# Broward College
# MGF 1106 – Foundations of Mathematical Reasoning

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|---|---|---|---|
| Instructor: | Carlos Sotuyo | Term/Session: | Fall 2020, Session 4 |
| Instructor's BC E-mail: | csotuyo@broward.edu | Reference No.: | 675302 |
| Office Hours: | TR  7:45 -8:45 pm | Class Days: | Tues_Thurs |
| Office: | Online via blackboard | Class Time: | 5:00 pm – 7:45 pm |
| Math Department Phone Number: | (954) 201-6029 | Classroom: | Blackboard (online) |
| Emergency Phone Number: | (954) 201-4357 (Safety) (954) 201-4900 (Hotline) | Withdrawal Date: Credit to Audit Date: | Oct 27, withdraw 100% refund Nov 20, withdraw with W. |

Academic Calendar at https://www.broward.edu/registrar/_docs/printable-calendars/2020-21-academic-calendar.pdf
Class web page: http://www.imathesis.com/mgf1106m.html

**REQUIREMENTS:**
This course does not have any required pre-requisites or co-requisites.

**COURSE DESCRIPTION:**
This general education course will include topics in logic, geometry, set theory, probability, and statistics. This course will also emphasize applications to real-world situations and the integration of topics from other disciplines, including, but not limited to, business and the physical sciences. Meets Area 5a of the General Education Requirements for the A.A. degree and for the A.S. degree

**GENERAL OUTCOME:**

| Units | General Outcome |
|---|---|
| | The student shall be able to: |
| **Unit 1.** Sets | • Demonstrate an understanding of sets, their properties, and some of their many uses. |
| **Unit 2.** Logic | • Demonstrate an understanding of logic concepts and apply the precepts of logic to problems. |
| **Unit 3.** Geometry | • Demonstrate knowledge of plane and solid geometry, and identify and apply geometric principles to solve problems. |
| **Unit 4.** Systematic Counting and Probability | • Understand counting techniques and apply methods for computing probabilities. |
| **Unit 5.** Statistics | • Apply basic statistical principles in various ways with the aid of a calculator or appropriate statistical software. |

**COURSE MATERIAL:**
Textbook: *Mathematical Ideas, 14th Edition*, Miller, Heeren, & Hornsby, Pearson

Learning System: An online educational program titled MyMathLab (MML) that includes an electronic version of the textbook (e-book): Required

**SUPPLEMENTAL MATERIAL:** Scientific calculator
**REQUIRED FOR REMOTE DELIVERY OF THIS COURSE:**
Students will need a reliable internet connection and laptop or desktop computer with functioning webcam capable of running Honorlock, the remote exam proctoring service we will be using for the Final exam. Please see Honorlock tab on D2L for system requirements.

**HOMEWORK:**
Required homework assignments are posted on MyMathLab and will be counted towards your grade in this class. The homework grade is determined by the percentage of completed assignments. An assignment is considered completed once the student reaches 80% or obove on it. The Pearson ovarall avarege is Not the HW grade. Register at www.pearson.com/mylab instructor's **course ID**: sotuyo98503

**ASSISTANCE:**
**Academic Success Center (ASC):**
The ASC centers at Broward College are here to ensure your success in this class. You will benefit from an array of academic support services provided in a comfortable, collaborative atmosphere specifically designed to advance your academic achievement: http://www.broward.edu/studentresources/lrc/Pages/default.aspx

Here are just some of the services provided at the ASC:

- Academic Support Labs (Science Center, Math Lab, Writing Center)
- Collaborative Project Space
- Open Computer Centers (Printing)
- Study Groups
- Textbook Reserves
- Tutoring by Certified Tutors (All subject areas)

**Seahawk Support Program:**
The Seahawk Support Program is a coordination between students, faculty, the Office of Student Success, and the ASC designed to support students in order to increase their chances of success. If you are contacted by a representative of the Office of Student Success or the ASC, please take full advantage of this excellent opportunity to improve your success in this course.

**CELL PHONE POLICY:**
Put your cell phone away on "silent-mode". Cell phones, smart phones, IPod, and other similar devices are not allowed to be used as calculator during class time and Tests.

**METHOD OF INSTRUCTION AND EVALUATION:**
In this class, you will engage in structured in-class and out-of-class activities. You will achieve the course objectives through interactive lecture, in class practice problems, class participation, homework assignments, and assessments.
All **Tests**, including final exam, via D2L. The Final exam will be proctored by Honorlock.
All exams are mandatory for all students and cannot be made up at an alternative time. Missing an exam for any reason will result in a zero score for that exam. If you miss an exam due to an emergency that would qualify as an excused absence, **you must inform your instructor within 24 hours of the scheduled exam**. In the case of an excused absence for an exam, the final exam score will be used in place of the missing exam score. You may not be excused from the final.

| Assessment | Grade Points | Percent of Final Grade |
|---|---|---|
| 5 Tests | 600 | 60% |
| MyMathLab Homework | 200 | 20% |
| Final Exam | 200 | 20% |
| Total | 1000 | 100% |

**GRADING POLICY:**

Your grade will be determined by taking the average of your test scores, homework and Final Exam:

| Grade | Grading Scale |
|---|---|
| A | 90 – 100% |
| B | 80 – 89.9% |
| C | 70 – 79.9% |
| D | 60 – 69.9% |
| F | 0 – 59.9% or if a student commits an act of cheating/plagiarism |
| W | Official Withdrawal by the student by the withdraw date |
| WN | Administrative Withdrawal for Non-Attendance |

**COURSE WITHDRAWALS:**
During the second week of class, professors are required to report students who have never attended, and these students will be administratively withdrawn. Following this attendance verification, it is the student's sole responsibility to withdraw from the course and to verify that the withdrawal is properly recorded through the Registrar's Office prior to the withdrawal deadline. The professor cannot process withdrawals for any reason other than the above-stated student non-attendance. A withdrawal is considered an attempt.

**ACADEMIC ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:**
If you are requesting academic accommodations, you must first register with Accessibility Resources (contact information is provided below). Accessibility Resources will evaluate your request and determine eligibility. If approved, you will be provided with an Accommodation Plan that you must deliver to me either electronically or in person. Once received, we will discuss which accommodations you are requesting for this class, and in accordance with Broward College policy 6Hx2-5.09 you will be provided with the appropriate accommodations. Students who wait until after completing the course, or an activity, to request accommodations should not expect any grade to be changed, or to be able to retake the course or activity.
South Campus; Miramar Centers; Pines Center; Weston Center: 954-201-8913

**ATTENDANCE POLICY:**
You are required to attend all classes. There will be no penalty for a student who is absent from academic activities because of religious holiday observances in his/her own faith, the student's serious illness, death in immediate family, or attendance to statutory governmental responsibilities. The students must notify the instructor of these absences, providing necessary documentation. It is the student's responsibility to make up the missed work.

**STATEMENT OF ACADEMIC DISHONESTY:**
Broward College expects its students to be honest in all of their coursework and activities. Breaches of academic honesty include, but are not limited to, cheating, plagiarism, misrepresentation, bribery, and the unauthorized possession of examinations, papers, or other class materials that have not been formally released by instructors. A student's academic work must be the result of his or her own thought, research, or self-expression. 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 specifically prohibited from doing so by the instructor, looking at test, notes or another person's paper during an examination when not permitted to do so. (See current BC catalog statement at www.broward.edu/catalog/).

| Days | Date | Units | Sections and Topics |
|---|---|---|---|
| Day 1 | 10/20 | Unit 1:  Sets | 2.1 Symbols and Terminology |
| | | Unit 1 | 2.2 Venn Diagrams and Subsets |
| | | Unit 1 | 2.3 Set Operations |
| | | Unit 1 | 2.4 Surveys and Cardinal Numbers |
| Day 2 | 10/22 | | Review |
| Day 3 | 10/27 | | Test 1 |
| Day 4 | 10/29 | Unit 2:  Intro to Logic | 3.1 Statements and Quantifiers |
| | | Unit 2 | 3.2 Truth Tables and Equivalent Statements |
| | | Unit 2 | 3.3 The Conditional and Circuits |
| | | Unit 2 | 3.4 The Conditional and Related Statements |
| | | Unit 2 | 3.5 Analyzing Arguments with Euler Diagrams |
| | | Unit 2 | 3.6 Analyzing Arguments with Truth Tables |
| Day 5 | 11/3 | | Review |
| Day 6 | 11/5 | | Test 2 |
| Day 7 | 11/10 | Unit 3: Geometry | 9.1 Points, Lines, Planes, and Angles |
| | | Unit 3 | 9.2 Curves, Polygons, and Circles |
| | | Unit 3 | 9.3 The Geometry of Triangles: Congruence, Similarity, and the Pythagorean Theorem |
| | | Unit 3 | 9.4 Perimeter, Area, and Circumference |
| | | Unit 3 | 9.5 Volume and Surface Area |
| Day 8 | 11/12 | | Review |
| Day 9 | 11/17 | | Test 3 |
| Day 10 | 11/19 | Unit 4: Counting methods, probability | 10.1 Counting by Systematic Listing |
| | | Unit 4 | 10.2 Using the Fundamental Counting Principle |
| | | Unit 4 | 10.3 Using Permutations and Combinations |
| | | Unit 4 | 10.5 Counting Problems Involving "Not" and "Or" |
| | | Unit 4 | 11.1 Basic Concepts of Probability |
| | | Unit 4 | 11.2 Events Involving "Not" and "Or" |
| | | Unit 4 | 11.3 Conditional Probability and Events Involving "And" |
| Day 11 | 11/24 | | Review |
| Day 12 | 12/1 | | Test 4 |

| Day 13 | 12/3 | Unit 5: Intro to Statistics | 12.1 Visual Displays of Data |
|--------|-------|------------------------------|-------------------------------|
|        |       | Unit 5 | 12.2 Measures of Central Tendency |
|        |       | Unit 5 | 12.3 Measures of Dispersion |
|        |       | Unit 5 | 12.4 Measures of Position |
|        |       | Unit 5 | 12.5 The Normal Distribution |
| Day 14 | 12/8 | | Review |
| Day 15 | 12/10 | | Test 5 |
| Day 16 | 12/15 | | Final Exam |