



Academic Course Catalog  
2009 - 2010

Mathematics  
Department

Current As Of: 4/6/09

## MATHEMATICS DEPARTMENT

### INTEGRATED ALGEBRA HONORS-3117 - Freshmen

1 credit

This Honors level course in Integrated Algebra is designed for students who enter high school with above average mathematical ability, as determined by high school entrance and in-house placement examination scores. The first semester is an introduction to basic concepts in algebra, geometry and trigonometry. Functions and coordinate geometry, as well as probability and statistics are among the topics that will be covered in the second semester. Students will be introduced to the use of the TI-83 graphing calculator through these applications. Students will be preparing to take the required Integrated Algebra Regents exam in June.

### INTEGRATED ALGEBRA REGENTS-3111 - Freshmen

1 credit

This course in Integrated Algebra is designed for students who enter high school with average mathematical ability, as determined by high school entrance and in-house placement examination scores. The first semester is an introduction to basic concepts in algebra, geometry and trigonometry. Functions and coordinate geometry, as well as probability and statistics are among the topics that will be covered in the second semester. Special emphasis will be placed on problem solving skills and real-life applications of math. Students will be introduced to the use of the TI-83 graphing calculator through these applications. Students will be preparing to take the required Integrated Algebra Regents exam in June.

### INTEGRATED ALGEBRA-3115 - Freshmen

1 credit

This course in Integrated Algebra is designed for students who enter high school with below average mathematical ability, as determined by high school entrance and in-house placement examination scores. This course will review pre-algebra topics, as well as integrate various topics from algebra, geometry and trigonometry on a basic level. Special emphasis will be placed on problem solving skills and real-life applications of math. Students will be introduced to the use of the TI-83 graphing calculator through these applications. Students will be preparing to take the required Integrated Algebra Regents exam in January of sophomore year.

### GEOMETRY HONORS-3127 - Freshmen/Sophomores

1 credit

This Honors level course is designed for students who have completed *Integrated Algebra Honors* with a minimum average of 80% and have earned a minimum score of 80 on the Integrated Algebra Regents exam or who have received departmental approval. The course will emphasize topics in Euclidean and coordinate geometry, which includes formal proofs. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the *Geometry Regents* exam in June.

### GEOMETRY REGENTS-3121 - Freshmen/Sophomores

1 credit

This course is designed for students who have completed *Integrated Algebra Regents*. The course will emphasize topics in Euclidean and coordinate geometry, which includes formal proofs. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the *Geometry Regents* exam in June.

INTEGRATED ALGEBRA/GEOMETRY-3125 - Sophomores	1 credit
---	----------

This course is designed for students who have completed *Integrated Algebra*. In the first semester, special emphasis will be placed on problem solving skills and further integration of topics in algebra in preparation for the Integrated Algebra Regents exam, which the students are required to take in January. In the second semester, topics in Euclidean and coordinate geometry will be introduced. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the Geometry Regents exam in the subsequent academic year.

ALGEBRA 2/TRIGONOMETRY HONORS-3134 - Sophomores/Juniors	1 credit
---	----------

This course is designed for students who have completed *Geometry Honors* with a minimum average of 80% or who have received departmental approval. The course will emphasize topics in intermediate algebra and trigonometry on the Honors level. Knowledge of all topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the Algebra 2/Trigonometry Regents in June.

ALGEBRA 2/TRIGONOMETRY REGENTS-3135 - Sophomores/Juniors	1 credit
--	----------

This course is designed for students who have completed *Geometry Regents* with a minimum average of 80%. The course will emphasize topics in intermediate algebra and trigonometry. Knowledge of all topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the Algebra 2/Trigonometry Regents in June.

GEOMETRY-3136 - Juniors	1 credit
-------------------------	----------

This course is designed for students who have completed *Integrated Algebra/Geometry*. The course will emphasize topics in Euclidean and coordinate geometry, which includes formal proofs. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. Students will be preparing to take the Geometry Regents exam in June.

MATH B REGENTS/PRE-CALCULUS-3044 - Seniors	1 credit
--	----------

This course is designed for seniors who wish to review the Math B curriculum in order to retake the Math B Regents, as well as study pre-calculus. Topics in geometry, trigonometry, probability, and statistics will be covered, and review will be provided for the Math B Regents exam, which the students are required to take in January. Selected topics from pre-calculus will be covered in the second semester. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. It is an excellent college preparatory course for those students interested in the sciences, mathematics, or engineering. Prerequisite: A minimum average of 80% in Math 3 Regents or departmental approval.

PRE-CALCULUS-3041 - Juniors/Seniors	1 credit
-------------------------------------	----------

This course is designed to prepare students for college level calculus. Major topics include functions, matrices, limits, derivatives, trigonometric applications, polar coordinates, complex numbers, and natural logarithms. Knowledge of such topics will be enriched by the use of the TI-83 graphing calculator. Prerequisite: A minimum

average of 80% in *Math 3 Honors*, or 85% in *Math 3 Regents* or departmental approval. This course is also open to juniors taking *Algebra 2/Trigonometry Honors/Regents* who have a special interest in mathematics and are considering taking *AP Calculus* in senior year. These students must have a minimum average of 90% in *Geometry Honors/Regents* and departmental approval.

AP CALCULUS-3060 - Juniors/Seniors
------------------------------------

1 credit
----------

This is a college level calculus course that covers differential and integrated calculus. Students will take the AP exam in AB Calculus upon completion of the course to potentially earn college credit. Prerequisite: A minimum average of 85% in *Math 3 Honors* or *Pre-Calculus*, a passing score on the Math B Regents exam and departmental approval.

MATH LAB-3900
---------------

0 credit
----------

This course is designed for students who enter high school with below average mathematical ability, as determined by high school entrance and in-house placement examination scores, or who have not yet earned the minimum score on the Math Regents exam required for graduation. Selected students may be scheduled for these labs in addition to their required math course. This course will review pre-algebra topics, as well as integrate various topics from algebra, geometry and trigonometry on a basic level. Special emphasis will be placed on problem solving skills.