**Marshall University**

**MTH 102 Syllabus**

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| **Course Title/Number** | Preparation for College Mathematics B MTH 102 |
| **Semester/Year** | Fall 2016 |
| **Section/CRN** | 2961 |
| **Days/Time** | TR 5:00 – 6:40 PM |
| **Location** | SH 624 |
| **Instructor** | Roger Estep |
| **Office** | Smith Music 115 |
| **Phone** | 304 696 3986 |
| **E-Mail** | estep102@marshall.edu |
| **Office Hours** | TR 4-5, otherwise by appointment |

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| **Teaching Assistant** | Nika Rowan |
| **TA Office** | Smith Music 115 |
| **TA Phone** | 304 696 3986 |
| **TA E-Mail** | rowan11@marshall.edu |

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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. |

**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 on a module exam and take a comprehensive final exam. |
| 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 on a module exam and take a comprehensive final exam. |
| Students will develop a facility in solving algebraic equations, evaluating geometric formulas, and graphing points in the plane. | 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 on a module exam and take a comprehensive final exam. |
| Students will learn the properties of exponents, scientific notation, and operations on polynomial expressions. | 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 on a module exam and take a comprehensive final exam. |
| 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 on a module exam and take a comprehensive final exam. |
| Students will evaluate, simplify, and perform algebraic operations on rational and radical expressions. | 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 on a module exam and take a comprehensive final exam. |

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

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| (1) Textbook and computer software – Developmental Mathematics Software and e-book, ISBN 9781941552353, Hawkes Learning Systems.  A software license can be purchased at the student bookstore or on-line at http://www.hawkeslearning.com/.  Students who have not purchased a software license code within three weeks of the start of the semester will be automatically unenrolled. If a license is purchased within one additional week, the student will be re-enrolled.  (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.  (4) Notebook – Students should take notes on each lesson during the Learn and the Practice. Examples and explanations for different types of problems should be worked out neatly in your notebook and discussed with the Instructor or Teaching Assistant as needed. |

**Course Requirements/Due Dates**

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| Students must complete certifications with mastery 80% or higher to receive credit for completion of the lesson. Students have unlimited attempts to master the certifications. We recommend students complete the Learn and Practice before attempting a certification. Students can attempt a certification once without completing the Practice problems. Students who do not master the lesson in one attempt will be required to attempt the Practice problems before repeating the certification problems. The last day of classes is the last day that lesson certifications can be completed.  Each module exam should be taken on or before the date listed in the syllabus. Students should complete the Learn, Practice, and Certification for each lesson of a module and take the Module Practice Test before attempting the module exam. Students will be allowed to take a module exam before the date listed in the syllabus, if all of the corresponding module certifications are completed.  The first attempt of Module I and Module J tests must both be completed on or before the date of the Module J test listed in the syllabus.  The first attempt of Module K and Module L tests must both be completed on or before the date of the Module L test listed in the syllabus.  The first attempt of Module M and Module N tests must both be completed on or before the date of the Module N test listed in the syllabus.  Students who do not complete their first attempt at any module exam by the firm deadline will receive a 0 for one of their two attempts.  Students can take each module test twice. Students wishing to retake a module exam should review their first attempt with their instructor before taking the test for the second time. All module exams, including second attempts, must be completed by the last day of classes. Note that students who take the Module F exam for the first time on the last day of classes have only one attempt for that exam.  The final exam must be taken on or before the final exam date and time for this section. The final exam can be taken before the date listed in the syllabus, if all of the module exams have been taken. The final exam may only be attempted once.  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 are expected to work outside of class 2 – 4 hours for each credit hour of class time (8 – 16 hours each week). |

**Grading Policy**

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| Students have unlimited attempts to achieve mastery of 80% or higher in each lesson certification. Once mastery is achieved, the lesson is recorded in the gradebook as 100%. There is no penalty on your certifications grade for completing certifications late. Your certifications grade will be calculated as (number of mastered certifications)/(total number of certifications).  Students have 2 attempts on each of the 6 module tests. The highest of the 2 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 for each unexcused absence).  Grading scale: 90 – 100 A  80 – 89.99 B  70 – 79.99 C  60 – 69.99 D  Below 60 F  Students who earn a 75% or higher on every Module Test and the Final Exam, complete all of the lessons, and attend all classes, will earn an 80%, B, in this course.  Students who earn an 88% or higher on every Module Test and the Final Exam, complete all of the lessons, and attend all classes, will earn a 90%, A, in this course.  Midterm Grades  Midterm grades will be reported on Monday, October 10. Your midterm grade will be calculated as follows. Mod I 40%, Mod J 40%, Certifications 15%, Attendance 5%. |

**Attendance Policy**

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| Students are required to attend each class. Students with a University Excused Absence must provide evidence to justify a University Excused Absence on the first day they return to class. Each unexcused absence will result in a decrease of your final grade. Students do not need to attend class after successful completion of all lesson certifications, module tests, and the final exam. |

**Academic Integrity Policy**

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| Students may work together on the Learn, Practice, and Certification of each lesson and on Practice Tests. Students may not work together, receive help, or use any resources (web, notes, cell phones, textbook) on Diagnostic Tests, Module Tests, or the Final Examination. Any students who are discovered cheating will be given a 0 on the assignment, which will count toward their final course grade. Receiving a 0 on a module exam supersedes the two attempts policy. A second cheating offense will result in an F for the course. Notice of any cheating offense will be sent to Academic Affairs.  For best test preparation, students should attempt lesson Certifications without assistance. |

**Tutoring**

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| Math Department Open Computer Lab  Location: Smith Hall 620  Hours: TBA  Please remember to get your instructor’s permission before taking tests during open computer lab hours. Students will need to sign-in and show ID to the persons staffing the lab to be able to take tests.  Math Department Tutoring Lab  Location: Smith Music Hall 115  Hours: TBA  There are no computers in the math tutoring lab. Please bring your questions on paper or bring your own laptop. No tests can be taken in the math tutoring lab.  Other MTH 100 / 102 / 102B Classes  Students may attend class periods of other MTH 100 or MTH 102 sections on a first come first served basis, if the classroom has an open computer. Students must arrive on time, get instructor permission to use an open computer, and stay the entire class period. |

**Getting Started with Hawkes**

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| In a web browser, navigate to learn.hawkeslearning.com. Click on Create an Account. Choose the appropriate option “I have an Access Code”, “I want to Purchase Access”, or “I want to request Temporary Access” and press Continue.  Use your name and email as officially recorded with Marshall University. In particular, enter your Marshall email address **@live.marshall.edu**. Select product “Developmental Math”. Select your instructor and section. Verify your email as instructed.  Technical Assistance  Students requiring technical assistance with the Hawkes software should contact Hawkes directly by phone at 800-426-9538 or 843-571-2825, Monday – Friday 8:30am – 10:00pm ET, or by live chat at www.hawkeslearning.com/chat, any time 24/7. |

**T, R Course Schedule**

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| **Module** | **Fall 2016 MTH 102 Course Schedule for Sections Meeting TR** | **Complete on or before** | **✓** |
| **I**  Whole numbers  Fractions  Mixed numbers  Decimals  Percentages | Intro to technology and policies – how this course works | T 8/23 |  |
| **Module I Diagnostic Test** (optional) for students who are confident with operations on whole numbers, fractions, mixed numbers, decimals, and percentages | T 8/23 |  |
| Lessons 1.5, 1.6, and 1.7 Learn, Practice, Certify | R 8/25 |  |
| Lessons 1.8 and 1.9 Learn, Practice, Certify | R 8/25 |  |
| Lessons 2.1, 2.2, and 2.3 Learn, Practice, Certify | T 8/30 |  |
| Lessons 2.4 and 2.5 Learn, Practice, Certify | R 9/1 |  |
| Lessons 2.6 Learn, Practice, Certify | R 9/1 |  |
| Lessons 3.1 and 3.5 Learn, Practice, Certify | T 9/6 |  |
| Lessons 4.3 and 4.4 Learn, Practice, Certify | T 9/6 |  |
| Module I Practice Test | R 9/8 |  |
| **Module I Test** | **R 9/8** |  |

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| **J**  Real numbers  Algebraic expressions | **Module J Diagnostic Test** (optional)for students who are confident with operations on real numbers and evaluating algebraic expressions | T 9/13 |  |
| Lessons 7.1a and 7.1b Learn, Practice, Certify | T 9/13 |  |
| Lessons 7.2 and 7.3 Learn, Practice, Certify | R 9/15 |  |
| Lessons 7.4 and 7.5 Learn, Practice, Certify | R 9/15 |  |
| Lessons 7.6 and 7.7a Learn, Practice, Certify | T 9/20 |  |
| Lessons 7.7b and 7.7c Learn, Practice, Certify | T 9/20 |  |
| Lesson 7.8 Learn, Practice, Certify | R 9/22 |  |
| Module J Practice Test | R 9/22 |  |
| **Module J Test** | **T 9/27** |  |

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| **K**  Solving linear  equations  Area and volume  Cartesian coordinates | **Module K Diagnostic Test** (optional) for students who are confident solving linear equations, geometry, and the Cartesian coordinate system | T 9/27 |  |
| Lessons 8.1a and 8.1b Learn, Practice, Certify | R 9/29 |  |
| Lessons 8.2 and 8.3 Learn, Practice, Certify | R 9/29 |  |
| Lesson 8.4 Learn, Practice, Certify | T 10/4 |  |
| Lesson 8.5 Learn, Practice, Certify | T 10/4 |  |
| Lessons 5.2 and 5.3 Learn, Practice, Certify | R 10/6 |  |
| Lessons 5.4 and 9.1 Learn, Practice, Certify | R 10/6 |  |
| Module K Practice Test | T 10/11 |  |
| **Module K Test** | **R 10/13** |  |

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| **L**  Exponents  Scientific notation  Polynomials | **Module L** **Diagnostic Test** (optional) for students who are confident with exponents, scientific notation, and polynomials | R 10/13 |  |
| Lessons 11.1 and 11.2a Learn, Practice, Certify | T 10/18 |  |
| Lessons 11.2b Learn, Practice, Certify | T 10/18 |  |
| Lessons 11.3 and 11.4 Learn, Practice, Certify | R 10/20 |  |
| Lessons 11.5 and 11.6a Learn, Practice, Certify | R 10/20 |  |
| Lesson 11.6b Learn, Practice, Certify | T 10/25 |  |
| Lesson 11.7a Learn, Practice, Certify | T 10/25 |  |
| Module L Practice Test | R 10/27 |  |
| **Module L Test** | **R 10/27** |  |

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| **M**  Factoring polynomials  Solving quadratic equations | **Module M Diagnostic Test** (optional) for students who are confident factoring polynomials and solving quadratic equations | T 11/1 |  |
| Lessons 12.1a and 12.1b Learn, Practice, Certify | T 11/1 |  |
| Lesson 12.1c Learn, Practice, Certify | R 11/3 |  |
| Lesson 12.2 Learn, Practice, Certify | R 11/3 |  |
| Lesson 12.3a Learn, Practice, Certify | T 11/8 |  |
| Lesson 12.3b Learn, Practice, Certify | T 11/8 |  |
| Lesson 12.4a Learn, Practice, Certify | R 11/10 |  |
| Lesson 12.6 Learn, Practice, Certify | T 11/15 |  |
| Module M Practice Test | T 11/15 |  |
| **Module M Test** | **R 11/17** |  |

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| **N**  Rational expressions  Radicals  Rational exponents | **Module N Diagnostic Test** (optional) for students who are confident adding, subtracting, multiplying, and dividing rational expressions and radicals | R 11/17 |  |
| Lessons 13.1a and 13.1b Learn, Practice, Certify | T 11/29 |  |
| Lesson 13.2 Learn, Practice, Certify | T 11/29 |  |
| Lessons 14.1 and 14.2 Learn, Practice, Certify | R 12/1 |  |
| Lesson 14.3a Learn, Practice, Certify | R 12/1 |  |
| Lesson 14.3b Learn, Practice, Certify | T 12/6 |  |
| Lessons 14.4 and 14.6 Learn, Practice, Certify | T 12/6 |  |
| Module N Practice Test | R 12/8 |  |
| **Module N Test** | **R 12/8** |  |

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| **Final**  **Exam**  All Topics | Final Exam Practice Problems |  |  |
| Final Exam Practice Test |  |  |
| **Final Examination** | **Tuesday, 12/13 5PM** |  |

