INSTRUCTOR: Dr. James Fulton
OFFICE: R345
COURSE: MAT102-A Survey of Contemporary Mathematical Topics
OFFICE HOURS:
M 11:00AM-12:50PM
T/W 12:30PM-1:50PM
SECTION: 93238
TIME: M/W 9:30-10:45AM  Th 12:20PM-12:50PM
CLASSROOM: R234
PREREQUISITE: MAT007 – Algebra I or equivalent
TELEPHONE: 451-4784 (Prof. Fulton)  
451-4270 (Secretary)
E-MAIL: fultonj@sunysuffolk.edu
CREDITS: 3

COURSE PHILOSOPHY:
This course is designed to provide college students with the opportunity to experience the different types of mathematical thinking; and to enable them to ultimately appreciate mathematics as an art, a science and a language, in addition to a method of understanding and solving problems. This course, while designed to satisfy the mathematical needs of the liberal arts student, as a consequence of its emphasis on abstract reasoning, can be a useful course for all college students.

OBJECTIVES:
Upon successful completion of this course, students should be able to:
1. demonstrate a fundamental knowledge of statistics (frequency distributions and their graphs, averages and variability);
2. demonstrate an understanding of the use of factorials, combinations and permutations;
3. demonstrate an understanding of what is meant by probability and conditional probability;
4. compute P(A), P(A and B), P(A or B) and P(A|B);
5. demonstrate a fundamental knowledge of axiomatic structures by comparing Euclidean and non-Euclidean geometric systems;
6. demonstrate a basic understanding of fractals and dimension;
7. demonstrate a fundamental knowledge of number theory (modular numbers, congruence classes, prime numbers, perfect numbers, divisibility and sequences);
8. demonstrate a basic understanding of symmetry and group theory.

GRADING POLICY:
1. There will be four (4) tests and four (4) projects.
2. Your course average will be determined as follows:
   Tests......................... 60%
   Projects ...................... 40%

Copies of the detailed departmental syllabus for this course are available in the Math Office (R352).
COLLEGE–WIDE ATTENDANCE POLICY:
All students are expected to attend every session of each course for which they are registered. Students are responsible for all that transpires in class whether or not they are in attendance. The College defines excessive absence or lateness as more than the equivalent of one week of class meetings during the semester. Excessive absence or lateness may lead to failure in a course or removal from the class roster.

TEXTBOOK:
Mathematical Mystery Tour, Volume II, 3rd Edition
Published by CreateSpace 2014
by James P. Fulton

Available in the bookstore or online at: [http://www.amazon.com/Mathematical-Mystery-Tour-Volume-II/dp/150307532X](http://www.amazon.com/Mathematical-Mystery-Tour-Volume-II/dp/150307532X)

TOPICS TO BE COVERED:
Listed below is a general outline of the ideas and topics to be covered, A more detailed outline is provided at: [http://www2.sunysuffolk.edu/fultonj/MA22_MAT102.htm](http://www2.sunysuffolk.edu/fultonj/MA22_MAT102.htm)

- Probability and Statistics (Random Patterns)
  - Chapters 1 – 4
  - **Test 1**

- Geometry (Spatial Patterns)
  - Chapters 5 – 9
  - **Test 2**

- Numbers (Numerical Patterns)
  - Chapters 10 – 13
  - **Test 3**

- Symmetry and Groups (Symmetrical Patterns)
  - Chapters 14 – 15
  - **Test 4**

MATHEMATICS LEARNING CENTER (MLC):
Free tutoring and use of computer software is available in the Math Learning Center (R235). Hours are posted on the door. You must sign in each time you use MLC. The College and the Mathematics Department support the MLC.