# MATH 102, Intermediate Algebra, M-F 8:50 - 9:50 AM, Putnam 101

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Course Webpage: http://www.ndsu.edu/pubweb/∼mspanier/math102summer2013.html
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Office Hours: 10:00 - 11:30 AM and by appointment.

Course Information: Math 102, Intermediate Algebra, 3 Credits, 8-Week Summer Session 2013, M-F 8:50 - 9:50 AM, Putnam 101

Textbook: Intermediate Algebra, Custom edition for NDSU compiled by Lonnie Hass and Susan Bornsen (access code for MyMathLab, included) by Bittinger and Beecher, 2013

Prerequisites: ACT or COMPASS test score.

Description: Topics include fundamental operations with polynomials, fractions, exponents, radicals, and complex numbers, factoring polynomials, functions, graphing, and equation solving.

Goals: Students will develop an understanding of the basic algebraic tools and problem-solving skills necessary for success in the study of College Algebra (103) or Finite Math (Math 104).

Calculators: A scientific or graphing calculator such as the TI-84 Plus is recommended. If you have another model, check to make sure it is suitable for this course. Cell phone calculators are not allowed on tests and quizzes. You may not use a TI-89 calculator.

Homework: There will be textbook problems assigned at the end of each section, problems will be posted on course webpage. It is crucial that you do as many of these problems as possible. Due to the fast pace of the course it is important to work on problems each day. The book assigned homework problems will not be collected (see notes in Quizzes and Exams).

MyMathLab: In addition to homework problems, after each section there will be some problems assigned using MyMathLab. These problems are designed to give you practice with basic concepts and methods. MyMathLab will give you instant feedback, so you know if you are completing the problems correctly. Points earned using MyMathLab will go towards the Homework portion of your final grade (See Grading section). Be advised that the pace for the summer course is quite fast and it is cruital you stay up to date on the online portion of the course.

    In addition to homework problems there will be many additional resources for you posted onto MyMathLab (e.g., additional homework problems, section recaps, recorded lectures). I will spend time during the first class period going over MyMathLab and some of its features, if you have any concerns or problems with the software do not hesitate to let me know. MyMathLab can be accessed at

http://pearsonmylabandmastering.com/

with the course name of Spanier102Summer2013 and course ID of spanier95365.

QUIZZES: There will be 1-3 quizzes per week. Quizzes are defined as one of the following in-class quizzes (individual or group), in-class assignments (individual or group), or take-home quizzes (either online or handed out). Problems for the quizzes will consist of approximately 2/3 of posted problems (Textbook and MyMathLab). Your lowest 2 quiz scores will be dropped. There will be no make-up quizzes.

EXAMS: There will be four in class examinations on Friday June 21, Wednesday July 3, Wednesday July 16, and Friday July 26. The exams will all be held in Putnam 101. The final exam will be on on Friday August 2. Problems for the exams will consist of approximately 2/3 of posted problems (Textbook, MyMathLab, Quizzes, and previous exams). Make-up exams will only be allowed under extreme circumstances.

KEY DATES:

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\begin{array}{ll}
\text{First Day of Class} & \text{June 11} \\
\text{Exam 1} & \text{June 21} \\
\text{Exam 2} & \text{July 3} \\
\text{No Class} & \text{July 4} \\
\text{Exam 3} & \text{July 17} \\
\text{Drop Deadline} & \text{July 17} \\
\text{Exam 4} & \text{July 26} \\
\text{Final Exam} & \text{August 2}
\end{array}
$$

GRADING: Breakdown of scores for the course

$$
\begin{array}{ll}
\text{Homework} & 15\% \\
\text{Quizzes} & 15\% \\
\text{Exams} & 55\% \\
\text{Final Exam} & 15\%
\end{array}
$$

Grades will be assigned according to the following rule

$$
\begin{array}{ll}
\text{A} & 90\text{-}100 \\
\text{B} & 80\text{-}90 \\
\text{C} & 70\text{-}80 \\
\text{D} & 60\text{-}70 \\
\text{F} & 0\text{-}60
\end{array}
$$

GROUP STUDY: You are encouraged to find at least one person in the class with whom you can study. Not only does this help you study better, but also, in the event you miss a lecture you can get the notes and assignments from this person.

EXTRA HELP: Dot not hesitate to come to my office during office hours (I would much rather discuss problem with you than stare at the wall in my office) or by appointment to discuss a homework problem or any aspect of the course. If you would like additional help there is tutoring available through the NDSU Mathematics department. See the mathematics webpage for times http://math.ndsu.nodak.edu/tutorial/

ADA STATEMENT: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic, learning and psychiatric disabilities in

order to ensure their equal access to course content. If you have a documented disability and require accommodations, please let your instructor know as soon as possible. For more information, please contact Disability Services at 231-7671 or go to http://www.ndsu.edu/counseling/disability.shtml.

ACADEMIC HONESTY: The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at http://www.ndsu.edu/academichonesty/.

Tentative Schedule:

| Week | Sections | Topics |
|---|---|---|
| 1. 6/11 - 6/14 | 5.1 | Introduction to Factoring |
| | 5.2 | Factoring Trinomials of the Type $x^2 + bx + c$ |
| | 5.4 | Factoring $ax^2 + bx + c$ when $a \neq 1$: The $ac$-method |
| | 5.5 | Factoring Trinomial Squares and Differences of Squares |
| 2. 6/17 - 6/21 | 5.6 | Factoring Sums or Differences of Cubes |
| | 5.7 | General Factoring Strategies |
| | 5.8 | Solving Quadratic Equations by Factoring |
| | 5.9 | Applications of Quadratic Equations |
| 3. 6/24 - 6/28 | 6.1 | Multiplying and Simplifying Rational Expressions |
| | 6.2 | Division and Reciprocals of Rational Expressions |
| | 6.3 | Least Common Multiples and Denominators |
| | 6.4 | Adding Rational Expressions |
| | 6.5 | Subtracting Rational Expressions |
| | 6.6 | Complex Rational Expressions |
| | 6.7 | Solving Rational Equations |
| 4. 7/1 - 7/5 | 6.8 | Applictions Using Rational Equations and Proportions |
| 5. 7/8 - 7/12 | 3.1 | Introduction to Graphing |
| | 3.2 & 3.3 | Graphing Linear Equations |
| | 3.4 | Slope and Applications |
| | 7.1 | Functions and Graphs |
| | 7.2 | Finding Domain and Range |
| | 7.3 & 7.4 | Linear Functions: Graphs and Slopes |
| 6. 7/15 - 7/19 | 7.5 | Finding Equations of Lines; Applications |
| | 9.1 | Sets, Inequalities, and Interval Notation |
| | 9.2 | Intersections, Unions, and Compound Inequalities |
| | 9.3 | Absolute-Value Equations and Inequalities |
| 7. 7/22 - 7/26 | 10.1 | Radical Expressions and Functions |
| | 10.2 | Rational Numbers as Exponents |
| | 10.3 | Simplifying Radical Expressions |
| | 10.4 | Addition, Subtraction, and Multiplication of Radical Expressions |
| | 10.5 | Division of Radical Expressions |
| | 10.6 | Solving Radical Equations |
| | 10.7 | Applications Involving Powers and Roots |
| | 10.8 | The Complex Numbers |
| 8. 7/29 - 8/2 | 11.1 | Solving Quadratic Equations |
| | 11.2 | The Quadratic Formula |
| | 11.3 | Applications Involving Quadratic Equations |