BOB JONES UNIVERSITY
BUILD FAITH. CHALLENGE POTENTIAL. FOLLOW CHRIST.

Ma 080 ~ Liberal Arts Math Modules
Ma 090 ~ Math Preparatory Modules
2020-21 School Year

Instructor:	**Mrs. Donna Lawrence**		
	Assistant Professor, Division of Mathematical Sciences	Email:	dflawren@bju.edu ** best contact method*
Office:	AI 08	Phone:	8015
Office Hours:	*Students may always come to the math lab when I am there. Or email to set up another time.*	Class Times:	**1st Sem** MWF 8:00 am MWF 9:00 am MWF 1:00 pm MWF 3:00 pm TTh 1:30-2:45 pm
Math Lab:	MB 201 (2nd floor of the library)		

COURSE DESCRIPTIONS

The **Liberal Arts Math Modules** are designed to help students with computational and reasoning skills that are foundational to success in liberal arts college courses. The modules constitute a non-credit course that must be completed prior to registering for Essential Science, which is required of nearly all students.

The **Math Preparatory Modules** are designed for the development of the foundational algebra skills necessary for success in the collegiate mathematics classroom. They must be completed before the student can take a college-level math or computer science course.

CONTEXT

This course supports the following institutional goals (IG), the goals of the BJU Core® (BC).
- IG 3:   To develop in students Christ-like character through disciplined, Spirit-filled living.
- IG 4:   To direct students toward a biblical life view that integrates God's Truth into practical Christian living.
- IG 5:   To prepare students to excel intellectually and vocationally by offering diverse academic programs rooted in biblical truth and centered on a liberal arts core.
- BC 3c: Will equip students to understand the physical world as God's creation, as a stewardship given to man, and as the physical expression of His glory.
- BC 4:   Demonstrate critical thinking in analyzing, evaluating, and synthesizing information and ideas.
- BC 5:   Develop solutions to problems, working independently and with others, through critical and creative thinking.

Even at this most basic level, this course will equip students to fulfill the following goals for students in the Division of Mathematical Sciences (MS).
- MS 1:   Understand the essential theory of mathematics and appropriately apply the theory in solving problems.
- MS 2:   Use critical–thinking/analytical skills.
- MS 4:   Apply an understanding of how mathematics can be used in service to Christ as tools to the examination of the world He created.
- MS 5:   Construct a foundation upon which they, after graduation, can continue the development of their God-given abilities and the learning necessary for his work and life.

COURSE GOALS

This course is designed to
1. Ensure that students have the mathematical skills needed to be successful in everyday life. (IG 4, 5/MS 5)
2. Demonstrate mathematics as a tool that reveals God's handiwork in the world around us. (BC 3c/MS 4)
3. Develop Godly character traits such as self-discipline, perseverance, honesty, and precision. (IG 3)
4. Develop thinking and reasoning skills. (BC 4, 5/MS 1, 2)

Ma 080 – six modules

Ma 081 – Basic Mathematics – *Including arithmetic, fractions/decimals, percents, and basic properties of real numbers (such as transitivity)*

Ma 082 – Geometry – *including logical arguments, perimeter, area, volume, and basic triangular relationships*

Ma 083 – Measurement – *including length/mass/weight and conversion between English and metric units*

Ma 084 – Descriptive Statistics – *including mean, median, mode, and creating and interpreting graphical data*

Ma 085 – Linear Equations and Graphs – *creating and interpreting linear relationships*

Ma 086 – Mathematical Reasoning – *creating valid, logical arguments in context, including the consequences of negating statements, biconditional statements, etc.*

Ma 090 – five modules

Ma 091 – Number systems – *review of foundational properties of numbers with an emphasis on the real numbers*

Ma 092 – Power Functions – *development and use of exponents, both integer and fractional, and polynomials*

Ma 093 – Inequalities – *solving inequality relationships with radicals and polynomials*

***From here, students taking Ma 103, 180 or CpS go on to 094 and 095;
students taking Ma 220 or BA/Ma 320 go on to 096 and 097.***

Ma 094 – Factoring – *basic factoring techniques including factoring common terms and special forms*

Ma 095 – Rational Expressions – *simplifying rational expressions, including addition, subtraction, multiplication, and complex fractions*

Ma 096 – Systems of Equations – *solving equations with two or more unknowns*

Ma 097 – Probability and Statistics – *builds on ideas in Ma 084, including combinations and permutations, correlation, frequency distribution, quartiles, and more graphs*

COURSE POLICIES

Qualifications

> **Ma 080** is required for students with a math ACT score of 1–17 or for students who have to take a college-level math course with a math ACT score of 1-19 (as a prerequisite for the Ma 090 modules).

> **Ma 090** is required for students with a math ACT score of 1-19 who are required to or elect to take a college math or computer science course.

Class conduct

> Compliance with student handbook policies is expected during class. You must work on math modules during your Math Lab times. Headphones and beverages in closed containers *are* allowed.

Attendance

> You are required to be in the Math Lab for your assigned hours each week. Working on the modules outside of class time is strongly encouraged. In the Math Lab there will always be a qualified staff member available to help with student questions and procedural issues. You may also work on the modules on your own internet-enabled devices.

> Students who exceed the number of Absences allowed for the course according to the Student Handbook will be withdrawn for the semester and be required to pay the fee for re-enrolling in the modules the following semester.

> Once you have completed all of your assigned modules, you no longer need to come to Math Lab.

Collaboration

> Students can work together or get help on any part of the modules *except* for the Pre and PostTests. If you work together on a paper application with someone else, you can turn in one copy with everyone's name on it. There should be no more than three working on one assignment together. Be sure that everyone understands what you are doing, since your partner(s) won't be there for the test!

Calculators

> Calculators (including cell phone calculators) *may* be used for any part of the modules.

Module structure

Each module begins with two PreTests found in Canvas—one on Math concepts and one on Applications of those concepts. If you achieve at least an 80% on the Math PreTest and at least 3 out of 4 on the Applications, you can continue straight on to the next module.

If you do not pass the Math PreTest, you will be assigned work in CatchupMath (online program) and paper application assignments (available in the Math Lab or can be printed from Canvas). Once that is complete, you must take two PostTests back in Canvas to demonstrate that you have gained the needed proficiency.

If you pass the Math PreTest but not the Applications PreTest, you must compete the paper applications and take the Applications PostTest.

Study Guide

Each module has a Study Guide available outlining exactly what will be covered by the Tests. You are welcome to look things up ahead of time. Notes taken ahead of time can be used while you are taking the Tests. You may not look up methods for solving problems or ask for help *while* you are taking a Test.

Course Fees

The fee structure for the course is as follows:

Students who are required to take the modules *Note that students who are required to take Ma 090 must complete Ma 080 in one semester but may have until the end of the next semester to complete Ma 090.*	$450 for one semester access
Students who do not finish the required modules in one semester and have to re-enroll for a second semester *Note that this fee also applies to students who exceeded their allowed number of absences in a semester.*	$200 for a 2nd semester access
Students who take certain modules voluntarily, for example to prep for the PRAXIS or retaking the ACT	$40 for a year access

Fees will be charged to your account at the beginning of the semester. Once Drop/Add is over and the fees are assessed, no part of it will be refunded even if the student withdraws (or is withdrawn) from the course.

If a student completes the entire course with *all* PreTests *before* the end of Drop/Add, the fee will be waived.

Summer work

Students are allowed to work on the modules over the summer prior to the start of the school year. They enroll for the **fall** semester but will have early access to the course through Canvas. If all of the modules are complete before the start of the semester, they will of course not be expected to attend their math lab sessions. If they are not complete, the student just continues from the module he got to over the summer. There will be no extra fee if the student works in the summer and has to continue into the fall semester. Even if the student finishes before the start of the semester, the fee will not be assessed until Drop/Add is over. (Unless the student passes *all* of the PreTests in which case no fee will be assessed.)

Christmas work

Students who are starting the modules in the spring semester or students continuing into the 090 modules from first semester may work on them over the Christmas break.