

DUPAGE HIGH SCHOOL

DISTRICT 88

Building Futures

ADDISON TRAIL
WILLOWBROOK

Course Listing Guide

2020-2021



The 21st Century Vision for DuPage District 88

VISION... The successful vision for DuPage District 88 is one of a desired, hopeful future to chart its path of action. It is intended to be a source of pride, to instill the courage to make thoughtful and responsible decisions, and to be a compass for the future.

The 21st Century for DuPage District 88 is one of a learning community that welcomes, excites, and challenges. This envisioned future is described by:

Schools that...

- are safe and modernized promoting a learning environment that is healthy and conducive to optimal learning
- are structured as engaging and small learning communities that value and embrace diversity and allow for personalized and collaborative learning
- maximize a variety of learning spaces and arrangements that accommodate and sustain rigorous, creative, and innovative 21st Century learning
- form a tightly-connected and highly-interactive Addison Trail - Willowbrook (district-wide) learning community
- are part of a collaborative network of schools that represent an expanded global learning community

Classrooms that...

- are inspiring, caring, respectful, and empowering for all students
- emphasize robust, experiential, personalized and collaborative learning focused on real-world (local and global) issues and challenges
- have accessible digital tools that are used for the acquisition of 21st Century knowledge and skills

Learning Programs that...

- rigorously and dynamically integrate core knowledge instruction with 21st Century literacy skills*
- maintain high local and global standards and enable students to develop intellectual and life skills through critical thinking and applied learning in all programs of study
- are interdisciplinary, project-based, career-connected, and linked with elementary, middle level, and higher education programs
- forge partnerships with business/community sectors, develop mentoring-tutoring relationships, and provide local/global service learning opportunities
- provide opportunities for diverse learners to thrive in an environment of inclusion and acceptance

**global awareness, financial, economic, business, entrepreneurial, civic, health, environmental, media and technology*

Learners who...

- are respectful, self-directed, enthusiastic, positive, and responsible
- are critical, creative thinkers prepared to use 21st Century learning tools in responsible ways that contribute to the good of our global society
- are proactive, productive and ethically-appropriate consumers and contributors to the local and global community
- are engaged, resilient, and view 21st Century change as opportunities for growth and development

Teachers and professionals who...

- continuously connect existing content, skills, and assessment practices with vigorous intellectual, creative, and forward thinking associated with 21st Century essential educational changes
- are caring, respectful, and adaptable in meeting the needs of all learners
- are highly qualified and collaborative team players

School-Community partnerships that...

- embrace its youth by providing a healthy, safe, and nurturing school-community environment
- share the responsibility for providing appropriate and inclusive learning and recreational opportunities for youth before/during/after school hours

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GENERAL INFORMATION

This guide lists courses offered in DuPage High School District 88. The guide lists district-wide offerings (both Addison Trail and Willowbrook) first, and continues to list courses specific to each school. Please read this guide carefully and discuss your course selection with your parents, teachers and counselor. Some courses may be canceled due to insufficient enrollments. If this happens, your counselor or the summer counselor will help you select another course.

CREDIT:

1. A full-year course, such as Biology, Algebra 9, etc., receives two credits per year, one each semester.
2. A semester course, such as Business Law, Public Speaking and Communication, Health, receives one credit.
3. Physical Education receives one credit per semester.
4. Credits may be made up through summer school, county continuing education, or College of DuPage; however, courses from these alternatives must be pre-approved by your counselor.

REQUIRED COURSES

English

Every student must take and pass 8 semesters of English, including English 9, 10, 11, 12 (or AP) and Public Speaking and Communication.

Public Speaking and Communication

Every student must take and pass one semester of Public Speaking and Communication or Speech/Technology, which may be used to meet the English requirement.

Mathematics

All students are required to take and pass three years of mathematics. **All students must take one year of math that includes algebraic thinking and one year of math that includes geometric thinking.**

Science

Every student must successfully complete three years of science: one year in biology, one year in a physical science, or one year of chemistry, and then two additional semesters. The required initial course sequence for students to meet the Science graduation requirement is Biology, Chemistry and Physics. Counselors will help choose science course(s) based on science background, vocational/career objectives, and the recommendation of the Science Department.

Social Studies

Every student is required to successfully complete one year of U.S. History, one semester of Government (which includes civic education), one semester Economics, and one year of Human Geography or AP Human Geography. The United States and Illinois Constitution exams, which are given in the U.S. Government classes, must be passed in order for a student to graduate. Students are required to take three consecutive years of Social Studies, beginning with Human Geography or AP Human Geography in Grade 9 and continuing in Grades 10 and 11.

General Education Requirements

Beginning with the Class of 2019, the general education requirements are:

3 semesters in Art, CTE (Business, Industry & Technology, or Family and Consumer Sciences), Music and World Language

**** Note: The Consumer Education course requirement does not meet the CTE general education requirement.**

Physical Education

Illinois School Code requires daily physical education for all students. All District 88 students will be scheduled into a PE class every semester. Health and Driver's Ed count as PE classes under the School Code. PE classes carry full credit, grade point average, and rank. Students can count PE credits towards elective credit for graduation.

Reading

Students will take a reading test when they enter Addison Trail or Willowbrook prior to their placement in courses. District 88 establishes cut scores on the Reading Placement exam; based on these cut scores, some students may be placed into a reading intervention, which may include a separate course.

Consumer Education

The Consumer Education requirement may be met through one of the following options: Consumer Management, Online Consumer Management, Introduction to Business or Sheltered Consumer Management (Each is offered by the Career and Technical Education departments).

REQUIRED PERFORMANCES:

Constitution Test

Health Proficiency

Educational Plan An educational plan will be required for all students. A counselor will meet with each student to prepare a realistic plan based: on the student and parent's educational and vocational goals.

Transportation: Students who elect to take a course at the Technology Center of DuPage will have transportation provided by the district. Students who elect Invitation to Teaching or Medical Careers will need to provide their own transportation.

Credits/year

Students in District 88 are evaluated for year in school based upon the number of credits they have earned*.

Grade 9 0 to 10 credits and year 1

Grade 10 11 to 21 credits and year 2 or higher

Grade 11 22 to 32 credits and year 3 or higher

Grade 12 year 4 or higher and completion of required state assessments (if applicable)

*The evaluation of credits for determining year in school will take place three times a year in August, January, and June.

REGISTRATION FOR SCHOOL

Every August a registration packet is sent to each home with the necessary registration information and dates and times for students to register by class. Students are expected to register on the date that is designated for their class. When an extenuating circumstance occurs, and a student cannot register on the assigned date, the guidance office needs to be notified. **Any student who registers after registration week and has NOT previously notified the Guidance Office will be charged a \$25.00 late registration fee.**

District 88 Graduation Requirement Summary

English	8 semesters (includes a semester of Public Speaking and Communication) (English 9,10 & 11) (1 additional semester)
Mathematics	6 semesters (2 semesters algebraic thinking) (2 semesters geometric thinking) (2 additional semesters)
Science	6 semesters (2 semesters biological science) (2 semesters physical science) (2 additional semesters) *The required initial course sequence for students to meet the Science graduation requirement is Biology, Chemistry and Physics.
Social Studies	6 semesters 2 semesters of Human Geography or AP Human Geography 2 semesters American History 2 semesters Social Studies (Economics, Government) *Beginning with Class of 2020 - Students are required to take three consecutive years of Social Studies, beginning with Human Geography or AP Human Geography in Grade 9 and continuing in Grades 10 and 11.
Reading	1 semester – unless exempt. Based on proficiency, a student may need additional reading courses.
General Education	<i>Beginning with the Class of 2019</i> – 3 semesters in Art, CTE (Business, Industry & Technology or Family and Consumer Science), Music or World Language
Consumer Education	1 semester
Elective Credits **All students are required to take 8 semesters of Physical Education per Illinois School Code. The PE credits will allow students to complete 8 of the 13 elective credits necessary for graduation.	13.0
Total Credits	44.0
Performance Requirements	Constitution Test
	Health Proficiency Requirement – must pass a Health class

FUTURE PLANS

College Planning:

College and university entrance is primarily based on the results of an entrance exam, the student's grade point average, class rank and the student's high school courses. These requirements vary from school to school and are even somewhat flexible within a school. Please check with your counselor or the college you are considering for specific information. **Students should confirm with their counselor that they are taking college accepted courses in the required areas since some courses will not meet the entrance requirements of some universities.**

Trade, Industry and Vocational Planning:

Students wishing to pursue a specific trade or vocation are encouraged to examine and pursue Career and Technical Education sequences. Please see your guidance counselor for more information.

Career Planning:

See your counselor for help in exploring your career options, making some initial decisions, and developing a plan for reaching your educational and career goals.

Illinois Seal of Biliteracy and Commendation

DuPage High School District 88 students have the opportunity to earn the Illinois Seal of Biliteracy and/or Commendation.

According to the Illinois State Board of Education (ISBE):

“The Illinois Seal of Biliteracy is a recognition given to graduating high school students who have demonstrated a high level of proficiency in English and in reading, writing, listening and speaking in another language. The State Commendation toward Biliteracy is a recognition given to graduating high school students who have demonstrated significant progress toward achieving a high level of proficiency in English and in reading, writing, listening and speaking in another language.”

Once earned, the student's diploma (upon graduation) will contain the official ISBE Seal or Commendation symbol. In addition, the Seal or Commendation will be added to the student's transcript upon verification that the district determines the student has met the necessary performance criteria during the student's enrollment in high school.

GRADE WEIGHTING SYSTEM AND HONOR ROLLS

The course as well as the grade earned determines how many honor points a student receives toward class rank. Class rank is used primarily for college admission. Students will be able to earn an A, B, C, D, or F in all classes. Students who take more challenging courses are able to earn additional honor points. Thus, a student who enrolls in four high weighted courses and receives one A, two B's and one C at the end of the semester will have a 4.00 grade point average, whereas another student with the same grades, but is in all regular courses, would have a 3.00 grade point average. This would give the student in the high weighted courses a higher class rank and a better chance for college admission. High weighted courses are identified with in the course outlines.

	A	B	C	D	F
High weighted courses	5 pts	4 pts	3 pts	2 pts	0 pts
Regular weighted courses	4 pts	3 pts	2 pts	1 pt	0 pts

Students must be enrolled in a minimum of four academic courses to be considered for the honor roll. The Distinction Honor Roll requires a grade point average of at least 3.5 for the marking period and all grades must be an A or B. The Merit Honor Roll requires an average of 3.0 to 3.49. No student with the grade of I is given honor roll status until the work is completed. Sophomores, juniors and seniors may be elected to the National Honor Society on the basis of scholarship, leadership, service and character. The entire faculty is involved in the selection process.

All students must be enrolled in a minimum of four classes to be considered for the honor roll.

FEES

Course fees **DO NOT** include the price of textbooks. Fees are estimated costs and may need to be adjusted.

IHSA ELIGIBILITY

To be eligible to represent the school in interscholastic contests, students must be passing 5 academic classes per week during the season and must have passed 5 academic classes the semester prior to participation. Passing work shall be defined as work of such a grade that if on any given date a student would transfer to another school, passing grades for the course would immediately be certified on the student's transcript.

Any student who fails to meet the academic criteria stated above will be ineligible for interscholastic competition for the following week beginning Monday through Saturday of that week.

Any student ruled ineligible for not meeting the academic criteria stated must be passing 5 academic classes at the end of the ineligible week or the ineligibility will continue for another week. Students suspended or expelled from the high school educational program are not permitted to participate in or attend any school curricular or co-curricular events or activities during the term of the 37 suspension/expulsion. Any student placed off campus in an alternative program/outside placement facility will be considered by the administration for participation in extracurricular activities on an individual, case by case basis.

1. To participate in Illinois High School Association activities such as athletics, music, drama, speech, cheerleading, debate, math team, or academic team, a student:
 - A. Must be enrolled in and pass five academic classes each week to be eligible.
 - B. Must pass five academic classes each semester.
 - C. Must have parental consent, training rules, current physical.
 - D. See IHSA Athletic Eligibility Rules at <http://ihsa.org/AbouttheIHSA/ConstitutionBylawsPolicies.aspx>.
2. Students are subject to the Code of Conduct and school disciplinary rules.

TEACHER QUALIFICATIONS

In accordance with ESEA Section 1111(h)(6) *PARENTS RIGHT-TO-KNOW*, DuPage High School District 88 will provide the parents, upon request, (and in a timely manner), information regarding the professional qualifications of the student's classroom teachers, including, at a minimum, the following:

1. Whether the teacher has met State qualification and licensing criteria for the grade levels and subject areas in which the teacher provides instruction.
2. Whether the teacher is teaching under emergency or other provisional status through which State qualification or licensing criteria have been waived.
3. The baccalaureate degree major of the teacher and any other graduate certification or degree held by the teacher, and the field of discipline of the certification or degree.
4. Whether the child is provided services by paraprofessionals and, if so, their qualifications.

For additional information, please contact Mrs. Jean Barbanente, Asst. Superintendent at (630) 530-3985.

ART



*Art Honors Option

Students can elect to receive weighted credit in all certain Art courses at Addison Trail and Willowbrook. Requirements will include the following: 1. Research Paper on a significant artist or style. 2. Art Project based on the artist or style. 3. Presentation on Research paper and Art Project. 4. One Extra Project selected from class assignments. 5. Participation in an Art Related Event. Students select the Honors Option within the first ten days of the semester.

***Senior students are exempt from prerequisites.**

AR44253 Advanced Placement Studio Art

The Advanced Placement Studio offers a choice of AP Drawing, AP 2-D Design, and AP 3-D Design. These classes are intended for independent art students who wish to develop individual skills, style, and technique along with a portfolio of work. This course is meant to provide students with an experience equivalent to a college level foundations class. Students will work on self-directed as well as teacher-directed assignments and will learn how to shoot professional quality photographs of their work. The Advanced Placement Art Exam is offered in May at an additional cost.

Semesters: 2

AR55015 Introduction to 2-D Art

This is a general introductory art course which deals with the principles of two dimensional design and composition. Students will learn drawing, painting, cartooning and computer art completing still life drawings, portraits, digital drawing, design and cartoons. Significant 2-D art from the past and present will be explored. **This course is a prerequisite for drawing and painting classes. Honors Option is available (AR54995).**

Semesters: 1

AR55025 Introduction to 3-D Art

This is an introductory, 3-dimensional art course designed to be welcoming for students of all artistic experience levels. Students will learn the elements of art and the principles of 3-dimensional design and composition through a variety of art projects in sculpture, pottery, and jewelry. Students will learn to work with clay, wire, glass, foam, and found objects. Significant 3-D art from the past and present will be explored. **This course (or Introduction to 2-D Art) is a prerequisite for clay and sculpture/jewelry courses. Honors Option is available (AR54985).**

Semesters: 1

AR55115 Animation and Cartoon Drawing 1

This course will introduce students to basic drawing techniques in the field of cartooning and animation. Single-panel cartoons, editorial cartoons, caricatures, original characters, comic strips, comic books/graphic novels will be explored with an emphasis on creativity, composition, and craft. A drawn animation with storyboards will be filmed and edited using the computer. 3-dimensional claymation and cut-paper animation will be explored. Career pathways, along with significant cartoons and animations from the past and present, will be studied. **Honors Option is available (AR65115).**

Semesters: 1

AR55125 Graphic Design 1

This course explores the use of computer-generated art as an introduction to the computer as an artistic tool. Adobe Photoshop and Illustrator are the software programs that will be used to alter and manipulate images and typography in order to create strong designs and compositions. Students will be complete CD package design, concert posters, concert tickets, portraits, photo collages, optical illusions, logo symbol design, letterhead mailers and digital images. **Honors Option is available (AR65145).**

Semesters: 1

AR55205 Graphic Design 2

Prerequisite: Graphic Design 1

This class continues to develop artistic and technical skills needed to solve complex design problems using Adobe Photoshop, Illustrator and InDesign software programs. Students will complete an advertising campaign, candy box package design, magazine layout, invitations, digital photography, logo design, restaurant menus and posters. **Honors Option is available (AR65205).**

Semesters: 1

AR55225 Animation and Cartoon Drawing 2

Prerequisite: Animation and Cartoon Drawing 1

This in an advanced studio course designed for the student who wishes to explore advanced cartooning and animation techniques in the areas of character development, storyboarding, publishing, filming and editing, while further developing their own personal style. Students will focus on creating an in-depth cartoon series or a drawn, 3-D, or experimental animation with an emphasis on

creativity, composition, and craft. Career pathways, along with significant cartoons and animations from the past and present, will be studied. *Honors Option is available (AR65225).*

Semesters: 1

AR55235 Advanced Animation

Prerequisite: Animation 1 / Animation 2 or instructor's permission.

Students who are interested in going into the growing field of animation need to have a block of studio time to produce animations to be used for scholarship opportunities and admission into art schools. Advanced Animation allows students to have time to work on an in-depth semester long project. In addition to working in a more independent manner, students will learn new software that allows them to add special effects and sound layers to their animations. (Past student films created during this class have been featured in The Ottawa Animation Festival in Canada and Chicago Youth Film Festival).

Semesters: 1 (may also be taken for 2 semesters) *Honors Option is available (AR65235).*

AR56035 Drawing and Painting 1

Prerequisite: Introduction to 2-D or 3-D Art.

This is a course that explores the fundamentals of both drawing and painting techniques. Students will learn the basics of sketching using a variety of media including pencil, pastels, colored pencils and charcoal. Watercolor and acrylic paints will be used to learn a variety of painting techniques. Subjects include still lifes, landscapes, portraits, figure studies and abstract designs. *Honors Option is available (AR66035).*

Semesters: 1

AR56135 Drawing and Painting 2

Prerequisite: Drawing and Painting 1

This course will provide students with the opportunity to expand their drawing and painting skills to learn advanced techniques using a variety of media including conte, pen and ink, watercolor pencils, pastels, oil paints and water based oil paints. Subjects include still life and nature, anatomical sketching, photographic reference and imaginative design. Students will study how artists of the past and present use drawing and painting as a form of personal expression and communication. *Honors Option is available (AR66135).*

Semesters: 1

AR56045 Ceramics 1

Prerequisites: Introduction to 2-D or 3-D Art

This is a studio art course in which students create original artwork from a variety of clay working methods. Basic hand building (coil, pinch, and slab), basic potter's wheel-throwing, and glazing will be explored with an emphasis on creativity, composition, and craft. Significant ceramic art from the past and present will be studied. *Honors Option is available (AR56145).*

Semesters: 1

AR56065 Ceramics 2

Prerequisite: Ceramics 1

This is an advanced studio art course in which students create original artwork from a variety of clay working methods. Advanced and large-scale hand building (coil, pinch, slab), advanced and large-scale potter's wheel-throwing, and a variety of surface and glazing techniques will be explored with an emphasis on creativity, composition, and craft. Students will learn and participate in the kiln loading and firing process. Significant ceramic art from the past and present will be studied. Recommended for the student who was successful in, Ceramics 1. *Honors Option is available (AR56165).*

Semesters: 1

AR56075 Ceramics 3

Prerequisite: Ceramics 2

This is an advanced studio art course for students who wish to create ambitious and/or large-scale works in clay. Students will learn modern trends in ceramic art and develop a concentration of art pieces that explore their choice of handbuilt pottery, wheelthrown pottery, or clay sculpture with an emphasis on creativity, composition, and craft. Students will learn and participate in the kiln loading and firing process. Significant ceramic art from the past and present will be studied. Recommended for the student who was successful in, Ceramics 2. *Honors Option is available (AR56175).*

Semesters: 1

Additional courses offered at Addison Trail HS:

AR66145 Artistic Photography

Prerequisite: None

This is a course for students who want to visually express themselves through a combination of photographic and artistic techniques. This course is open to students who have no experience in photography or students who have taken a photography course and want to take their skills to the next level. Students will learn basic photo composition, black and white darkroom techniques and digital photography. Students will investigate the use of photography for the communication of ideas through an understanding of the elements of art and principles of design using Adobe Photoshop to edit, process, and print high quality, professional photographs. This course will also investigate mixed media techniques using photographic imagery with a mixture of traditional art media and techniques compiled in portfolio of their work.

Semesters: 1

Additional courses offered at Willowbrook HS:

AR55305 Jewelry/Sculpture

Prerequisite: Intro to Art 3-D or Intro to Art 2-D.

This course is designed for students to explore 3-Dimensional art and design on both a small and large scale. Original art jewelry will be explored in glass, copper, brass, silver, and semi-precious stone setting, and original sculpture will be explored in clay, wood, wire, glass, plaster, and found objects with an emphasis on creativity, composition, and craft. Both additive and subtractive jewelry and sculpture processes will be explored along with mold making processes. Significant jewelry and sculpture from the past and current art trends of the present will be studied. *Honors Option is available (AR65305).*

Semesters: 1

AR65125 Game Design 1

Prerequisite: Introduction to 2-D or Introduction to 3-D or Animation and Cartoon Drawing 1 or Graphic Design 1.

Prerequisite waived for seniors.

This is a class that will teach visual and audio game design through game mechanics, player design with animation and the principles of modeling environmental levels. The students will use current software programs to design games from concept through final production utilizing special effects and terrain rendering for game levels. *Honors Option is available (AR65165).*

Semesters: 1

AR65155 Game Design 2

Prerequisite: Game Design 1

This course will continue to investigate the visual and audio game design fundamentals through game mechanics in the integrated development environment which allows the student to control all game details such as path finding, physics, object interaction, particles and data structure. Students will use current software to design complex games from concept through final production implementing previously learned techniques to advance game development into multi-platform and multi-player games for mobile devices, computers and the internet. *Honors Option is available (AR65175).*

Semesters: 1



CAREER AND TECHNICAL EDUCATION – BUSINESS EDUCATION

BU55013 Introduction to Business

This course presents the everyday business activities that the student will experience in his or her own personal life. It is a general orientation course in the business field, including such topics for exploration as business careers, money management, investing, banking services, consumerism, and types of insurance. The course contributes to a better understanding of American business and where we as consumers and business persons will fit into this social and economic environment. **This course meets the consumer education graduation requirement and one elective graduation requirement.**

Semesters: 2

BU55023 Sheltered Introduction to Business

This course introduces English learners to consumer problems that may be encountered now and in their adult years. Placement in this class is based on recommendations of both the Literacy and Guidance departments. The topics covered in class relate to everyday living situations and help prepare individuals for making wise purchasing decisions in the marketplace. Some of the areas of study include: budgeting, savings, checking accounts, comparison-shopping, using credit wisely, deceptive advertising practices, taxation, and various consumer protection laws. **This course meets the consumer education graduation requirement.**

Semesters: 2

BU55035 Keyboarding/Word Processing 1

This semester course is strongly recommended for college-bound students as well as those students interested in entering the workforce. The objective of this course is to develop the skills necessary to accurately keyboard and word process reports, letters, outlines, and a variety of materials that the individual may have occasion to use. The objective of this course is to develop the skills necessary to type and format material for personal, professional and school use quickly and accurately. Students will learn basic Microsoft Word functions to complete business documents. *Dual credit option is available through the College of DuPage.*

Semesters: 1

BU55065 Consumer Management

BU55395 Sheltered Consumer Management

This one-semester course focuses on specific consumer problems that students will encounter now and as an adult. This subject relates to everyday living and helps prepare individuals for making wise purchasing decisions. Topics include: budgeting, saving/checking, investments, comparison-shopping, using credit wisely, tax preparation, insurance, advertising practices, labor relations, and various consumer protection laws. **This course meets the consumer education graduation requirement.**

Semesters: 1

BU56065 Consumer Management - Online Blend

This one-semester course focuses on specific consumer problems that students will encounter now and as an adult. This subject relates to everyday living and helps prepare individuals for making wise purchasing decisions. Topics include: budgeting, saving/checking, investments, comparison-shopping, using credit wisely, tax preparation, insurance, advertising practices, labor relations, and various consumer protection laws. **This course meets the consumer education graduation requirement. This SECTION is online - meeting physically for specific instruction and assessments; however, a majority of the work - including uploading assignments and student blogged responses - will be individual and kept on a calendar pace with the Instructor.**

Semesters: 1

BU55073 Accounting 1

This course is highly recommended for students who plan to study any field of business in college. The study of accounting emphasizes the accounting principles and concepts necessary to process financial data. Students acquire the background essential for a solid foundation for the further study of accounting, as well as work in a wide range of accounting, clerical, and data processing jobs or any other business field. Computerized accounting software and spreadsheets are integrated into the curriculum. Accounting simulations are used to bring the content to life and show real life applications. *Honors Option is available (BU55343).*

Semesters: 2

BU55083 Accounting 2 - Honors

Prerequisite: Accounting I, and/or teacher recommendation.

This course is highly recommended for students who plan to study any field of business in college. This is an introductory college accounting course. It includes departmentalized accounting, cost accounting, accruals, deferrals, controlling financial resources, accounting for partnerships and corporations. Computerized accounting software and spreadsheets are integrated.

Dual credit option is available through the College of DuPage at WBHS.

Semesters: 2

BU55125 Business Law

This course informs the student of everyday law. The course discusses one's legal rights and benefits as well as one's legal duties, obligations, and liabilities. Topics covered in business law include criminal and civil law, contracts, juvenile law, and a variety of current legal issues that arise. Debates, court house field trip, and mock trial are excitingly included.

Honors Option is available (BU55155).

Semesters: 1

BU55136 Entrepreneurship

Managers play an important role in the success of a business. This course prepares students with the skills managers need to make a positive impact on implementing change in the workplace. Topics include characteristics of good leadership, motivational strategies, the study of entrepreneurs, writing a business plan, marketing, types of ownership, accounting, and completing a business simulation. The course explores all aspects of business operation and investigates new and popular trends in business management—including up to date software simulations.

Honors Option is available (BU55165).

Semesters: 1

BU55275 Marketing – Sports and Entertainment Focus

Learn the basic concepts of Marketing in the Sports and Entertainment Industry. The student will study the four P's of marketing—product, price, place, and promotion; including topics such as marketing research, sponsorships, endorsements, advertising, logos, and promotion planning. Classroom instruction will be reinforced through current events, case studies, individual and group projects, as well as computer simulations. Students can participate in field trip opportunities as well.

Honors Option is available (BU55285).

Semesters: 1

BU55555 College & Career Technology

Don't be left out when it comes to learning and knowing how to use Microsoft Office Suite. Learn word processing, database, spreadsheet, and presentation applications (Microsoft Word, Access, Excel, and PowerPoint) and how to integrate them all together. In addition, students will explore and use free online resources. These are skills you should know whether you plan on going to college or entering the world of work immediately. Keyboarding/Word Processing highly recommended or ability to key with speed and accuracy. *Honors Option is available (BU55565). Dual credit option is through the College of DuPage.*

Semesters: 1

Additional courses offered at Addison Trail HS:

BU55503 Culinary 3 Hospitality - Business

BU55505 Culinary 3 Hospitality - Business S1

Prerequisite: Culinary 1 and 2 or TWO semesters of Business

This is two-period capstone course that is sponsored by Addison Trail, local hotels, restaurants, and other hospitality establishments. Students who have completed two semesters of a business course, and with teacher approval will be eligible to enroll in this course. Students will gain experience with duties performed in the hotel, restaurant, and travel industry, as well as earn their Food Manager Certification, while using the newly renovated kitchen. Class time consists of various projects including food preparation, concessions, computer lab time, and speakers. When on the cooperating site, the students will shadow/train with hotel personnel. Finally, students have the opportunity to earn Dual Credit. **Students must sign up for both periods (BU55503 and FC55503 or BU55505 and FC55505) of this course. Industry certification opportunity available.**

Semesters: 2

BU65143 / BU65163 Work Program - Business

BU65153 / BU65173 Advanced Work Program - Business

Work Program is designed to provide students with an opportunity to develop real-world work experience for academic credit. The students will receive one period of instruction in the classroom each day and will also spend a minimum of 15 hours per week on a job in the community, thereby earning two credits per semester. Classroom instruction during the school day focuses on

developing business-oriented vocabulary, the job application process, employment reading skills, utilizing a variety of computer applications commonly found in a work environment—Microsoft Office Suite, work related business math skills, marketing and office related concepts, and emphasis on human relations skills. Students can also participate in national professional associations, called BPA or DECA, where they have the opportunity to compete in area, state, and national competitions.

Semesters: 2

Additional courses offered at Willowbrook HS:

EN55325 Public Speaking and Communications/Technology (Course is also listed under English)

Prerequisite: Sophomore standing

This course is an integrated English/Business Education course designed to teach students the basic elements of oral communication in combination with technology. Students will perform several different types of speeches utilizing presentation software. The class also will stress research, listening skills, and the impact technology can bring to the communication process.

This course is one semester/one period and fulfills the Speech graduation requirement. *Dual credit option is available through the College of DuPage at WBHS.*

Semesters: 1

BU55265 Business Explorations

This course will provide students with basic career management tools required in today's workforce, which includes how to design an impressive resume and cover letter. The class is designed to prepare students to successfully enter today's rapidly changing job market and develop skills to ensure lifelong career success. One of the main objectives of the course is to allow students to examine a variety of employment opportunities in the business world that range from professional careers to those that involve technical and service-based training. Areas of study will include desktop publishing, accounting, advertising, international business and management and website publishing skills.

Semesters: 1

CAREER AND TECHNICAL EDUCATION – FAMILY & CONSUMER SCIENCES



FC15125 Human Growth and Child Development

Students explore topics focusing on child growth and care from conception through childhood with emphasis on the techniques and skills necessary to promote healthy physical, social, emotional, intellectual and moral development. This course incorporates concepts from child psychology, educational research, biology, sociology and philosophy. Students will spend a full weekend with a computerized baby to further their understanding of the care needed for an infant. Illinois Gateways Early Childhood certification is available. **Industry certification opportunity available.**

Semesters: 1

FC25125 Preschool I

Prerequisite: Human Growth and Child Development

Students will apply the knowledge that they learned in Human Growth & Child Development, in the preschool lab setting. Children from the community attend The Little Blazer Preschool (AT) and Little Warrior Preschool (WB) which is directed by the course instructor and the assistance of the high school students. Students will have the opportunity to observe the preschoolers as well as work with each child on a one on one basis. The course curriculum includes positive guidance techniques, observation skills, reflection and additional information that can be used in Preschool II and a future career related to young children. Illinois Gateways Early Childhood certification is available. **Industry certification opportunity available.** *Note: When taking Pre-School I and II in sequence (recommended), it is considered a year-long course and the first semester final exam is required.*

Semesters: 1

FC35125 Preschool II Practicum

Prerequisite: Preschool I

Students will research, explore and implement the most current teaching trends and techniques children with a variety of needs in The Little Blazer Preschool (AT) and Little Warrior Preschool (WB). Students will apply the knowledge and practice the skills gained in previous courses. Students will gain further knowledge about a career in education and other child related professions.

Semesters: 1

FC45125 Preschool Teaching Internship

Prerequisite: Preschool II and teacher approval

Grades 11-12

This internship opportunity is given those students who have successfully completed Human Growth & Child Development, Preschool I and Preschool II and have been given permission, after an application process, to enroll in this course. As an advanced continuation of Preschool II, the student works as an individual lead teacher in the Little Blazer Preschool (AT) or Little Warrior Preschool (WB) acting as a facilitator to those students enrolled in Preschool I and/or II. The student will further their education and knowledge in working with young children by conducting research, observing, planning, implementing and individual reflection. The student will work closely with the classroom teacher who will guide them in throughout the course.

AED, CPR, and First Aid Certification Available. Honors Option is available (FC45135).

Semesters: 1

FC55115 Interior Design

This performance based course is designed for the student interested in the study of interior design. Emphasis is upon the application of art design principles to achieve effective interiors. Units of study include: personal needs and housing, historical development, consumer issues, elements and principles of design, floor plans, and construction basics of the interior design industry.

Semesters: 1

FC55305 Culinary Arts 1

This course combines both a classroom setting and a laboratory experience. The course focuses on kitchen safety and sanitation, recipe selection and reading, food assembly techniques, and the nutritional value of basic recipes. This course is designed for both everyday cooking and those aspiring to work in the food service industry.

Semesters: 1

FC55405 Culinary Arts 2

Prerequisite: Culinary Arts 1

This laboratory course expands upon the knowledge and culinary skills obtained in Culinary Arts 1. Emphasis will be on the exploration of American regional cuisines, meal planning, more advanced cooking/preparation skills and careers within the food service industry. Food Handler Certification available through instructors. See Culinary 3 (AT and WB Only courses listed below) for students looking to continue in culinary arts after completion of Culinary Arts 2. **Industry certification opportunity available.**

Semesters: 1

FC55523 Culinary Explorations

This course is designed to provide opportunities for life and career skills through the exploration of a variety of culinary learning experiences. This course will include general education students who will serve as peer leaders and coaches in the class. The peer leaders will learn interpersonal and intrapersonal communication skills as they facilitate culinary labs for the special education students. This course is highly recommended for those students interested in pursuing a career in the education field.

Semesters: 2

Additional courses offered at Addison Trail HS:

FC55503 Culinary Arts 3 - Hospitality

FC55505 Culinary Arts 3 - Hospitality S1

Prerequisite: Culinary 1 and 2 or TWO semesters of Business

Be a part of the #1 growing industry in Illinois, as well as across the country. This is two-period capstone course is sponsored by Addison Trail, local hotels, restaurants, and other hospitality establishments. Students who have completed both Culinary 1 and Culinary 2 will be eligible to enroll in this course. Students will gain experience with duties performed in the hotel, restaurant, and travel industry, as well as earn their Food Manager Certification, while using the newly renovated kitchen. Learn both the culinary side as well as the Business/Hospitality side of the industry. Learn hands on within our own classroom and at outside facilities. Students have the opportunity to earn Dual Credit. **Industry certification opportunity available.**

Students must sign up for both Business and FACS periods (BU55503 and FC55503 or BU55505 and FC55505) of this course. *Dual credit option is through the College of DuPage.*

Semesters: 2

FC45055 Food for Life

Prerequisite: Senior Status

This laboratory course provides cooking skills and techniques that will aid in successful independent living upon graduation. The focus is upon tips for making wise nutritional and economical food choices, and cooking techniques to prepare simple, well-balanced snacks/meals. ***Dual credit option is available at ATHS through College of DuPage.***

Semesters: 1

FC55035 Fashion & Apparel Construction 1

This hands-on, performance based class is designed for the students interested in all aspects of the fashion apparel industry. Emphasis is upon fashion trends, color theory, pattern and fabric selection, machine operation, construction techniques, and construction of a simple garment. \

Semesters: 1

FC55045 Fashion & Apparel Construction 2

Prerequisite: Fashion & Apparel Construction 1

This hands-on, performance based class focuses primarily on basic clothing construction techniques including equipment, practical skills, and sewing processes in the apparel manufacturing industry. Students will read and interpret patterns to create a variety of garments using self-selected projects and suitable fabrics.

Semesters: 1

FC55185 Advanced Clothing Construction

Prerequisite: Fashion & Apparel Construction 2

This hands-on, performance based is a continuation of Fashion & Apparel Construction 2. It focuses on further in-depth exploration of advanced clothing construction techniques and advanced equipment operations. Emphasis on the quality of construction including fit methods.

Semesters: 1

Additional courses offered at Willowbrook HS:

FC55235 Fashion & Apparel Design

This hands-on, performance based class is designed for the student interested in all aspects of the fashion apparel industry. Emphasis is upon fashion trends, methods of basic fashion design, design principles, color theory, and personal fashion analysis. Using the skill of sketching for a variety of garments, students will design a fashion line as their final project.

Semesters: 1

PE55053 Fitness & Nutrition

Prerequisite: Junior or Senior status

This course is an inter-departmental course taught by the Physical Education and Family & Consumer Science departments. The focus of the course is upon physical fitness activities that can be pursued into adulthood and today's nutritional needs. Included topics are body composition testing, computer dietary analysis, laboratory experiences in nutritional food preparations and physical conditioning activities, like yoga. **This course can fulfill daily PE requirement. Dual credit option is available through the College of DuPage at WBHS.**

Semesters: 2

FC55303 Culinary Arts 3 - Catering

Prerequisite: Culinary Arts 1 and 2

Students in grades 10, 11, 12 will learn how to operate a small catering business located at the high school. Course content will include food preparation including plating and garnishing, serving food on occasion, and addressing the cleanup activities that follow. Students gain real life experience along with high school credit as part of their school day. Activities include planning, scaling recipes, ordering of groceries, and figuring costs in a lab setting. Opportunities to work with clients to determine themes and menus for morning, afternoon, and evening events will be included. Students should expect to work some hours before/after the school day throughout the semester/year as is typical in the Hospitality industry. This course is designed for students having an interest in food service as a possible career. Food Safety and Sanitation Managerial Certification available. **Industry certification opportunity available. Honors Option is available (FC55313). Dual credit option is available through the College of DuPage at WBHS.**

Semesters: 2; 1 or 2 period block; repeatable

FC55503 Culinary Arts 3 - Hospitality

Prerequisite: Culinary 1 and 2*

Be a part of the #1 growing industry in Illinois, as well as across the country. This one-period capstone course is sponsored by Willowbrook local hotels, restaurants, and other hospitality establishments. Students who have completed both Culinary 1 and Culinary 2 will be eligible to enroll in this course. Students will gain experience with duties performed in the hotel, restaurant, and travel industry, as well as earn their FSSM Certification, while using the newly renovated kitchen. Learn both the culinary side as well as the Business/Hospitality side of the industry. Learn hands on within our own classroom and at outside facilities. Students have the opportunity to earn Dual Credit. ***Honors Option is available (FC55513) Industry certification opportunity available. Dual credit option is through the College of DuPage.***

Semesters: 2

CAREER AND TECHNICAL EDUCATION – INDUSTRY AND TECHNOLOGY



IT25043 Automotive Technology 1

Prerequisite: None

This course consists of an in depth study of the following vehicle systems: engine mechanical, electrical, starting and charging. In each of these areas the students will learn about the modern parts, operation, diagnosis and repair of the system. Modern tools and diagnostic procedures will be stressed. The student will work toward developing mechanical skills, technical knowledge, and manipulative operations necessary for entry-level employment in the automotive field. Time is split between the classroom and lab. Most units will entail a service component that will resemble a job-shop situation where students are working on live vehicles that are currently being driven on the road. Safety glasses and coveralls required (cost of overalls is estimated to be \$35.00 at AT).

Dual credit option is available for through College of DuPage.

Semesters: 2

IT65063 Automotive Technology 2

Prerequisites: Automotive Technology 1

This course consists of an in depth study of the following vehicle systems: tires, braking, fuel, and computerized engine performance. In each of these areas the students will learn about the modern parts, operation, diagnosis, troubleshooting, and repair of the system. Modern tools and diagnostic procedures will be stressed along with use of analyzers and scanners. The student will work toward developing mechanical skills, technical knowledge, and manipulative operations necessary for entry-level employment in the automotive field. Time is split between the classroom and lab. Most units will entail a service component that will resemble a job-shop situation where students are working on live vehicles that are currently being driven on the road. Safety glasses and coveralls required (cost of overalls is estimated to be \$35.00 at AT). ***Dual credit option is available for through College of DuPage.***

Semesters: 2

IT66063 Automotive Technology 3

Prerequisite: Automotive Technology 2

This course consists of an in depth study of a variety of vehicle systems including but not limited to: , air conditioning, manual transmissions and driveline, automatic transmissions, and electrical systems In each of these areas the students will learn about the modern parts, operation, diagnosis and repair of the system. Modern tools and diagnostic procedures will be stressed. The student will work toward developing mechanical skills, technical knowledge, and manipulative operations necessary for entry-level employment in the automotive field. Time is split between the classroom and lab. Most units will entail a service component that will resemble a job-shop situation where students are working on live vehicles that are currently being driven on the road. Safety glasses and coveralls required. Continuation of text from Automotive Technology 2. SkillsUSA, and Autos certification available.

Industry certification opportunity available. *Dual credit option is available for through College of DuPage.*

Semesters: 2 (2 Periods per day at AT/WB)

IT66083 Automotive Technology 4

Prerequisite: Automotive Technology 1, 2 and 3

This course consists of an in-depth study of steering, suspension and alignment on today's modern automobile. Students will learn about the parts, operation, diagnosis and repair of the systems. Most labs will be completed on live vehicles that are currently being driven on the road. Customer service and customer interaction are also covered and put into practice during this course. Students will be required to diagnose steering, suspension and alignment problems, quote the repair to the customer and then complete the repair. **Safety glasses and coveralls required. *Honors Option is available***

Dual credit option is available for through College of DuPage.

Semesters: 2

IT66093 Automotive Technology 5

Prerequisite: Automotive Technology 1, 2, 3 and 4

This course consists of an in-depth study of the vehicle emission system and hybrid vehicles. Students will spend time working on practicing diagnosis of vehicle engine performance and emission failures along with electrical diagnosis. Most labs will be completed on live vehicles that are currently being driven on the road. Customer service and customer interaction are also covered and put into practice during this course. Students will be required to diagnose quote the repair to the customer and then complete the repair. **Industry certification opportunity available. Safety glasses and coveralls required.**

Honors Option is available

Semesters: 2

IT55125 Photography 1

Prerequisite: None

This is an introductory course in which students will learn basic photographic processes— including black and white film and digital photography. This course covers the technical areas of photography, but stresses the proper practices and techniques as they apply to taking and printing of good pictures. Areas to be covered include: history of photography, camera types, light, lenses, camera handling, film, composition, filters and color. The program focuses on camera operation, film processing, printmaking and presentation. Students will also investigate the use of photography for the communication of ideas through an understanding of the elements of art and principles of design as well as Adobe Photoshop to edit, process, and print high quality, professional photographs. *Honors Option is available (IT25125). Dual credit option is available through the College of DuPage.*

Semesters: 1

IT55135 Photography 2

Prerequisite: Photography 1

This is an advanced level course that will expand the student's knowledge and skill with the photographic medium, as well as utilizing black and white and digital photography techniques. Students will investigate fine printmaking techniques and the use of different films and papers as well as working with studio and commercial lighting and proper techniques for flash photography and use of Advanced Adobe Photoshop. Students will employ a more extensive manipulation of images and alternative process techniques. Students will learn processes and do assignments similar to those demanded of a professional photographer. *Honors Option is available (IT25135). Dual credit option is available through the College of DuPage.*

Semesters: 1

IT55335 Architectural Drafting

This course will explore the options, careers, education and skills related to architecture and building construction. It will focus primarily on residential design and the required drawings for constructing buildings ranging from as small as a shed or garage up to large houses. Topics will include building codes, construction plans, room layouts, roofing and more. Students will learn principles of CAD Drafting software and design as well as modeling with balsa wood and foam core board. *Honors Option is available (IT55335). Dual credit option is available through the College of DuPage at WBHS.*

Semesters: 1

IT65035 Building Trades 1 (formerly Home Repair & Maintenance)

This course is designed for students interested in completing some of their own home maintenance and repair work and for those who may be interested in learning about a career in the building trades. Students learn the basic information and techniques necessary to use the major tools and various building materials required for routine repair and maintenance of a residential structure and its systems, including exterior and interior walls, roofs, windows, plumbing, masonry, and insulation. Students will work independently, in a large group, and/or in pairs while going through individual units of study throughout this course. Safety Glasses are required.

Semesters: 1

IT65045 Building Trades 2

Prerequisite: Building Trades 1 or Home Repair & Maintenance

This course is a continuation of Building Trades 1 (formerly Home Repair and Maintenance). Students will advance their skills in several areas of building trades, including blueprint reading & implementation, floor framing, concrete & masonry work, roof framing, and steel construction. Students will apply knowledge and skills learned in the previous course and build upon those as well as learn new higher level skills to accomplish designated projects. Students will also have the opportunity to earn OSHA 10 Certification. Students will work independently and in groups throughout the course. **Safety glasses are required for this course.** *Dual Credit option pending through the College of DuPage.*

Semesters: 1

IT65185 Woods 1

This course will introduce students to basic woodworking skills. Students will learn how to properly operate and maintain woodworking tools and machines, learn to identify different types of wood, and the characteristics of various types of woods while completing basic projects. This is primarily a hands-on lab course where students learn through demonstration and project-based learning activities. Students will have the opportunity to earn certification on specific machines through the Woodworkers Career Alliance. Through the completion of projects and classroom activities, students will learn and improve skills in safety, organization, basic math, project planning, and reading. These skills establish a foundation for advanced woods, careers in the building trades, and/or an introduction to a rewarding hobby. Safety glasses are required. **Industry certification opportunity available.**

Semesters: 1

IT55315 Woods 2

Prerequisite: Woods 1

This course is a continuation of Woods 1 where students will enhance their woodworking skills by creating more complex projects that require them to follow proper project planning guidelines, safety procedures, machine operation techniques, and finishing techniques. Students will continue earning certification on specific machines through the Woodworkers Career Alliance. This is primarily a hands-on lab activity course with projects to reinforce student learning. Safety glasses are required. **Industry certification opportunity available.**

Semesters: 1

IT55301 Advanced Woods S1

IT55302 Advanced Woods S2

Prerequisite: Woods 2

This course is a continuation of Woods 1 and 2 where students will enhance their woodworking skills by focusing on the production part of woodworking, learning how to design and create projects to be mass produced. Students will learn the importance of creating a prototype and then making jigs and fixtures to make the process more efficient. This will require them to follow proper project planning guidelines, safety procedures, machine operation techniques, and finishing techniques. Students will continue earning certification on specific machines through the Woodworkers Career Alliance. This is primarily a hands-on lab activity course with projects to reinforce student learning. Students will work on teacher approved projects throughout the semester. Safety glasses are required. **Industry certification opportunity available.**

Honors Option is available

Semesters: 1

IT55215 Computer Repair - Servicing

Prerequisite: None

This course is designed to equip beginner and semi-experienced students with entry-level computer technician proficiencies. The course follows CompTIA A+ Certification objectives for computer hardware. Students will become proficient with computer hardware components including the motherboard, processor, memory, drives, power supplies, and other devices. Classroom activities including demonstrations, videos, and lab work to help master the theory and operation of computer hardware. This course follows industry-recognized curriculum and is strongly recommended for students who have an interest in pursuing Computer Servicing and Technology as a career or as a computer enthusiast. ***Dual Credit option is available through the College of DuPage at WBHS.***

Semesters: 1

IT55425 Advanced Computer Repair

Prerequisite: Computer Repair - Servicing

This course is designed to maintain and service personal computer systems, with an emphasis on advanced hardware, operating systems, troubleshooting, networks, printers, and other peripheral devices. This course will prepare students for CompTIA A+ certification. The A+ certification means that the student can diagnose, repair, configure and install hardware and operating systems. ***Career internship opportunity available for students. Internship details and prerequisite information with sign-up at the start of the course.*** **Industry certification opportunity available.** ***Dual Credit option is available through the College of DuPage at WBHS.***

Semesters: 1

IT66103 Career, Culture, College Explorations

Prerequisite: Successful completion of a level one IT course

This course is designed to provide opportunities for life and career skills through the exploration of a variety of career and technical learning experiences. This course will be aligned to students' transition goals and will scaffold student job-readiness for career coaching experiences in the community. This course will include general education students who will serve as peer leaders and coaches in the class.

Semesters: 2

Additional courses offered at Addison Trail HS:

IT55085 Computer Aided Drafting 1 (Mechanical CAD 1)

In this course the student will learn to use the computer as a drafting and design tool. The basics of machine drawing and design are explored as well as an introduction and utilization of AutoCAD software. Another purpose of this course is to present to the student different types and procedures for drawing pictorial illustrations. Some of the units covered will include isometric drawings, perspective, exploded views, and different types of rendering and 3-D Modeling. AutoCAD is one of the most commonly used drafting software packages in the world today and mastery of its skills can prove to be very valuable in a variety of career fields

including engineering, construction, and manufacturing. *Dual credit option is available through the College of DuPage.*

Semesters: 1

IT55095 Computer Aided Drafting 2 (Mechanical CAD 2)

Prerequisite: CAD 1

In this course the student expands and improves their CAD skills working with Inventor software. In addition, the course is to acquaint the student with a basic fundamental knowledge of manufacturing and engineering. By means of projects, the student will develop proper designs, familiarity with different types of engineering processes, manufacturing basics, and learn different engineering and manufacturing careers. Students interested in manufacturing, or any of the engineering fields would benefit from a study in CAD II. *Honors Option is available (IT55395).*

Semesters: 1

IT55173 Manufacturing Technology

This course consists of an in-depth study of how people convert raw materials into useful usable products. Students will design, build and test their products. This course will also focus on manipulative skills in the safe and proper use of industrial manufacturing machines, (metal – milling, computer CAD/CAM, (computer assisted machining), drill press, lathe, welding, etc.) Safety glasses required. *Dual credit option is available through the College of DuPage.*

Semesters: 2

IT55273 Advanced Manufacturing Technology

Prerequisite: Manufacturing Technology

Students will build on knowledge and skills acquired in the Manufacturing Technology course. This course will focus on more advanced skills associated with various manufacturing processes such as, metals, drill press, lathe, welding, etc. *Dual credit option is available through the College of DuPage.*

Semesters: 2

IT55263 Principles of Technology

Prerequisite: Algebra

This course is designed to acquaint the student with the physical laws of science as they apply to the technological world. Mechanical, fluid, electrical and thermal systems are studied through a laboratory approach that requires data recording and analysis. This course will be useful to those students who are planning on pursuing a career in engineering or in a technical field.

This course fulfills the science requirement to meet graduation requirements.

Semesters: 2

IT65015 Technology Survey I

As the name implies this course allows a student to explore a variety of technical skill areas that they may know little about, and it provides a wide range of student activities related to all areas of technology and engineering education in the areas of: Woodworking, Technical Drawing & CAD, STEM (Science Technology Engineering and Mathematics), Automotive Service and Maintenance, and Small Engines. This broad technical background will aid in making future education and career choices. It is primarily a hands-on lab activity class with discussions to reinforce student learning. Students will be exposed to various career possibilities through discussions in class and lab experiences. Safety glasses are required and may be purchased at registration for approximately \$5.00.

Semesters: 1

Additional courses offered at Willowbrook HS:

IT15113 Introduction to Engineering Design (IED) (Full-Year Course) Project Lead the Way

Prerequisite: None

Introduction to Engineering Design (IED) is a high school level course for students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. IED gives students the opportunity to develop skills and understanding of course concepts through activity-project, and problem-based (APPB) learning. Students will employ engineering and scientific concepts in the solution of engineering design problems. In addition, students use Auto Desk INVENTOR a 3D solid modeling design software package to help them design solutions to solve proposed problems. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges that increase in difficulty throughout the course. *Honors Option is available (IT15123). University credit is available.*

Grades: 9, 10, 11, and 12

Semesters: 2

IT55213 Principles of Engineering (POE) (Full-Year Course) Project Lead the Way

Prerequisite: C or Better in Algebra or Consent of CTE Dept Chair;

Introduction to Engineering recommended but not required

Principles of Engineering (POE) exposes students to major concepts they will encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. Students develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions, along with utilization of a 3D printer and APPB learning. This course will lead to paths of other specializations, including aerospace, biotechnical, civil engineering and architecture, computer integrated manufacturing, digital electronics, and engineering design and development. *Honors Option is available (IT55223). University credit is available.*

Grades: 10, 11, 12

Semesters: 2

IT55333 Civil Engineering and Architecture (Full Year Course) Project Lead the Way

Prerequisite: IED OR Arch CAD 1 OR consent from CTE Dept. Chair

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software. Students design and develop residential and commercial properties using 3D architectural design software. This course will further explore the concepts of architecture and architectural design. Students will also learn about energy efficiency and "green" building practices as well as supplemental construction plans related to electricity, framing practices and detailed plans for bathrooms, residential and commercial. *Honors Option is available (IT55233). University credit is available.*

Grades: 10, 11, and 12

Semesters: 2

IT15133 Digital Electronics (DE) (Full Year Course) Project Lead the WayTW

Prerequisite: IED or Computer Repair or consent from Dept. Chair

Students learn important aspects of development and implementation of electronic components. They apply math, science, and standard engineering practices to design electrical circuits using technology such as robots, sensors and motor controls. Students are introduced to the process of combinational and sequential logic design, engineering standards and technical documentation. They are also exposed to programming integrated circuit kits and microcontrollers. Honors Option is available (*IT15143*)

University credit is available.

Grades: 10, 11, and 12

Semester: 2

IT25045 Automotive Upkeep

Prerequisite: None, **Grades:** 9, 10, 11, and 12

Do you plan on owning a car? This course is designed to introduce students to the basic operation and maintenance of the automobile. Topics covered will be beneficial to ALL current and future car owners, both male and female, and will provide students with the skills necessary for owning and maintaining a car. This course will include classroom demonstrations and lab activities including oil changes, under the hood inspections, under the car inspections, changing and rotating tires, replacement of essential maintenance parts on an automobile, and how to properly care for your vehicle. This is the first step to owning a vehicle. **Safety glasses and coveralls required. Dual credit option is available through the College of DuPage at WBHS.**

Semesters: 1

IT55035 Digital Imaging

Students will explore the many applications of digital media. The focus includes processing, comprehension, storage, printing, and professional display of images. Time will be dedicated to edit and utilize still shots as well as digital video. Student will learn how to manipulate images creatively from various genres including, but not limited to photo editing, illustrations, and typography. The Adobe Create Suite with emphasis in Adobe Photoshop will be used in production of projects. *Honors Option is available (IT55055). Dual credit option is available through the College of DuPage at WBHS.*

Semesters: 1

IT55285 Screen Printing

Prerequisite: None

This is one of the introductory courses in Graphic Communications. It includes study and projects in the areas of layout and design, computer assisted design, desktop publishing, scanning, and an emphasis in screen-printing. Screen-printing is more than T-shirts and reflects a growing employment market. The projects will survey various stencil preparation methods. The projects are designed by the students and printed on a variety of materials. The student will learn the proper techniques and methods for printing on T-shirts, mirrors, posters and paper in single and multiple colors.

Semesters: 1

IT55325 Advanced Screen Printing and Production

Prerequisite: Screen Printing

This course is a continuation of Screen Printing with a greater emphasis on equipment operation, long run production, and the creation of professional screen print designs. Varying levels of specialization are undertaken with emphasis upon the area of the student's choice. Activities and projects will allow students to develop the skills necessary to seek employment in the field of Graphic Communications. After a general level of competency is achieved, specific advanced skill development can be directed into the following areas: desktop publishing, design and screen-printing. Basic math computation skills and the ability to read a ruler are recommended.

Semesters: 1

IT55065 Architectural Drafting and Design 2 (formerly Advanced Architectural Drafting)

This course will explore the fundamentals of hand drafting and architectural conventions. Includes use of tools, lettering, dimensioning, drafting techniques and frame construction vocabulary and terminology. Students will expand their principles of CAD Drafting software and design as well as modeling with wood, board, hand drawings, dimensional drafting, and architectural plans, as well as drafting techniques, foundation plans, wall and stair section, and exterior elevations. *Honors Option is available (IT55075). Dual credit option is available through the College of DuPage at WBHS.*

Semesters: 1

ENGLISH



EN12013 English 9

EN13023 English 9 Honors

These courses combine the study of language and literature, including the short story, the novel, drama, the essay, and the narrative and lyrical poem, with a writing focus. These courses integrate research and writing skills with the study of vocabulary, grammar and literary classics. Special emphasis is given to basic language review, effective sentence writing, and paragraph development. Honors placement is made by the department and is based on teacher recommendation, placement scores, and prior grades. The final grade of the honors course is weighted. *Note: Students enrolled in English 9 Honors will participate in a summer reading program. Either of these two courses satisfies the graduation “writing intensive” requirement.*

Semesters: 2

EN22043 English 10

EN23053 English 10 Honors

Prerequisite: English 9

These courses build upon the language arts skills established in English 9. Thematically-based units of instruction will reflect more difficult literary selections and writing which has more complex structure and vocabulary. Students will study the research process more in depth. Honors placement is made by the department and is based on teacher recommendation, placement scores, and prior grades. The final grade of the honors course is weighted. *Note: Students enrolled in English 10 Honors will participate in a summer reading program. Either of these two courses satisfies the graduation “writing intensive” requirement.*

Semesters: 2

EN32083 English 11

Prerequisite: English 10

This course surveys American literature from the Colonial period to the present. Much attention is given to our American heritage and to the development of American ideals and culture. Well-organized compositions are expected, and there is an extensive library research project. **Either of these two courses satisfies the graduation “writing intensive” requirement.**

Semesters: 2

EN34093 AP English Language and Composition

This course offers a challenging program of literary study and rhetorical analysis designed to prepare the student to take the Advanced Placement Test in Language and Composition. A satisfactory score on this exam could result in students receiving college credit and/or advanced placement in those colleges that accept advanced placement credits. The curriculum includes an emphasis on major American writers and some world authors and philosophers of comparable literary merit. The primary focus will be on American fiction and non-fiction. Students participate in a summer reading program that requires a reading of several texts and the writing of critical responses. This is a high-weighted course. Students will take the AP exam, which currently costs \$89.00. **This course satisfies the English 11 requirement for graduation. Also, this course satisfies the graduation “writing intensive” requirement.** *Note: Students enrolled in AP English Language and Composition will participate in a summer reading program.*

Semesters: 2

EN44133 AP English Literature and Composition

This course offers a challenging program of literary analysis designed to prepare the student to take the Advanced Placement Test in Literature and Composition. A satisfactory score on this exam could result in students receiving college credit and/or advanced placement in those colleges that accept advanced placement credit. The curriculum includes an emphasis on major English and some world authors of comparable merit from Sophocles to Shakespeare with an emphasis on British literature. Students participate in a summer reading program that requires the reading of several texts and the writing of critical responses. This is a high-weighted course. Students will take the AP exam, which currently costs \$89.00. **This course satisfies the graduation “writing intensive” and English 12 requirement.** *Note: Students enrolled in AP English Literature and Composition will participate in a summer reading program.*

Semesters: 2

EN45105 Creative Writing

Students will write, read, and analyze fiction. Several projects may include poetry, a one-act play, a short story, and, time permitting, a children's book. Ongoing work will include brainstorming sessions, literary analysis, practice of fictional writing techniques, definitions of fictional terms, reports on authors, and writer's workshop sessions. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1

EN45123 English 12

Prerequisite: English 11

This course offers a challenging program in American and British fiction as well as nonfiction/informational texts. Extensive research and preparation for college-level writing will be the focus for this course. Analysis of drama including but not limited to an American playwright and Shakespeare. Written and oratorical arguments are created for real audiences and purposes, which will be another facet of this course's college-bound preparation. **This course satisfies the graduation "writing intensive" requirement.**

Semesters: 2

EN45165 New Humanities - Cinema

Prerequisite: English 10 and junior or senior standing.

This course weaves together the study of film, literature, art, philosophy, psychology, history and social issues. It stresses communication, focusing upon the ways that film and required readings relay their messages. Students submit a variety of types of writing assignments: essays, reviews, and critical analyses. New Humanities combines the study of visual and written expression, and emphasizes a variety of thinking skills. This course may contain mature subject matter. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1

EN55075 Public Speaking and Communication

Prerequisite: English 9

This is a course designed to teach students the basic elements of the communication process, further their listening skills, and afford students the opportunity to perform several different types of speeches in front of an audience. This class will stress the research, organization, and nonverbal aspects of speech presentation. Students will also study group dynamics and have the opportunity to work in small groups to discuss current issues. **This course is one semester and is a graduation requirement.**

Semesters: 1

EN55135 Introduction to Theatre Arts

This fine arts class is open to all students and is a full-credit, one semester English course. It will provide an overview of the Theatre Arts, from historical perspectives to current theatre. It will focus on various areas of theatre; the technical areas (including scenery, lights, props, costumes); the performance areas (including mime, improv and basic acting skills); and production concerns. Students will complete various projects demonstrating skills in these areas, including putting on their own performances. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1

EN55265 Acting 1

Prerequisite: Acting I. This course may be taken 9th through 12th grade.

Students work on analyzing and developing characters in order to perform scenes. Fun and dynamic units on film and television, pantomime, improvisation and ensemble building will prepare students for the final performance project. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1

EN55275 Advanced Acting

Prerequisite: Acting I. This course may be taken 9th through 12th grade.

For the serious actor! Students will read, analyze and perform modern comedy/drama and Shakespeare. Students will also learn to master audition, improvisation, movement and vocal skills. They will also explore the personal/societal history of their characters and synthesize improvisation, movement, and vocal work into character development. Performances include monologues, scenes, and potentially a play. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1

EN55323 Publications

Prerequisite: None. This course may be taken multiple times in 9th through 12th grade.

Capture history in the making! Those who would like to demonstrate a proficiency in writing or layout design can register for this course. Publications teaches layout and design for several publications, focusing on yearbook and newspaper formatting. Staff members conduct interviews, write stories, take photographs, edit, and use computers to design page-layouts. Students should demonstrate some proficiency in writing or computer skills and be capable of working independently. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 2

Additional courses offered at Addison Trail HS:

EN22075 Journalism

Students electing this course will concentrate on developing their communication skills in the collecting, writing, and editing of news. In addition to reading, interpreting, and evaluating newspaper information, they will learn about the rights, responsibilities, and power of the press. Class activities will focus on helping students become effective communicators, responsible journalists, and thoughtful consumers of media. This course will not count as a graduation credit; however, the course will be an elective credit. *Honors option available (EN22085).*

Semesters: 1

EN32083 American Studies English 11

This course is open to all juniors and will satisfy the requirements for English 11. Two periods count for American history and English 11 graduation requirements. An English teacher and a history teacher cooperate to develop important themes in American culture; students learn connections between our country's literature and its history. In addition to history and literature, American Studies explores other aspects of our culture such as art, music, and architecture. Additional resources outside the traditional classroom, supplemental speakers, and field trips are also used to enrich the American Studies curriculum. The classes frequently cooperate on common projects designed to help develop reading, writing and thinking skills. American Studies meets for two consecutive periods, and two credits in English and two credits in American History are earned for the year's study. An extensive research project is required. **This course satisfies the graduation "writing intensive" requirement.**

Semesters: 2 (2 periods per day)

Additional courses offered at Willowbrook HS:

EN55325 Public Speaking and Communications/Technology

Prerequisite: English 9

This course is an integrated English/Business Education course designed to teach students the basic elements of oral communication in combination with technology. Students will perform several different types of speeches utilizing presentation software. The class also will stress research, listening skills, and the impact technology can bring to the communication process.

This course is one semester/one period and fulfills the Speech graduation requirement. Dual credit option is available and is earned in CTE through the College of DuPage at WBHS

Semesters: 1

EN55235 Mass Communication

Prerequisite: Public Speaking and Communication

The purpose of this class is to give students the opportunity to develop skills necessary to present facts, ideas, or information in a number of different formats which include informative speeches, persuasive speeches, debate and news broadcast. Students will learn different techniques in analyzing audiences, interviewing skills and oral presentation skills. Students will be introduced to mass media and its effectiveness in our society. This course will not count as a graduation credit; however, the course will be an elective credit.

Semesters: 1



ENGLISH LEARNERS (ELs)

ES15013 ESL 1 (Beginning)

ES15513 ESL 1 Language Skills

This program offers English skill instruction and reading instruction. This beginning level ESL course is designed for students who need intensive entry-level assistance with listening, speaking, reading and writing English. Students receive both English and reading credit for their work. Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.

Semesters: 2

(2-English credits), (2-Reading credits), (2-elective credits)

ES25023 ESL 2 (Intermediate)

This two-period program consists of one (1) period of English instruction and one (1) period of reading. Students continue to develop and strengthen literacy skills in listening, speaking, reading and writing English. Students receive both English and reading credit for their work. Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.

Semesters: 2

(2-English credits), (2-Reading credits)

ES35033 ESL 3 (Advanced)

This two-period program consists of one (1) period of English instruction and one (1) period of reading. Students interpersonal language may have reached the level of a native speaker, but their academic language proficiency still places them at a disadvantage in content area classes taught in English. Emphasis is on attaining the English literacy skills needed to transition out of ESL classes. Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.

Semesters: 2

(2-English credits), (2-Reading credits)

ES55061/ES55062 ESL Language Assistance S1/S2

Students enrolled in ESL are entitled to receive academic assistance in all content area classes. These academic resources are designed to meet the individual needs of the students' in academic skills building, homework assistance and personalized goal setting.

Semesters: 1 & 2

**Sheltered/ bilingual content area course descriptions are available through other departments to English Learners who need language assistance with content material. Below represents the list of other courses offered in the content areas to English Learners:*

BU55395 Sheltered Consumer Management	SS32183 Sheltered United States History
BU55023 Sheltered Introduction to Business	SS35303 Bilingual U.S. History
MA12323 Bilingual Algebra	SS32165 Sheltered United States Government
MA12333 Sheltered Algebra	SS45295 Bilingual United States Government
MA22353 Sheltered Geometry	SS45175 Sheltered Economics
MA12343 Sheltered Algebra 2	SS42155 Bilingual Economics
MA12123 Sheltered Pre-Algebra	SS12163 Sheltered Human Geography
PE15035 Sheltered Health	SS12133 Bilingual Human Geography
PE24245S1/PE24245S2 Sheltered Driver Education	RD15073 Reading ESL I
SC12173 Bilingual Biology	RD25083 Reading ESL II
SC31173 Bilingual Chemistry	RD35093 Reading ESL III
SC41173 Bilingual Physics	
SC11223 Sheltered Biology	
SC31073 Sheltered Chemistry	
SC42123 Sheltered Physics	

MATHEMATICS



MA12063 Algebra

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

Algebra is designed to prepare students to use algebraic concepts, terms, and symbols to solve problems. The course includes performing operations on real numbers and algebraic expression, solving equations in one and two variables, solving quadratic equations, using graph relationships, and data analysis.

Semesters: 2

MA22063 Algebra Geometry Honors

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

This honors level course will replace the current Honors Algebra course. Algebra with Geometry is designed for students who have mastered the first semester of Algebra 1 objectives and specific objectives within Geometry. The course will allow students to complete Algebra 1 and Geometry within one year and meet the Algebra and Geometry graduation requirement.

Semesters: 2

MA12323 Bilingual Algebra

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

This course for Spanish-speaking students is designed to prepare students to use algebraic concepts, terms, and symbols to solve problems. The course includes performing operations of real numbers and algebraic expression, solving equations in one and two variables, solving quadratic equations, using graph relationships, and data analysis.

Semesters: 2

MA12333 Sheltered Algebra

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

This course for the student with limited English proficiency is designed to prepare students to use algebraic concepts, terms, and symbols to solve problems. The course includes performing operations of real numbers and algebraic expression, solving equations in one and two variables, solving quadratic equations, using graph relationships, and data analysis.

Semesters: 2

MA22073 Geometry

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

Geometry is the study of plane Geometry and includes some three-dimensional Geometry. Algebra is used as a tool to enhance the understanding of geometric concepts.

Semesters: 2

MA22353 Sheltered Geometry

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

This course for the student with limited English proficiency is the study of plane Geometry and includes some three-dimensional Geometry. Algebra is used as a tool to enhance the understanding of geometric concepts.

Semesters: 2

MA23083 Geometry Honors

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

Geometry Honors is the study of the mathematical system that develops plane and solid geometry through formal proof. In depth Algebra applications are used throughout the course.

Semesters: 2

MA32093 Advanced Algebra and Trigonometry

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

Advanced Algebra and Trigonometry is designed to reinforce and expand algebraic concepts. The following advanced algebra topics will be covered: solving equations; systems of linear equations; quadratic equations; operations with polynomials; radicals; quadratic relations and systems; conic sections; exponential functions, logarithms and trigonometry

Semesters: 2

MA33103 Advanced Algebra and Trigonometry Honors

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

This course contains the traditional topics of an advanced algebra course in addition to trigonometry, sequences and series, matrices. A graphing calculator is used throughout the course.

Semesters: 2

MA33123 Algebra 2

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

Algebra 2 is designed to reinforce and expand algebraic concepts. The following algebra topics will be covered: the set of complex numbers; solving equations; systems of linear equations; linear inequalities; systems of linear inequalities; quadratic equations; operations with polynomials; radicals; quadratic relations and systems; conic sections; exponential functions; and logarithms.

Semesters: 2

MA42123 Precalculus

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

Precalculus prepares the student for the study of calculus. Topics include sequences and series; polynomial functions; exponential and logarithmic functions; analytic geometry; complex numbers; trigonometry and circular functions.

Semesters: 2

MA43133 Precalculus Honors

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

This course prepares the student for the study of calculus. Topics include sequences, series, limits; polynomials, rationals, logarithmic, and exponential functions; analytic geometry; complex numbers; trigonometry, parametric equations, circular functions; polar coordinates; vectors and determinants.

Semesters: 2

MA44213 AP Calculus AB

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

Calculus AB is designed to prepare the student for the Calculus AB Advanced Placement Examination. A satisfactory score on this exam could give the student credit and advanced placement at college. This course includes limits and continuity; differentiation of algebraic functions; applications of the derivative; the definite integral; trigonometric and exponential functions; formal integration; applications of the integral.

Semesters: 2

MA44223 AP Calculus BC

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

Calculus BC is designed to prepare the student for the Calculus BC Advanced Placement Examination. A satisfactory score on this exam could give the student credit and advanced placement at college. This course includes limits and continuity; differentiation of algebraic functions; applications of the derivative; the definite integral; trigonometric and exponential functions; formal integration; applications of the integral, polar coordinates; vectors; parametrically defined functions; sequences and series; elementary differential equations.

Semesters: 2

MA44243 AP Statistics

Calculator Requirement: Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed

Statistics is designed to prepare the student for the Statistics Advanced Placement Examination. A satisfactory score on this exam could give the student credit and advanced placement in college. This course includes analysis of data, planning and conducting a research study, producing models using probability and simulation, and methods of statistical inference. Students who plan to take an AP science course in their senior year will benefit greatly from AP Statistics in the junior year.

Semesters: 2

MA55213 Quantitative Literacy and Statistics

Calculator Recommendation: *Graphing Calculator TI84*

This course is designed for students interested in taking a 4th year, non-STEM mathematics course with an emphasis on authentic contexts and decision making. Topics in this course will include numeracy, algebra, functions and modeling, applications of proportional reasoning, quantitative literacy, and applications of probability and statistics. This course is designed in partnership with the College of DuPage and based on student success leading directly to a credit bearing math course at COD such as MATH 1218, MATH 1100, MATH 1102, MATH 1115

Semesters: 2

MA44263CC College Algebra Asynchronous Online Course with Elmhurst College

Calculator Requirement: *Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed*

College Algebra EC is an asynchronous course designed with Elmhurst College. Prerequisite is the completion of Advanced Algebra and Trig. Successful completion of College Algebra EC will result in a transcript credit through Elmhurst College. This course includes review of elementary algebra, equations, relations, functions and transformations, inequalities and quadratic functions, systems of linear equations and inequalities, polynomial equations and their graphs.

Dual credit is available through Elmhurst College

Semesters: 2

MA44233 Calculus 3 Honors Asynchronous Online Course with Elmhurst College

Calculator Requirement: *Graphing Calculator (TI83+ or TI84), no calculator with a symbolic manipulator allowed*

Calculus 3 is an asynchronous course designed with Elmhurst College. Prerequisite is the completion of BC Calculus. Successful completion of Calculus 3 will result in a transcript credit through Elmhurst College. This course includes vectors in three-space, quadric surfaces, partial derivatives with applications and multiple integrals with applications, introduction to vector analysis.

Dual credit is available through Elmhurst College

Semesters: 1

MA55183 Computer Science

Computer Science will explore programming concepts, the elements of Visual Basic language, and an introduction to JAVA. Structured programming principles such as problem solving, object-oriented programming, structured coding, and programming style will be emphasized. Programming applications range from standard numeric processing to problems in the real world. **Honors Option is available at AT and WB (MA55193).**

Semesters: 2

MA54103 Computer Science 2: Mobile App Development

Computer Science 2: Mobile App Develop continues the development of computer programming, but is specific to programming applications for mobile devices. Students use previous knowledge learned through Computer Science or AP Computer Science with the programming language LUA to create the apps. Students will start with the basics and templates as they build towards creating their very own app. **Honors Option is available (MA54113).**

Semesters: 2

MA55243 Cybersecurity PLTW

This course exposes high school students to the ever growing and far reaching field of cybersecurity through problem-based learning. Students engage in algorithmic thinking, computational thinking and critical thinking. Students will also explore the many educational and career paths available in the field of cybersecurity and information security. **Potential college credit is available through PLTW university programs.**

Semesters: 2

Additional courses offered at Addison Trail HS:

MA42153 Statistics

Calculator Requirement: **Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed** The course is a one-year statistics course designed for college bound students who have an interest in biology, business, psychology, education, mathematics and/or the medical careers. The TI-83+ graphing calculator technology has been incorporated throughout the course with an emphasis on hands-on investigations. Topics include organizing data, regression correlations, normal distributions, binomial and geometric distributions, inference, probability, and significance. Simulations will be explored as a technique for solving real-world problems.

Semesters: 2

MA44253 Calculus

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator allowed.

Calculus is designed to prepare the student for college level calculus. The course is designed to move as quickly as learning allows with topics including limits and continuity; differentiation of algebraic functions; applications of the derivative; the definite integral; trigonometric and exponential functions; formal integration; applications of the integral.

Semesters: 2

MA12123 Sheltered Pre-Algebra

Calculator Requirement: Graphing Calculator (TI 83+ or TI84), no calculator with a symbolic manipulator

allowed. Sheltered Pre-Algebra is designed to prepare students that are English Language Learners to develop the mathematical foundations of algebraic concepts, terms and symbols to solve problems. The course includes performing operations on real numbers and algebraic expression, solving equations in one and two variables, solving quadratic equations and using graph relationships.

Semesters: 2

Additional courses offered at Willowbrook HS:

MA54203 AP Computer Science

Advanced Placement Computer Science will introduce many of the programming concepts that are covered in a first year college computer science course and prepare the student for the Computer Science Advanced Placement Exam. Using the Java Language, the topics include: string manipulation, recursion, analysis of searching and sorting algorithms, structures, and classes.

Semesters: 2



MUSIC

Music Honors Option

Students enrolled in courses below marked **Honors Option** can elect to receive weighted credit. To earn this credit, students do all the regular coursework and then also prepare advanced performance materials including the ILMEA audition, solo and ensemble literature, and keep a performance reflection journal. Honors performance recitals are held each semester to showcase students work.

GUITAR

MU55033 Beginning Guitar

No prerequisite

This class is open to any students with little or no previous training on the guitar. This class combines group instruction with supervised practice. Students will learn to read and play music in a developmental sequence. Elements of basic guitar technique will be studied including tuning, fingering, basic strum patterns, elementary chords, and reading music notation. Second semester will deal with more advanced strum patterns, bar chords, and classical guitar techniques.

Semesters: 2

MU55053 Guitar Ensemble

Prerequisites: Beginning Guitar or Consent of Instructor.

Guitar Ensemble is for guitarists wishing to continue studies of Guitar playing after Beginning Guitar or for students who already have guitar skills and can read music. The Guitar Ensemble will perform at school concerts and community events, as well as study music of these styles: Classical, Jazz, World, Rock, Alternative, and other varieties of popular music. *Honors Option is available (MU55063).*

Semesters: 2

STRINGS

MU15073 Symphony Orchestra

This course is open to those who play violin, viola, cello, or string bass. Activities include the study of symphony orchestra compositions from various style periods of music history. Emphasis is placed upon interpretation, ensemble skills, style, and individual tone quality and intonation. This group performs regularly during the school year. *Honors Option is available (MU15083).*

Semesters: 2

MU25053 Chamber Orchestra

Prerequisite: Membership by audition.

String students seeking the highest level of performance in the orchestra may audition for Chamber Strings. Chamber Music is used for community performances, and students study advanced string techniques and ILMEA music. *Honors Option is available at AT and WB (MU25153).*

Semesters: 2

VOCAL

MU15043 Beginning Mixed Chorus

No prerequisite

Beginning Mixed Choir is a group designed for beginning singers at all grade levels. Students will learn fundamentals of singing technique, music theory, and ear-training skills. This choir will perform at all concerts throughout the year. These students may be placed in "Concert Choir" based on class enrollment. *Honors Option is available (MU15053).*

Semesters: 2

MU25083 Treble Choir

Prerequisite: Membership by audition or teacher approval.

Treble Choir is comprised of 18-24 advanced female vocalists. The group will focus on Soprano/Soprano/Alto/Alto repertoire and build upon prior knowledge of singing technique, music theory, and ear-training skills. This choir will perform at all concerts throughout the year. *Honors Option is available (MU25183).*

Semesters: 2

MU35093 Concert Choir

Prerequisite: Membership by audition or teacher approval

Concert Choir is a mixed chorus designed for intermediate singers in their sophomore, junior, or senior year. Students will build upon prior knowledge of singing technique, music theory, and ear-training skills and perform a more advanced repertoire. This choir will perform at all concerts throughout the year. *Honors Option is available (MU35193).*

Semesters: 2

WINDS & PERCUSSION

MU25213 Concert Band

Prerequisite: Membership in middle school band or audition for the teacher.

Concert Band is designed to give students the opportunity to further their musical skills, knowledge, and enjoyment in an ensemble setting. In addition to performing appropriate literature of various periods and styles, Concert Band emphasizes the development of individual musicianship, ensemble skills, and technical proficiency. Concert Band performs at several concerts during the year, as well as occasional clinics and festivals. Students enrolled in Concert Band are highly encouraged to take private lessons and are required to participate in marching band and pep band. *Honors Option is available (MU25313).*

Semesters: 2

MU15013 Symphonic Band

Prerequisite: Membership by audition.

This band is for all freshmen, and for sophomore, junior, and senior students who have previous band experience. Emphasis is given to the development of musicianship through scales, arpeggios, and suitable literature. The band performs at athletic events, parades, concerts, and contests. The individual members prepare solos and participate in small ensembles for the class and, if they wish, for competitions. Attendance at sectionals is required. Students who successfully complete the performance objectives may advance to the Wind Ensemble. *Honors Option is available (MU15023).*

Semesters: 2

MU25063 Wind Ensemble

Prerequisite: Membership by audition.

The Wind Ensemble includes students who have attained a high level of proficiency on their instrument. Musical ability and a positive mental attitude, along with a desire to achieve fine musical results, are the prime requisites for this organization. The band performs at athletic events, parades, concerts, and contests. The individual members prepare solos and participate in small ensembles for the class and, if they wish, for competitions. Attendance at sectionals is required. Membership in the band is through audition or permission of the director. *Honors Option is available (MU25163).*

Semesters: 2

MU55193 Percussion Method

Prerequisite: None

Percussionists not in the Symphonic Band or Wind Ensemble enroll in Percussion Methods. Technique on snare drum, keyboard instruments, and timpani is emphasized. Members of this class form the percussion section for the Symphonic Band and the Freshman Band. Non-freshman percussionists are members of the Marching Band and all class members will participate in Pep Band. Percussion ensemble is also a featured part of this class. *Honors Option is available (MU55183).*

Semesters: 2

Additional courses offered at Addison Trail HS:

MU35103 Jazz Ensemble I

Prerequisite: Membership by audition.

The Jazz Ensemble is an ensemble that performs jazz/rock and other styles. Any student may audition for Jazz Ensemble. Rehearsals are held at mutually convenient times for the students and teacher and performances are given at school concerts and community events. Emphasis will be on developing each student's improvisational skills and the ability to perform different styles of music. *Honors Option is available (MU35123HH).*

Semesters: 2

MU55303 Music Production

Music Production is a career-focused course designed for students interested in all aspects of music and music production. Student projects will include a music video, video game/movie soundtrack composition, live sound recording techniques, learning how to DJ, Creating promotional materials, and basic music theory.

Semesters: 2

OTHER MUSIC COURSES OFFERED DISTRICT-WIDE

MU55023 Class Piano

No prerequisite

This course is designed for students who wish to learn basic keyboard skills or to improve on skills already learned. Students will learn how to read musical notation and use basic fingerings and chord patterns. In the second semester, sight-reading, improvisation and harmonization will be studied. *Honors Option is available (MU55043).*

Semesters: 2

MU54123 AP Music Theory

Prerequisite: 4 music credits

This high-weighted course will examine the fundamentals of musical structure through many different techniques including written analysis, listening, composing ear training, singing, and playing. Elements of music, music history, music analysis, and aural skills will be studied and developed. Students will be prepared to take the AP Music Theory Exam at the end of the course.

Semesters: 2

PHYSICAL EDUCATION



PE15015S1/PE15015S2 Physical Education 9

Students will be involved in a variety of activities with an emphasis on personal fitness. Students also complete CPR training.

Semesters: 1

PE25045S1/PE25045S2 Physical Education 10

Students will be involved in a variety of activities with an emphasis on personal fitness.

Semesters: 1

PE35071/PE35072 Physical Education 11/12

Prerequisite: Junior/Senior standing

Students will be involved in a variety of activities with an emphasis on personal fitness. Lifetime fitness activities will also be included during this course. Junior students complete CPR training.

Semesters: 2

PE45111/PE45112 PE Leaders

Prerequisite: Successful completion of Leadership Training

(AT & WB - Seniors only)

Students will continue practicing leadership skills by assisting Physical Education classes in the areas of skill development and assessment.

Semesters: 1

PE55161/PE55162 Zero-Hour Physical Education

Students will be involved in a variety of activities with an emphasis on personal fitness during Period 0.

PE55145S1/PE55155S2 Online Individualized Fitness and Training

Online Fitness is a rigorous class that utilizes heart rate data to assess weekly fitness participation in class. Students also take part in online discussion and are responsible for contributing to the online discussions weekly.

Criteria for taking class:

- Junior or Senior students that have had success in traditional Physical Education classes in the past (minimum of 3.0 GPA in Physical Education).
- Student is in good standing with District 88 technology policy.
- Student will be required to attend class during Zero-Hour for 3 weeks of the semester for fitness testing.

All exceptions for enrollment will be made through administrative approval process.

Semesters: 1

PE15025S1/PE15025S2 Health

This course deals with intellectual, psychological, and social dimensions relating to activities which will educate the students on how to make informed decisions affecting themselves, their family and community well-being. Students also complete CPR training. **The successful completion of the Health proficiency component is required for graduation.**

Semesters: 1

PE15035 Sheltered Health

This classroom course is offered to English Language Learners. The course deals with intellectual, psychological, and social dimensions relating to activities which will educate the students on how to make informed decisions affecting themselves, their family and community well-being. Students also complete CPR training. **The successful completion of the Health proficiency component is required for graduation.**

Semesters: 1

PE24145S1/PE24145S2 Classroom Driver Education

Students will be given the state mandated thirty (30) hours of classroom driver education instruction.

Semesters: 1

PE24245S1/PE24245S2 Sheltered Driver Education

This classroom course is offered to English Learners. Students will be given the state mandated thirty (30) hours of classroom driver education instruction.

Semesters: 1

PE55085S1/PE55085S2 Dance and Aerobic Activities

Prerequisite: Junior/Senior standing

The purpose of this class is to present a variety of different dance styles, along with various aerobic activities. Students will participate in group fitness exercise workouts that will improve their personal fitness levels.

Semesters: 1 or 2

PE35101/PE35102 PE Leadership Training (Year Long)

(Juniors only)

Prerequisite: Teacher recommendation

This course is designed to allow students, who have excelled in previous physical education classes and have completed the Physical Educational Leadership class to practice the principles and skills of leadership in regular Physical Education classes.

Semesters: 2

PE55091/PE55092 Weight Training/Conditioning

Prerequisite: Junior/Senior standing

This class is designed to provide individualized instruction in strength and cardiovascular endurance through weight training and running. Students will learn and perform proper training techniques. Cardiovascular conditioning will also be included in this total fitness-based class.

Semesters: 2

PE65015 Athletic Training

Prerequisite: Grade 11 or 12 students

The objective of this course is to broaden the knowledge of students in the area of allied health fields related to sports medicine. Topics explored in this course include; anatomy and physiology, basic first-aid and CPR, injury prevention, injury and illness recognition, health education topics, and care of athletic injury. Students enrolled in this course will be expected to accrue 40 hours of service within the athletic training department during the school year.

Semesters: 1

PE65025 Personal Training

Prerequisite: Grade 11 or 12 students

The objective of this course is to give students the knowledge and understanding necessary to prepare for the ACE Personal Trainer Certification Exam. This course presents the ACE Integrated Fitness Training (ACE IFT) Model as a comprehensive system for designing individualized programs based on each client's unique health, fitness, and performance goals.

Semesters: 1

Additional courses offered at Addison Trail HS:

PE55175S1/PE55175S2 Learning Readiness PE

Learning Readiness Physical Education was designed based on research indicating that students who are physically active and fit are more academically alert and experience growth in brain cells or enhancement in brain development. Addison Trail pairs a physical education class that incorporates cardiovascular exercise, core strength training, cross lateral movements, literacy, and math strategies with literacy and math classes, that utilizes movement to enhance learning and improve achievement.

Semesters: 1

SP51101LK/SP51102LK PE S1/PE S2

Students will be involved in a variety of activities with an emphasis on personal fitness.

Additional courses offered at Willowbrook HS:

PE55053 Fitness & Nutrition

Prerequisite: Junior or Senior status

Fitness & Nutrition is an inter-departmental course taught by the Physical Education and Family & Consumer Science departments. The focus of the course is upon physical fitness activities that can be pursued into adulthood and today's nutritional needs. Included topics are body composition testing, computer dietary analysis, laboratory experiences in nutritional food preparations and physical conditioning activities, like yoga and balance movements. **This course can fulfill daily PE requirement. Dual Credit option is available for Juniors, and Senior through College of DuPage at WBHS.**

Semesters: 2

PE551655S1/PE55165S2 Individualized Fitness and Training

Students will learn how to develop and implement personalized fitness plans that are tailored to their specific fitness needs and goals. Students will gain a stronger knowledge base of strength training anatomy, physiology and fitness safety which will aid them in reaching their goals as well as lessen the chance of injury while they train now and into their post-secondary lives.

Semesters: 2

SP65011/SP65012 LP PE

Students will be involved in a variety of activities with an emphasis on personal fitness.

PE55151LP/PE55152LP DLP Assistants in PE

Students will be involved coordinating physical education activities with the physical education instructors for the LP PE classes.



READING

RD53015 College Literacy Strategies

Juniors and seniors who have been deferred from reading placement and whose NCE scores are between 40.0 and 59.0 are scheduled for College Literacy Strategies. This one-semester course fulfills District 88 reading graduation requirements and focuses on research skills, advanced vocabulary building, college test preparation, and other post-high school skills.

Semesters: 1

RD55253 Reading 2 (11-12) Remedial Reading Intervention

Juniors and seniors reading at a Normal Curve Equivalent (NCE) level between 30 and 40, and/or not yet meeting PSAT requirements are assigned to Reading 2 (11-12). Placement is based on standardized test scores, PSAT scores, and teacher recommendation. The class focuses on building comprehension and vocabulary skills to support college and career success. Students must meet exit criteria to be withdrawn from the class.

Semesters: 2

RD55153 Reading 2 (9-10) Remedial Reading Intervention

Freshmen and sophomores reading at a Normal Curve Equivalent (NCE) level between 30 and 40, and/or not yet meeting PSAT requirements are assigned to Reading 2 (9-10). Placement is based on standardized test scores, PSAT scores, and teacher recommendation. The class focuses on building comprehension and vocabulary skills, using materials requiring literal, inferential and critical thinking. Students must meet exit criteria to be withdrawn from the class.

Semesters: 2

RD55163 Reading 3 Remedial Reading Intervention

Freshmen through seniors reading at a Normal Curve Equivalent (NCE) level between 1 and 29, and/or not yet meeting PSAT requirements are assigned to Reading 3. Placement is based on standardized test scores, PSAT scores, and teacher recommendation. Each student will be assessed using a Qualitative Reading Inventory in order to diagnose reading deficits. They will then receive intensive individual interventions. Progress monitoring will be done on a regular basis, using various classroom measurements. Students must meet exit criteria to be withdrawn from the class.

Semesters: 2

RD15073 Reading ESL I

This one-period course is designed for intensive reading instruction in English for students whose basic language skills and cognitive academic language proficiency make it almost impossible for them to succeed in classes where the language of instruction is English. The course emphasis is on acquiring the comprehension and vocabulary skills necessary to become proficient readers, writers and speakers of the English language. Students enrolled in this course are concurrently registered in English as a Second Language I. Students enrolled in Reading ESL I are eligible to receive tutoring in all content area classes at no cost to them. Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.

RD25083 Reading ESL II

This one-period course provides continued intensive reading instruction in English for students whose basic interpersonal language has developed to a level that allows them to begin reading independently in English, but whose cognitive academic language proficiency makes it difficult for them to succeed in classes where the language of instruction is English. The course emphasis is on acquiring the comprehension and vocabulary skills necessary to become proficient readers, writers and speakers of the English language. Students enrolled in this course are concurrently registered in English as a Second Language II. Students enrolled in Reading ESL II are eligible to receive tutoring in all content area classes at no cost to them.

Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.

RD35093 Reading ESL III

This one-period course continues to develop reading skills in English for students whose basic interpersonal language has reached the level of native speakers, but whose cognitive academic language proficiency still places them at a disadvantage in classes where the language of instruction is English. The course emphasis is on acquiring the comprehension and vocabulary skills necessary to become proficient readers, writers and speakers of the English language. Students enrolled in this course are concurrently registered in English as a Second Language III. Students enrolled in Reading ESL III are eligible to receive tutoring in all content area classes at no cost to them. Exit criteria are based on standardized test scores, achievement of state standards, and teacher recommendation.



SCIENCE

SC12023 Biology

Placement based on reading scores, math scores, and 8th grade teacher recommendation. This course introduces the principles and concepts of biology. Emphasis is on basic biological chemistry, cell structure and function, genetics, evolution, populations and ecosystems, and other related topics. In addition to the content, considerable laboratory work will be performed. Laboratory exercises reinforce lecture topics and include microscope techniques.

Semesters: 2

SC11223 Sheltered Biology

SC12173 Bilingual Biology

These courses are for English Language Learners and covers the basic principles of biology through laboratory and classroom activities. *Bilingual Biology is taught in Spanish.*

Semesters: 2

SC13183 Biology Honors

Placement based on reading scores, math scores, and 8th grade science placement scores. This high-weighted honors course in biology is an accelerated program with an emphasis at the molecular level. The course emphasizes conceptual skills dealing with experimentation and the scientific method. Extensive lab and written work.

Semesters: 2

SC31073 Sheltered Chemistry

SC31173 Bilingual Chemistry

These courses are for English Language Learners. Chemistry is designed to introduce the principles and laws that apply to chemical changes and to explore their applications to daily experiences. Laboratory experiments provide a basis for experiencing and interpreting chemical activities. This course is recommended for all students who plan to attend college. *Bilingual Chemistry is taught in Spanish.*

Semesters: 2

SC32073 Chemistry

Core Chemistry is an introductory course using discovery-based labs and modeling to explore various concepts in Chemistry. A special emphasis will be placed on developing critical thinking skills, scientific inquiry, and several scientific practices. These practices include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, and constructing explanations; and to use these practices to demonstrate understanding of the core ideas of Chemistry. While most of the course focuses on conceptual learning, basic algebra skills are required.

Semesters: 2

SC33083 Chemistry Honors

Chemistry Honors will study the concepts of chemistry in great depth through a problem solving and experimental approach involving extensive data collection and processing. A solid foundation in algebra and self-disciplined study habits are characteristics of successful students in this program. Those students who are planning on entering a science related field or program at the college or university level should take this course.

Semesters: 2

SC35143 Anatomy & Physiology

Anatomy & Physiology is an elective science class in which the students study the 11 systems of the body. Students will investigate histology up to the gross anatomy utilizing extensive laboratory investigations including dissections designed to illustrate anatomical and physiological concepts. Dissections include those of the heart, brain, eye and various systems of the fetal pig. The class is intended for students interested in pursuing a career in the medical field. **This is a prerequisite for the Medical Careers**

Class at Addison Trail.

Semesters: 2

SC42113 Physics

Physics is a college preparatory course based on laboratory experimentation, demonstrations and the application of basic algebra and geometry to the principles that govern the universe. There is extensive use of computers and graphical tools.

Semesters: 2

SC42123 Sheltered Physics

SC41173 Bilingual Physics

This course for English Language Learners is based on laboratory experimentation, demonstrations and the application of basic algebra and geometry to the principles that govern the universe. *Bilingual Physics is taught in Spanish.*

Semesters: 2

SC44063 AP Biology

Prerequisite: Placement based on completion of Biology

The Advanced Placement Biology course is a high-weighted course designed to meet the objectives of a first-year college general biology course and prepares students to take the AP Exam. Topics include biochemistry, cell biology, genetics, biotechnology, evolution, biodiversity and ecology. This course will involve extensive laboratory experiences requiring time before or after school.

Semesters: 2

SC44093 AP Chemistry

Prerequisite: Placement based on completion of Biology and Chemistry

The Advanced Placement Chemistry course is designed to meet the objectives of a first-year college general chemistry course, with the focus on test preparation for the AP exam. Topics include atomic theory, chemical bonding, states of matter, reactions, acid-base chemistry, stoichiometry, electrochemistry, equilibrium, kinetics, and thermodynamics. There is an emphasis on the quantitative aspects of chemical concepts and of the formulation of principles.

Semesters: 2

SC32193 AP Environmental Science

Prerequisite: Placement based on completion of Biology

The goal of the AP Environmental Science course is to provide students with the scientific concepts and methodologies that are required for them to understand the interrelationships of the natural world. The course is a full-year course intended to be the equivalent of a one-semester introductory college level course in Environmental Science and prepares students to take the AP exam. The course is interdisciplinary; it stresses scientific concepts in geology, biology, chemistry, geography, environmental ethics, and economics. Topics include: global water resources, ecosystem diversity, energy flow, soil dynamics, weather and climate change, impacts of population growth, land use and conservation, alternative energy sources and pollution. This course will involve extensive laboratory experiences, possibly requiring time before or after school.

Semesters: 2

SC44133 AP Physics 1

Algebra-Based AP Physics 1 is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. Science practices are emphasized. The ability to develop and use physics knowledge by applying it to the practice of scientific inquiry and reasoning is at the heart of the new physics courses and exams. Scientific inquiry will be used to promote a more engaging and rigorous experience for AP Physics students. Inquiry-based investigations are emphasized. The amount of instructional time devoted to laboratory investigations is 25 percent. These investigations foster student engagement in the practice of science through experimenting, analyzing, making conjectures and arguments, and solving problems in a collaborative setting, where they direct and monitor their progress toward an academic goal.

Semesters: 2

SC44143 AP Physics 2

Prerequisite: Completion of AP Physics 1

Algebra-Based AP Physics 2 is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. Science practices are emphasized. The ability to develop and use physics knowledge by applying it to the practice of scientific inquiry and reasoning is at the heart of the new physics courses and exams. Scientific inquiry will be used to promote a more engaging and rigorous experience for AP Physics students. Inquiry-based investigations are emphasized. The amount of instructional time devoted to laboratory investigations is 25 percent. These investigations foster student engagement in the practice of science through experimenting, analyzing, making conjectures and arguments, and solving problems in a collaborative setting, where they direct and monitor their progress toward an academic goal.

Semesters: 2

SC44153 AP Physics C

Prerequisite: Completion of AP Physics 1

The Advanced Placement calculus-based physics course is a one-year physics course designed to meet the objectives of a first-year college physics course especially appropriate for students planning to specialize or major in one of the many physical sciences or fields of engineering. The course will address the topics of Mechanics and Electricity & Magnetism, the first two semesters of college physics. Common units of study that address the content of Mechanics include: Kinematics; Newton's Laws of Motion; Work, Energy, and Power; Systems of Particles and Linear Momentum; Rotation; Oscillations; and Gravitation. Additional units that address the content of Electricity and Magnetism include: Electrostatics; Conductors, Capacitors, and Dielectrics; Electric Circuits; Magnetic Fields; and Electromagnetism. Students cultivate their understanding of physics through classroom study and open-ended activities as well as hands-on laboratory investigations as they explore larger concepts such as change, force interactions, fields, and conservation.

Semesters: 2

SC24143 Bio-Medical Science – Project Lead The Way

Science elective: Open to all grade levels

This course provides an introduction to the biomedical sciences through exciting hands on projects and problems. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics. Key biological concepts including homeostasis, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum. Engineering principles including the design process, feedback loops, and the relationship of structure to function are also incorporated. This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses.

Semesters: 2

SC34043 Human Body Systems – Project Lead The Way

Human Body Systems is an elective class in which students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and function of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries. *Honors Option is available (SC34053).*

Semesters: 2

SC33143 Medical Interventions – Project Lead The Way

Medical Interventions is a Project Lead The Way course. This course is the third course within the PLTW Biomedical Science course sequence. Students investigate how to prevent, diagnose, and treat disease. Additionally, student will explore, through a series of real-world scenarios, various methods to identify and treat various health issues. *Honors Option is available (SC33153).*

Semesters: 2

SC32103 Environmental Sustainability – Project Lead The Way

Environmental Sustainability is an interdisciplinary engineering Project Lead The Way elective class where students investigate and design solutions to solve complex environmental issues facing the world, such as clean drinking water, stable food supply and renewable energy sources.

Semesters: 2

Additional courses offered at Addison Trail HS:

SC31053 Ornamental Horticulture

Prerequisite: Biology

The major aim of Ornamental Horticulture is to give the student practical experiences needed to enter ornamental horticulture occupations. These experiences take place outdoors, in the greenhouse, and in the home environment. Emphasis is placed on greenhouse crop production; landscape design, construction and management; turf grass management; floriculture and floral design. There is a minimum of traditional classroom activity as emphasis is centered on greenhouse and hands on experience.

Semesters: 2

SC31153 Greenhouse Operation and Management

Prerequisite: Ornamental Horticulture

Advanced work in four areas of Horticultural Science will be emphasized namely propagation of plants (both asexually and sexually, plant nutrition and soils, bedding plant production, merchandising, and greenhouse management. Each student will select and complete a significant project in the area of his/her particular interest.

Semesters: 2

SC55165 Medical Careers A/SC55175 Medical Careers B

Prerequisite: Open to seniors only with completion or concurrent enrollment in Anatomy and Physiology, Human Body Systems (PLTW) and departmental approval

Anatomy & Physiology must have been taken previously or while enrolled in Medical Careers. Medical Careers is a one semester, two period course that is cosponsored by Addison Trail HS and GlenOaks Medical Facility. Through this course, students experience the duties performed by many medical professionals. Students spend four and half hours a week at GlenOaks and four hours a week at Addison Trail. Classroom activities include taking vital signs, learning and using medical terminology, exploring medical ethics and disease. When at the hospital, the students shadow medical professionals in various areas of the hospital exposing them to the variety of health professions while utilizing their skills learned in both the medical careers classroom and from anatomy & physiology. (SC55185 Medical Careers - Hospital A/SC55195 Medical Careers - Hospital B)

Dual credit option is through the College of DuPage.

Semesters: 1

SC55165 Biomedical Terminology

Prerequisite: Students should have taken/or are dually enrolled in Human Body Systems (PLTW) or Anatomy and Physiology before taking this class. Students may also be allowed to take on a case by case basis

This course is designed for students interested in pursuing a career in the medical fields and is focused upon developing background knowledge and proficiency in vocabulary and terminology necessary for medical coursework and the healthcare field. It is aligned to other career pathway courses included Biomedical Technology and Anatomy and Physiology.

A dual credit option will be available through College of DuPage.

Semesters: 2

Additional courses offered at Willowbrook HS:

SC55223 Comparative Zoology

Prerequisite: Biology

Live animals in the classroom provide students with an understanding of animal anatomy, nutrition, care and diseases. Humane laboratory experiments are conducted on small mammals, fish, birds, reptiles and amphibians. In addition, students are given information on career opportunities in the field of animals and are provided with realistic views of the requirements and responsibilities of these careers. Topics of study include zoonotic diseases, ecology, taxonomy, evolution, animal behavior, and current events.

Semesters: 2

SC32203 Environmental Science

Prerequisite: Biology and open to Grades 10-12

This is a hands-on course which provides students with a chance to experiment with concepts related the environment. Topics to be explored include: population dynamics, pollution, earth systems, energy use, geology, oceanography, meteorology, biogeochemical cycles, conservation and resource use. Current events and environmental case studies will be discussed. Students will also utilize local resources such as brook and local soil samples to determine the ecological health of the community.

Semesters: 2



SOCIAL STUDIES

SS12123 Human Geography

This course engages student interest in the social sciences by connecting contemporary "what" and "where" questions to the historical "why" questions. Students will engage in the systematic study of patterns and processes that have shaped the human understanding of, use of, and alteration of Earth's surfaces. It explores the location of countries and human institutions (ethnic groups, cities, and industries) and examines why and how they exist. Students will employ spatial concepts and landscape analysis to examine human social organization and its historical and environmental consequences.

Semesters: 2

SS12163 Sheltered Human Geography

SS12133 Bilingual Human Geography

Prerequisite: Placement in this class is based on recommendations of both the Literacy and Guidance departments

Designed for students with limited English language proficiency, this course engages student interest in the social sciences by connecting contemporary "what" and "where" questions to the historical "why" questions. Students will engage in the systematic study of patterns and processes that have shaped the human understanding of, use of, and alteration of Earth's surfaces. It explores the location of countries and human institutions (ethnic groups, cities, and industries) and examines why and how they exist. Students will employ spatial concepts and landscape analysis to examine human social organization and its historical and environmental consequences.

Semesters: 2

SS13113 AP Human Geography

This honors level course emphasizes the importance of geography as a field of inquiry and discusses the emergence of academic geography in nineteenth century Europe. Geographic concepts emphasized throughout the course are location, space, place, scale, pattern, regionalization, and globalization. These concepts are basic to students' understanding of spatial interaction and spatial behavior, the dynamics of human population growth and movement, patterns of culture, economic activities, political organization of space, and human settlement patterns, particularly urbanization. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 2

SS32073 United States History

This course surveys the history of the United States. The course focuses on the development of the country and implications of nationalism, sectionalism, democracy, industrialism and foreign affairs. Teachers use a variety of approaches to help students understand concepts and topics in U.S. history and reading, writing, and thinking skills are practiced as students prepare to become intelligent decision makers in 21st century United States.

Semesters: 2

SS32183 Sheltered United States History

SS35303 Bilingual U.S. History

Prerequisite: Placement in this class is based on recommendations of both the Literacy and Guidance departments

Many issues confront American citizens in our complex world. Sheltered US History focuses on integrating the issues of American history such as cultural, pluralism, imperialism, foreign policy, and bridging the gap of the English language and vocabulary. This course helps the student to understand the roots of these issues and link the comprehension and understanding of the English language. A wide variety of activities are used to develop these skills.

Semesters: 2

SS34083 AP United States History

This high-weighted course is a survey of the American past from the time of European discovery and settlement of the continent to the present. Students are required to draw upon analytical and interpretive skills to deal with the factual knowledge and problems of United States history. Students will develop critical thinking skills to assess a variety of historical materials, including both primary and secondary sources, and weigh their relevance, reliability and their importance—all goals of historical scholarship. Class discussions and independent library research are integral activities in each unit, and formal written essays will be used in conjunction with tests to evaluate student progress during the year. **A satisfactory score on the AP test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 2

SS45285 United States Government

What are one's rights and responsibilities in a democratic society? How does the American legal and political system work? Students will learn the basics of the American political system and the process of governmental decision-making at the local, state, and national levels. Areas of study will include the legislative, executive, and judicial branches of government, campaigns and elections, and the U.S. and Illinois Constitution.

Semesters: 1

SS32165 Sheltered United States Government

SS45295 Bilingual United States Government

Prerequisite: Placement in this class is based on recommendations of both the Literacy and Guidance departments

The purpose of this class is to provide an opportunity for students with limited English language skills to study our American political system while working on the development of comprehension and vocabulary skills. Students will learn the basics of the American government and the process of governmental decision making at the local, state, and national levels. Areas of study will include the legislative, executive, and judicial branches of government, campaigns and elections, and the Constitution. Current events and technology will be used extensively to enhance the learning opportunities.

Semesters: 1

SS44265 AP United States Government & Politics

Students will develop an analytical perspective on government and politics in the United States. This high weighted course includes both the study of general concepts used to interpret U.S. politics and the analysis of many examples. Through this course the student will gain a familiarity with various institutions, groups, beliefs and ideals that constitute U.S. politics. This course will cover college level topics such as, the U.S. Constitution, American Political Parties, Civil Rights, Individual Liberties and the Development of Foreign and Domestic Policy. This course prepares the student for the AP examination. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 1

SS44275 AP Comparative Government & Politics

Students will develop conceptual tools necessary to understand some of the world's diverse political structures and practices. This high-weighted course will include the study of countries and their governments and general concepts used to interpret the relationships and institutions found in national and global politics. Six countries will be the emphasis of this course, which provide students a foundation for developing paradigms of different types of political systems. Study will be focused on topics such as political authority and power, and relationships between states and different political systems. This course prepares the student for the AP examination. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 1

SS42145 Economics

This course studies the basic principles of macro and micro economics -- to understand our current economic situation as well as the components of a market economy. It is a study of the American economic system - the role of government and the system of taxation, as well as its role in the global economy. The course is highly recommended for college bound students to fulfill the economics requirements.

Semesters: 1

SS45175 Sheltered Economics

SS42155 Bilingual Economics

Designed for students with limited English language proficiency, this course includes vocabulary and comprehension development as part of a look at the American economic system. Students in this course will look at the basic principles of economics and their daily application to their lives. Students will explore the role of the consumer, businessman, and government in shaping their economic world. A key goal of this class is to provide students with the knowledge to make good economic choices in the world in which they live.

Semesters: 1

SS44245 AP Microeconomics

In this high-weighted courses, students will be introduced to the principles of economics and their application to decision making, both as consumers and producers. Topics in microeconomics include: the market system, supply and demand, the determination of price and output levels, surpluses and shortages, and market structures such as monopoly, oligopoly, and perfect competition. Students will learn to apply basic economic principles to personal decision-making, as well as to analysis of the economy's operation. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 1

SS44255 AP Macroeconomics

In this high weighted course, students will be introduced to elementary macroeconomic principles and methods of analysis. Topics in the course include: the national income, the monetary system, inflation, recession, national debt, international trade, and economic growth. Macroeconomic principles will be used to analyze selected social issues such as taxation, Federal spending, foreign trade, and stabilization policies. The class will track the performance of the economy as a whole. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 1

SS24093 AP European History

This challenging course provides an in-depth study of Western Civilization from the dawn of the Renaissance (1450) to the fall of communism (1989). In addition to political history, this course will also cover aspects of culture, including philosophy and art. This elective course has been designed to prepare students for the Advanced Placement exam in European History. A college level textbook will be used for the course, as well as supplementary materials. Students should expect to be assessed through objective tests, document-based essay questions, class discussions, library research, and simulations. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 2

SS44123 AP Psychology

This high-weighted course covers all areas of psychology in depth. Students will learn the major core concepts and theories of psychology; they will learn to define key terms and to use these terms in their everyday vocabulary. They will also learn the basic skills of psychological research, devise simple research projects, and evaluate the general validity of research reports. Students will be able to develop critical thinking skills, build their reading, writing and discussion skills, learn about the ethical standards governing the work of psychologists, and to apply psychological concepts to their own lives. **A satisfactory score on the Advanced Placement test could result in students receiving college credit and/or advanced placement in college.**

Semesters: 2

SS55135 Sociology

Why do we behave like human beings? Learn why American society works the way it does and gain some insight into why one acts the way they do. We will take an in-depth look at American society while exploring the various concepts of sociology while blending in some concepts from social psychology. The main topic areas of the course are human development, deviance, minorities and prejudice, group behavior and influence, social institutions, social and cultural change and moral development.

Semesters: 1

Additional courses offered at Addison Trail HS:

SS55045 Latin American Studies

With the growing attention directed to the Americas through forces such as economics and immigration, students need to be exposed to the rich heritage of the diverse people living south of the Rio Grande. This course is designed to help students of all nationalities to succeed in the business world as well as day-to-day living in the United States in the 21st century.

Semesters: 1

SS55105 Introduction to Psychology

This is a one semester psychology course introduces students to the study of human behavior and mental processes. The course content includes, but is not limited to, an overview of the field of psychology, topics in human growth and development, personality and behavior, learning and memory, and abnormal psychology.

Semesters: 1

SS32073AS United States History - American Studies

This double-period American Studies course uses U.S. History as a framework for a one year chronological study of political, cultural and military events. Such topics as drama, poetry, music, art, novels and intellectual history are integrated. The wide variety of class activities is limited only by the creativity of students who enroll; cooperative strategies are frequently used in class. **Students who choose this option will receive credit for both United States history and English.**

Semesters: 2 (2 periods per day)

Additional courses offered at Willowbrook HS:

SS35113 The World of Psychology

All of us have wondered at times what makes people tick. How do we develop and mature? How do we cope with stress in our lives? What forms our personality? The methods and theories of psychology will be explored with plenty of opportunities for discussion. The course is especially beneficial for those who are either interested in a career in psychology or are simply interested in gaining a better understanding of their own behavior, and the behavior of others.

Semesters: 2



SPECIAL EDUCATION

The Special Education Departments in DuPage High School District 88 are committed to providing a comprehensive education to all identified students in accordance with their handicapping condition. It is believed that with appropriate curriculum and support services, all students can become life-long learners. Special Education has a critical responsibility to provide a structure that allows equal opportunities for all students, tailored to their individual needs. A major focus of each of the programs is to assist the students in developing needed skills including academics, self-advocacy, vocational and life skills to allow for a successful transition from school to adult life.

In compliance with IDEA and the "Rules and Regulations to Govern the Administration and Operation of Special Education," mandated by the Illinois State Board of Education, DuPage High School District 88 offers special education classes and services designed to meet the unique needs of students with the following handicapping conditions:

Visual impairment
Specific learning disability
Hearing impairment
Severe emotional disorder (SED)

Physical impairment
Mental retardation
Speech/language impairment
Health impairment

The DuPage High School District 88 staff strives to provide an appropriate special education program in the least restrictive environment. Working to comply with State Board of Education inclusion initiative (including transitional programming), materials are selected according to the student's functional ability and vary depending on program and year in school. Specific programs may be offered within District 88 or at other appropriate, approved sites.

Appropriate District 88 staff participates on the Behavior Interventions Committee. This committee develops policies and procedures for students with disabilities who require behavioral interventions. This is in accordance with P.L. 89-191 and the guidelines set forth by the Illinois State Board of Education.

All students are expected to comply with the rules and regulations as stated in the Parent Student Handbook, which outlines the District 88 discipline policy. In specific circumstances where general policies are not sufficient /effective, an individual behavioral intervention plan may be developed.

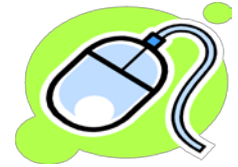
Each year a copy of the procedural safeguards and rights for students with disabilities are furnished to all parents and/or guardians of students with disabilities receiving special education and related services. Additionally, all students and parents are notified concerning the District 88 policy on "Behavioral Interventions for Students with Disabilities."

Parents or students interested in knowing about the programs and specific classes available in District 88 should contact the Special Education Department Chair at the individual schools.

Addison Trail High School
Ms. Julie Johnson, Department Chair
(630) 628-3366

Willowbrook High School
Mr. Nick Hildreth, Department Chair
(630) 530-3682

TECHNOLOGY CENTER OF DUPAGE (TCD)



The TCD programs are considered elective subjects, but must fit into a student's career/education plan. Eligible juniors and seniors who choose the TCD elective spend a part of each school day at their home school and the TCD. District 88 pays TCD tuition and provides bus transportation to and from the Center. Attending TCD does not interfere with other classes or after-school activities. Morning and afternoon sessions are offered.

See your counselor for a copy of the Technology Center of DuPage 2019-2020 Program Guide and Registration Form. All course descriptions have been taken directly from the TCD Program Guide

COMMUNICATION PROGRAMS

TD55023 Multimedia & Television Production

Go behind the scenes of the entertainment industry, learning trade secrets in computer editing, digital video, digital audio, multi-track recording, set design, studio lighting, remote lighting, video graphics, and animation. Work as part of a production team using state-of-the-art software and technology. Learn how good storytelling is critical to the ultimate success of any film or video. Technology Center of DuPage offers private HD production facilities that will help you get ready for a fun and exciting career in media production. *Articulated credit with the College of DuPage is available after successful completion of this program.*

Recommended courses: Keyboarding, Photography, Advanced Photography

Semesters: 2

TD55253 Computer Information Systems & Game Systems

Game programming and web development require creative, detail-oriented people. Design your own games, websites, or apps as you develop skills in writing code, storyboarding, and 3D character development. Use state-of-the-art design software and today's programming languages: Unity, Java, HTML, 3D Studio Max, Visual Studio (Visual Basic and C#), GameMaker, and Adobe Photoshop. Acquire new skills in managing, running, troubleshooting, and maintaining systems in any setting. When you successfully complete this course you will be ready for college level coursework.

Semesters: 2

HUMAN SERVICE PROGRAMS

TD55123 Cosmetology

Prerequisite: None

Learn and refine skills in cuts, color, perms, nail care, esthetics, and make-up. Develop professional-level techniques through practice and instructor demonstrations. Learn how aspects of chemistry, anatomy, and geometry are applied every day by cosmetology professionals. Use your skills through TCD's full-service salon, industry internships, or community projects (theatrical productions, fashion shows, community service events). It is possible to earn up to 46 hours of college credit through this program. After graduation, use that great head start to obtain an associate's degree with a cosmetology or business emphasis, adding even greater value to your state license.

Semesters: 2

TD55033 Fire Science

Follows the standards of training in NFPA 1001 (National Fire Protection Association) Standards for Firefighters. Topics covered include safety and fire behavior, rescue/extrication techniques, communications, equipment use and maintenance, CPR and EMR (Emergency Medical Responder).

Semesters: 2

TD55573 Emergency Medical Technician

Follows the standards of training in Emergency Medical Technician (EMT) National Standards. Once student reaches age 18, upon completion, students are eligible to take the state or national EMT licensing exam for the EMT-B certificate. **Students must have a Social Security Number upon registering for this class to sit for the National Exam.**

Semesters: 2

TD55223 Criminal Justice

Cover the basics of traffic law/traffic enforcement, juvenile and criminal law, crime prevention, the court and corrections systems, homeland security, and more. Develop your observational, communication, documentation, and “people” skills critical for success in this field. You will also learn which career paths require further training or education. The program includes simulations, demonstrations, guest presenters, report preparation, lecture, and work-based learning experiences. Viewing the criminal justice system from the ground up will help you understand how these career pathways play out at the local, private, state, and federal levels of service.

Semesters: 2

TD56263 Nursing Assistant Training Program

Prerequisites or concurrent enrollment: Keyboarding, Biology

Develop a solid understanding of body systems, the nature of disease, and common health problems. Master medical terms and communication skills critical to an effective healthcare environment. Learn how to safely move, lift, and transport patients; measure and record vital signs; report observations; perform personal care and technical skills; and respond to a variety of patient conditions. Your acquired knowledge of basic healthcare skills, even if you do not achieve certification, will prepare you to work in assisted living facilities as well as private duty home care. *Articulated credit is available with the College of DuPage.*

Recommended: Chemistry

Semesters: 2

TD56363 Healthcare Foundations

Prerequisites or concurrent enrollment: Biology, Keyboarding

Explore the modern Healthcare Delivery System and its broad spectrum of career pathways. Through research, lab activities, and group projects, you will lay a foundation in basic anatomy, physiology, common diseases/ disorders, wellness and nutrition, growth and development, medical math, and the legal, ethical, and social issues common to today’s healthcare industry. You will be introduced to medical terminology as well as the teamwork, communication, and employability skills critical for success in this field. In addition to basic safety and infection control practices, you will have the opportunity to earn certification and dual credit in CPR and First Aid Training. This course is designed to meet the National Health Science Standards for healthcare foundations and prepare you for more advanced studies, such as TCD’s Medical Terminology & Health Careers, Nursing Assistant Training, and college healthcare programs of study.

Recommended: Chemistry

Semesters: 2

TD55563 Medical Terminology and Healthcare Careers

Cover extensive biomedical terminology as it relates to each body system and to healthcare careers and medical specialties.

Classes are taught by a licensed registered nurse and guest speakers may include other healthcare professionals. You will learn and apply your knowledge through a combination of multimedia assignments, interactive Smartboard activities, authentic lab activities, word games and case studies. You will also have the opportunity to become CPR and First Aid certified. In addition to strengthening science and language arts skills through anatomy and medical terminology, you will explore select medical math topics and learn job-seeking skills. Increase your likelihood of success as you continue your healthcare education!

Semesters: 2

TD57063 Professional Cooking, Baking and Service

Prerequisites or concurrent enrollment: Culinary I, Culinary II

In your first year, begin with ServSafe® -- a short certification course in food safety for managers -- followed by measurement and kitchen skills common to a range of industry pathways. Explore those pathways in a three-week rotation through cooking, baking, and service careers and the rest of the year is your choice: Cooking or Baking Curriculum. In one year, you have the opportunity to earn certifications and dual credit (both high school and college credit). Second year students spend six weeks in C-B-S Boot Camp, working in small teams to design and develop a foodservice concept. Then for three weeks your team will run that concept (managing a crew of first year students) through TCD’s Bistro, Deli, or Gateway Café service areas. The remainder of the year is Baking or Cooking, the reverse of your first year curriculum choice

Recommended: Culinary Arts and Fitness & Nutrition

Semesters: 2

INDUSTRIAL/BUILDING PROGRAMS

TD55093 Heating, Ventilation, Air Conditioning & Refrigeration

Learn the safety, mechanical, and electronic fundamentals needed to become a qualified HVACR technician. Master the theory and electrical skills critical for successful postsecondary training. Install, maintain, and repair residential forced-air and air conditioning systems. Advanced skills include sheet metal fabrication, light commercial HVACR equipment, and the opportunity to earn EPA 608 refrigerant certification. Understand the career pathways in residential service, new construction, and commercial property maintenance.

Articulated credit is available with the College of DuPage.

Semesters: 2

TD57123 Precision Engineering and Design Technology

Prerequisites: Manufacturing

Discover how 2D modeling software like Revit, AutoCAD (computer aided design), Inventor, or Adobe fuels creativity and innovation in fields as diverse as architecture, construction, manufacturing, civil engineering, biomedical technology and more. The precision engineering field can include precision controls, replication, and fabrication; optics and optical fabrication; nanotechnology; metrology (measurement); interferometry (electromagnetic wave technology); and materials processing. It sounds futuristic, because it is! If your passion is ultra-precision production, discover how CAD interfaces with CAM (computer aided manufacturing) software tools and robotic production systems. Use 3D parametric solid part modeling software and create prototypes with TCD's 3D printers. You will learn how to control sophisticated Computer Numerically Controlled (CNC) machines and how to program and operate CNC machining and turning centers.

Articulated credit is available with the College of DuPage.

Semesters: 2

TD57563 Welding Technology

Experience the variety of custom and production welding techniques, including the four major processes: stick arc, MIG, TIG, and oxyacetylene. Discover how all these are utilized in welding, cutting, and brazing. Learn to read blueprints and understand welding symbols. Develop and practice the industry's life skills including estimate preparation, shop expansion, time management, industrial mathematics, and communication skills. Advanced students will identify metal shapes, practice accurate measuring techniques, and recognize different welding test positions.

Semesters: 2

STEM (Science, Technology, Engineering and Math) Programs

TD55233 Digital Electronics/Electronics Technology

Learn the language of electronics: symbols, data sheets, safety measures, and diagrams. Then begin electronic fabrication, including the art of soldering, using assembly tools, and system testing procedures. Build, test, and troubleshoot electronic circuits, using a digital storage oscilloscope to convert, observe, and record constantly varying signal voltages. Understand the fundamentals of transformers, capacitors, inductors, and DC circuits. Projects you may tackle include designing and building a 14 watt RMS stereo amplified system, exploring alternative energy generation, and using motor controls, programmable logic controllers, and robotics to design your own mini-automated system.

Articulated credit is available with the College of DuPage.

Semesters: 2

PROJECT LEAD THE WAY – ENGINEERING PATHWAY

TD15113 Introduction to Engineering Design (IED)

Discover the role of an engineer in taking an idea from the design process to manufacturing or production. Learn to use AutoDesk Inventor, animated 3D modeling software, to design solutions to engineering problems. Employ reverse engineering using Automoblox and familiar devices to see how each product's components is essential to the final design. Produce a working prototype of your project with one of the program's 3D printers. Work in teams to design and improve products, document and test your solutions, and communicate them to others.

Semesters: 2

TD15263 Principles of Engineering (POE)

Go beyond “myth buster” to solution builder! As you master the basic concepts needed to continue your education in engineering or engineering technology, you’ll apply them — tackling real world challenges:

- Energy sources and applications
- Machine systems
- Fluid power
- Testing the strength and durability of materials
- Understanding how things move and applying that knowledge to projects

Semesters: 2

TD55333 Civil Engineering & Architecture (CEA)

Use 3D modeling software AutoDesk Revit Architecture to create and test your own residential and commercial designs, factoring in:

- Materials and systems
- Structural design
- Cost / efficiency analysis
- Storm water management
- Site design and considerations
- Utilities and services
- Building codes
- Architectural style and guidelines

Research the careers and trends in the design and construction industry, including new developments in energy efficiency, green technologies, and changing populations.

Semesters: 2

TD15033 Digital Electronics (DE)

Design and build a variety of projects: a random number generator, toll booth gate, garage door opener circuit, and 60-second timer circuit. Before you know it, you will be diving into robotics: programming microchips and an Arduino microcontroller using VEX systems.

Semesters: 2

TD15123 Engineering Design & Development (EDD)

Put all the skills and concepts you have developed in previous PLTW courses to work in this capstone course. Working as part of a team, you’ll design a solution to a technical problem of your choosing. Research, design, test, and construct that solution and present it to industry partners. Use what you have already learned to guide you through the process of design and product development. Who knows? You and your team might solve a problem that has stumped others, just because you were able to let your imaginations soar. (Find web links to projects at the Engineering Design & Development page at www.tcdupage.org)

Semesters: 2

WORLD LANGUAGE



WL12063 German 1

The aim of this course is to enable the student to understand German, to speak the language with correct pronunciation and intonation, and use the German language in simple, yet practical situations within the scope of a first-level course. The emphasis in this course is an active mastery of complete thought patterns to the point where the student can comprehend and use them practically and orally. Some attention is given to control writing of German. Performance-based activities include written and oral dialogues, simple written paragraphs and short skit presentations that reflect the culture and social behavior of Germans. German life style is also presented through various videos.

Semesters: 2

WL22073 German 2

Prerequisite: German 1

This course continues with the aims and goals of German I at an intermediate level. The German language is used as much as possible in all phases of classroom work. Continued emphasis is placed on understanding, and more attention is given to reading and writing more complex sentence patterns, along with emphasis on simple impromptu conversation. Cultural items are stressed through more complex performance based activities and supplementary readings of authentic materials. Various videos are used to reinforce understanding of the German life style and language.

Semesters: 2

WL33083 German 3H

Prerequisite: German 2 and/or teacher recommendation.

German is used as much as possible in all phases of classroom work in this high-weighted course. More attention is given to reading authentic materials that offer a wide range of theme and treatment, which are representative of German life and character. Conversation is continued at an advanced level, and some work in composition is done. Various authentic videos without subtitles are used to reinforce understanding of German life style and language.

Semesters: 2

WL43093 German 4H

Prerequisite: German 3H and/or teacher recommendation.

In this course, students continue an in-depth study of the German language. This in-depth study will analyze and apply the four vital points of foreign language study including listening, speaking, reading and writing. Use of authentic materials to enhance learning will be emphasized as readings represent contemporary authors with some insight into the work of classical authors. Improving oral and written communication at a competent level with native speakers continues to be a prime-learning objective.

Semesters: 2

WL12143 Spanish 1

This beginning course emphasizes listening, speaking, reading and writing through a variety of performance-based classroom activities. Basic vocabulary, grammar concepts and cultural perspectives are introduced in order to facilitate written and oral communication in the target language. Performance activities include written and oral dialogues, simple written paragraphs, and short oral presentations. Performances are based on practical life situations that relate to high school students. The Hispanic culture is presented through various classroom activities.

Semesters: 2

WL22153 Spanish 2

Prerequisite: Spanish 1 or skill test or feeder school language teacher recommendation.

This course is a continuation of Spanish 1 further developing the oral and written communication skills in Spanish. Students will be creating original oral and written performances, as well as reading more complex selections. Various technological resources will engage learners while reinforcing Spanish language performances and cultural study. The cultural studies are an expansion introduced in the Spanish 1 level.

Semesters: 2

WL33163 Spanish 3H

Prerequisite: Spanish 1 and 2 and/or teacher recommendation.

This high-weighted advanced level honors course is intended for the highly motivated student. It is a more in-depth and faster paced study of the Spanish language and culture. Students will engage in a variety of listening activities, sustained conversations and presentations. An extensive selection of readings is provided to seamlessly integrate culture and real-life situations. Complex grammar concepts will be practiced in a variety of written and oral tasks. Students will continue to enhance listening, speaking, reading and writing skills in order to be effective communicators.

Semesters: 2

WL43173 Spanish 4H

Prerequisite: Spanish 3H and/or teacher recommendation.

This high-weighted, advanced course provides students with a comprehensive grammatical analysis, as well as a historical and cultural overview of the Spanish-speaking world. Current events and social/political issues are also used as a vehicle to expose students to authentic language and foster practical comprehension and self-expression. Listening, writing, speaking, and reading correctly at a higher proficiency level is the primary goal of this course, as it will prepare students for further advanced studies.

Semesters: 2

WL44183 AP Spanish Language & Culture

Prerequisite: Successful completion of advanced Spanish courses and/or teacher recommendation.

The AP Spanish Language course will help students improve their Interpersonal, Interpretive, and Presentational communication and the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons and Communities). Students will develop advanced vocabulary and grammar skills, while gaining deep cultural knowledge of the Spanish-speaking world. The course is meant to be comparable to third year (fifth or sixth semester) college or university courses that focus on speaking and writing at an advanced level. **Semesters:** 2

WL44193 AP Spanish Literature & Culture

Prerequisite: Successful completion of advanced Spanish courses and/or teacher recommendation.

(Either AP course may be selected after successful completion of Spanish 4H)

An AP Spanish Literature and Culture course is comparable to a third-year college Introduction to Hispanic Literature and Culture course. The following course description is taken from AP Central: The AP® Spanish Literature and Culture course is designed to introduce students to the formal study of a representative body of texts from Peninsular Spanish, Latin American and U.S. Hispanic literature. The course provides opportunities for students to demonstrate their proficiency in Spanish across the three modes of communication (interpersonal, interpretive and presentational) and the five goal areas (communication, cultures, connections, comparisons and communities) outlined in the Standards for Foreign Language Learning in the 21st Century. The overarching aims of the course are to provide students with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills — with special attention to critical reading and analytical writing — and to encourage them to reflect on the many voices and cultures included in a rich and diverse body of literature written in Spanish. In particular, the course reflects a meaningful integration of the cultures, connections and comparisons goal areas of the Standards. Emphasis is placed on approaching the study of literature through global, historical and contemporary cultural contexts. A key objective of the course is to encourage students not only to understand and retell the content of the texts they read but also to relate that content to literary, historical, sociocultural and geopolitical contexts in Spanish. It is based on a required reading list. The works on the list are of literary significance and represent various historical periods, literary movements, genres, geographic areas, and population groups within the Spanish-speaking world. The objective of the course is to help you interpret and analyze literature in Spanish.

Semesters: 2

Native Spanish Speakers Program - Programa de Asignaturas para los Hispanohablantes

WL12103 Heritage Spanish Language 1

Prerequisite: Functional conversational Spanish ability and an informal written diagnostic.

This course is designed for students who are exposed to Spanish at home, but who have had limited prior formal language instruction in Spanish. Course themes highlight Hispanic heritage and identity, while examining historical trends and current events. Students develop reading skills through the study of a variety of fiction and non-fiction authentic texts in Spanish. Students will improve their writing skills through guided formal writing and creative writing projects. Development of grammatical foundations, academic vocabulary spelling are also components of the curriculum. Speaking and oral presentation skills are developed through spontaneous and formal presentations. (Formerly Native Spanish)

Semesters: 2

WL12103 Heritage Spanish Language 2

Prerequisite: Functional conversational Spanish ability and an informal written diagnostic.

This course continues the development of literacy skills acquired through previous study of Spanish and is intended for students with a native Spanish speaking background (diagnostic placement and/or teacher recommendation required) and/or those who have successfully completed Heritage Spanish Language Arts I. Emphasis is placed on developing critical thinking, reading, and writing skills within the context of. Students complete independent writing assignments designed to support grammar and vocabulary acquisition and will read a variety of authentic texts in Spanish, with a focus on non-fiction reading skills. Vocabulary acquisition and grammar study are addressed through class discussion, oral presentations, guided essays, and creative writing. This course prepares students for success in the AP Spanish Language and Culture course and/or AP Spanish Literature and Culture.

Semesters: 2

Additional courses offered at Addison Trail HS:

WL12203 Italian 1

This beginning course emphasizes listening, speaking, reading, and writing through a variety of performance-based classroom activities. Basic vocabulary and grammar concepts are introduced in order to facilitate written and oral communication in the language. Performance activities include oral and written dialogues, simple written paragraphs, and short oral presentations. Performances are based on practical life situations that reflect the culture and social behavior of Italy.

Semesters: 2

WL22213 Italian 2

Prerequisite: Italian 1

This course builds upon students' core knowledge base to enhance communication and performance in the Italian language. Students will be speaking, reading, writing, and listening at an advanced level through more complex performance-based activities. Performance activities at this level include longer oral and written dialogues, written essays, and individual as well as group presentations. All activities tie into a culminating project "Una Visita in Italia" where students will be performing all the necessary functions for a simulated trip to Italy.

Semesters: 2

WL33223 Italian 3H

Prerequisite: Italian 2 and/or teacher recommendation.

In this high-weighted advanced course, Italian will be used in every aspect of classroom work. Students will be analyzing works of Italian literature and engaging in class discussion. Performance-based activities include sustained oral dialogues, longer written essays, and lengthy oral presentations. Students will be compiling written works throughout the year to create a class magazine including stories, advertisements, comic strips, book and movie reviews and poetry.

Semesters: 2

WL43233 Italian 4H

Prerequisite: Italian 3H and/or teacher recommendation.

In this high-weighted advanced course, Italian will be used in every aspect of classroom work. Students will be reading a variety of literary selections, as well as news articles pertaining to current Italian issues/events. Performance-based activities will include sustained oral dialogues, longer written essays and lengthy oral presentations and discussions. Students will also be studying and writing an in depth research paper about a historical Italian figure.

Semesters: 2

WL44243 AP Italian Language and Culture

The AP Italian Language and Culture course is designed to be comparable to college/university Italian courses. Its aim is to develop student's reading, writing, listening, and speaking skills within a cultural framework, reflective of the richness of the Italian language and culture. Students will gain exposure to the knowledge and skills necessary to succeed at the college level.

Semesters: 2

Additional courses offered at Willowbrook HS:

WL12013 French 1

This course develops a basic understanding of the language, stressing the listening and speaking skills. The acquisition of meaningful speech patterns is gained through oral presentation of dialogues and structure drills. Dialogues and drills will progressively lead the student from a form of directed conversation to more spontaneous conversation. Grammar and vocabulary are treated functionally. Vocabulary expansion is also stressed. Cultural materials are presented through the language itself, in music, in videos, on bulletin board displays, etc.

Semesters: 2

WL22023 French 2

Prerequisite: Feeder school language teacher recommendation for incoming freshmen

This course is a continuation of French 1 further developing the student's communication skills in the French language and his/her understanding of French culture. More stress is placed on grammatical structural content and reading and writing.

Semesters: 2

wL33033 French 3H

Prerequisite: French 2 and/or teacher recommendation

This high-weighted third year of French provides a continuation of an intense language study introducing more complete structures, idiomatic expressions, and in general, more advanced content. Oral skills are particularly emphasized; concurrently, writing skills are more fully developed by a variety of free composition and reports. Literary readings reinforce the grammatical content of the course and broaden the student's understanding of French culture.

Semesters: 2

WL43043 French 4H

Prerequisite: French 3H and/or teacher recommendation

In this high-weighted fourth year study of French, students are encouraged to freely develop oral and writing skills through oral reports and original composition on a variety of topics. Their knowledge of the language is supplemented by an emphasis on culture and history which, in turn, is reinforced by the reading of current literary texts, both prose and poetry, and current events texts.

Semesters: 2



AVID (Advancement Via Individual Determination) Program

AD55093 AVID 9 (Addison Trail Only)

Prerequisite: Freshman students

AVID 9 is an elective class for freshman high school students, designed for one class period per day. During that time, students receive strategic lessons that support their academic and social-emotional needs. Each day includes a strategy (or set of strategies) that helps the student understand the specific content and skills being utilized in their other classes or provides activities focused on college and career planning. Students participate in the AVID program all four years of high school.

AD55103 AVID 10 (Addison Trail Only)

Prerequisite: AVID 9 or teacher/counselor recommendations

This course is an academic elective course that prepares students for college readiness and success. Students will receive instruction utilizing a rigorous college preparatory curriculum provided by tutor-facilitated study groups, motivational activities and academic success skills. In AVID 10, students participate in activities that incorporate strategies focused on writing, inquiry, collaboration, organization and reading to support their academic growth. Students participate in the AVID program all four years of high school.