Math 030 Foundations of Math Course Syllabus

Instructor:	Christine Gardner
Classroom:	#1
Days/Times	TF 5:30PM – 8:00PM

Required Materials:

- Extra lined paper for in-class note taking & preview note taking
- Writing materials - pencils
- Basic four-function or scientific calculator or TI-84.

Course Description: This course is designed to prepare non-STEM major students for MAT 130, Quantitative Reasoning. It aims to

- cultivate student skills in interpreting, understanding, and using quantitative information,
- develop facility with numeracy, problem-solving strategies, and proportional and statistical reasoning through a quantitative literacy lens,
- foster skills in reading and writing quantitative information, and
- emphasize critical-thinking and the use of multiple strategies in applied contexts.

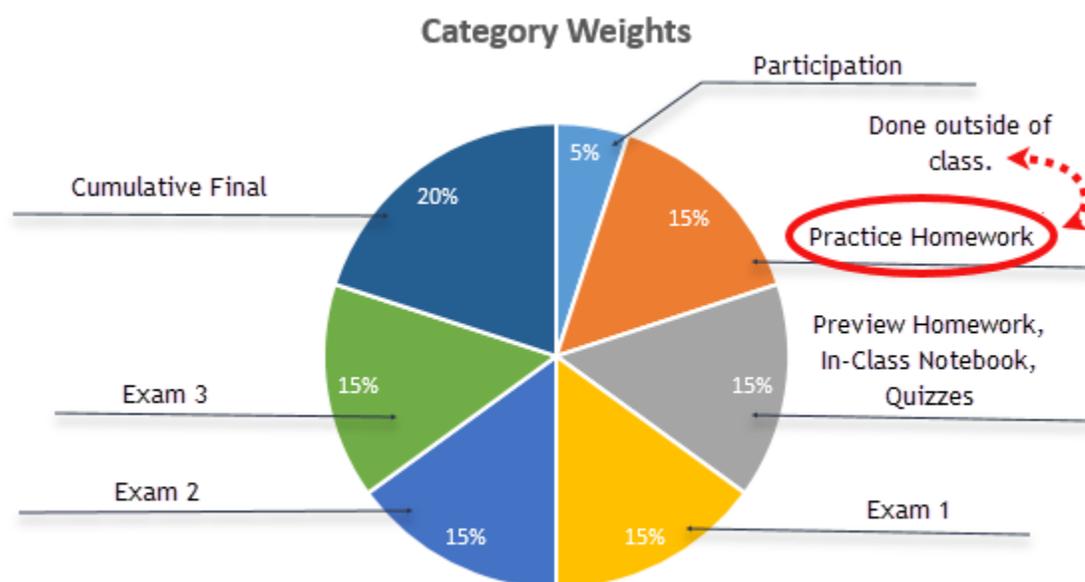***Prerequisite:*** Accuplacer score or completion of MAT 019

Math 030 Course Course Objectives: Students will be able to:

1. **Communication Objective:** interpret and communicate quantitative information and mathematical and statistical concepts using language appropriate to the context and intended audience.

   o Use appropriate mathematical language.
   o Read and interpret short, authentic texts of quantitative information including graphical displays.
   o Use quantitative information to make or critique an argument or to summarize information.

2. **Problem Solving Objective:** make sense of problems, develop strategies to find solutions, and persevere in solving them.

   o Solve multi-step problems by applying strategies in new contexts or by extending strategies to related problems within a context.

3. **Reasoning & Evaluation Objective:** reason, model, evaluate, and make decisions with mathematical, statistical, and quantitative information.

   o Make decisions about situations in which quantitative information must be considered along with other factors.
   o Present short written or verbal justifications of decisions that include appropriate discussion of the mathematics involved.
   o Identify mathematical or statistical errors, inconsistencies, or missing information in arguments.

4. **Technology Objective:** use calculator- based tools appropriate for a given context.

5. **Learning Strategies Objective:** improve metacognition and self-regulation.

   o Take responsibility for their own mathematical development.
   o Utilize self-management practices as it pertains to their mathematics class such as time management, meeting deadlines, attending class, etc.
   o Work interdependently with peers, the instructor and other college support systems.

6. **Numeracy Objective:** develop number sense and the ability to apply concepts of numeracy to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.

   o Solve problems and interpret results involving: fractions, decimals, percents, unit analysis, estimation, magnitude, measurement, and inequalities.
   o Demonstrate operation sense and communicate verbally and symbolically with real numbers.
   o Read, interpret, and make decisions about data summarized numerically, in tables, and in graphical displays.

7. **Proportional Reasoning Objective:** use proportional reasoning to solve problems that require ratios, rates, proportions, and scaling.

   o Represent, and use ratios in a variety of forms and contexts.
   o Determine whether a proportional relationship exists based on how one value influences another.
   o Analyze, represent, and solve real-world problems involving proportional relationships, with attention to appropriate use of units.

8. **Algebraic Competence, Reasoning, and Modeling Objective:** transition from specific and numeric reasoning to general and abstract reasoning using the language and structure of algebra to investigate, represent, and solve problems.

   o Demonstrate understanding of the meaning and uses of variables as unknowns, in equations, in simplifying expressions, and as quantities that vary, and use that understanding to represent quantitative situations symbolically.
   o Describe, identify, compare, and contrast the effect of multiplicative or additive change.
   o Analyze real-world problem situations, and use variables to construct and solve equations involving one or more unknown or variable quantities.

9. **Probabilistic Reasoning Objective**: understand and critically evaluate statements that appear in the popular media.

   o Interpret statements about chance, risk, and probability that appear in everyday media.
   o Identify common pitfalls in reasoning about relative and absolute risk in terms of probability.

10. **Application Objective:** understand, interpret, and critically evaluate quantitative information in order to make decisions in their financial and civic life.

   o Identify and critique erroneous, misleading, or conflicting information.
   o Topics will be selected from: Compound interest, consumer debt, personal finance, social policies,

      economics, or environmental issues.

Course Requirements:

Grading Scale:		Grading Policy:	
90 -100%	**4.0**	**Attendance/Class Participation:** 5%	**3 absences = drop from course**
85 - 89%	**3.5**	**Practice Homework:** 15%	**5% per calendar day late**
80 - 84%	**3.0**	**Preview Homework, In-Class Notebook, Quizzes:** 15%	**5% per calendar day late**
75 - 79%	**2.5**	**Exam 1 (lessons 1-4):** 15%	**no late exams**
70 - 74%	**2.0**	**Exam 2 (lessons 5-9):** 15%	**no late exams**
65 - 69%	**1.5**	**Exam 3 (lessons 10-14):** 15%	**no late exams**
60 - 64%	**1.0**	**Cumulative Final (lessons 1-14):** 20%	**no late exams**
50 - 59%	**0.5**		
0-49%	**0.0**		

Category Weights

Participation — 5%

Done outside of class. → Practice Homework — 15%

Preview Homework, In-Class Notebook, Quizzes — 15%

Exam 1 — 15%

Exam 2 — 15%

Exam 3 — 15%

Cumulative Final — 20%

Absence Policy: Students are expected to attend all class meetings, arrive on time, and stay until the end. You are responsible for signing in when you come into class each day, and signing out before you leave each day. You will receive 1 pt./day for full attendance. **If you miss three class periods, you will automatically be dropped from the course.**   We do a variety of in-class activities involving other students and group participation. These activities cannot be made up outside of class for any reason. If absence is unavoidable the **student is responsible** for obtaining the missed lecture notes from another student.

Participation: You will be expected to take notes, ask questions, and actively participate in in-class activities as evidenced, in part, by answering questions in the in-class notebook during class time. You will also be expected to complete the preview assignments during class time. If time warrants, you will be expected to begin working on practice assignments that will be due at the beginning of the next class period. You will receive 1 pt./day for participation, if you participate according to this criterion.

Practice Homework:

- These assignments must be done outside of class time. There is a practice assignment for each lesson in the course.

- Practice assignments will be due at the beginning of the next class period after it is assigned, as announced in class. You can also refer to the course schedule for particular due dates.

- **Late** homework will be accepted at a 5% penalty per calendar day.

In-Class Notebook, Preview Homework, Quizzes, etc.: There will be frequent in-class assignments (turned in for credit). These assignments will be lessons from the in-class notebook and preview assignments (handouts). These may be individual or group assignments, closed or open notes at the instructor's discretion. There will be a notebook check before each exam. Each notebook check will be part of your In-Class portion of your final grade. Students that are absent may not make up the missed in-class assignments for any reason. If a quiz is given, it will be open-note, and you will be made aware of it at least one class-period in advance.

Exams: Due to the nature of the course, every exam will have questions that relate to previous exams. The final exam is cumulative for the whole course. Exams **may not be made up** except under extreme, well-documented circumstances. Final decisions as to whether a makeup exam will be allowed rest solely with the instructor, so contact them immediately if there is a problem. You will be allowed a page (8.5 by 11, front and back) of notes for each exam of your own creation. All previous note sheets may be used on the final exam. There will also be instructor-given tables and info sheets on certain exams. The Final Exam is during the last week of the course and can NOT be taken early.

Extra Credit Policy: There will be no opportunities for extra credit. Your grade is based on your performance in class, not on extras.

Grading Information: A 2.0 or "C" is a passing grade. Only courses with passing grades count toward graduation. Other colleges transfer in only courses with passing grades. Many financial aid sources, including most employers, require passing grades. Additionally, earning less than a 2.0 in a class results in being unable to participate in the next level of courses in a discipline which requires this course as a prerequisite. Registering for the next course sequence without passing the prerequisite course may result in you being dropped from that class.

Incompletes Policy: (Excerpt from JCC Policy) "A student may request an incomplete from the instructor. The incomplete will be granted only if the student can provide documentation that his or her work up to that point is sufficient in quality, but lacking in quantity, due to circumstances beyond the student's control. Furthermore, a written plan for making up the missing work within one semester must be completed by the student. Final determination of whether an incomplete will be given is the instructor's decision."

Intermediate Grading: To comply with college policy and federal regulations you will receive three intermediate grades during the semester. The grades assigned are letters with the following meanings:

- **V:** Verifies that you are participating and your work so far has been acceptable
- **H:** Means that you are participating, but your work shows that you may require Help in order to complete the class successfully. If you receive an H grade, you will be contacted by the Center for Student Success (located in 125 Bert Walker Hall) and offered tutoring services.
- **Q:** Means that you have quit participating in the course. If you receive a Q grade, you will automatically be withdrawn from the course. A Q grade is normally assigned if you have not submitted work (classwork, exams, participation, etc.) for two weeks and have not contacted your instructor regarding your absences.

Academic Honesty Policy: **You are *encouraged* to talk to each other, but all your work must be your own.** In other words, "group-work" is a great way to learn material, but anything you submit for a grade must be done by you - reflecting your own thought processes, not that of someone else. If I suspect you of academic dishonesty, I will follow JCC's Academic Honesty Policy and take appropriate action up to and including assigning a **failing grade** for the paper, project, report, exam, or the course itself (whichever I deem necessary). The policy can be seen here:
http://www.jccmi.edu/policies/Academics/Policies/1004.pdf

Classroom Behavior Policy: *"We know what a person thinks not when he tells us what he thinks, but by his actions."* - **Issac B. Singer**

1. Be Responsible: for your work, for your learning, for your behavior in class, etc.

The homework, in particular, is going to require great levels of responsibility on your part. You will need to stay on top of your schedule and your life to make sure that all coursework is done in a timely fashion.

2. Be Respectful: of other students, of the instructor, of the material, of yourself...

Come to class on time, stay the full time, be prepared to answer questions and work together.

Where to Get Help…

Read the Student Resources Pages at the end of your in-class notebook. A table of contents is available on page xii.

Each Other! Form a regular study group.