

**MA 305 - STRUCTURE OF MATHEMATICS III: NUMBER PATTERNS**

***READ THIS SYLLABUS CAREFULLY.  
YOU ARE RESPONSIBLE FOR KNOWING THIS INFORMATION!***

**Prerequisite:** MATH 213 (C- or higher) and MATH 116, 119, 124, or 125 (C- or higher)

**Course Description:** Exploratory approach to number patterns and functions. Topics include prime and composite numbers, perfect numbers, Fibonacci numbers, Pythagorean triples, and sequences. Calculators will be used. Can be used to meet requirements of a major or minor in mathematics only for students seeking elementary, early childhood, or middle level certification. Not recommended for use in meeting certification requirements for secondary school mathematics.

The major goals of this course are to:

- a. develop an ability to discover, understand, and describe number patterns
- b. introduce new ideas and modes of thought about numbers
- c. introduce a mathematical view of the world

This course will teach you to think critically in mathematics and about mathematics education.

**Instructor:** Adele Miller, Ed.D.

**Phone:** 860-832-3679

**Office:** Marcus White 119

**E-Mail:** [millera@ccsu.edu](mailto:millera@ccsu.edu)  
[jmmiller43@earthlink.net](mailto:jmmiller43@earthlink.net)

**Office Hours:** Monday: 2:00 pm – 4:00 pm  
Wednesday 9:00 am – 11:00 am  
Thursday 1:00 pm - 3:00 pm (9/2, 9/16, 9/30, 10/14, 10/28, 11/11, 11/18, 12/2)  
and by appointment

**Textbook:** The Magic of Numbers, by Benedict Gross & Joe Harris (Pearson Prentice Hall, 2004)

**Class Meeting Times:** MWF 1:00 pm – 1:50 pm  
Attendance will be taken

Maria Sanford 216

**Course Requirements:** Attend and participate in class regularly, complete homework assignments, submit electronic reflections regularly, create an electronic portfolio, and take quizzes and tests as scheduled. All work to be handed in must be written neatly in pencil. Illegible work must be rewritten. Quizzes and homework assignments cannot be made up. If you know you will be absent, you may arrange to take a quiz or hand in homework early. Missed tests must be made up by the next class meeting. A general rule for any college course is to put in at least 2 hours of work outside of class for every hour in class. All electronic devices except approved calculators must be turned off before entering the classroom. If a cell phone rings or any text-messaging occurs during class, a percentage point will be deducted from that student's test average.

### Attendance Policies:

- a. You are expected to attend every class just as you will expect your students to be present every day.
- b. In the case of an unavoidable absence, please notify me in advance of the date, or, if that is impossible, phone or e-mail me at the time of the absence.
- c. Attendance and class participation are part of your grade in this course. They are evaluated in this manner:

Three or fewer absences and enthusiastic class participation:	85% - 100%
Four absences and occasional class participation:	75% - 85%
Five or six absences and little class participation:	50% - 75%
More than six absences and no class participation:	0%

### University Policies:

- a. You must take the final examination at the time specified in the course selection book.
- b. If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My telephone number and office hours are given above.
- c. In the event of a weather or other emergency curtailment or cancellation of classes, listen to WTIC (1080 AM), call 860-832-3333 for any messages, or visit the CCSU website.
- d. In the event that I am not in the classroom when class is scheduled to begin, you should wait a full 10 minutes before leaving the classroom.
- e. The last day to withdraw from a course and receive the grade of “W” is Monday, October 25<sup>th</sup>. Approvals for withdrawal prior to this date are not required; however, it is strongly recommended that you consult with your academic advisor prior to deciding to withdraw. Cessation of attendance, notice to the instructor, or telephone calls to the Enrollment Center are not considered official notice of your intention to drop the course. After October 25<sup>th</sup> withdrawals are allowed only under extenuating circumstances and require approval of the course instructor, department chair and dean of the School of Arts and Sciences.

### Resources Available:

- a. If you need help, take advantage of my office hours. Do not wait until just before a quiz or test to get help.
- b. The Learning Center (TLC) is located in Room 241 Copernicus. Free tutoring is available. A schedule of hours the Center is open will be posted soon after the beginning of the semester.
- c. Form a study group with other students in the class. Explaining solutions to homework exercises to each other and preparing for quizzes and tests together are good ways to learn.
- d. A list of private tutors for hire is available in the math department office, Room 107 Marcus White, 832-2835.

## Evaluation:

a. Attendance and class participation	10%
b. Homework	10%
c. Reflections	10%
d. Portfolio	10%
d. Average of five best quizzes	20%
e. Average of three tests	20%
f. Final examination (Wednesday, December 15 <sup>th</sup> 2:00 pm – 4:00 pm)	20%

## Academic Integrity:

The CCSU honor code for Academic Integrity is in effect in this class. You may find it online at: <http://web.ccsu.edu/academicintegrity/UndergradAcadMisconductPolicy.htm>. Please read it carefully. As this policy clearly states, plagiarism and other forms of cheating are forbidden. All writing and other creative work you submit in this class must be your own. Academic integrity is the responsibility a student assumes for submitting academic work as his/her own. Cheating or plagiarism on any test, quiz, or final exam will result in a grade of zero for that work. Cheating or plagiarism is submitting someone else's work for one's own work. It is different from sharing work with others during class or on group projects.

## Homework:

Homework is an opportunity to practice applying concepts learned in class and to communicate mathematical thinking. How you present your homework is a reflection of how you think and work mathematically and your attitude towards mathematics. Here is a list of how I would like for you to complete and submit your homework this semester.

1. Write all homework in pencil.
2. Do not submit any homework on paper torn from a spiral notebook unless the paper is perforated.
3. Put your name and the due date in the upper right-hand corner of the paper.
4. Identify from which page(s) the work comes.
5. Write neatly and legibly. Illegible homework will not be reviewed or graded.
6. Number and write out some identifying information about the exercise before doing any work on the exercise. Do not simply write an answer. **SHOW YOUR WORK.**
7. Leave one empty line between exercises and do not have more than one column of work on a page.
8. When homework is on more than one sheet of paper, staple the sheets together.
9. Be sure to submit homework at the beginning of class the day it is due. Late homework is not accepted. If you cannot attend class, you may hand in homework ahead of time or have a friend bring your homework to class or my office.