

TRINITY HIGH SCHOOL

Catalogue of Courses and
Special Academic Programs

2020-21

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POLICY OF ADMISSION

Trinity High School admits students of any race, color or national and ethnic origin to all the rights, privileges, programs and activities generally available to students. Trinity does not discriminate on the basis of race, color, national or ethnic origin, or disability (if with reasonable accommodation the student can meet the requirements of Trinity's course of study) in the administration of its educational policies, scholarship or loan programs, athletic or other school-administered programs. Further, Trinity High School requires its students to remain unmarried during the period of their enrollment and to reside with their parents or legal guardians. The school reserves the right to refuse admission in particular instances at the judgment of the principal.

SUBJECT AND CREDIT REQUIREMENTS

To receive a diploma from Trinity High School, a student must earn the minimum number of credits required for his graduating class. Students must also take the ACT in order to graduate. Trinity's credit requirements fulfill and exceed the Commonwealth of Kentucky's Pre-college Curriculum. Students should strive to generate a final transcript that shows rigor and a variety of course work by careful selection of additional electives and maximizing credit opportunities.

Subject	Credits
Theology	4
English	4
Mathematics	4
Science	4
Social Studies	4
World Languages	2
Physical Education/Health	1.5
Fine Arts/Humanities Elective	1
Communications Skills	.5
Business & Technology Elective	1
ACT/PSAT Prep Course	1
Senior Capstone Course	.5
Freshman Success Course	.5
Additional electives required	2
Minimum credits required for graduation	30

Credit in Health and Physical Education is a state requirement for graduation. Unless excused in writing by a physician, each student must participate in Physical Education classes.

Kentucky's Pre-College Curriculum currently requires all students seeking unconditional admission to state universities to have two credits in a world language. Any exception to this requirement can only be granted by the particular state university after communication with the high school.

KENTUCKY PRE-COLLEGE CURRICULUM

At the present time, all of Kentucky's state-sponsored universities require students seeking unconditional admission to those schools to have completed a specific series of courses designated as Pre-college Curriculum. Trinity's curriculum includes those courses plus other school requirements and electives.

Pre-college Curriculum

English/Language Arts - 4 credits

English I
English II
English III
English IV

Mathematics - 3 credits required

Algebra I
Algebra II
Geometry

Science - 3 credits required

Credits to include Life Science,
Physical Science and Earth/Space
Science (at least one lab course)

Social Studies - 3 credits required

From U.S. History, Economics,
Government, World Geography
and World Civilization

Foreign Language - 2 credits

Health - 1/2 credit required
Physical Education - 1/2 credit

**History & Appreciation of Visual,
Performing Arts - 1 credit**

Electives - 7 credits (5 rigorous)
Recommended strongly: Computer Literacy

Total Credits for Kentucky Pre-college Curriculum: 24

Rigorous electives should have academic content at least as challenging as that in courses required in the minimum high school graduation requirements. These electives also should be in Social Studies, Science, Math, English and Language Arts, Arts and Humanities, Foreign Language, Business, Marketing, Technology Education and Career Pathways.

LEVELS OF DIFFICULTY (LOD)

Courses at Trinity are set at different Levels of Difficulty (LOD). This helps all students to work successfully at an appropriate pace and degree of complexity. The last digit in each course number (e.g. E402) indicates the Level of Difficulty with lower numbers assigned to more difficult courses. A student's Level of Difficulty may vary from subject to subject the same way that his abilities may vary. **To best prepare for college, it is to a student's advantage to take courses with the greatest difficulty of which he is capable.**

Trinity High School will also report on the transcript a cumulative weighted GPA according to the following scale. The total weighted GPA points will be divided by the number of credits attempted. A weighted GPA will not be used for any other purposes, such as Honor Roll, National Honor Society, Beta Club, etc.

AP Courses (ending in 0)	= GPA value +2
Advanced Level (ending in 1)	= GPA value +1.6
Honors Level (ending in 2)	= GPA value +1.2
Academic Level (ending in 3)	= GPA value +0.8
Traditional and non-weighted	= GPA value +0 courses (ending in 4,5,9)

THE ADVISING PERIOD

Within his normal class schedule, a student has an Advising period on Monday, Tuesday and Thursday. This period has been designated as a time in which students may make individual use of the varied services and programs offered by Trinity High School. During this period, students hear school announcements and House news. Students may leave their classrooms and move to such resource areas as the library, the computer lab and the art studios. In addition, administrative and counseling staff may schedule necessary conferences, thus minimizing the impact such meetings have upon normal academic class time. Students choosing not to exercise any of the above options are provided with a controlled study environment under direct teacher supervision, allowing for the completion of homework, missed assignments due to illness, etc.

With appropriate approval, students may also opt to work during an Advising period as a computer, video production, library or teacher assistant.

SPECIAL ACADEMIC PROGRAMS

Trinity High School offers several programs to help meet the various individual needs of its students. Programs are listed below:

ADVANCED PROGRAM

Trinity's Advanced Program provides gifted and motivated students four years of (1) a core curriculum that will ensure a strong preparation for college with a background commensurate with the demands of the most academically oriented, post-secondary institutions throughout the country; (2) the opportunity and expectations to take courses for college credit while enrolled at Trinity at whatever point the student is ready to take on such work; (3) regular experiences with modern educational technology; (4) enrichment activities in fine arts, service learning and leadership; (5) special mentoring and counseling services focused on the unique needs of the gifted student; and (6) various forms of special recognition as an Advanced student.

2020 -21 Advanced Program Requirements.

- A final annual overall GPA of 3.0 or higher.
- No more than one semester grade below 70 percent.
- A minimum of 12 semester "0" or "1" level courses.
- Participation in all scheduled Advanced Program activities.

Students who meet the above requirements are awarded Advanced Program status for each year they participate. Students participating in the program normally are expected to begin college-level course work during their junior and senior year.

ADVANCED PLACEMENT (AP) COURSES FOR COLLEGE CREDIT

Advanced Placement (AP) courses are offered to qualified students. Following guidelines established by the College Board, these courses provide students with an accelerated and in-depth examination of the subject area at a collegiate level. Students enrolled in such courses are given the opportunity to sit for the Advanced Placement Examinations offered each spring. There are more than 3,800 universities and colleges nationwide giving college credit and/or sophomore placement for sufficiently high scores. There is a fee for each AP examination. The Advanced Placement courses offered by Trinity High school are as follows:

AP Studio Art (A260)
AP Biology (C500)
AP Calculus AB (M300)
AP Calculus BC (M400)
AP Statistics (M600)
AP Chemistry (C600)
AP Environmental Science (C700)
AP Economics: Micro and Macro (B400)
AP Computer Science Principles (B500)
AP Computer Science A (B600)
AP Seminar (E200)
AP English Literature and Composition (E400)
AP English Language and Composition (E300)

AP Human Geography (T100)
AP U.S. Government and Politics (T500)
AP Physics 1 (C300)
AP Physics 2 (C400)
AP European History (T300)
AP U.S. History (T400)
AP World History (T200)
AP Psychology (T600)
AP Spanish (S400)

COLLEGE CREDITS POLICY

Students can receive college credit while in high school by achieving acceptable scores on a College Board AP exam, or student enrollment in coursework offered by a university or college. Enrollment in a college course while a student is concurrently enrolled at Trinity High School must be approved by the school. Such approval will be the responsibility of a dean of studies with input from the Counseling Department. All requests for approval will be handled on a case-by-case basis. Any such college-level courses will not substitute for any required courses and may not be used in place of course requirements for graduation. College-level courses can be included on a Trinity transcript but will not be used in the calculation of GPA or class rank.

TRADITIONAL PROGRAM

The Traditional Program exists for students with skill deficiencies or learning differences and offers a complete, self-contained curriculum leading to graduation. While providing individualized instruction in required subject areas, the Traditional Program offers in freshman and sophomore years specialized components designed to address specific skill deficiencies in reading and math. Specialized labs provide diagnostic, prescriptive and individualized remediation primarily reinforced through technology. Counseling services are also provided to assist the student in developing interests and abilities, setting goals, making career choices and solving personal and social problems.

LEARNING SUPPORT PROGRAM

The Learning Support Program is provided for students who are in the Academic, Honors or Advanced Levels of Difficulty and who have mild learning disabilities. For a student to be eligible for the program, two criteria must be met. First, the student must have a learning disability as evidenced by a psychoeducational evaluation or must have a diagnosis of ADHD or a physical disability. Second, documentation must be provided that shows the disability substantially limits the student's ability to perform in the classroom. Trinity will assist in gathering the proper documentation. It is important to note that if medication or some other means of accommodation corrects the impairment, the impairment may no longer be substantially limiting, and the student may not qualify for classroom accommodations.

STANDARDIZED TEST PREPARATION

During the 10th and 11th grades, students take two semester courses in standardized test preparation for the American College Test (ACT). Preparation will include diagnostic pre-testing and post-testing, basic skills review, test strategies and test practice. The ACT is currently the most widely used college admissions

test for Trinity students and a graduation requirement.

COURSE DESCRIPTIONS

This course offerings booklet is prepared each winter for the following fall. It is a preliminary statement of courses and subject to change. Final course offerings for any given year must consider student enrollment, teacher availability and the budget.

Fine Arts and Humanities Department

ART I (A201) Studio Semester 1/2 Credit

Prerequisite: None

Art I is a course in basic design and the following drawing techniques: pencil, charcoal, pen and ink, marker, dry brush and watercolor.

ART II (A221) Studio Full year 1 Credit

Prerequisites: Sophomore, junior and senior standing and completion of Art I

Art II is an intermediate course building upon techniques introduced in Art I and extended into new media in each of the following areas: pen and ink drawing, watercolor painting, pastels, acrylic and oil painting, and ceramics.

ART III (A241) Studio Full year 1 Credit

Prerequisites: Junior and senior standing, completion of Art II and the approval of the instructor

Art III is an in-depth course designed to allow students the opportunity for specialization, while introducing new media and techniques to the third-year student. Printmaking, painting, sculpture, pastels, colored pencil, ink, scratch board and architectural drawing and building are included in the basic curriculum of the course.

GUITAR I (A251) Semester 1/2 Credit

Prerequisite: None

This is a comprehensive guitar-methods course teaching classical guitar. Basic skills on both the guitar and reading music will be covered. The course is designed to cover chords, strums and single-line notation simultaneously. The music presented is eclectic and multicultural, with introductions to various artists and composers throughout music history.

AP ART (A260) Full year 1 Credit

Prerequisites: Senior standing, completion of Art II and the approval of the instructor

Advanced Placement Art is an individualized, third-year program that places em-

phasis upon specialization and experimentation on the part of the student, who is encouraged to use unaccustomed materials and techniques in new and imaginative ways. The course focuses upon drawing, painting, sculpture and printmaking.

WORKING WITH CLAY (A281) Semester ½ Credit

Prerequisite: Junior or senior standing

This course is an introduction to sculpture in ceramics using basic techniques such as slab, coil and pinching. No prior experience is necessary.

3-D DESIGN (SCULPTURE) (A301) Semester ½ Credit

Prerequisite: A201

This course is an introduction to the wide variety of techniques and materials associated with sculpture. Students will become adept in the concept of 3-D design/sculpture through study and application of clay work, stone carving, wood carving, Paper mache, chicken wire sculpture, copper repousse and chasing, basketry, paper engineering, mold making, folk art, jewelry design, architecture and possibly glasswork.

DIGITAL PHOTOGRAPHY I (A321) Semester ½ Credit

Prerequisite: Sophomore, junior or senior standing

A digital camera with manual exposure options is required. This is a complete photography course that covers the history as well as the art of photography. The course incorporates the elements of art and principles of design, and utilizes Photoshop to create styled images. Students will learn camera basics including exposure, shutter speeds, and lighting and will understand how to use the digital camera. Projects will include portraits, action photography, architecture details, landscapes, composite photos, and still life.

DIGITAL PHOTOGRAPHY II (A341) Semester ½ Credit

Prerequisite: Successful completion of Digital Photography I

A digital camera with manual exposure options is required. Students will continue to learn more advanced settings on their DSLR camera. As student create a digital portfolio of their work, they will continue to explore elements of composition and lighting while expanding their experiences using various subject matters. Additional Photoshop techniques will enable students to continue editing their photos as well as experimenting with the digital scanner to create photo images.

GUITAR II (A351) Full Year 1 Credit

Prerequisite: Guitar I and/or permission of instructor

This course is for students who want to further their skills in guitar. An emphasis will be placed on advanced barre chords, the ability to improvise, reading advanced guitar music, and playing in small ensembles (duets, trios, quartets, etc.)

INDEPENDENT PHOTOJOURNALISM (A361)	Semester or Full Year
	1/2 or 1 Credit

Prerequisites: Sophomore, junior or senior standing
This course completed outside classroom hours focuses entirely on an independent assignment approach to digital photography for use in print journalism.

WORKING WITH CLAY 2 (A381)	Semester	½ Credit
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Prerequisite: Working with Clay (A281)

Students will explore different methods and strategies for combining wheel throwing and hand building techniques to produce a wide range of forms and pieces. Various methods of surface decoration and glazing are taught as well.

FILM STUDY (A401, A403)	Semester	½ Credit
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Prerequisite: Junior or senior standing

The focus of this course is the study and appreciation of film as an art form through a concentration on visual techniques and themes.

ART HISTORY I (A421, A423)	Semester	½ Credit
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Prerequisite: Sophomore, junior or senior standing

This course examines fine arts and philosophies of cultures from prehistoric times through the present. Students will develop a general understanding of the arts and philosophies of past and present cultures. Students will be able to apply the elements and principles of art when looking at a piece of artwork.

ART HISTORY II (A431)	Semester	½ Credit
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Prerequisite: Junior or senior standing

This course examines the arts of cultures from the Italian Renaissance to the present. Students who take AP European History are especially encouraged to take this course as it examines the artwork of the same historic periods and cultures.

BAND (A521)	Full year	1 Credit
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Prerequisite: Approval of the instructor after an audition

This course is a beginning instrumental music course for students wanting to continue with instrumental music and for students who play musical instruments but cannot read music, as well as other students interested in playing at the Jazz Band level. This is a preparatory class to enter a performance group.

JAZZ ENSEMBLE (A531)	Full year	1 Credit
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Prerequisites: Sophomore, junior or senior standing. Audition and approval of the instructor.

A third-year music class, Jazz Ensemble will continue to develop individual skills on instruments, with emphasis on playing in an ensemble. The course allows students to apply their newfound skills and understanding to a performance group.

CHORUS (A541) **Full year** **1 Credit**

Prerequisite: Approval of the instructor after an audition

This course is designed for the student who wishes to participate in ensemble singing. Various types of choral singing will be used and the group will make formal and informal presentations.

MUSIC STUDY (A561, A563) **Semester** **½ Credit**

Prerequisite: Junior or senior standing

The focus of this course is the study and appreciation of the art of popular music styles that are uniquely American. Although the primary focus is rock music, students will begin with a study of blues and will also learn about great performers in soul, folk, country and rap. Students will learn how to listen and respond critically to these musical genres using appropriate musical terminology.

VIDEO PRODUCTION (A571, A573) **Semester** **½ Credit**

Prerequisite: None

This course introduces students to the terminology, technical skills and equipment of video production. Students produce a variety of projects to demonstrate their knowledge of the use of video and audio equipment and video editing software. The course is required to be considered for the Advanced Video Production and Broadcast Journalism courses.

VIDEO PRODUCTION II (A581) **Semester** **½ Credit**

Prerequisite: Successful completion of Video Production

This course is designed for students interested in continuing video production and video editing. The content of the course will provide students with an opportunity to learn advanced camera and lighting skills, script writing, graphics creation and video editing. The course includes intermediate and advanced video production concepts, techniques and hands-on training.

HANDBELL ENSEMBLE (A591) **Semester** **½ Credit**

Prerequisite: None

No musical background is necessary to enroll in this course - just a willingness to learn while being part of an exciting performing group. Students will be taught music fundamentals and instrumental technique and experience the joy of playing handbells. Playing in a handbell group is a team effort, and students will explore what it means to create entertaining music in an ensemble setting.

PRODUCING LIVE TELEVISION (A621)**Semester****½ Credit**

Prerequisite: Video Production

This course will teach students to produce and direct live, multi-camera television events including music, sports and theater. Students will work with both studio and on-location directing, covering the elements of a television show: script, shot, audio, editorial, visual and aural effects, graphics, actors, sets and locations. Students will interact with many departments at Trinity.

BROADCAST JOURNALISM (A631)**Semester or Full Year
1/2 Credit or 1 Credit**

Prerequisites: Sophomore, junior or senior standing, successful completion of Video Production (A571, A573) and approval of instructor

This course is designed to develop the skills required to produce television broadcast programs and news stories and to explore issues related to broadcast media. Students produce TTV, a 10-minute daily newscast, which is broadcast to the school community.

GRAPHIC DESIGN I (A641)**Semester****½ Credit**

Prerequisite: Sophomore, junior or senior standing. Introduction to Art, Learning to Draw or Art I.

Graphic Design I offers the basic concepts of design and photo editing with hands-on projects and computer manipulations. Students will use Adobe Photoshop and Illustrator to enhance existing graphics, create their own artwork, and produce electronic art pieces. Students will explore the evolution of design movements and designers who have impacted the field of graphic design.

GRAPHIC DESIGN II (A651)**Semester****½ Credit**

Prerequisite: Sophomore, junior or senior standing. Completion of Graphic Design I.

This course is designed for intermediate art students with an interest in learning to draw and manipulate imagery through computer art programs. Students will continue to explore the principles of 2D design through the use of Adobe Photoshop and Illustrator software basics. Students will create digital drawings/compositions to be used in advertising, logos, book covers, and other printed materials. Students will create digital drawings using a vector program, photo repair and manipulation with Photoshop and compositional construction through poster designs. Students will supplement their course work with additional research and analytical projects.

GEOMETRY IN ART AND ARCHITECTURE (A661)**Semester****1/2 Credit**

Prerequisite: Students must be Academic, Honors or Advanced level.

In this course, students will explore the many ways art and mathematics overlap. Students will be exposed to a wide range of art, covering a long historical period and a variety of styles. Topics may include: sculpture in ancient Greece, use of proportion in art, perspective, perspective machines and cameras, golden section,

knots, symmetry, Twentieth-century geometric art, chaos, and fractals.

COMPUTER AIDED DESIGN (A671) Semester ½ Credit

Prerequisite: None

By using the AutoCAD system, students will be introduced to the concepts of computer-aided design equipment, terminology, and theory of operation. The course will teach the skills needed to enable students to create both working and schematic drawings.

THEATRE ROCKS TRINITY STYLE PART 1 (A721) Semester ½ Credit

Prerequisite: None

Students will learn about on stage, off stage, back stage, and all in between. This course includes a practical introduction to the basics of acting, theatre, history of theatre, different forms of theatre, arts administration, technical theatre, music, dance, and how to prepare for an audition.

THEATRE ROCKS TRINITY STYLE PART II (A731) Semester ½ Credit

Prerequisite: Completion of Theatre Rocks Trinity Style Part I

Building upon previously learned concepts in Theatre Rocks Trinity Style Part I, students will enhance the understanding of on and off stage, behind the scenes, and all in between, delving deeper in the knowledge of each category. This course includes a more intense coverage of acting, theatre, history of theatre, different forms of theatre, arts administration, technical theatre, music, dance, and how to prepare for an audition.

COMEDY WRITING AND PERFORMING (A741/A743) Semester ½ Credit

Prerequisite: Sophomore, junior or senior standing

Students will develop comedy writing, improvisation, and performance skills through various exercises, games, and assignments. Writers will workshop their scripts before their final edit. All coursework will build towards the final product: an all-original comedy variety show created by the students.

Business and Technology Department

COMPUTERS & TECHNOLOGY (B101, B103) Semester ½ Credit

Prerequisite: None

Students will learn about operating systems and computers, file management skills, the basics of computer networking, word processing, using spreadsheets and formulas, databases, and more. Students will leave with a basic knowledge of all areas of computing, and discover their strengths and interests in order to better focus their future studies.

ACCOUNTING I (B201)**Full year****1 Credit**

Prerequisite: Sophomore, junior, senior standing with Algebra II credit or concurrent enrollment in Algebra II

Accounting I is a complete course in normal accounting methods designed for the student interested in learning accounting systems, both manually and by computer. It includes systematic recording, transactions, payrolls and an introductory coverage of complete accounting systems. Students will create accounting worksheets for predetermined companies from which they will then generate accounting financial statements.

PRINCIPLES OF ACCOUNTING (B202)**Semester****½ Credit**

Prerequisite: Sophomore, junior or senior standing with completion of Alg. I

This is an introductory course in normal accounting methods designed for the student interested in learning accounting systems both manually and by computer.

BASIC PROGRAMMING (B221, B223)**Semester****½ Credit**

Prerequisite: Sophomore, junior or senior standing

This course offers students an introduction to computers and computer programming. Computer hardware and software are discussed and a brief history of computers is given. Students spend the majority of time learning to write their own programs for the computer using the BASIC language. Q-BASIC will be used on Windows-based computers.

ADVANCED PROGRAMMING (B241)**Semester****½ Credit**

Prerequisite: Successful completion of B221, B223 or knowledge of programming

This course is an independent study course, allowing students to learn and work with the computer language of their choice. Languages they may choose include VISUAL BASIC, C++ and PHP, or they may study another language of their choice with the approval of the instructor.

PRINCIPLES OF ACCOUNTING II (B252)**Semester****½ Credit**

Prerequisite: Successful completion of Principles of Accounting I

This course is a continuation of Principles of Accounting I. This class will pick up with accounting for merchandising business, including subsidiary ledgers, payroll, dividend distribution, merchandise inventory, allowing for uncollectible accounts, etc.

MOBILE ROBOTICS (B261)**Semester****½ Credit**

Prerequisites: Junior or senior standing. Successful completion of Computers & Technology or recommendation of instructor.

A designated STEAM course, Mobile Robotics is designed to introduce the ba-

sics of the NXT as it teaches science, technology, engineering and mathematics. Students will learn how to use applied mathematics, measurement, and feedback from sensors to program their robot to navigate in its environment.

VIDEO GAME THEORY AND ANALYSIS (B271) Semester ½ Credit

Prerequisite: Successful completion of B101 or B103

This semester course examines the cultural, educational, and social functions of video games in society. Special emphasis will be placed on video game theory and design, showing practical applications for video game development. Through analysis, reading, and writing, students will examine and understand the aspects of video games and their impact.

CISCO

Trinity partners with Cisco, Inc. and Jefferson Community & Technical College to offer courses in computer networking. The Cisco Networking Academy Program is a complete, four-semester program on the principles and practice of designing, building and maintaining networks capable of supporting national and global organizations. The Networking Academy Program is localized to individual needs of high schools and colleges, and features hands-on, project-driven training in high-demand job skills. Students may take just one semester or opt to go through two-, three- or the entire four-semester sequence. Students completing all four semesters should be prepared to take the exams to receive the Cisco Certified Networking Associate (CCNA). Students will receive four hours of college credit (currently at no charge) from JCTC for each semester course.

Each semester Cisco course is listed below with the topics to be covered.

INTRODUCTION TO NETWORKS (B301) Semester ½ Credit

Prerequisites: Instructor approval

Topics covered: OSI model and industry standards; network topologies; IP addressing, including subnet masks; and basic network design

ROUTING AND SWITCHING ESSENTIALS (B321) Semester ½ Credit

Prerequisite: Successful completion of B301

Topics covered: Beginning router configurations and routed and routing protocols

ROUTING PROTOCOLS (B351) Semester ½ Credit

Prerequisite: Successful completion of B321

Topics covered: Advanced router configurations, LAN switching theory and VLANs, advanced LAN and LAN switched design, Novell IPX and threaded case studies

CONNECTING NETWORKS (B371) Semester ½ Credit

Prerequisite: Successful completion of B351

Topics covered: WAN theory and design; WAN technology, PPP, frame relay and ISDN; network troubleshooting; national SCANS skills; and threaded case studies

AP ECONOMICS (B400) Full year 1 Credit

Prerequisite: Junior or senior standing with Advanced Program standing

This is a college-level course of micro- and macroeconomic theory and policy. The basic goal of the course is to establish an understanding of the functioning of the world's economy in general and the United States' economy in particular.

Microeconomics establishes an understanding of the organization and operation of the modern mixed-market economy from the viewpoint of both business firms and consumers. Stress is placed on supply-and-demand analysis, cost and production theory, and price determination under different conditions of market organization.

Macroeconomics focuses upon large-scale issues and tendencies such as unemployment, output, inflation, economic growth and the interaction of countries within the context of a world economy.

This course may be counted as a Business/Technology or Social Studies credit.

ECONOMICS (B403) Semester ½ Credit

Prerequisite: Junior or senior standing

Economics provides an understanding of microeconomics, macroeconomics, international topics and how an individual interacts with the economy in our American system. The focus of the course is on market organization, taxes, banking, economic growth, production and fiscal policy.

This course may count as 1/2 Social Studies credit or Business/Technology credit.

AP COMPUTER SCIENCE PRINCIPLES (B500) Full Year 1 Credit

Prerequisite: Computers and Technology (B101 or B103)

This course introduces students to the concepts of computer science and challenges them to explore how technology can impact the world, with a unique focus on creative problem solving and real-world applications. Students will complete the College Board-required portfolio and prepare to take the AP Computer Science Principles exam.

BUSINESS AND PERSONAL LAW I (B511, B513) Semester ½ Credit

Prerequisite: Sophomore, Junior, or Senior standing

This course will provide a solid foundation in understanding the legal issues re-

lated to both business and personal law. It is intended to provide background and perspective that will allow students to more easily grasp business legal concepts addressed in Business Law II, but it is not a prerequisite to Business Law II. Topics include the origins, structure, and philosophy of U.S. legal systems; criminal law and procedure; and tort law (including intentional torts, negligence, and strict liability).

BUSINESS AND PERSONAL LAW II (B551, B553) Semester ½ Credit

Prerequisite: Sophomore, Junior, or Senior standing

This course will provide students with an introductory but focused study on legal issues that affect business opportunities and decision making. To come into the course with a broad understanding of basic legal principles, it is helpful and recommended, but not required, that students first complete Business Law I. Topics include contract law; property law; employment law; business organizations; and debtor/creditor law.

AP COMPUTER SCIENCE A (B600) Full Year 1 Credit

Prerequisite: Computers and Technology (B101 or B103)

This course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, data structures, algorithms, analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. Students will prepare to take the AP Computer Science A exam.

MONEY MANAGEMENT (B603, B604) Semester ½ Credit

Prerequisite: Junior or senior standing

Money Management is a semester elective for Academic or Traditional students covering topics in personal finance. This course will explore a financial road map, career decisions, pay methods/paychecks, taxes, banking transactions, budgets, saving methodology, investments, credit/loans and insurance. Students will complete real-life exercises and projects.

ENTREPRENEURSHIP STUDIES (B701) Semester ½ Credit

Prerequisites: Junior or senior standing. Successful completion of Economics or permission of instructor.

An in-depth look into how individuals combine land, labor and capital to build businesses, with special attention to business ethics and social responsibility.

WEBSITE DESIGN (B801) Semester ½ Credit

Prerequisite: Sophomore, junior or senior standing.

In this course, students will learn the basics of designing and developing a web site. Basic principles of page layout, web-based presentations and effective navigation

will be taught. The course will provide instruction on the use of HTML, Cascading Style Sheets (CSS) and provide an introduction to PHP and databases. Modules on Photoshop or GIMP will also be required. The course is very hands-on, with a majority of instruction coming from online tutorials and the completion of projects.

ADVANCED WEB DESIGN (B851) Semester ½ Credit

Prerequisites: B801

This semester course will cover advanced CSS, Javascript, JQuery, the use of forms, embedding media, graphics development, and responsive design.

MOBILE APPLICATION DEVELOPMENT (B861) Semester ½ Credit

Prerequisites: Completion of B801 and Junior or Senior Standing

This semester course will explore techniques, languages, and concepts applied in the development of web/mobile applications. This course introduces programming languages commonly used in the development of web and mobile applications, examples include Javascript, AngularJS, & PHP.

English Department

LANGUAGE ARTS I (E004) Full year 1 Credit

Prerequisite: Enrollment in E104

This course is paired with E104 English classes and is designed to address incoming students' individual deficiencies in reading and writing. In addition to teacher-directed lessons, individualized computer-assisted instruction is offered. Whenever possible, reading and writing assignments are coordinated with work in other subject areas. Independent novel reading is a requirement. Organization, study skills and test taking skills are also emphasized.

LANGUAGE ARTS II (E014) Full year 1 Credit

Prerequisite: Enrollment in E204

These courses are a continuation of E004, with greater emphasis on writing skills and the writing portfolios. Computer-assisted instruction promotes individualized comprehension development and reinforces vocabulary, punctuation, spelling and writing skills.

ENGLISH I (E101, E102, E103) Full year 1 Credit

Prerequisite: Freshman standing

These English courses place emphasis upon mastery of the paragraph, leading to

development of the short essay. Emphasis is placed upon standard grammar, vocabulary development, spelling and oral communication. A survey of world literature is also presented with additional units in drama and Shakespeare. Students develop their composition skills by beginning their high school writing portfolios.

ENGLISH I (E104) **Full year** **1 Credit**

Prerequisites: Freshman standing with approval of the Traditional Department and/or dean of studies

This English course is designed for students with varying degrees of learning differences, especially with regard to reading and writing. A survey of literary genres is presented with an emphasis on reading skills, comprehension, vocabulary development and oral communication. Composition skills are developed throughout the year, and mastery of the paragraph and the short essay is emphasized. Students will begin their high school writing portfolios.

AP SEMINAR (E200) **Full Year** **1 Credit**

Prerequisites: None

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. This course is a pre-requisite for the AP Research course, which can be taken junior or senior year.

ENGLISH II (E201, E202, E203) **Full year** **1 Credit**

Prerequisites: Sophomore standing

These English courses place emphasis upon the mastery of the short essay with an understanding of the four forms of expression: description, exposition, narrative and argument. The mechanics of grammar are reviewed, with additional work in vocabulary, spelling and oral communication. A survey of British literature is presented, with additional world/American literature works used in E201. Students will also continue to work on their writing portfolios.

ENGLISH II (E204) **Full year** **1 Credit**

Prerequisites: Sophomore standing with approval of the Traditional Department and/or dean of studies

This English course focuses upon the mastery of the short essay, with an understanding of the four forms of expression: description, exposition, narrative and argument; elements of grammar; vocabulary development; oral communication and British literature. Lessons are designed to fit the varying needs of students with learning differences and are typically paired with Language Arts II (E014), which stresses language skills as well as writing skills. Students will continue to work on their writing portfolios.

AP ENGLISH LANGUAGE AND COMPOSITION (E300)

Full year

1 Credit

Prerequisites: Junior standing and departmental approval

This year-long course for juniors is based upon the Advanced Placement English Language and Composition program as suggested by the College Board. Students will focus on a rhetorical form approach to the subject matter, covering narration, description, argumentation and persuasion, definition, division and classification, cause and effect, process analysis and comparison and contrast. Students will work with a variety of source materials representing a wide range of authors and genres.

ENGLISH III (E302, E303, E304)

Full year

1 Credit

Prerequisites: Junior standing. For E304, approval of the Traditional Department and/or dean of studies

These courses extend the work done in sophomore year on the short essay and four forms of expression by requiring extensive work in the use of models and essays. A survey of American literature is presented in E302 with outside readings in the American novel and Shakespeare. E303 and E304 classes include a survey of American literature with a remedial reading component. E304 maintains restricted class size as well as offering computer-assisted instruction to help reinforce language arts skills in reading and writing and a life skills program. All students will continue to work on their writing portfolios.

AP ENGLISH LITERATURE AND COMPOSITION (E400)

Full year

1 Credit

Prerequisites: Senior standing and departmental approval

This course introduces students to the college-level research paper through an in-depth examination of the entire process from working bibliography and research through preliminary outlining and first-drafting, to final draft, following the Modern Language Association format. Students are required to complete two major papers of 1,500 to 3,000 words, respectively, over the course of the year. Students are also introduced to literary criticism as it applies to short fiction, poetry, novel and drama. Three hours of credit are awarded for composition and three for literature. Students enrolled also have the opportunity to sit for the Advanced Placement Examination given by the College Board each spring.

ENGLISH IV (E402/403/404)

Full year

1 credit

Prerequisite: None

The E402/403 language arts courses place emphasis upon the research paper and its preparation. In addition, classes present a survey of world literature. Students will also become familiar with college-bound vocabulary lists and writing in the expository mode.

ENGLISH IV: Journalism (E412)

Full year

1 credit

Prerequisite: None

The E412 senior English course places emphasis on a journalistic approach to writing a variety of papers that involve research and possible publication in the school's newspaper and yearbook. Various genres of literature and college-bound vocabulary are focal points, along with a photography component. Students interested in the course must complete an application form and receive instructor approval.

PHOTO & ONLINE JOURNALISM (E501)

**Semester or Full year
1/2 or 1 Credit**

Prerequisite: Sophomore, junior and senior standing

This course involves all aspects of yearbook and online newspaper production, including digital photography and journalistic writing and design. The school's newspaper, *ECHO*; yearbook, *Shamrock*; and online newspaper, *ECHO*, are produced in this class.

Photo & Online Journalism may count as a Fine Arts/Humanities or English credit.

CREATIVE WRITING (E531, E533)

Semester ½ Credit

Prerequisite: Junior or senior standing

This course is designed for juniors and seniors who are seriously interested in improving their writing. Emphasis will be placed upon a variety of genres, including poetry, the essay and the short story. The student will be asked to develop his writing from simple compositions dealing with description and character analysis through poetry and one-act plays to the fully plotted short story.

This course may count as a Fine Arts/Humanities or senior English composition credit.

COMMUNICATION SKILLS (E541, E543)

Semester ½ Credit

Prerequisite: Sophomore, junior or senior standing

The purpose of this course is to prepare students for the difficult task of communicating intelligently in the world of higher education and/or the world addressing a public forum, debating, teaching and improving self-concept as a communicator.

SPEECH AND DEBATE (E551)

Semester ½ Credit

Prerequisite: Approval of Speech Team coach and dean of studies

This course covers all of the interpretive areas, including duo interpretation, solo acting, storytelling, prose and poetry interpretation, and dramatic and humorous interpretation. Students who remain active with the Speech Team may also receive this credit outside of class time.

This course may substitute for Communication Skills.

SCIENCE FICTION (E601/603) Semester ½ credit

Prerequisite: Sophomore, junior or senior standing.

This English elective course provides a survey of science fiction using novels, stories, articles, and film. Besides literary analysis and themes, students will consider how sci-fi has been used as an attempt to improve and instruct society. Students will complete expository writing assignments and read works from both classic and modern science fiction.

INTRODUCTION TO GOTHIC FICTION (E661/E663) Semester ½ Credit

Prerequisite: Sophomore, junior or senior standing

Students will explore how Gothic fiction has shaped the modern horror story. The interactive nature of the class will include creating webisodes, blogs and photo stories based on fiction by Shirley Jackson, Ira Levin, Stephen King and Dean Koontz. Open to all levels of difficulty.

THE GRAPHIC NOVEL (E681/E683) Semester ½ Credit

Prerequisite: Junior or senior standing

This semester course is designed to study both the craft of graphic novels and the social issues (gender equality, race, social justice) that are often found in these works. Students will study a wide range of works and create their own graphic novels to convey their understanding of the art as well as a social commentary.

World Languages Department

FRENCH I, GERMAN I, CHINESE I, SPANISH I
(F101, F102, G101, G102, H101, H102, S101, S102, S103) Full year 1 Credit

Prerequisites: Freshman or sophomore standing

The first-year course introduces the students to the language skills of listening, speaking, reading and writing, with the focus on developing the students' capacities to use the language in real-life situations. Students will learn vocabulary and grammar, engage in reading selections and be given opportunities to practice conversation and writing in the language.

SPANISH I (S104) Full year 1 Credit

Prerequisites: Junior standing and approval of Traditional English teacher and/or dean of studies

This basic course will introduce the student to the Latino people, their language and culture and the geography of the various Spanish-speaking countries. Students will begin to develop the language skills of reading, writing, listening and speaking.

FRENCH II, GERMAN II, CHINESE II, SPANISH II
(F201, F202, G201, G202, H201, H202, S201, S202, S203) Full year 1 Credit

Prerequisite: Successful completion of Chinese I, French I, German I, or Spanish I

This second-year course continues the development of the language skills of listening, speaking, reading and writing, with the focus on learning strategies for communication in a variety of ways. Students will continue to learn vocabulary and grammar at a higher level, engage in contemporary reading selections and be given opportunities to practice conversation and writing in the language.

SPANISH II (S204) Full year 1 Credit

Prerequisites: Successful completion of Basic Spanish I; approval of dean of studies and S104 instructor

This second-year basic course expands the student's ability to use the language through continued development of the basic language skills of reading, writing, listening and speaking. Emphasis will be placed on the learning of grammar and vocabulary and using this knowledge to communicate in the target language.

FRENCH III, GERMAN III, CHINESE III, SPANISH III
(F301,G301,H301, H302, S301, S302, S303) Full year 1 Credit

Prerequisites: Junior or senior standing and successful completion of French II, German II, Chinese II or Spanish II

Third-year courses intensify the development of the language skills of listening, speaking, reading and writing, with the focus on polishing these skills for communication in a variety of ways. Students will learn vocabulary in categories and study advanced grammar. They will be exposed to contemporary and classical reading selections and be given opportunities to converse and write in the languages.

AP SPANISH IV (S400) Full year 1 Credit

Prerequisite: Successful completion of Spanish III

In the fourth-year course, emphasis is placed on speaking and writing the language, while refinement of listening and reading skills continue. The student will review the fine points of grammar and continue his study of more complex and advanced grammar. The course will follow the guidelines of the College Board in order to prepare students for the AP exam. The course follows the themes that correspond to the exam to better prepare the students in regard to vocabulary, grammar and format. Students enrolled in S400 have the opportunity to sit for the Advanced Placement Examination given by the College Board each year. Fourth year course will also prepare students to take the Language CLEP test at the college of their choice. Students enrolled in F400, G400 and S400 have the opportunity to sit

for the Advanced Placement Examination given by the College Board each year. Fourth-year course will also prepare students to take the Language CLEP test at the college of their choice.

FRENCH IV, GERMAN IV, CHINESE IV (F401, G401, H401) Full year 1 Credit

Prerequisites: Senior standing and successful completion of French III, German III or Chinese III

In the fourth-year courses, emphasis is placed on speaking and writing the languages, while refinement of listening and reading skills continue. The student will review the fine points of grammar and continue his study of more complex and advanced grammar. The courses will include the reading of literary works, studies in historical and contemporary society and offer cultural assignments that develop an understanding and an appreciation of other people from foreign countries. The student will make comparisons of other cultures to his own and learn the importance of cultural interrelationships.

SPANISH IV (S402) Full year 1 Credit

Prerequisites: Senior standing and successful completion of Spanish III

In this fourth-year course, emphasis is placed on speaking and writing the languages, while refinement of listening and reading skills continue. The student will review the fine points of grammar and continue his study of more complex and advanced grammar. The course will include the reading of literary works, studies in historical and contemporary society and offer cultural assignments that develop an understanding and an appreciation of other people from foreign countries. The student will make comparisons of other cultures to his own and learn the importance of cultural interrelationships.

SPANISH V (S500) Literature Full year 1 Credit

Prerequisite: This course is available to seniors who have completed S400 in their junior year

This course focuses on the studies of modern Spanish literature and poetry while aiding the student in language skills, self-expression, analytical prowess and essay organization.

Health and Physical Education Department

HEALTH (P101, P102, P103, P104) Semester ½ Credit

Prerequisite: Freshman standing

This course is aimed at the development of a student's personal responsibilities for his health and the health of others. This course encourages good mental, social and physical health habits that are necessary for a satisfying life.

PHYSICAL ED. (P119, P129, P139, P149) Semester ½ Credit

Prerequisite: Freshman standing

This course is designed to provide each student with an opportunity to develop skill and understanding in a variety of sports activities, which will serve him throughout life. Objectives of increased strength and endurance, better motor skills, improved health practices and the development of the total person physically, mentally, emotionally and socially are the major goals of the course.

FIRST AID (P209) Semester ½ Credit

Prerequisite: Junior or senior standing

This course is designed to give the student the necessary knowledge to help handle common emergency situations. CPR, AED and basic first aid training will be included. Course content includes: first aid for different types of wounds, shock, poisoning, broken bones, burns, frostbite and how to transport victims with varying types of injuries.

ISSUES IN DRUG AND ALCOHOL EDUCATION (P301, P303) Semester ½ Credit

Prerequisite: Junior or senior standing

This course will examine the causes of chemical dependency and give insight into related forms of human behavior. This class is a combination of psychology, sociology and pharmacology. Students will be challenged to examine how drugs and alcohol impact the family, individuals and society. Topics include: Family Roles, Addiction as a Disease, Myth vs. Facts, Environmental Factors, Birth Defects, Adolescent Brain Development, Gender Differences, Mixed Messages, Gateway Drugs - Alcohol, Nicotine, Marijuana, Inhalants, Other Drugs - Steroids, Ecstasy, Cocaine, Heroin, Methamphetamine, GHB, Ketamine, Rohypnol, LSD, Prescription Drugs and Treatment and Recovery.

INTRODUCTION TO COACHING (P429) Semester ½ Credit

Prerequisite: Junior or senior standing

This course focuses on learning and developing leadership skills associated with athletic coaching. Concepts covered in this class are: leadership skills, team-building skills, risk-taking skills, communication skills, teaching discipline and organizational skills.

SPORTS ADMINISTRATION (P439) Semester ½ Credit

Prerequisite: Junior or senior standing

This course is designed to offer students a chance to learn about sports from behind the scenes and off the field. In this course, we will address marketing and promotion of events, game day operations, stats, media and social media among other topics.

NUTRITION FOR SPORT AND FITNESS (P459) **Semester** **½ Credit**

Prerequisite: Junior or senior standing

This course will develop the basic understanding of nutrition and exercise that was started in freshman year. The goal of this course is to provide students with a class that gives them the knowledge to develop as student-athletes through understanding proper nutrition.

ADVANCED PHYSICAL CONDITIONING (P479) **Semester** **½ Credit**

Prerequisite: Sophomore, junior or senior standing

This course focuses on weight training and conditioning techniques. The weight training component of the class emphasizes strength training, power training, Olympic lifting and endurance training. The conditioning component includes aerobic as well as anaerobic training.

CONDITIONING AND TEAM SPORTS (P489) **Semester** **½ Credit**

Prerequisites: Sophomore, junior or senior standing

This course is designed for students interested in improving their overall physical condition, as well as developing team sport skills that can carry over for a lifetime of physical activity. Students will learn about equipment, rules and strategies used for various sports. Students will be expected to participate and demonstrate proficiency in skills and knowledge of various team sports which may include basketball, soccer, volleyball, ultimate Frisbee, team handball, floor hockey and football. Please note: Student-athletes wanting to take this class during the semester in which their sport is competing must have a permission sheet signed by both their parent/guardian and the head coach of that sport.

Mathematics Department

All math classes require a TI-83/TI-84 graphing calculator.

ALGEBRA I (M101, M102) **Full year** **1 Credit**

Prerequisite: Freshman standing and approval of dean of studies

In this course the student will investigate properties of real numbers, linear equations and inequalities, systems of linear equations, graphing linear functions, exponents, rational expressions, factoring and quadratic equations. The emphasis throughout is on the solution of word problems.

ALGEBRA I (M103) **Full year** **1 Credit**

Prerequisite: Freshman standing and approval of dean of studies

This course begins with the study of integers and variable expressions and how to deal with data. The majority of the year will be spent on solving equations and inequalities and how to apply this ability to real situations. Systems of linear equations and inequalities, radicals and an introduction to quadratic equations will also be included in this course.

ALGEBRA I PART I (M104) **Full year** **1 Credit**

Prerequisite: Freshman standing

This course is designed to cover traditional Algebra I in a two-year period for students who need additional instructional time. It covers all the essentials of basic algebra. The emphasis in this course is on detailed explanations, repetition, and review. Students will work with expressions, formulas, properties of integers, decimals and fractions to solve the basic equations and inequalities found in elementary algebra. Emphasis will be placed on basic problem-solving techniques and graphing.

ALGEBRA I PART II (M114) **Full year** **1 Credit**

Prerequisites: M104

Students will continue their study of Algebra I including: solving systems of equations using various methods, understanding the rules of exponents and exponential functions, exploring the use of the Pythagorean theorem, and using the quadratic function and factoring to explore polynomials. Other investigations will include introductory statistics and probability and its applications in the real world.

GEOMETRY (M201) **Full year** **1 Credit**

Prerequisites: Sophomore standing and the completion of M101 or M311

Students in this course will study parallel lines and planes, congruence, deductive proof, quadrilaterals, similar figures, right triangles, circles and arcs, area, volume, constructions and selected topics from algebra.

GEOMETRY (M202) **Full year** **1 Credit**

Prerequisites: Sophomore standing and completion of M102 or its equivalent

Students in this course will study parallel lines and planes, congruence, deductive proof, quadrilaterals, similar figures, right triangles, circles and arcs, area, volume, constructions and selected topics from algebra.

GEOMETRY (M203) **Full year** **1 Credit**

Prerequisites: Sophomore standing and completion of M103 or its equivalent

Topics studied will include patterns, lines, planes, triangles, polygons, geometric reasoning, the use of coordinates in geometry and parallel lines.

GEOMETRY (M204) **Full year** **1 Credit**

Prerequisites: Junior standing and completion of M114 or its equivalent

Topics studied will include patterns, lines, planes, triangles, polygons, geometric reasoning, the use of coordinates in geometry and parallel lines.

AP CALCULUS AB (M300) **Full year** **1 Credit**

Prerequisite: Successful completion of M801 or M401 or approval of dean of studies

Students will study the conic sections, limits, derivatives, applications of the derivative, integration, transcendental functions and selected applications of the integral.

ADVANCED ALGEBRA 2 / PRE-CALCULUS (M301) **Full year** **1 Credit**

Prerequisite: Successful completion of M101 or its equivalent

Topics include linear, quadratic, exponential, logarithmic, radical, absolute value and fractional equations. Students will also study radicals, exponents, inequalities and graphing.

ALGEBRA II (M302) **Full year** **1 Credit**

Prerequisites: Junior standing and completion of M102 and M202 or their equivalents

This course will focus on real numbers and their properties, exponents, grouping symbols, absolute value, linear equations and inequalities, formulas, systems of linear equations, matrices, graphing of points, lines and regions, polynomials, radicals and quadratic equations.

ALGEBRA II (M303) **Full year** **1 Credit**

Prerequisites: Junior standing and the completion of M103 and M203 or their equivalents

Students will study exponents, absolute value, linear and quadratic equations, systems of linear equations, word problems, matrices and logarithms.

ADVANCED ALGEBRA II (M311) **Full year** **1 Credit**

Prerequisites: Freshman standing, satisfactory completion of high school Algebra I in the eighth grade and approval of dean of studies/department chairs

This course will focus on real numbers and their properties, exponents, grouping symbols, absolute value, linear equations and inequalities, formulas, systems of linear equations, matrices, graphing of points, lines and regions, polynomials, radicals and quadratic equations.

ADVANCED TRIGONOMETRY (M351) Semester ½ Credit

Co-requisites: M301/M801

The students will learn and apply the six trig functions as ratios and with a strong emphasis on the unit circle. Students will graph the trig functions, solve both triangle right and oblique, and study analytic trigonometry. There will also be applications of trigonometry to vectors and polar coordinates.

THE HISTORY OF MATHEMATICS (M361) Semester ½ Credit

Prerequisite: Successful completion of Algebra II

This course will cover the evolution of mathematical concepts from pre-history through the twentieth century. The class will cover a historical time line highlighting important people, concepts, places and events that contributed to the language known as mathematics. Sample problems will be examined, discussed and worked through the class.

AP CALCULUS BC (M400) Full year 1 Credit

Prerequisite: Successful completion of Calculus AB or departmental approval

This course will include an intensive review from Calculus AB, elementary differential equations, polar coordinates, parametric equations, tests for convergence and the Taylor polynomial.

PRECALCULUS (M401, M402) Full year 1 Credit

Prerequisites: Successful completion of Algebra, Geometry and Algebra II

Students will study functions, graphing, trigonometry, exponents, polynomials, exponential and logarithmic functions and conic sections, arithmetic and geometric series, and probability.

ALGEBRA II / TRIG (M403) Full year 1 Credit

Prerequisites: Senior standing and completion of M103, M203 and M303 or their equivalent

Students will study systems of equations and inequalities, radicals and complex numbers, polynomial and rational functions, probability, arithmetic and geometric series, and elementary trigonometry.

ALGEBRA II (M404) Full year 1 Credit

Prerequisites: Senior standing and completion of M304 and/or approval of the dean of studies

This is a course designed for students to explore its language of mathematics in verbal, tabular, graphical and symbolic forms in real-life situations. Problem-solving activities and applications allow students to model patterns and relationships with variables and functions. ACT practice sets will be assigned during the

first semester. Each topic will be covered in more depth than Algebra 1 in order to prepare students for an introductory college course.

CALCULUS (M501) **Full Year** **1 Credit**

Prerequisite: Successful completion of M401 and Pre-Calculus

This course will focus on differential calculus and the application of the differential calculus techniques.

PROBABILITY AND STATISTICS (M502) **Full year** **1 Credit**

Prerequisites: Senior standing in the Honors or Academic Level

The course is intended for students who will most likely pursue business-related majors in college. It covers data organization, distributions, permutations, combinations, probability, descriptive statistics and inferential statistics.

AP STATISTICS (M600) **Full year** **1 Credit**

Prerequisites: Junior or senior standing with instructor approval

Although statistics is mathematical science, it differs significantly from probability. This class will help students become better statistical thinkers and prepare them for statistics in a college-level course.

ADVANCED GEOMETRY/ALGEBRA II (M701) **Full year** **1 Credit**

Prerequisites: Freshman standing, satisfactory completion of high school Algebra I in the eighth grade and approval of dean of studies/department chair

The geometry work will include parallel lines and planes, logic, direct and indirect quadrilaterals, similar figures, right triangle, circles, area, volume and construction. The algebra work will include exponents, linear and quadratic equations and systems, radicals, imaginary numbers, vectors, inequalities and application problems.

ADVANCED ALGEBRA II/PRE-CALCULUS (M801) **Full year** **1 Credit**

Prerequisites: Sophomore standing with successful completion of M701 or approval of instructor and/or dean of studies

Students will study exponents, logarithms, inequalities, linear and quadratic equations and systems, polynomial equations, complex numbers, conic sections, functions and graphing, permutations, probability, the binomial theorem, mathematical induction, volume and geometric proof.

Science Department

BIOLOGY (C101, C102, C103, C104) **Full year** **1 Credit**

Prerequisite: Freshman standing

As an introduction to biology, this course presents the basic principles of modern biology, as well as detailing the taxonomic groupings of the plant, animal and protist kingdoms, and an introduction to the chemistry of biology. A study of cell division is included, as well as units in Mendelian, molecular and human genetics. Evolution is presented as the most widely accepted and best supported theory, which explains the great diversity of organisms on this planet. Microbiology, the immune system and disease are also covered.

CHEMISTRY (C201, C202, C203, C204) **Full year** **1 Credit**

Prerequisite: Sophomore standing

This course focuses on matter, its structure, properties and composition and the changes it undergoes. This includes the study of measurement and observation, the role energy plays in chemical and physical change, atomic theory and structure and chemical bonding. Both qualitative and quantitative lab experiences present, the core concepts on a practical level and allow students to develop problem-solving and laboratory skills.

AP PHYSICS 1 (C300) **Full year** **1 Credit**

Prerequisites: Junior standing, Biology, Chemistry and a knowledge of Algebra I

This course emphasizes the understanding of the principles and applications of physics. Students are taught proper problem-solving techniques and lab skills. Topics covered include mechanics, heat, waves, sound, optics, electricity and magnetism, atomic physics and nuclear physics. This course prepares students to sit for the Advanced Placement exam given by the College Board.

PHYSICS (C302) **Full year** **1 Credit**

Prerequisites: Junior or senior standing, Biology, Chemistry and a knowledge of Algebra I

This course emphasizes the mathematical applications of the principles of physics along with understanding of concepts. Students are taught proper problem-solving techniques and lab skills. Topics covered include mechanics, heat, waves, sound, optics, electricity and magnetism, atomic physics and nuclear physics.

PHYSICS (C303, C304) **Full year** **1 Credit**

Prerequisite: Junior or senior standing.

This course investigates the major topics of physics with an emphasis on conceptual understanding and real-life applications. Students are also taught problem

solving techniques and lab skills.

AP PHYSICS 2 (C400)

Full year

1 Credit

Prerequisites: Senior standing, successful completion of AP Physics C300 and the appropriate mathematics background

This course is designed to meet the requirements of a first-year college, algebra trig-based physics course. Topics covered include mechanics, thermodynamics, sound, optics, electricity, magnetism and some modern physics topics. Mathematical application of the principles is emphasized. This course prepares students to sit for the Advanced Placement exam given by the College Board.

AP BIOLOGY (C500)

Full year

1 Credit

Prerequisites: Biology, Chemistry and Physics (or concurrent physics)

This course is designed to meet the requirements of a first-year college biology course. Topics covered include the cell, genetics, the human body, evolution, and plant and animal structure and function. Labs appropriate to the course are included. Students enrolled in this class will have the opportunity to sit for the Advanced Placement Examination in the spring.

ENVIRONMENTAL SCIENCE (C503)

Full year

1 Credit

Prerequisites: Biology, Chemistry and Physics (or concurrent physics)

This is an introductory full year course into the world of environmental science. The course is interdisciplinary in nature, including concepts and ideas from multiple fields of study. Students will discuss the interrelationships of the natural world; identify and analyze environmental problems, both natural and man-made; evaluate risks and trade-offs associated with these problems; and examine alternative solutions for resolving and/or preventing them. Open to juniors and seniors.

ENGINEERING AND DESIGN (C521, C523)

Semester

½ Credit

Prerequisite: None

A designated STEAM course, Engineering and Design teaches students principles of engineering, the design process, research and analysis, teamwork, communication methods, global and human engineering impacts, engineering standards, and the importance of technical documentation. Engineering and Design gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based learning.

PRINCIPLES OF ENGINEERING AND BIOTECHNOLOGY (C531, C533)

Semester

½ Credit

Prerequisite: None

A designated STEAM course, Principles of Engineering and Biotechnology is a semester course designed to introduce students to various STEAM aspects, including civil, mechanical, chemical and genetic engineering. The project and group

based curriculum is designed to enhance students' creativity and the application of previous knowledge with math, science, art and computer design.

AP CHEMISTRY (C600) **Full year** **1 Credit**

Prerequisites: Biology, Chemistry and Physics (or concurrent physics)

This Advanced Placement chemistry course is designed to be the equivalent of the first-year general chemistry college course. Topics covered include a review of chemistry fundamentals plus additional studies in reaction types, stoichiometry, equilibrium, kinetics, thermodynamics, atomic and molecular structure, and nuclear chemistry. Problem-solving, logical thinking and clear communication are stressed. Students enrolled in this course have the opportunity to sit for the Advanced Placement Examination in the spring.

ANATOMY AND PHYSIOLOGY (C601, C603) **Full year** **1 Credit**

Prerequisites: Biology, Chemistry and Physics

This course focuses on the interdependence and functions of major body systems and on disease and its impact upon the body. The course is designed to enable the student to better understand the relationship of a healthy body to healthy emotional and psychological functions. Studies will also include recent advances in medicine, biotechnology, biochemistry and immunology. This course gives a comprehensive preview into the type of courses that must be taken to enter medical careers.

AP ENVIRONMENTAL SCIENCE (C700) **Full Year** **1 Credit**

Prerequisite: Junior or senior standing

This course is designed as a fourth-year elective science course at the Advanced Level. It will require analysis of field research and a research paper. Slide-lectures, project case studies and labs are used to present course content. This course is recommended for environmental engineers, lawyers, biologists, city planners, environmentalists, etc. Students enrolled in this course have the opportunity to sit for the Advanced Placement examination in the spring.

FORENSIC SCIENCE I (C802) **Semester** **½ Credit**

Prerequisites: Successful completion of Biology and Chemistry

This course will focus on the biological and human traits that can be examined in terms of crime scene/evidence analysis. The proper methods of collecting, preserving and analyzing evidence will be presented in both classroom and laboratory settings.

BIOLOGY II ANIMAL BEHAVIORS (C803) **Semester** **½ Credit**

Prerequisites: Successful completion of Biology and Chemistry

A STEM designated course, this project-based course will investigate animal behaviors and interactions. Students will use the scientific method and experimental design to plan, organize, and conduct research on different animal species. Classwork will build upon previous knowledge of biological systems learned

freshman year.

FORENSIC SCIENCE II (C852) Semester ½ Credit

Prerequisites: Successful completion of Biology and Chemistry

This course will introduce the science of gathering and interpreting evidence resulting from the commission of a crime. Biological and chemical evidence will be examined. Through class writing assignments, students will improve both their writing and critical thinking skills.

BIOLOGY II EXPERIMENTAL TECHNIQUES (C853) Semester ½ Credit

Prerequisites: Successful completion of Biology and Chemistry

A STEM designated course, this project-based course will investigate specific techniques used in biological science. Students will learn techniques in the area of microbiology, field research, and animal sciences to discover how organisms interact with each other and their surroundings. Classwork will build upon previous knowledge of biological systems learned freshman year.

AEROSPACE SCIENCE (C902, C913) Full year 1 Credit

Prerequisite: Senior Standing

A designated STEAM course, Aerospace Science focuses on the principles and history of flight and space exploration. Students explore concepts of flight and propulsion systems through creative thinking, designing, and building aircraft and rockets. Emphasis will be placed on some of the basic concepts of physics such as Newton's laws of motion, velocity and parallax calculations. Instructional strategies for this class include hands-on learning, engineering design techniques, problem solving skills, and Internet-based research. The project and group-based curriculum is designed to enhance students' creativity and the application of previous knowledge with math, science, art and computer design.

AEROSPACE SCIENCE (C904) Full year 1 Credit

Prerequisites: Senior standing in Traditional Level

This space science class focuses on the principles and history of flight and space exploration. Emphasis will be placed on some of the basic concepts of physics such as Newton's laws of motion, velocity and parallax calculations. Current limitations to human exploration of deep space and possible solutions to these limitations will also be examined. Instructional strategies for this class include hands-on learning experiences and Internet-based research. Interdisciplinary instruction is also a cornerstone of the curriculum.

THE HOLOCAUST (T251)**Semester****1/2 Credit**

Prerequisite: Junior or senior standing

In this course, students will explore the Holocaust through the words of those who endured it. This course will lend an ear to the voices of those who suffered through mass genocide at the hands of the Nazi regime. After a brief historical overview of the Holocaust, students will learn how both strength and courage became the catalyst for survival. Students will have the opportunity to interact and learn from the personalized history of victims across Europe through the use of journaling, wikis and the creation of digital histories. Open to all levels of difficulty.

AP EUROPEAN HISTORY (T300)**Full year****1 Credit**

Prerequisites: Junior or senior standing, successful completion of World Civilization or United States History and the approval of the instructor and/or dean of studies

This course examines the history of Western Civilization from 1500 A.D. to post-World War I, including the late Middle Ages, the Renaissance, the Reformation, the Counter-Reformation, the Religious Wars, the Scientific Revolution, the Age of Enlightenment, the French Revolution, the rise of Napoleon, the development of European supremacy, pre-World War I politics and imperialism, and alliances leading to World War I. Students may sit for the Advanced Placement examination given by the College Board at the end of each year.

UNITED STATES HISTORY (T302, T303, T304)**Full year****1 Credit**

Prerequisite: None

United States History is a chronological survey of important events that took place in the national, political, economic, social, intellectual, artistic and cultural development of the nation. The time period to be examined begins with the Post-Civil War Reconstruction and extends to the Modern Era. Advanced levels emphasize critical thinking skills and event impact.

AP UNITED STATES HISTORY (T400)**Full year****1 Credit**

Prerequisites: Junior or senior standing, Advanced or Honors level students and approval of an instructor and/or dean of studies.

This course entails a fast-paced, thorough examination of United States history from the late 1400s to the 2016 presidential election. As the AP U.S. History examination focuses on social history, this course will emphasize African-American history, women's history, etc. to best prepare students to pass the AP exam in May. This course will require higher-level reading and writing skills that will be routinely employed to analyze historical documents and artifacts as well as construct detailed written arguments involving a range of complex topics.

AMERICAN CIVIL WAR (T401, 403)**Semester****1/2 Credit**

Prerequisite: Junior or senior standing

This course traces the history of the Civil War by examining root causation, the

PSYCHOLOGY (T601) **Full year** **1 Credit**

Prerequisite: Junior or senior standing

Psychology is the study of human behavior and mental processes. This course will introduce students to such basic concepts as personality theories, states of consciousness, human emotions, the fundamental physiology of the brain and the work of important psychologists and may do preparation for the AP test. Applications will also be made to specific situations in business, education and social problems. Students will also be introduced to key theorists in the history of psychology.

PSYCHOLOGY (T603) **Semester** **1/2 Credit**

Prerequisite: Junior or senior standing

Psychology is the study of human behavior and mental processes. This course will introduce students to such basic concepts as personality theories, states of consciousness, human emotions, the fundamental physiology of the brain and the work of important psychologists. Applications will also be made to specific situations in business, education and social problems. Students will also be introduced to key theorists in the history of psychology.

APPLIED PSYCHOLOGY (T613) **Semester** **½ Credit**

Prerequisite: T603 Psychology

Applied Psychology is a vast field of study, so this course aims to teach students how to 'apply' psychological concepts and theories and answer basic questions to understand human behavior. This course will focus on four branches of psychology: behavioral, abnormal, forensic and sports psychology.

PHILOSOPHY (T701) **Semester** **1/2 Credit**

Prerequisite: Junior or Senior standing

This course is designed to give students a general introduction to the subject of philosophy through an examination of key historical figures and pertinent philosophical topics. After introducing students to a working definition of philosophy, the works of famous philosophers will be studied.

PHILOSOPHY (T703) **Semester** **1/2 Credit**

Prerequisite: Junior or senior standing.

This course will focus on the fundamental principles of Western philosophy. Major topics addressed would include the essence of being, the quest for virtue, the defining of morality, the power of death and the nature of politics. Upon conclusion, students would have several philosophical approaches with which to analyze everyday issues.

MEDIA LITERACY (T741, T743) **Semester** **½ Credit**

Prerequisite: Junior or senior standing

This class will study the messages students receive from movies, television, music, advertising, the Internet and other pop culture sources. Students will develop a critical awareness of these messages through group projects, papers and personal analysis.

SOCIOLOGY (T801) **1 Semester** **½ Credit**

Prerequisite: Junior or senior standing.

This course is an introduction to the discipline of sociology. Topics will include research, culture, socialization, the individual in society, social institutions, social minorities and collective behavior. Students will develop a sociological imagination that will help them see how sociological concepts apply in their daily lives.

SOCIOLOGY (T803) **1 Semester** **½ Credit**

Prerequisite: Junior or senior standing.

This course would be an overview and introduction to the basic concepts in the field of sociology. Some concepts to be covered will include research, culture, socialization, social groups, social structure, deviance, social stratification and social institutions.

Enrichment Courses

FRESHMAN SUCCESS (Q101, Q103)

Prerequisite: Freshman standing

Freshman Success is a required enrichment course for all freshmen. The aim of the course is to assist students as they transfer into the high school experience. The course includes units that explore their own personality strengths and weaknesses, study skills, conflict management and other skills necessary in young adulthood.

ACT SKILLS REVIEW (Q201, Q203) **Semester** **½ Credit**

Prerequisite: Sophomore standing

This course is a review of the core skills deemed necessary for college readiness by the ACT Corporation. Basic skills in English, Mathematics, Reading and Science Reasoning are explored. Students will have a pre-test administered in the spring of their freshman year and a mid-test administered in the spring of the sophomore year.

ACT STRATEGIES (Q301, Q303) **Semester** **½ Credit**

Prerequisite: Junior standing

This course covers the mechanics, concepts and strategies of the ACT. Students will practice test questions illustrating concepts of timing, pacing, guessing and test-taking strategies. Students will complete up to three practice tests with answers and explanations. A post-test will be administered in the spring of the junior year. An actual ACT is required of all Trinity students to obtain a diploma. The ACT is best

taken following the junior year.

SENIOR CAPSTONE (Q401, Q403)

Prerequisite: Senior standing.

Senior Capstone is a required enrichment course for all seniors. The aim of the course is to enable students to reflect and summarize their high school education and prepare to transition to the next phase of their lives. The course includes units that explore careers, interview skills, time management, personal finance, spirituality and other life skills.

Theology Department

The theology program is composed of seven core semester-length subject themes and one elective subject theme. The courses are designed systematically, with each course designed to build on the foundation established by preceding courses. The guidelines are also designed to help young people develop the necessary skills to answer or address the real questions that they face in life and in their Catholic faith.

Each Trinity student is expected to complete community service as part of their theology classes. Members of the National Honor Society and the National Beta Club also complete service work in addition to their theology-required service.

Freshman, Sophomore and Junior Required Courses

FRESHMAN THEOLOGY 1 (R101, R102, R103, R104) Semester ½ Credit

Prerequisite: Freshman standing.

The purpose of this course is to give students a general knowledge and appreciation of the Sacred Scriptures. The students will pay particular attention to the Gospels, where they may grow to know and love Jesus Christ more personally.

FRESHMAN THEOLOGY 2 (R151, R152, R153, R154) Semester ½ Credit

Prerequisite: Freshman Theology 1

The purpose of this course is to introduce students to the Mystery of Jesus Christ, the Living Word of God, the Second Person of the Blessed Trinity. In learning who He is, the student will also learn who He calls them to be.

SOPHOMORE THEOLOGY 1 (R201, R202, R203, R204) Semester ½ Credit

Prerequisite: Sophomore standing

The purpose of this course is to help students understand all that God has done for us through his Son, Jesus Christ. They will also be introduced to what it means to be a disciple of Christ and what life as a disciple entails.

SOPHOMORE THEOLOGY 2 (R251, R252, R253, R254) Semester ½ Credit

Prerequisite: Sophomore standing

The purpose of this course is to help the student understand that in and through the Church they encounter the Living Jesus Christ. The students will come to know the Catholic doctrine that the Church is the living Body of Christ today.

JUNIOR THEOLOGY 1 (R301, R302, R303, R304) Semester ½ Credit

Prerequisite: Junior standing

The purpose of this course is to help students understand that they can encounter Christ today in a full and real way through the sacraments and especially the Eucharist. Students will examine each of the sacraments in detail so as to learn how they may encounter Christ throughout life.

JUNIOR THEOLOGY 2 (R351, R352, R353, R354) Semester ½ Credit

Prerequisite: Junior standing

This purpose of this course is to help students understand that it is only through Christ that they can fully live out God's plans for their lives. Students are to learn the moral concepts and precepts that govern the lives of Christ's disciples.

Senior Required Course

CATHOLIC SOCIAL TEACHING (R421, R422, R423, R424)

Semester ½ Credit

Prerequisite: Senior Standing

This purpose of this course is to help students understand that it is only through Christ that they can fully live out God's plans for their lives. Students are to learn the moral concepts and precepts that govern the lives of Christ's disciples.

Senior Electives - Seniors must choose one of the following:

COMMUNITY SERVICE (R431, R433) Semester ½ Credit

Prerequisites: Senior standing with approval of student affairs director. Student must have the ability to provide transportation and parental approval to leave campus for service.

The purpose of this course is to help fulfill Trinity's mission to instill "Christian values in the Catholic Tradition." The Community Service honors this segment of the school's mission by travelling off-campus to service assignments where students learn about and practice being servants to our local community.

ADVANCED SCRIPTURE (R451, R453)

Semester ½ Credit

Prerequisites: Senior Standing

The purpose of this course is to give an overview of Sacred Scripture with an introduction to the basic principles for understanding and interpreting the Bible. Because of the extent of the scriptural material, this outline will not try to cover the vast content but rather offer comments about Scriptures purpose and religious significance.

HISTORY OF THE CATHOLIC CHURCH (R461, R463) Semester ½ Credit

Prerequisite: Senior Standing

The purpose of this course is to supply students with a general knowledge of the Church's history from apostolic times to the present. Students will be introduced to the fact that the Church was founded by Christ through the Apostles and is sustained by him throughout history through the Holy Spirit over the last 2000 years of history.

COMPARATIVE RELIGIONS (R471/R473)

Semester ½ Credit

Prerequisite: Senior Standing

This course is designed to help students understand how the Catholic Church relates to non-Catholic Christians as well as to people of other religions or no religion. It starts with the foundation that Jesus Christ established the Catholic Church and gave her to the fullness of God's revelation. Comparative Religions also explores the recognition of spiritual truths that can be found in non-Catholic churches and religions. This course will help students see the ways that other systems of belief or practice are different from the Catholic faith. The curriculum is aligned with the Catholic Bishops Framework.

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