the instructor know they are present if they arrive in the classroom after the instructor has taken the attendance.

3. **RECORDING OF CLASS SESSIONS:** A student shall not, without my express authorization, make or receive any recording, including but not limited to audio and video recordings, of any class, co-curricular meeting, organizational meeting, or meeting with me. Further, it is not permissible to post my class lectures/course materials on the web.

4. **REQUEST FOR ACCOMMODATIONS:** Any student whose disability falls within the American Disabilities Act (ADA) and requires accommodations should contact the Office of Services for Students with Disabilities. The Brandon office is located in the Student Service Building Room 109. You may also reach the office by phone at (813) 253-7914. Requests for accommodations should be submitted to the instructor within the first two weeks of the course. Tests taken in the testing center must be taken before or during your normal class time.

5. **Religious Observances:** HCC will reasonably accommodate the religious observances, practices, and beliefs of students in its admissions, class attendance, and examination policies and work assignments. Students must notify instructors at least one week prior to a religious observance.

6. **EQUITY/EQUAL ACCESS POLICY:** Hillsborough Community College is an equal access/equal opportunity employer that makes employment and education-related decisions without regard to race, color, gender, religion, national origin, age, disability, sexual orientation, marital status or any other bias that is or may be prohibited by laws. In addition, the college does not discriminate in employment practices or in the admission and treatment of students. HCC is committed to equitable treatment for all students and employees and to a learning and working environment free of discrimination and harassment for current as well as future students and employees. The college provides equal educational opportunities for qualified individuals with disabilities and complies with, as well as, supports the Americans with Disabilities Act. HCC’s Equity Officer ensures compliance with federal and state laws prohibiting discrimination and sexual harassment. Employees and students who believe they have been a victim of discrimination or sexual harassment should contact: Dr. Joan B. Holmes, 813-253-7043, jholmes16@hccfl.edu

7. **Incomplete:** Before an incomplete grade is given, all of the following requirements must be satisfied:
   1. You must have completed more than two-thirds of the course.
   2. You must have a “C” average.
   3. You must provide written documentation justifying the request.

   **INCOMPLETE GRADES MUST BE APPROVED BY THE INSTRUCTOR AND CONFIRMED BY THE ACADEMIC DEAN.** Additional information regarding the incomplete policy can be found in the HCC Catalog.
Course Intended Outcomes Form
Course Number: MGF 1106
Course Title: Mathematics for Liberal Arts I
Initiator(s) of Course Intended Outcomes: Craig Hardesty Date: 5/29/2007
Signature(s):
Cluster 3 Date of Cluster Approval: 3/23/2007
Typed Name and Signature of Cluster Chair: Tim Achenbach

Course Outcomes: (Six to ten specific intended outcomes are requested.)
Upon completion of the course the student should be able to:

Sets
1. Deduce facts of set inclusion or set non-inclusion from a diagram.
2. Use set operations, including union, intersection, complement, and set difference.
3. Demonstrate knowledge of infinite sets and their characteristics as contrasted with finite sets.
4. Solve problems using Venn diagrams.
5. Solve problems involving the application of sets.

Logic
1. Identify statements.
2. Create truth tables.
3. Solve problems involving the conditional.
4. Identify statements equivalent to the negations of simple and compound statements.
5. Determine equivalence or nonequivalence of statements.
6. Draw logical conclusions from data.
7. Recognize that an argument may not be valid even though its conclusion is true.
8. Recognize valid reasoning patterns as illustrated by valid arguments in everyday language.
9. Select applicable rules for transforming statements without affecting their meanings.
10. Draw logical conclusions from a list of premises.
11. Use Euler Diagrams and truth tables to determine validity of an argument.

III. Geometry
1. Calculate distances, areas, and volumes.
2. Identify and use relationships between angle measures to find missing angles.
3. Classify simple plane figures by recognizing their properties.
4. Recognize and use similar triangles and their properties to find missing information.
5. Identify appropriate units of measurement for geometric objects.
6. Infer formulas for measuring geometric figures.
7. Select applicable formulas for computing measures of geometric figures.
8. Solve real-world problems involving perimeters, areas, and volumes of geometric figures.
9. Solve real-world problems involving the Pythagorean Theorem.

IV. Counting Methods and Probability
1. Use counting methods to count by systematic listing.
2. Use permutations and combinations.
3. Use the fundamental counting principle.
4. Identify the probability of a specific outcome in an experiment.
5. Identify and list a sample space for an experiment and compute the probability of a specific outcome.
6. Identify independent and mutually exclusive events.
7. Solve problems using the addition and multiplication rules of probability.
8. Solve problems using the complement formula for probability.
9. Determine the odds in favor of or against an event.
10. Determine conditional probability.
11. Calculate mathematical expectation.

V. Statistics
1. Identify information contained in bar, line, and circle graphs.
2. Determine the mean, median, and mode of a set of numbers.
3. Recognize properties and interrelationships involving the mean, median, and mode in a variety of distributions.
4. Solve problems dealing with range and standard deviation in a variety of distributions.
5. Infer relationships and make accurate predictions by studying statistical data.
6. Interpret real-world data involving frequency and cumulative frequency tables.
7. Use the normal curve to solve problems.
8. Understand the idea of correlation.