MATHEMATICS

PLACEMENT IN MATH COURSES &

ELIGIBILITY FOR HONORS/AP MATH CLASSES

Students are recommended for placement in Mathematics courses based on a combination of student performance, achievement scores on standardized tests, and teacher recommendations. The following describes the recommendation process and the eligibility for requirements for honors and AP level mathematics courses.

Incoming freshman are given an initial placement in a math course based on academic performance, recommendations from staff members from the grammar schools, and the Explore test scores. If a student shows mastery of algebra 1 course objectives as determined by their eighth grade teachers, data from the course assessments, and has above average scores on the locally administered standardized tests, he/she will be placed into Honors Geometry. If the student shows mastery of the algebra 1 course objectives but does not have above average scores on locally administered standardized tests, he/she will be placed into Geometry. If a student does not show mastery of the Algebra 1 course objectives, s/he will be placed into either Algebra 1 or Foundations of Algebra based upon his/her score on the placement exam and upon teacher recommendation. Due to the fact that a student MUST show mastery of Algebra 1 course objectives before proceeding to Geometry, these math placements are not subject to parent/guardian override.

Subsequent to the freshman year recommendation process as described above, students will be placed in math courses based on academic performance and teacher recommendation.

If a student is currently in a regular level math class and wishes to move into an honors level math class (including an AP math class) ALL of the following criteria must be met:

- Student must have earned an A in the current regular level math class
- Student must have above average scores on locally administered standardized tests
- Student must have a teacher recommendation to move into the honors course

If a student is currently in an honors level math class and wishes to enroll in the next honors level math class (including an AP math class) at least TWO of the following criteria must be met:

- Student must have earned an A, B, or C in the current honors level math class
- Student must have above average scores on locally administered standardized tests
- Student must have a teacher recommendation to enroll in the honors course

CALCULATOR POLICY

Any student enrolled in a mathematics course (with the exception of Geometry at any level) at Ridgewood High School is required to have a **Texas Instruments** graphing calculator. **The only acceptable models include the TI-83, TI-83 Plus, TI-84 and the TI-84 Plus. (TI-89 is also acceptable for Calculus only.) The graphing calculator will be used in mathematics courses throughout the curriculum.** Teachers will also use free graphing calculator apps to enhance the learning process. However, at this time, only hand-held graphing calculators are permissible on standardized tests. Therefore, students will become familiar with both throughout their math courses.

FOUNDATIONS OF ALGEBRA 1.0 Cr.

- Prereq: Placement into this course is by teacher recommendation **only**.

  Description: This foundational algebra course will cover the following topics: ratio and proportional reasoning, equivalent mathematical expressions, an introduction to linear equations (graphing and solving), and an introduction to functions as a mechanism to model the relationship between two quantities. Problem solving skills, application problems, and mathematical discussions will be emphasized. This course will serve as a transition into high school algebra 1 for those students who have not shown adequate success on pre-requisite skills as measured by a placement exam. Graphing calculator required**.

ALGEBRA 1 1.0 Cr.

- Prereq: None

  Description: This course will cover the following topics: equations in one variable, graphing linear equations, linear systems and linear inequalities, exponents, radicals, quadratic equations, and polynomials. Graphing calculator required**.

GEOMETRY 1.0 Cr.

- Prereq: Successful completion of Algebra 1. Freshmen may be placed in this course based on performance on local assessment and teacher recommendation.

  Description: This course will cover Geometry topics with an inductive and deductive approach. Topics will include measurement, angle relationships, various geometric figures and their properties, analytic proofs, area and volume, congruence and similarities. Material will be explored traditionally and with dynamic computer software**.** Graphing calculator is not required, but will be used by instructor to model.

GEOMETRY IN CONSTRUCTION 1.0 Cr.

- Prereq: Successful completion of Algebra 1 or recommendation from teacher. **Concurrent enrollment in Construction Principles is required.**

  Description: Geometry in Construction is an alternative approach to learning Geometry. The objective of this course will be the same as the objective in the traditional geometry course, the difference will be the order of the objectives, and the contextualized nature of the lesson plans. The course will be ordered around the naturally occurring steps for designing and building a home. Students will see mathematics in the context. Upon completing the course students will be able to continue into Algebra 2 with no curricular gaps.

GEOMETRY HONORS* 1.0 Cr.

- Prereq: Successful completion of Algebra 1 and the student meets criteria for Math Honors courses. (see page 18).

  Description: Geometry Honors is a fast-paced course which covers all geometric topics by using both inductive and deductive approaches. Students are continually challenged to make and prove mathematical discoveries through the use of logic, definitions, postulates, and theorems. Algebra is used frequently as a tool to reinforce those skills which will be used in subsequent math courses. Graphing calculator is not required, but will be used by instructor to model.

*grade weight differential (pg. 5)
****see Calculator Policy**

ALGEBRA 2 1.0 Cr.

- Prereq: Successful completion of Algebra 1 and teacher recommendation.

Description: This course covers basic Algebra 2 topics in depth. Topics include quadratic, polynomial, radical, exponential, logarithmic, and periodic functions. Sequences and series, as well as topics in probability and statistics will also be covered. Graphing calculator required**.

ALGEBRA 2 IN BUSINESS 1.0 Cr.

- Prereq: Successful completion of Algebra 1 and teacher recommendation.

Algebra 2 in Business is an alternative approach to learning advanced algebra. The objective of this course will be the same as the objectives in the traditional algebra 2 course, the difference will be the order of the objectives, and the contextualized nature of the lesson plans. The course will be ordered around the naturally occurring steps for designing and running a business. Students will see mathematics in the context. Upon completing the course students will be able to continue into Pre-Calculus or Probability & Statistics with no curricular gaps. **Concurrent enrollment in Introduction to Business is required.**

ALGEBRA 2 HONORS* 1.0 Cr.

- Prereq: Teacher recommendation or successful completion of some level of Geometry and the student meets criteria for Math Honors courses. (see page 18).

Description: This course requires a thorough understanding of Algebra 1. It is a fast paced course which covers Algebra 2 concepts in depth. Topics include: higher order equations and inequalities, functions and their graphs, systems of equations and inequalities and trigonometric functions. Graphing calculator required**.

MODELING AND PROBLEM SOLVING WITH MATHEMATICS 1.0 Cr.

- Prereq: Successful completion of algebra 1, geometry, and algebra 2 at some level AND teacher recommendation.

Description: This course emphasizes mathematical modeling and problem solving. The modeling perspective permits students to experience mathematics as a means of making sense of data through representation, interpretation, and prediction. Using these tools and a problem solving approach, students will come to a deeper understanding of the math concepts they have studied in the past and see how they can be used to understand the real world around them and how that understanding can lead to quality decision making. Graphing calculator required**.

PROBABILITY AND STATISTICS 1.0 Cr.

- Prereq: Successful completion of Algebra 2 and Senior standing.

Description: This course is intended for fourth-year math students who are seeking to prepare for liberal arts college math courses. Topics include descriptive and inferential statistics. Specific topics are: measures of central tendency and variation, graphical displays with analysis, binomial and normal distributions, regression and correlation, probability theory, counting principals, expected value for decision making, sampling distributions, confidence intervals, and hypothesis testing. Graphing calculator required**.

*grade weight differential (pg. 5)
****see Calculator Policy**

PRE-CALCULUS 1.0 Cr.

- Prereq: Successful completion of Algebra 2 and teacher recommendation.

Description: This course is to prepare students for college level mathematics, including calculus. Topics include logarithmic, rational, exponential, and trigonometric functions, conic sections, and an introduction of sequences and series**.** Graphing calculator required**.

PRE-CALCULUS HONORS* 1.0 Cr.

- Prereq: Successful completion of some level of Algebra 2 and the student meets criteria for Math Honors courses. (see page 18).

Description: This course is a Common Core Standard 4th year course which is intended to prepare students for Calculus. Topics include logarithmic, rational, and exponential functions, trigonometric and inverse trigonometric functions, conic sections, sequences and series, and an introduction to parametric, polar and complex coordinate systems. Also, probability topics of binomial distribution, counting principles and expected value for decision making are included. Graphing calculator required**.

ADVANCED PLACEMENT CALCULUS A-B* 1.0 Cr.

- Prereq: Successful completion of Pre-Calculus Honors and the student meets criteria for Math Honors courses. (see page 19).

Description: This course follows a College Board approved syllabus. Students receiving a "3","4", or "5" on the A.P. exam in May will be eligible for college credit at many colleges. Basic topics include functions and graphs, limits and continuity, and differential and integral calculus. Graphing calculator required**. A $92 test fee will be collected with the other fees.

*grade weight differential (pg. 5)
****see Calculator Policy**

SCIENCE

A scientific calculator is required for every science course. It is recommended that the student use the same calculator required by the math department.

INTEGRATED PHYSICS 1.0 Cr.

- Prereq: Freshman standing.

  Description: This course will provide students with a basic understanding of how the physical world works. Topics include motion, forces, energy and machines, electricity and magnetism. Students will learn how to use different forms of technology to collect and analyze data, as well as appropriate lab techniques.

HONORS INTEGRATED PHYSICS* 1.0 Cr.

- Prereq: Freshman standing and appropriate placement test score.

  Description: This course will provide students with a basic understanding of how the physical world works. Topics include motion, forces, energy and machines, electricity, and magnetism. Students will learn how to use different forms of technology to collect and analyze data, as well as appropriate lab techniques. This course has a more rigorous engineering aspect than the regular level course, requiring students to design, build, test, and evaluate their projects that they use to learn the science content. This level is required for honors chemistry.

ENGINEERING BY DESIGN (EBD) – FOUNDATIONS OF TECHNOLOGY 1.0 Cr.

- Prereq: None

  Description: In this course, students, using the design process, will engineer and build contraptions in teams using various materials to demonstrate different technologies. Students will use a hands-on approach to investigate the 8 technology categories that include: biotechnology, electronic and electrical technology, materials and mechanical technology, optical, fluid, and structural technology.

CHEMISTRY 1.0 Cr.

- Prereq: Successful completion of Integrated Physics/Engineering by Design and Algebra 1 or Algebra 1 C&S.

  Description: The subject matter includes the study of the atom, its behavior, and interactions. This course is designed to give the student an overview of the basic concepts of chemistry, including how chemistry relates to biology, physics, and earth science. Students will use various forms of technology to collect, analyze, and report data. This course is required for graduation and is a prerequisite for biology. Topics covered include: nature of science, matter, the atom, quantum theory, the periodic table, bonding, naming, types of reactions, stoichiometry, gases, thermochemistry, solutions, acids and bases, and electrochemistry.

*grade weight differential (pg. 5)

CHEMISTRY – HONORS* 1.0 Cr.

- Prereq: Successful completion of Honors Integrated Physics with a C or better or Integrated Physics/ Engineering by Design with an A and teacher approval. Successful completion of Algebra 1.

  Description: This course is designed to have students learn chemistry at a more in depth level than regular chemistry including more topics and some more rigorous labs. Students will use various forms of technology to collect, analyze, and report data. This course is required for graduation and is a prerequisite for biology. Topics covered include: nature of science, matter, the atom, quantum theory, the periodic table, bonding, naming, types of reactions, stoichiometry, gases, solutions, acids and bases, thermochemistry, and electrochemistry.

BIOLOGY 1.0 Cr.

- Prereq: Successful completion of Integrated Physics, Chemistry, Algebra and Geometry.

  Description: This course will give students a thorough understanding of basic biology concepts, and how they relate to physics, chemistry, and their everyday lives. Students will use various forms of technology to collect, analyze, and report data. Topics to be studied include the chemistry and energy of life, materials exchange and energy collection, energy release and cell structure and function, and the cell cycle, DNA, and protein synthesis, genetics, evolution, human systems, and ecology.

BIOLOGY - HONORS* 1.0 Cr.

- Prereq: Successful completion of Honors Chemistry with a C or better or Chemistry with an A and teacher approval. Successful completion of Algebra 1 and Geometry.

  Description: This course provides an opportunity for self-motivated learners to challenge themselves while gaining detailed and comprehensive knowledge of biology. Students in this course will study the same topics that are covered in biology, but should expect to do in depth study and cover additional topics. Participants should also be prepared to spend extra time at school and at home on biology projects.

ADVANCED PLACEMENT BIOLOGY* 1.0 Cr.

- Prereq: Successful completion of Honors Chemistry with an A and teacher approval, AP chemistry with a C or better, or Honors Biology with a C or better.

  Description: AP level Biology course meant for students who intend to pursue science or medicine as a career. Course is heavily lecture driven with mandatory reading assignments and twelve prerequisite in-class labs. The first 2/3 of the year deals with concepts of Biology including Cells, Ecology, Evolution and Genetics, while the last 1/3 of the course covers human anatomy. Students will be prepared for the AP Biology exam given in May. A $92 test fee will be collected with other fees.

*grade weight differential (pg. 5)

ADVANCED PLACEMENT CHEMISTRY* 1.0 Cr.

- Prereq: Successful completion of Honors Chemistry with a B or better or Chemistry with an A and teacher approval, and any level of Algebra 2 with a C or better.

Description: This course will allow students to pursue college level study while still in high school. Emphasis will be placed on topics recommended by the College Board and found in introductory college chemistry courses. Students who register for this course should have a serious interest in receiving college credit in chemistry and are required to take the Advanced Placement Examination offered in May. Topics include: matter, atoms, molecules, ions, stoichiometry, solutions, thermochemistry, electronic structure of atoms, periodic properties, chemical bonding, molecular geometry, gases, intermolecular forces, solutions, kinetics, equilibrium, acids and bases, aqueous solutions, thermodynamics, electrochemistry, and organic chemistry. This course is a science elective. A $92 test fee will be collected with other fees.

ADVANCED PLACEMENT PHYSICS 1* 1.0 Cr.

- Prereq: Successful completion of geometry and either successful completion of algebra II or concurrent enrollment in algebra II.

Description: AP Physics 1 is an algebra based, introductory college level physics course that will explore the following topics: Newtonian mechanics and rotational motion; work, energy, and power; mechanical waves and sound; introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. A $92 test fee will be collected with the other fees.

ENVIRONMENTAL SCIENCE 1.0 Cr.

- Prereq: Successful completion of Chemistry and Biology or concurrent enrollment in Biology.

Description: The course focuses on the study of environmental science with an emphasis on the political and economic components. Students will develop an understanding of how environments interact with living and non-living elements and the challenges the modern world faces in maintaining a sustainable planet.

Some topics to be discussed are ecosystems, water, air, climate, land, energy, waste, population growth, environmental decisions and environmental problems. This course is a science elective. It does not fulfill the science requirement for graduation.

*grade weight differential (pg. 5)

COMPUTER SCIENCE

COMPUTER PROGRAMMING 1.0 Cr.

- Prereq: Completion of Algebra 1 with a grade of C with mathematics teacher recommendation or completion of Algebra 1 with a grade of B or better without teacher recommendation.

  Description: This course introduces students to the concepts and skills of structured computer programming. This course is an elementary introduction to programming using language such as *Visual Basic* and *JAVA.* This course demands higher level thinking skills and involves a considerable amount of thinking at home. This course is recommended for any student interested in computer programming in college.

ADVANCED PROGRAMMING 1.0 Cr.

- Prereq: Successful completion of Computer Programming with a grade of C or better with Computer Programming teacher's recommendation.

  Description: This course is intended for those students who are interested in pursuing computer programming, web programming, or database programming in college as a field of study. Students will work independently. Topics covered will be: Java language and syntax, program development cycle, conditional clause programming, Polymorphism, Input Stream Control and Output Stream control.

WEB DEVELOPMENT 1.0 Cr.

- Prereq: None

  Description: This course introduces students to the concepts and skills of presentation design using Dreamweaver. Students will learn to create and manage a complete website. Topics covered will be: page development, site development, using graphic, optimizing graphic for the internet, storyboard development, basic animation, Flash game creation and Flash quiz creation.

ADVANCED WEB DEVELOPMENT 1.0 Cr.

- Prereq: Successful completion of Web Design with a grade of C or better.

  Description: This course is intended for those students who want to learn more than basic multimedia design. Students will work independently and choose an area of study such as World Wide Web design or animation and concentrate on this one area of study with emphasis on professional production. Students will create a portfolio of their work using Dreamweaver, Flash, Fireworks or Photoshop. This course in intended for those students who think they want to pursue a career in Graphics Arts and have high motivation to work diligently and independently on one major project.

AP COMPUTER SCIENCE PRINCIPLES* 1.0 Cr.

- Prereq: Successful completion of Algebra 1 or placement beyond algebra 1 based on teacher recommendation.

AP Computer Science Principles focuses on the main ideas of computer science. Students are able to be creative in this course while developing computational thinking skills and gaining an understanding of how computers and computer science as a whole impact the world. Programming is used in this course as a way to solve math problems and create meaningful artifacts. This course allows students to see how computing is used in other fields, discover new technologies and explore their ethical implications. AP Computer Science Principles develops data collection skills that can be used in other classes and career paths. Throughout the course students will be preparing for the AP Computer Science Principles test. The College Board recommends that students take Algebra 1 prior to taking this class, with no prior computer science class necessary. A $92 test fee will be collected with the other fees.

TECHNOLOGY APPRENTICE PROGRAM 1 (TAP 1) 1.0 Cr.

- Prereq: none

Description: The Technology Apprentice Program is a full year course that supports Ridgewood's 1:1 technology initiative. Students in the Technology Apprentice Program receive experience working in a real-life tech support environment. When students are not supporting students' technology needs, student work on a variety of independent pathways. These pathways allow students to explore and develop skills in a variety of technology subjects including computer programming, networking, app development, and web design. The students also are given the opportunity to become certified in multiple industry recognized certifications.

*grade weight differential (pg. 5)

EDUCATION TO CAREERS PROGRAMS

In order to participate in any work program, students will be contacted and must attend a MANDATORY information meeting.

COOPERATIVE WORK TRAINING (CWT) 1.0 Cr.

- Prereq: Students must be invited to take this course. Junior or Senior standing and sixteen years of age by the first day of the school year.

  Description: This course will provide students with experiences through employment that will help them become more productive, responsible individuals. Students will be released from school for one period a day, four days a week to go to work. Classroom instruction is provided one day a week to help students strengthen their communication skills, adjust to work situations and develop employability skills. Guidance Personnel, Vocational Educators, the Dean and the Special Education Coordinator will preselect students with special circumstances for this class.

  During any temporary unemployment period, it is mandatory that the student participate in volunteer (unpaid) service at Ridgewood High School until employment can be found.

  After registration, students will be contacted to attend a MANDATORY informational meeting.

WORK PROGRAM 1.0 Cr.

- Prereq: Senior standing and age 16 by the first day of the school year.

  Description: Students will be released from school for one period a day, four days a week to go to work. This course will provide students with experiences through employment that will help them become more productive, responsible individuals and employees. Classroom instruction is provided one day a week to help students strengthen their communication skills, adjust to their work environment and develop employability skills. Transportation to and from the job site must be provided by the student and proof of health and auto liability coverage must also be on file, if applicable.

  During any temporary unemployment period, it is mandatory, that the student participate in volunteer (unpaid) service at Ridgewood High School until employment can be found.

  After registration, students will be contacted to attend a MANDATORY informational meeting.

CAREER INTERNSHIP I 0.5 Cr.

- Prereq: Junior or Senior standing. Students must have good attendance records and a good disciplinary record.

Description: To meet the students' needs and interests the instructor and student will arrange an internship for experience in one of the following areas: Health Careers, Engineering, Law Enforcement, Business, Architecture/Construction, Veterinarian Science, Graphic Arts, Teaching, and many other possible career categories. Classroom instruction is provided one day a week to help students refine their job training skills as well as career/college research. Topics to be explored include business etiquette, ethics, sexual harassment, organizational charts and job interview.4

After registration, students will be contacted to attend a MANDATORY informational meeting.

CAREER INTERNSHIP II 0.5 Cr.

- Prereq: Junior or Senior standing and Career Internship I.

Description: Students will be able to either continue their previous internship or pursue an internship in another career. Classroom instruction is provided one day a week and students are released for one period a day for the other four days of the week.

After registration, students will be contacted to attend a MANDATORY informational meeting.

TECHNOLOGY EDUCATION

Faced with the growth and dominance of technology in our lives, Ridgewood High School is seeking new and effective ways to prepare our students to live and work in this changing world. Aware that the students will need more technical skills to thrive in the future work place, we believe that it is essential to engage our students in an educational challenge that leads them to understand, manage, and control some of the technologies that will one day dominate their lives.

The Technology courses offered at Ridgewood are designed to provide these experiences to our students. Students may explore their interests and abilities in technology education in scope and depth. Math, reading, writing, and scientific principles and skills will be applied in various ways throughout the entire technology curriculum. Students who choose to enroll in Technology Education courses will be introduced to careers and career concepts as they relate to specific technological fields.

Ridgewood High School supports the Illinois Plan for Technology Education by incorporating the concepts of communication, construction, manufacturing, transportation and bio-related technological fields, as well as the National Standards for Technological Literacy.

Ridgewood High School offers several courses in Technology Education, which may meet the requirements for specific career programs at Triton Community College. The courses are indicated with an asterisk (+).

Goals of Technology Education:

- to provide all students with hands-on experience in a variety of technology-based fields.
- to teach students more in-depth about specific technology-oriented careers.
- to give students the underlying content and skills base that will allow them to pursue higher level education and training in selected fields.

ENGINEERING BY DESIGN (EBD) – TECHNOLOGICAL DESIGN 1.0 Cr.

- Prereq: EbD – Foundations of Technology

Description: In this course, engineering scope, content and professional practices are presented through practical applications. Students in engineering teams apply technology, science, and mathematics concepts and skills to solve engineering design problems and innovative designs. Students research, develop, test and analyze engineering designs using criteria such as design effectiveness, public safety, human factors, and ethics. This course is an essential experience for students who are interested in technology, innovation, design, and engineering.

WOODWORKING TECHNOLOGY 1.0 Cr.

- Prereq: None.

Description: This course will cover the areas of basic woodworking, cabinetmaking, blueprint reading, and finishing. The students will be instructed on the safe operation of hand tools, power tools, and machinery. Wood as a material will also be studied. Students will take home at least **three** projects.

A $50 fee will be charged for the cost of lumber and other consumables.

ADVANCED WOODWORKING 1.0 Cr.

- Prereq: Woodworking Technology

Description: This is an advanced course designed to offer experienced students the opportunity, with instructor approval, to work independently on a project of their own choosing. This course will allow students to work on larger, more involved furniture projects and learn advanced joinery techniques. Additionally, students will learn additional elements of cabinet and furniture design, as well as special machinery set-ups, jig usage, and maintenance. Students will bring home at least two projects from this course.

A $50 fee will be charged for the cost of lumber and other consumables.

CONSTRUCTION PRINCIPLES 1.0 Cr.

- Prereq: Concurrent enrollment in Geometry in Construction or teacher placement into course is required.

Description: This hands-on course introduces students to several construction trades and home repair techniques. It is designed for both college and non-college bound students. Through this course, students will build a house. Real-life applications of math, science, and reading are reinforced through career experiences. Some of the areas of focus this course includes are: frame carpentry, finish carpentry, plumbing, electrical wiring, dry walling, floor/wall/tile coverings, painting, cement foundations, and roofing. (May be accepted as Triton credit, see counselor).

A $50 fee will be charged for the cost of materials.

ADVANCED CONSTRUCTION PRINCIPLES 1.0 Cr.

- Prereq: Successful completion of Construction Principles and teacher recommendation

Description: This course provides learning experiences related to the erection, installation, maintenance, and repair of building structures and related utilities. Student technical skill experiences include instruction and activities in safety principles and practices, performing maintenance control functions, joining pipes, building water distribution lines and drains, installing and maintaining plumbing fixtures and systems, installing switch and outlet boxes, light fixtures, service entrances, roughing in and trimming out electrical devices and appliances, preparing foundations and footings, and advanced building and construction methods and codes. All learning experiences are designed to allow the student to acquire job-entry skills and knowledge. In addition, students will be introduced to construction management, earn their OSHA 10 hour card, and given opportunities to demonstrate leadership on the job site.

COMPUTER AIDED DESIGN+ (CAD 1) 1.0 Cr.

- Prereq: None.

Description: This is an introductory project based course that uses real world examples to teach the fundamentals of 2-dimensional and 3-dimensional drawing. Any student thinking about a career in architecture, engineering, interior design or any other drafting field will have the opportunity to explore the fundamentals of creating and designing on a computer. In addition, through the design process, students will create 3D assembly drawings and build working robots. All content is taught on industry standard software such as; AutoCAD, Autodesk Inventor, and Revit Architecture. After completion of this course, students can partake in an Autodesk Academic Certification program. This one time test enables students to earn a nationally recognized certificate which proves knowledge of specific Autodesk software applications. (May be accepted as Triton credit, see counselor).

ADVANCED COMPUTER AIDED DESIGN+ (CAD II) 1.0 Cr.

- Prereq: Computer Aided Design 1

Description: This course introduces student to the more advanced features of Computer-Aided Drawing (CAD). Students will create complex 3-dimensional objects and will understand from beginning to end how a product is researched, designed and introduced into the market. Through project based learning and real world examples; students will be able to comprehend the basic methodologies of an architecture or engineering career. Students will further their knowledge on industry standard software which includes; AutoCAD, Revit Architecture and Autodesk Inventor. If time permits, students will learn the newest Autodesk software program, Autodesk 3DS Max design, which focuses on 3-dimensional animation and video game design. (May be accepted as Triton credit, see counselor).

ARCHITECTURE/DRAFTING 1.0 Cr.

- Prereq: Computer Aided Design 1

Description: This advanced course introduces students to architectural design and drawing methods. Students use freehand sketching, drawing instruments, AutoCAD Architecture software, and Revit software to create original house designs. Architectural proposals are produced and are rendered using marker, colored pencil and technical pen. Architectural model making is taught and each student builds a model of his/her design. Field trips are used to introduce students to building construction, architectural style and history.