**Marshall University**

**MTH 102 Syllabus**

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| **Course Title/Number** | Preparation for College Mathematics B MTH 102 |
| **Semester/Year** | Summer Intercession 2016 |
| **Section/CRN** | Section 301, CRN 3071 |
| **Days/Time** | MTWRF, 10:30am-1:30pm |
| **Location** | Smith Hall, SH 624 |
| **Instructor** | Jacob Rodeheffer |
| **Email** | rodeheffer@marshall.edu |
| **Co-Instructor** | Elizabeth Otunuga |
| **Co-Instructor Email** | otunuga1@marshall.edu |
| **Extra Help Hours** | MTWRF, 1:30pm-2:30pm (the hour after class) |
| **Extra Help Location** | Smith Hall, SH 624 |

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| **University Policies** | By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to [www.marshall.edu/academic-affairs/policies/](http://www.marshall.edu/academic-affairs/policies/). Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment |

**Course Description: From Catalog**

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| A mastery-based course that will prepare students for College Algebra. Prerequisite: Math ACT 18 or below, or SAT Math 450 or below. 4 credit hours. |

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| This course is intended to prepare students for MTH 127 or MTH 160. It will prepare students for courses that use algebra. |

**The Modified Math Emporium Format**

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| The format of this course is known as a modified math emporium. Math emporia have been shown to be more effective than traditional lecture-based courses in a number of colleges and universities across the country in the last decade. Studies have shown that when students actively engage with course material, on average they have higher rates of achievement of intended learning outcomes as well as higher course completion rates. The emporium model is based on mastery learning, promotes active learning, and provides flexibility in the pace at which students move through content, allowing students to cover familiar material quickly so that they can spend more time on topics that are more challenging for them. The format features timely personal assistance from the instructor, coupled with interactive computer technology for instruction, and assessment with immediate feedback. The interactive computer technology provides a nearly unlimited variety of practice examples, step-by-step guidance, and customized review support.  Note: Although this course involves computer-assisted instruction, it is not a distance learning or online course, nor is it an independent study. |

**Hawkes Learning**

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| To access the Hawkes Learning software used in this course, log in to MUOnline, select this course, select Course Content, and click on the Hawkes Learning link. In Hawkes Learning, this course is called Developmental Math.  The Hawkes course is divided into units, called modules, and each module has four types of to-do items: diagnostic tests, lessons, practice tests, and module tests.  Diagnostic tests: Diagnostic tests are optional and are not graded. Students can choose to take them at the beginning of each module to show what they already know and pass out of those lessons.  Lessons: Lessons have three stages: Learn, Practice, and Certify. In Learn, students can read the lesson information, or listen to a video lecture by pressing the Watch button. (Please use headphones.) Students should take notes. Once they are doing well with the Practice problems, students can move on to Certify, which is like the lesson’s quiz.  Practice tests: Practice tests are exactly like the module tests but are optional, are not graded, do not require instructor supervision, and can be taken as many times as wanted. They are a good rehearsal for module tests.  Module tests: Module tests are the main way students are graded in this course. For test-taking rules, see section below. |

**Academic Integrity Policy**

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| Students may work together on the Learn, Practice, and Certification of each lesson and on practice exams. Students may not work together, receive help, or use any resources (web, text, notes, etc) on Diagnostic Tests, Module Test, or the Final Test. Any students who are discovered cheating will be given a 0 on the test, which will count towards your final course grade; students caught cheating must still master the material of the assignment before moving on. A second cheating offense will result in an F for the course. Notice of any cheating offense will be sent to Academic Affairs. |

**Course Requirements/Due Dates**

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| Students must complete all certifications, all module tests (I, J, K, L, M, and N), and the final examination to earn a passing grade in the course.  Students will complete the certifications with mastery 80% or higher, the 6 module tests with mastery 75% or higher, and the final exam. Students have unlimited attempts to master the certifications. Students have 3 attempts to master each of the 6 module tests. The final exam may only be attempted once.  All certifications for a particular module must be mastered before attempting the module test, and each module test must be mastered before progressing to the next module (or final exam). If mastery on the test is not achieved in 3 attempts, then all certifications for the module and the diagnostic test will be reset; the student will work through the module again until mastery is achieved.  A complete suggested pace is provided in the Course Schedule in this syllabus. Students may complete certifications or exams before the suggested dates, if they have completed the appropriate prerequisites. Students may work ahead and finish the course early.  Students are expected to work outside of class 4 – 8 hours each week on lessons in place of homework assignments. Otherwise there may not be enough time for students to complete the course.  All course assignments, including the final, must be completed by the end of class on Friday, June 3. |

**Grading Policy**

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| Students have unlimited attempts to achieve mastery of 80% or higher in each lesson certification, and once mastery is achieved, is recorded in the gradebook at 100%. Students have 3 attempts to achieve mastery of 75% or higher in each of the 6 module tests, and once mastery is achieved, the highest of the 3 attempts is recorded in the gradebook. Students have 1 attempt to take the final exam and the score earned is recorded in the gradebook.  Semester grades will be based on certifications (15%), module tests (10% each for a total of 60%), the final exam (20%), and attendance (5%; note 1% point will be lost each day of missed class).  Grading scale: 90 – 100 A  80 – 89.99 B  70 – 79.99 C  60 – 69.99 D  Below 60 F  At the end of the semester, students who have not completed the course materials will be assigned a grade of F. |

**Required Texts, Additional Reading, and Other Materials**

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| (1) Software License – All students must purchase the software license within 3 weeks of the first class. There is a Purchase License link when you first enter Hawkes Learning from MUOnline; click it and select Developmental Mathematics. You can also purchase the OPTIONAL e-textbook for the course at the same link. Course software license and optional e-textbook can also be purchased at the Marshall University Bookstore at a higher price.  (2) Calculator – A calculator is allowed on all assignments and tests. No internet-enabled devices may be used as a calculator during tests.  (3) Headphones – Students who want to watch the HawkesTV instructional videos during class, as part of learning the course material, must use headphones. Students may also listen to music during class using headphones.  (4) Notebook – Although this course involves computer-assisted instruction, students should have and use note taking materials in every class. Notes should be taken on each lesson. Problems should be worked out neatly in your notebook and discussed with the Instructor as needed. |

**Attendance Policy**

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| Students are required to attend each class. Students with no unexcused absences will earn a perfect attendance grade; each unexcused absence hurts that grade. Students with a University Excused Absence must provide evidence to justify a University Excused Absence on the first day you return to class. Late arrivals, early departures, and excessively long breaks can add up to an unexcused absence, at the instructor’s discretion. Students do not need to attend class after successful completion of all modules, module tests, and the final exam. |

**Technical Assistance**

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| Students requiring technical assistance with the Hawkes software should contact Hawkes directly by live chat. Log in to Hawkes, click on your name in the upper-right corner, and select Live Support; or, if you are not able to log in, go to learn.hawkeslearning.com and click Live Chat 24/7 near the bottom. |

**Tutoring**

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| Math Department Open Computer Lab  Location: Smith Hall 620  Hours: MTWRF 12pm-4pm  Students will need to sign-in and show ID to the persons staffing the lab to be able to take tests. |

**The table below shows the following relationships: How each student learning outcome will be practiced and assessed in the course.**

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| **Course Student Learning Outcomes** | **How students will practice each outcome in this Course** | **How student achievement of each outcome will be assessed in this Course** |
| Students will identify different sets of numbers, compute results using elements of these sets, and convert numbers to the most appropriate form for applications. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module I. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |
| Students will apply properties and use operations to manipulate and simplify numerical and algebraic expressions. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module J. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |
| Students will solve equations and use graphical techniques to arrive at solutions of algebra problems. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module K. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |
| Students will learn the basics of polynomials and their applications. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module L. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |
| Students will factor polynomials using multiple techniques. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module M. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |
| Students will perform algebraic operations on rational and radical expressions, and solve application problems involving quadratic equations. | Both outside and inside the classroom, students will practice to master these concepts. These ideas are covered in Module N. | Students must certify in each lesson at the mastery level with a minimum grade of 80%. Students must demonstrate mastery of 75% on each module test. |

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| **Summer 2016 MTH 102 Course Schedule for Sections Meeting MTWRF** | | | |
| **Module** | **Lessons and Tests** | **Complete on or before** | **✓** |
| **I**  Whole Numbers  Fractions  Mixed Numbers  Decimals  Percentages | Intro to technology and policies – how this course works | M 5/9 |  |
| **Diagnostic Test Module I** (optional) for students who are confident with operations on and converting between whole numbers, fractions, mixed numbers, decimals, and percentages |  |  |
| Lessons 1.5 and 1.6 *Learn, Practice,* and *Certify* | M 5/9 |  |
| Lessons 1.7, 1.8, and 1.9 *Learn, Practice,* and *Certify* | T 5/10 |  |
| Lessons 2.1 and 2.2 *Learn, Practice,* and *Certify* | T 5/10 |  |
| Lessons 2.3 and 2.4 *Learn, Practice,* and *Certify* | T 5/10 |  |
| Lessons 2.5 and 2.6 *Learn, Practice,* and *Certify* | W 5/11 |  |
| Lessons 3.1 and 3.5 *Learn, Practice,* and *Certify* | W 5/11 |  |
| Lessons 4.3 and 4.4 *Learn, Practice,* and *Certify* | W 5/11 |  |
| Module I Practice Problems |  |  |
| **Module I Test** | **R 5/12** |  |
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| **J**  Real Numbers  Algebraic Expressions | **Diagnostic Test Module J** (optional) for students who are confident with properties and operations on real numbers, and evaluating algebraic expressions |  |  |
| Lessons 7.1a and 7.1b *Learn, Practice,* and *Certify* | R 5/12 |  |
| Lessons 7.2 and 7.3 *Learn, Practice,* and *Certify* | F 5/13 |  |
| Lessons 7.4 and 7.5 *Learn, Practice,* and *Certify* | F 5/13 |  |
| Lessons 7.6, 7.7a, and 7.7b *Learn, Practice,* and *Certify* | F 5/13 |  |
| Lessons 7.7c and 7.8 *Learn, Practice,* and *Certify* | M 5/16 |  |
| Module J Practice Problems |  |  |
| **Module J Test** | **M 5/16** |  |
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| **K**  Solving  Equations  Geometry  Cartesian Coordinate System | **Diagnostic Test Module K** (optional) for students who are confident in solving algebraic equations, evaluating geometric formulas, and graphing points in the plane |  |  |
| Lessons 8.1a and 8.1b *Learn, Practice,* and *Certify* | T 5/17 |  |
| Lessons 8.2 and 8.3 *Learn, Practice,* and *Certify* | T 5/17 |  |
| Lessons 8.4 and 8.5 *Learn, Practice,* and *Certify* | W 5/18 |  |
| Lessons 5.2 and 5.3 *Learn, Practice,* and *Certify* | W 5/18 |  |
| Lessons 5.4 and 9.1 *Learn, Practice,* and *Certify* | W 5/18 |  |
| Module K Practice Problems |  |  |
| **Module K Test** | **R 5/19** |  |
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| **L**  Exponents  Scientific Notation  Polynomials | **Diagnostic Test Module L** (optional) for students who are confident with exponents, scientific notation, and operations on polynomials |  |  |
| Lessons 11.1, 11.2a, and 11.2b *Learn, Practice,* and *Certify* | F 5/20 |  |
| Lessons 11.3 and 11.4 *Learn, Practice,* and *Certify* | F 5/20 |  |
| Lessons 11.5 and 11.6a *Learn, Practice,* and *Certify* | F 5/20 |  |
| Lessons 11.6b and 11.7a *Learn, Practice,* and *Certify* | M 5/23 |  |
| Module L Practice Problems |  |  |
| **Module L Test** | **M 5/23** |  |
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| **M**  Factoring  Quadratic Equations | **Diagnostic Test Module M** (optional) for students who are confident in factoring and solving basic quadratic equations |  |  |
| Lessons 12.1a, 12.1b, and 12.1c *Learn, Practice,* and *Certify* | T 5/24 |  |
| Lessons 12.2 and 12.3a *Learn, Practice,* and *Certify* | W 5/25 |  |
| Lessons 12.3b and 12.4a *Learn, Practice,* and *Certify* | W 5/25 |  |
| Lessons 12.6 *Learn, Practice,* and *Certify* | R 5/26 |  |
| Module M Practice Problems |  |  |
| **Module M Test** | **R 5/26** |  |
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| **N**  Rational Expressions  Radicals  Rational Exponents | **Diagnostic Test Module N** (optional) for students who are confident in rational and radical expressions, and rational exponents |  |  |
| Lessons 13.1a and 13.1b *Learn, Practice,* and *Certify* | F 5/27 |  |
| Lessons 13.2 and 14.1 *Learn, Practice,* and *Certify* | T 5/31 |  |
| Lessons 14.2 and 14.3a *Learn, Practice,* and *Certify* | T 5/31 |  |
| Lessons 14.3b and 14.4 *Learn, Practice,* and *Certify* | W 6/1 |  |
| Lessons 14.6 *Learn, Practice,* and *Certify* | W 6/1 |  |
| Module N Practice Problems |  |  |
| **Module N Test** | **R 6/2** |  |
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| **Final**  **Exam**  All Topics | Final Exam Practice Problems |  |  |
| **Final Examination** | **F 6/3** |  |
| **All course certification, module tests, and the final exam must be completed to finish the course.** | | | |