Math M100 – Fall 2018

Customized Textbook: Basic Mathematics, Edited by IUN Department of Mathematics

(Please note that this is a customized textbook, only available for purchase through the Indiana University Northwest Bookstore. Content was customized from A Survey of Mathematics, 10th edition, by Angel, Abbott, Runde.)

Topic Syllabus

There will be two departmental tests—a midterm exam and a final exam—this semester. Study guides will be provided by the instructor for each exam. The midterm exam will account for 25-30% of the final grade and the final exam will account for 30-35% of the final grade, with a combined minimum value of at least 60%. Students will be allowed one 8.5 x 11 sheet of notes (one side) and a calculator for each test. Cell phone calculators are not allowed.

Midterm Exam

Unit 1
- Section 1.4 (pp. 26-34) Direct, inverse, joint, and combined variation
- Department Supplement Integer exponents; Scientific notation
- Section 1.6 (pp. 41-54) Graph a linear equation
- Department Supplement Linear models
- Section 6.6 (pp. 469-481) Linear Correlation and Regression

Unit 2
- Section 1.9 (pp. 78-87) Quadratic formula
- Section 1.10 (pp. 88-103) Functions and Their Graphs
  - Department Supplement: Quadratic and Exponential Models
- Section 2.1 (pp. 122-130) Conversion Within the Metric System
- Section 2.4 (pp. 148-159) Dimensional Analysis and Conversion
Final Exam

Unit 3
- Section 3.3 (pp. 187-198) Perimeter and Area
- Section 3.4 (pp. 198-210) Volume and Surface Area
- Section 4.1 (pp. 256-264) Set Concepts
- Section 4.2 (pp. 264-270) Subsets
- Section 4.3 (pp. 270-281) Venn Diagrams and Set Operations
- Section 4.4 (pp. 281-290) Venn Diagrams with Three Sets
- Section 4.5 (pp. 290-296) Applications of Sets

Unit 4
- Section 5.1 (pp. 313-325) Empirical and Theoretical Probabilities
- Section 5.4 (pp. 342-351) Tree Diagrams
- Section 5.5 (pp. 351-361) OR and AND Problems
- Section 5.6 (pp. 361-368) Conditional Probability
- Section 5.7 (pp. 369-379) The Counting Principle and Permutations
- Section 5.8 (pp. 379-384) Combinations
- Section 5.9 (pp. 385-389) Solving Probability Problems by Using Combinations
- Section 6.2 (pp. 420-422) Frequency Distributions
  - Department Supplement: Frequency Distributions
- Section 6.3 (pp. 433-444) Measures of Central Tendency
- Section 6.4 (pp. 444-451) Measures of Dispersion
- Section 6.5 (pp. 452-469) Normal Curve

Calculators ARE allowed in M100. Strongly recommended calculators are the TI-30 (scientific) and the TI-83 (graphing). Use of cell phones during departmental exams is prohibited.

If you have a documented disability and need assistance, special arrangements can be made to accommodate most needs. Visit Student Support Services at HH 239 (980-6798).

The IUN Math Assistance Center provides free math tutoring services on a walk-in basis in HH 436 (phone 219-981-6979)

This semester I will be using IU’s FLAG Early Alert System to provide real-time feedback on your performance in this course. Periodically throughout the semester I will be entering data on factors such as your class attendance, participation, and success with coursework, among other things. This information will provide feedback on how you are faring in the course and offer you suggestions on how you might be able to improve your performance. You will be able to access this information in the student center: Onestart > Student Services page > Student Center > My Academics and Grades > My Grades.