

SELECTED TOPICS IN MATHEMATICS

This course, designed especially for motivated high school students wishing to pursue interesting mathematical ideas, covers a wide range of current and significant non-calculus based topics in mathematics. Topics include: *Chaos*: the study of dynamically changing systems

- *Combinatorics*: the art of counting, using methods to eliminate the need to list items.
- *Game Theory*: the study of strategic decision-making in presence of competition and uncertainty.
- *Linear Programming*: a tool for optimizing return, given resource constraints.
- *Number Theory*: the study of properties of the positive integers which form the basis for all arithmetic operations.
- *Topology*: the study of geometric properties preserved while stretching and bending the plane.



Benefits of Taking This Course

- Earn college credit which is transferable to any college or university in the country.
- Spend time on a college campus
- Study interesting mathematical ideas
- Challenge yourself in a unique way
- Improve your mathematical skills for competitions and standardized exams
- Meet other students interested in studying mathematics