Township High School District 211
Mission Statement

Township High School District 211 serves the educational needs of the community inspiring all students to successfully contribute to the world.

Township High School District 211
Board of Education

Mucia Burke, President
Will Hinshaw, Vice President
Anna Klimkowicz, Secretary
Peter Dombrowski Robert LeFevre, Jr.
Steven Rosenblum Edward Yung
Daniel E. Cates, Superintendent

If you require assistance while using a District 211 school, please contact the principal’s office.
For individuals who are deaf or hard of hearing, please access the following TTD/TTY telephone number: (847) 755-6654.
Superintendent’s Message


Dr. Daniel E. Cates

District 211 is proud to offer a comprehensive high school experience for each of our students. Students and parents perusing the over 700 unique courses that the District has to offer may find the experience exhilarating yet daunting. To help comb through these opportunities, consider the following three resources:

• **Career Cruising** ([www.careercruising.com](http://www.careercruising.com)) All District 211 students have an account connected to their District 211 student email in Career Cruising. This software provides interest surveys and career information which may help a student understand potential college majors and career clusters to explore.

• **D211 College Major and Career Cluster Website** ([www.d211careercluster.org](http://www.d211careercluster.org)) This website is designed for students to explore post-secondary interests and the specific District 211 courses helpful for this exploration. A sequence of courses is listed to narrow down the over 700 courses to a more reasonable list of choices with a specific focus on exploring a post-secondary option. As the courses are listed, they are linked to the Curriculum Guide for more detailed course information.

• **District 211 Curriculum Guide** This Guide lists all courses by department and gives a course description, level, credit and prerequisites. For courses which give student students early college credit through dual credit, the specific college course information is listed. The college course name and number can be used in Transferology ([www.transferology.com](http://www.transferology.com)) to see how that early college credit may be used not only at the college giving the credit but potentially transferred to other colleges upon high school graduation.

The coursework available in District 211 allows for career and college major explorations, workplace certificates and early college credits (dual credit). As each student travels through their high school career, their passions and goals typically change. Having conversations about current interests and potential future post-high school options can make for an effective course selection process in late fall.

Students should take advantage of the vast offerings the District has to offer. Exploring many options, changing paths and finding a way are all a part of the high school experience. We are proud to offer our students many choices as they investigate and prepare for their post-high school choices.

Daniel E. Cates
Superintendent

Seeing all possibilities, seeing all that can be done, and how it can be done, marks the power of imagination. Your imagination stands as your own personal laboratory. Here you can rehearse the possibilities, map out plans, and visualize overcoming obstacles. Imagination turns possibilities into reality.

- Author unknown
Introduction

This Curriculum Guide is designed to help students plan their programs of study from the variety of courses offered in Township High School District 211. Students should plan their high school programs with the help of their parents, counselors, and teachers. In this guide, each course is described by level of instruction, length of course, specific prerequisite, and credit value. Courses offered off-campus are so noted. In addition to the course descriptions, this guide provides information about graduation requirements, grading, student services, summer school, and other areas of interest. This Curriculum Guide is intended to assist students and parents in making educational decisions about high school programs. Course offerings are subject to enrollment and slight variations may occur from school to school. A student’s counselor is always the best source for the most up-to-date information regarding course selection.

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Student Services

Each school has a Student Services Department consisting of counselors, psychologists, social workers, speech and language therapists, a school nurse, and special education teachers. Staff members give students individual and group help in adjusting to their lives.

Each student is assigned a counselor upon entering high school. The counselor meets with each student at least twice a year, although students may see their counselor more often. Parents may meet with their student’s counselor by appointment during school hours.

A comprehensive testing program is in place to assist students in understanding their aptitudes, interests, and special abilities. Major test dates are provided in each school’s Calendar/Handbook. Counselors interpret test results to students and parents. A college and career resource center, which is available to students and parents, provides information on college programs, scholarships, employment opportunities, trade and technical school programs, military services, occupational opportunities, and specialized educational and vocational programs. A computer software system which contains occupational, college, and financial aid information is available to all students. A career counselor coordinates activities to help students develop appropriate career goals. A counselor who has received special training as a college consultant is available to provide families with specific college and financial aid information.

Psychologists and social workers provide services to students and/or their families and serve as liaisons between school and community agencies. In addition, the psychologist conducts individual psychological evaluations and interprets results to students, parents, and school staff. A speech and language therapist and school nurse are available in each school to provide appropriate services to students.

Special education programs, designed to meet all state and federal mandates, are available for students with special needs. Special education teachers are trained to work with physically, mentally, and behaviorally challenged students. These teachers provide supplemental instruction to students in the regular classroom and special instruction to students whose educational needs require a modified program. Teaching assistants work with classroom teachers to extend additional assistance to students.

Course Selection & Registration

Beginning in November, counselors and teachers assist students in the selection of courses for the following year. Parents are encouraged to contact their student’s counselor to assist in this process. A list of courses selected by the student is made available for review and approval in early spring. Changes in courses selected may be made up to the date indicated on this list. Courses will only run if minimum enrollment guidelines are met.

Subject level placement of incoming freshmen is based on the results of placement tests and the recommendations of junior high school teachers. Placement of students already enrolled in high school is based upon previous performance and the recommendations of their teachers.

Students must register for the equivalent of four full-credit subjects plus physical education. However, most students register for five full-credit courses plus physical education.

Student Course Acceleration

Most courses listed in this Guide have prerequisites for enrollment. Prerequisites are designed to inform students and parents of the background knowledge and skills important for successful completion of a course and should be reviewed before registering.

District 211 encourages every student to strive to reach his/her maximum educational potential. In some cases, a student may wish to register in a course for which prerequisites have not been met in order to accelerate that student’s academic progress. Success in this situation is dependent upon the degree of student motivation; a clear understanding of the challenges that will be presented in the course; and a collaborative approach by the student, parents, and teacher.

Any student who wishes to register for a course without meeting the prerequisites is encouraged to discuss course requirements and content with the student’s counselor and the department chair or teacher.
## Grading & Reporting

Student grades are reported by semesters. Each semester is made up of 18 weeks. Parents are informed of their student's progress at 6- and 12-week intervals. The 6-and 12-week in-progress grades may include special comments from the teacher. The final examination at the end of each semester is worth 20 percent of the semester grade. Semester grades are recorded on each student's permanent record. Parents of students having difficulty or doing unsatisfactory work are urged to meet with teachers and/or the student's counselor to discuss improvement options. Specific dates of all student reports are in each school's Calendar/Handbook.

Additionally, all parents may view the status of their students in classes in which the teacher is using the Infinite Campus Parent Portal by logging on at http://bit.ly/d211-infinite-campus.

## General Grading Information

The following is an explanation of the grading scale used on the report cards:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A superior grade for exceptional or outstanding work.</td>
</tr>
<tr>
<td>B</td>
<td>An excellent and commendable grade for an above average degree of accuracy and knowledge of the subject.</td>
</tr>
<tr>
<td>C</td>
<td>An average grade for an adequate and satisfactory performance.</td>
</tr>
<tr>
<td>D</td>
<td>A passing grade for below average work.</td>
</tr>
<tr>
<td>E</td>
<td>A passing grade for demonstrating maximum effort and/or minimum skills.</td>
</tr>
<tr>
<td>F</td>
<td>A failing grade.</td>
</tr>
<tr>
<td>AUD</td>
<td>Special permission to take a course for no grade and no credit.</td>
</tr>
<tr>
<td>EXC</td>
<td>Excused for the grading period and/or from taking the semester examination. Credit for the course may depend on any existing grades earned during the course.</td>
</tr>
<tr>
<td>PASS</td>
<td>A passing grade for a course taken on a Pass/Fail basis. Credit is given, but no grade point is recorded.</td>
</tr>
<tr>
<td>FAIL</td>
<td>A failing grade for a course taken on a Pass/Fail basis. No credit is given and no grade point is recorded.</td>
</tr>
<tr>
<td>W/P</td>
<td>Withdrew from course with passing grade. No credit is given and no grade point is recorded.</td>
</tr>
<tr>
<td>W/F</td>
<td>Withdrew from course with failing grade. No credit is given and the grade point reduction will be recorded.</td>
</tr>
<tr>
<td>INC</td>
<td>Required work is incomplete. Students should discuss the situation with their teachers as soon as possible.</td>
</tr>
<tr>
<td>–</td>
<td>Following a letter grade indicates a “minus”. “C–” means a low “C” grade.</td>
</tr>
<tr>
<td>+</td>
<td>Following a letter grade indicates “plus”. “C+” means a high “C” grade.</td>
</tr>
</tbody>
</table>
Semester grades are determined from grades recorded for daily class discussion, written assignments, special projects, and examinations. Grades are based on how well students meet established course standards.

Grades of “INC” will be given unless students do all basic assignments such as term papers, themes, special reports, book reviews, daily written assignments, community service projects, and all examinations. Students who are incomplete at the end of the semester, except for those with recent illness, will not be allowed to take the semester examination at its scheduled time and may fail the course unless work is made up by a designated time.

Juniors and seniors may choose to take one elective subject each semester on a “pass/fail” grade basis. “Pass/Fail” petitions must be signed and on file within the first twenty-five (25) school days of each semester. Once students choose “pass/fail” they may not change that option after the twenty-seventh (27th) school day of the semester. College admissions personnel recommend that students pursue a rigorous academic program for college admission. Generally, colleges do not recommend that high school students take a major academic subject on a pass-fail basis. College-bound students should confer with their counselors before taking a course pass/fail.

In order to be eligible for interscholastic athletics and competitive activities, a student must meet both Illinois High School Association and District 211 academic and personal conduct standards.

An honor roll is announced for each semester. Students with an unweighted semester grade point average of 3.5 (A average) or better are placed in the high honors group. Students with grade point averages of 3.0 to 3.5 (B average) are placed in the honors group. In computing honor roll, grade points are assigned according to a 4-point system (A=4 points; B=3 points; C=2 points; D=1 point; and E and F=0 points). Grades in physical education, pass/fail courses, and driver education are not given grade points and are not considered in the grade point average. Students taking accelerated and/or honors courses receive a weighted boost for each semester. A weighted grade point average is recorded each semester and is used for college admissions and academic scholar status purposes only. Weighted grade points do not affect in-school honors.

Requirements for Graduation

Complete 20 units of credit:
1. Physical education credit for each semester of attendance (or equivalent)
2. Successfully complete:
   a. One unit of United States History
   b. One unit of Social Science Survey or 1/2 unit each of Government and Economics
   c. Three years of mathematics course work is required, with successful completion of a 300-level course. One of the three required units must be Algebra I, and one unit must include Geometry content.
   d. Two units of science (1 year — Biological Science / 1 year — Physical Science)
   e. One unit of art, world language, music, or vocational education (Applied Technology, Business Education, Family and Consumer Sciences)
   f. Four units of English
   g. Two years of writing-intensive courses, one of which must be English.
   h. One-half unit of Consumer Education/Management (or equivalent)
   i. One-half unit of Health
3. Complete 30 hours of instruction in safety education (Driver Education classroom instruction)
4. Pass a qualifying examination on the State and Federal Constitutions, Declaration of Independence, use of the American flag, and the Australian (secret ballot) method of voting
5. Participate in State testing at an appropriate level

Special Policies Regarding Credits

1. Students may drop an elective course after the first semester and receive one-half credit. However, one semester of a one-year course may not meet college entrance requirements.
2. Students electing to take a fifth subject may drop a fifth subject no later than the twenty-fifth (25th) school day of the semester. A student who drops a fifth subject after the deadline will be assigned a compulsory study hall and will receive either a W/P or W/F.
The chart above compares the academic expectations of various post-high school opportunities available to graduates. It is intended only as a general guide. **Colleges expect a student to program at least four core academic subjects into each year.** These college preparatory subjects are: English, world language, mathematics, science, and social studies. Highly selective institutions require greater numbers of these core academics.

Counselors act as resource people but many specific questions are better directed to the college or university admissions staff. **Final admissions decisions are always up to the colleges.** They are usually based on the number of academic courses and the grade point average in those courses as well as the student’s scores on standardized admissions tests (ACT, SAT).

Requirements for admission to individual colleges and universities vary. Students who cannot maintain a “C” grade average (2.0) in high school may have some difficulty qualifying for college entrance. Some colleges may admit students with lower grade point averages, but who score well on entrance exams.

**College Admission Testing**

Most public colleges and universities in the Midwest, including all Illinois state universities and most community colleges, require the ACT or SAT as part of the admissions process.

**Advanced Placement**

Township High School District 211 offers courses designed to help students receive college advanced placement credit by examination. Each year, Advanced Placement tests are administered to qualified students in May. Many colleges also give college credit through the College Level Examination Program (CLEP).
NCAA Initial Eligibility for Student-Athletes

Students interested in participating in college athletics at the NCAA Division I or II level must meet the NCAA freshman eligibility standards. Initial eligibility is determined by NCAA from three high school factors: core course completion, test scores, and grade-point average. NCAA Division I and II require 16 core courses. Detailed information regarding freshman eligibility criteria is available on the NCAA Eligibility Center website.

The primary responsibility of a high school in relationship to a freshman athlete’s certification is to ensure that the school’s list of approved core courses is accurate and up to date. Only courses in the areas of English, mathematics, science, social studies and world language can be considered for core course approval. Approved Core Courses for all District 211 high schools are listed on the NCAA Eligibility Center website at www.ncaaclearinghouse.net. Additionally, these approved courses are listed below and have been denoted in this guide with an NCAA designation within the course description.

<table>
<thead>
<tr>
<th>List of Approved Core Courses (Form 48H) for all Township High School District 211 schools:</th>
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<tbody>
<tr>
<td>E101 English 1</td>
</tr>
<tr>
<td>E102 English 1</td>
</tr>
<tr>
<td>E106 English 1</td>
</tr>
<tr>
<td>E201 English 2</td>
</tr>
<tr>
<td>E202 English 2</td>
</tr>
<tr>
<td>E203/E603 Speech 1</td>
</tr>
<tr>
<td>E204 Speech 2</td>
</tr>
<tr>
<td>E205 Journal Writing 1</td>
</tr>
<tr>
<td>E206 Journal Writing 2</td>
</tr>
<tr>
<td>E208 English 2</td>
</tr>
<tr>
<td>E301 English 3</td>
</tr>
<tr>
<td>E302 English 3</td>
</tr>
<tr>
<td>E305 Adv Reading</td>
</tr>
<tr>
<td>E307 Creative Comp</td>
</tr>
<tr>
<td>E311 Adv Creative Comp</td>
</tr>
<tr>
<td>E319 AP Lang &amp; Comp</td>
</tr>
<tr>
<td>E331 American Studies</td>
</tr>
<tr>
<td>E336 American Studies</td>
</tr>
<tr>
<td>E401 Mod World Lit</td>
</tr>
<tr>
<td>E402 English Lit Survey</td>
</tr>
<tr>
<td>E403 Senior Comp</td>
</tr>
<tr>
<td>E404 English Lit Survey</td>
</tr>
<tr>
<td>E405/E605 Expo Comp</td>
</tr>
<tr>
<td>E411 Communication Skills</td>
</tr>
<tr>
<td>E419 AP Lit &amp; Comp</td>
</tr>
<tr>
<td>E429 AP Lang &amp; Comp</td>
</tr>
<tr>
<td>E423 Intro to Rhetoric</td>
</tr>
</tbody>
</table>

Student-athletes interested in pursuing athletic opportunities in college should discuss their interest with parents, coaches, and counselors. Prospective student-athletes must register with the NCAA Eligibility Center and meet academic eligibility standards as determined by NCAA. Complete details are available at www.ncaa.org or www.ncaaeligibilitycenter.org.

Courses marked “NCAA Pending” within this guide have been submitted to NCAA Clearinghouse for approval as a core course. Approval was not received prior to the printing of this guide.
Elective Courses

In addition to offering courses that meet high school graduation requirements, most departments offer elective courses that, if taken, assist a student with college admission requirements or other post-secondary academic preparation. Further, elective courses offer the student the opportunity to pursue special interest areas within the curriculum. Advanced Placement courses are available in many academic departments, including portfolio assessment in Art. Work/study opportunities are available in Applied Technology, Business Education, Family and Consumer Sciences, and Special Education.

Dual Credit Program

Selected courses in the curriculum have been designated as “dual” or “articulated credit.” These courses, designated as 600-level courses, are offered as part of a curriculum collaboration with William Rainey Harper College or other colleges as indicated. Dual credit allows a student to earn both college and high school credit simultaneously. Certain restrictions apply to these courses and interested students should see their high school counselor for details.

Results of aptitude and achievement tests and teachers’ recommendations are used by counselors to place individual students in courses. Students in general level courses who do work above “C” may be transferred to a regular level section of a course. Students in accelerated or honors level courses who earn “C” or lower are usually recommended for movement to a regular level section.

Entrance into the District Gifted Education Program is determined by performance on freshman placement tests and teacher recommendation. Based on this information, approximately five percent of incoming freshmen are invited into the gifted program. Please contact the student services director for information about the program and selection procedures.

Coding of Courses

A letter and three digits precede each course title in this curriculum guide. The letter indicates the department and the last digit indicates levels of ability. Letter designations of each department are as follows:

- **A** — Art
- **B** — Business Education
- **C** — Music
- **E** — English
- **G** — Social Studies
- **H** — Family and Consumer Sciences
- **L** — World Language
- **M** — Mathematics
- **P** — Physical Education/Driver Education/Health Education
- **R** — Non-Departmental
- **S** — Science
- **T** — Applied Technology
- **V** — Vocational
- **W** — Harper College campus

The first digit of the three-digit sequence generally represents the earliest year in which a student is eligible to take the course (1-freshman; 2-sophomore; 3-junior; 4-senior; 6-college dual credit). The second digit has no intrinsic meaning. The third digit indicates the following:

- **0** Courses designed to strengthen basic fundamentals, skills, and concepts.
- **1** General education courses designed to improve skills while presenting a complete curriculum.
- **2-7** Regular education courses designed for most students, including those who plan on entering programs of advanced education or training after graduation.
- **8** Honors courses for students whose aptitude and achievement qualify them for intensive study at an increased pace.
- **9** Advanced Placement and Honors courses for the academically talented. Students in these courses are encouraged to take Advanced Placement tests which are the focus of A.P. level courses.

As an example; E101 is a general level English course, E102 is a regular level English course, and E108 is an accelerated English course.
**Summertime School**

An annual summertime school is available to all Township High School District 211 students, who may enroll for one or more of the following reasons:

1. To take courses that could not be scheduled during the regular school year.
2. To repeat a failed course or to take a different course to make up credit lost by failure.
3. To repeat a course for a higher grade (“C” is our lowest recommended grade on transcripts to colleges. The higher grade will be used to calculate class rank. However, the original course grade will be noted on the transcript.)
4. To give incoming freshmen and students between freshman and sophomore year the opportunity to take courses which qualify them for more advanced work (Enrollment in these classes is through recommendation and invitation by the student services director, and enrollment may be required for some students.)
5. To earn credit for early graduation or to meet additional graduation requirements.

**Credit**

A student may earn a maximum of one academic unit of credit during the session and an additional one-fourth unit of credit in physical education.

**Study Requirements**

Each day of a summer class is equal to five day’s work during the regular school year. Students must make up work immediately after an absence. Arranging for making up work is the student’s responsibility.

**Attendance**

Since summertime school is a concentrated program, regular attendance is required. Students absent the first two days of school will not be admitted into class in that semester. To receive credit, a student must be present on the last day of each summer school semester. A student who accumulates three days of absence in a semester will lose credit and forfeit fees. A tardy (arriving within one hour

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**Alternative High School**

Residents of Township High School District 211 age 17 and over who have not completed high school and are no longer enrolled in school may earn a diploma in the evening at the Alternative High School. Classes are held Monday through Thursday evenings during the school year. For information and fee structure, contact the Continuing Education Office at (847) 755-6722.

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**Evening Make-Up Courses**

High School District 211 offers several evening make-up courses for seniors who need them for graduation. Students should consult their counselor for information regarding these courses.
### Advanced Manufacturing Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T144</td>
<td>Production Technology</td>
<td>1</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>T244/T642</td>
<td>Advanced Manufacturing Technology 1</td>
<td>1</td>
<td>2,3,4</td>
</tr>
<tr>
<td>T344/T643</td>
<td>Advanced Manufacturing Technology 2</td>
<td>1</td>
<td>3,4</td>
</tr>
<tr>
<td>T444/T644</td>
<td>Advanced Manufacturing Technology 3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>T346/T646</td>
<td>Building Construction</td>
<td>2</td>
<td>3,4</td>
</tr>
<tr>
<td>T446/T647</td>
<td>Building Construction Independent Study</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

### Carpentry/Building Construction

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T144</td>
<td>Production Technology</td>
<td>1/2</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>T296/M296</td>
<td>Geometry in Construction</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>T245</td>
<td>Woodworking Technology</td>
<td>1</td>
<td>2,3,4</td>
</tr>
<tr>
<td>T346/T646</td>
<td>Building Construction</td>
<td>2</td>
<td>3,4</td>
</tr>
<tr>
<td>T446/T647</td>
<td>Building Construction Independent Study</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>T347</td>
<td>Woodworking Technology Independent Study</td>
<td>1</td>
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<tr>
<td>T447</td>
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### Automotives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level(s)</th>
</tr>
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<tbody>
<tr>
<td>T134</td>
<td>Small Engine &amp; Power Technology</td>
<td>1/2</td>
<td>1,2,3,4</td>
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<tr>
<td>T235</td>
<td>Automotive Technology 1</td>
<td>1</td>
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<tr>
<td>T336</td>
<td>Automotive Technology 2</td>
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<td>T437</td>
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<td>T487</td>
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### Computer Aided Design

**Architecture, Engineering, Animation**

<table>
<thead>
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<th>Course Name</th>
<th>Units</th>
<th>Level(s)</th>
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<tbody>
<tr>
<td>T166</td>
<td>Architecture, Animation &amp; Engineering I</td>
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<tr>
<td>T266</td>
<td>Architecture, Animation &amp; Engineering II</td>
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<td>T366</td>
<td>Architecture, Animation &amp; Engineering IS I</td>
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<tr>
<td>T466</td>
<td>Architecture, Animation &amp; Engineering IS II</td>
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Electronics

T174
Electronics Technology 1
1 Unit                     Levels 1,2,3,4

T276
Electronics Technology 1
1 Unit                     Levels 2,3,4

T377
Electronics Independent Study
1 Unit                     Levels 3,4

T477
Electronics Independent Study
1 Unit                     Levels 3,4

PLTW Engineering

T202
PLTW Introduction to Engineering Design
1 Unit                     Levels 1,2,3,4

T302
PLTW Principles of Engineering
1 Unit                     Levels 2,3,4

T408/T608
PLTW Digital Electronics
1 Unit                     Levels 3,4

T418
PLTW Civil Engineering & Architecture
1 Unit                     Levels 3,4

T428
PLTW Bioengineering & Environmental Sustainability
1 Unit                     Levels 3,4

T438
PLTW Computer Integrated Manufacturing
1 Unit                     Levels 3,4
Applied Technology courses are designed to give students an exposure to technical environments and their applications in the modern work world. Through careful selection, students may explore areas of career interest. Many courses in the Applied Technology field are accepted as electives for college admission.

**T130 Applied Technology Exploration**  
**LEVEL: 1,2**  
One year  
One unit  
**PREREQUISITE:** Placement through staff conference recommendation.  
This course is designed to help students with special needs acquire skills to be successful. Emphasis will be placed on basics such as: organizational skills, measuring, reading working drawings, shop safety, basic math, tool identification and usage, and following a sequential plan of action. This class is organized to provide for small group and individualized instruction with class projects varying depending on student's abilities.

**T134 Small Engine & Power Technology**  
**LEVEL: 1,2,3,4**  
One-half year  
One-half unit  
Students will gain an understanding of the operation of piston engines, basic electrical circuits, hydraulic, and pneumatic principles with emphasis on small engine repair. Hands-on experience includes the opportunity to participate in the repair of a variety of small engines.  
Recommended but not a prerequisite for T235.

**T144 Production Technology**  
**LEVEL: 1,2,3,4**  
One-half year  
One-half unit  
Production Technology is a lab oriented class in which several materials including wood, metal, and plastic will be used for both custom-made and mass produced products. Students will use a variety of hand and power tools as they learn about modern production technology.  
Recommended but not a prerequisite for T244/T642.

**T166 Architecture, Animation and Engineering Design I**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
In the T166 course, students will be exposed to three different content areas: engineering, architecture, and animation. Students will be using Autodesk Inventor to learn about engineering drafting in both 2D and 3D environments. Students will create, develop, and test the function of their designs within the engineering software. Students will utilize Chief Architect for the architectural portion of the class in which they will focus on residential floor plan design. Students will learn about traffic flow, the three main areas of a home, proper design of homes, building codes and many other architecture related topics. Finally, in animation students will use Autodesk 3D Studio Max in which they will create animations of their creations they developed in both engineering and architecture. This will include students creating several short length animations. Course prepares students for Autodesk Certification Test.

**T174 Electronics Technology 1**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
This course is designed for students interested in electronics technology, digital communications, audio technology, industrial technology applications, and electronic design. Students will study safety, basic components and symbols, electrical fundamentals, instrumentation, circuit analysis, semiconductor applications, and digital technology. Students will assemble and analyze electronic circuits including power supplies, oscillators, amplifiers, and digital circuits. Emphasis is placed on problem solving and teamwork in a lab environment.  
T67402: Harper College Course ELT110, Introductory Electronics, 4 college credit hours.

**T202 PLTW Introduction to Engineering Design**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
**PREREQUISITE:** Concurrent enrollment in M117 Algebra 1 or higher or department chair recommendation.  
The Project Lead the Way (PLTW) course, Introduction to Engineering Design, is an interdisciplinary study with an emphasis placed on learning the design development process. Students utilize their creativity to collaborate with other students through distance learning projects. In this course students develop the essential skills that engineers rely on everyday such as patent research, working with team members, hand-sketching, and proper engineering documentation with team members. Students apply the Design Loop to innovate and invent products in a continuous improvement model. State of the art technology including Autodesk's Inventor, ANSYS, 3D Printing and ShopBot industrial automation, is used to allow students an opportunity to create prototypes and mock-ups of their individual and team solutions. With successful completion of end-of-course assessment, student may obtain college credit.

**T235 Automotive Technology 1**  
**LEVEL: 2,3,4**  
One year  
One unit  
Auto Technology 1 covers theory of operation and care of the basic components of the modern automobile. Areas of study include engines and engine systems, brakes, and suspensions. Hands-on activities consist of working with actual automotive parts and work on live cars. This course is a prerequisite for T336 Auto Technology 2 and stresses entry level job skills. It is recommended for students interested in becoming an automotive technician, as well as for those who wish to learn basic automotive repair for personal use.  
ASE Certification Prep; NATEF Certified Program.

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Creativity requires the courage to let go of certainties.

- Erich Fromm  
Social psychologist and philosopher
T244 Advanced Manufacturing Technology Level 1  LEVEL: 2,3,4
One year One unit
Students will work towards industry standard certifications in the area of precision machining based on the National Institute of Metalworking Skills (NIMS). Students will develop the skill set and knowledge that employers want when hiring people in the manufacturing industry. Students will be prepared to take NIMS credential tests in: 1) Measurement, materials, and safety 2) CNC Operator: Milling Level 1 and 3) CNC Operator: Turning Level 1. Students will be learning and operating industry standard Computerized Numerical Control machines that cut steel. NIMS operates under rigorous and highly disciplined processes as the only developer of American National Standards for the nation’s metalworking industry accredited by the American National Standards Institute (ANSI). Students will learn concepts in the Manufacturing Skills Standards Council curriculum in the four areas: Safety, Measurement & Continuous Improvement, Manufacturing Processes and Maintenance Awareness.

Harper College MFT105 (T64201) Machine Processes I, 2 college credit hours; MFT120 (T64202) Machine Processes II, 3 college credit hours.

T245 Woodworking Technology  LEVEL: 2,3,4
(Level 1 with instructor approval)
One year One unit
Woodworking Technology is designed for the beginning to intermediate student. This one-year course includes instructional units in safety, layout and measurement, equipment and processes, cabinet making, furniture construction, lathe turning, and career/consumer awareness. These hands-on units are geared for preparing students for future courses as well as helpful household knowledge of wood working procedures. Project material fees are required and vary with the various project selections.

T266 Architecture, Animation & Engineering II  LEVEL: 1,2,3,4
One year One unit
PREREQUISITE: Computer Aided Drafting and Graphics T166
In the T266 course, students will further their knowledge in the three content areas: architecture, engineering, and animation. The first semester will be broken down into a series of 6 week sessions, touching base on each of the three content areas. The engineering session focuses on complex assemblies and specialty views. The architecture session focuses on architectural home styles, the reading of plan sets, and framing. The animation session focuses on continuing students’ ability to model, set cameras, and create more detailed short length animations. During second semester students are able to pursue the field of their choice. During this period students will continue to advance their knowledge working on student-selected large scale projects. Course content allows preparation for Autodesk Certification test.

T276 Electronics Technology  LEVEL: 2,3,4
One year One unit
PREREQUISITE: Successful completion of T174 Electronics Technology I and C or higher in M114 Algebra 1 or instructor’s approval
Students will become familiar with analyzing, aligning, troubleshooting, and servicing most common types of electronic circuits. They will study areas of electronics such as amplification, solid-state circuitry, digital circuitry, FM stereo, and basic problem solving techniques. Students will build advanced projects and analyze and evaluate a variety of laboratory experiments. Emphasis is on the theory of electronic circuits and a systematic approach to troubleshooting.

T273 Computer Repair  LEVEL: 2,3,4
One year One unit
PREREQUISITE: M117 Algebra or equivalent; T174 is not a prerequisite, but is recommended.
This course is designed for students interested in computer repair. Students will have hands on experience servicing Windows-based computers. Areas of computer study include: construction, disassembly and assembly, installation and configuration of operating systems, modifying and upgrading of circuits, MS-DOS, Windows, and utilities. Students will have learning opportunities in the areas of: safety and preventative maintenance, removal and installation of field replaceable units, backing up and restoring files, configuration and utilization of video circuits, Windows, modems, I/O addresses, interrupt request lines, direct memory access, network interface cards, network connections, and the diagnosing/troubleshooting of malfunctioning systems. Completion of this course will prepare students to earn Comp TIA A+ certification. T67301/02: Harper College NET 111, A+ Hardware, 3 college credits; NET 112 Operating Systems Technologies, 3 college credits.

It’s kind of fun to do the impossible.
- Walt Disney
T296 Geometry in Construction  LEVEL: 2
One year  One unit
The purpose of this course is to have students experience putting geometry into action by building real world construction projects. Geometry in Construction is taught by both Math and Applied Technology teachers. This interdisciplinary course integrates geometry and construction topics through the building of significant construction projects. The goal is to provide students with a better understanding of both the geometry and the construction content taught in the Math department and prepares students for the subsequent Math courses. Students will gain hands-on, real-world experience in different areas of construction. Additional emphasis is given to teamwork, problem-solving, and the promotion of employable attributes. This is a double-period course that offers both a Math credit and an Applied Technology credit.

T302 PLTW Principles of Engineering  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: T202 Introduction to Engineering Design or Department Chair approval
PLTW Principles of Engineering is the course that follows T202 Introduction to Engineering Design in the Project Lead the Way sequence. This course uses project-based, hands-on experiences to teach students the key elements and skills of engineering and technology-based careers. Concepts in this course include communication and documentation, design processes, engineering systems, statics and strength of materials, materials and material testing in engineering, engineering for reliability, and kinematics. This course explores technology systems and manufacturing processes and addresses the social and political consequences of technological change. The applications of physics, trigonometry, and applied sciences are integrated in the course to solve engineering problems. Autodesk Inventor is a computer aided design (CAD) program that will be utilized to assist in completion of projects. With successful completion of course assessment, student may obtain college credit.

T344 Advanced Manufacturing Technology Level 2  LEVEL: 3,4
One year  One unit
PREREQUISITE: Successful completion of T244 Advanced Manufacturing Technology 1
Students will work towards industry standard certifications in the area of precision machining based on the National Institute of Metalworking Skills (NIMS). Students will develop the skill set and knowledge that employers want when hiring people in the manufacturing industry. Students will have the opportunity to take NIMS credential tests in: 1) CNC Turning: Programming and Setup Operations Level 1 and 2) CNC Milling: Programming and Setup Operations Level 1. Students will be learning and operating industry standard Computerized Numerical Control machines that cut steel. NIMS operates under rigorous and highly disciplined processes as the only developer of American National Standards for the nation’s metalworking industry accredited by the American National Standards Institute (ANSI). Students will also work towards industry standard certifications based on the Manufacturing Skill Standards Council (MSSC). Students will have the opportunity to take two MSSC certification exams in: 1) Safety and 2) Measurement and Continuous Improvement.

T346 Building Construction  LEVEL: 3,4
Two units
PREREQUISITE: T245 Wood Technology is recommended but not required
While participating in the construction of a house, students become familiar with all stages of construction from site preparation to interior finish work. This may include the following skills: carpentry, siding, roofing, drywall, electrical, plumbing, heating, painting and staining, various flooring applications, cabinet installation, and finish trim work. Transportation to the construction site is provided.

T336 Automotive Technology 2  LEVEL: 3,4
One year  One unit
PREREQUISITE: Successful completion of T235 Auto Technology 1
Auto Technology 2 deals with testing, adjustment, repair and replacement of various components of the automobile. Students study troubleshooting and the use of test equipment including engine analyzers, computer scanners, pressure testers, and emission analyzers. They gain experience in engine mechanical diagnosis and servicing, fuel injection and emission control service, electrical testing, brake repair, alignment, transmission work, and air conditioning service. Time will be split between classroom and lab activities. Students may bring vehicles into the lab for maintenance, testing, and repair when related to planning class activities.

T3602: Harper College Course MNT115, Basic Carpentry, 2 credit hours.
T347, T447 Woodworking Technology Independent Study  LEVEL: 3,4
One-half to two years  One-half unit per semester
PREREQUISITE: Instructor’s approval and successful completion of T245 Wood Technology
These courses will allow students who are interested in pursuing a career in the field of woodworking to gain additional knowledge and experience in an area of particular interest. With the help and supervision of the instructor, students explore in-depth such areas as cabinet making, building construction, wood technology, laminating, and bending or other related areas.
Students working on independent study projects must show personal initiative and self-direction in developing goals and carrying out plans. Research, experimentation, project construction and report writing are among appropriate student activities. With the instructor’s approval, planned activities may take place outside of the classroom.

T366, T466 Architecture, Animation, & Engineering Independent Study I & II  LEVEL: 3,4
One-half to two years  One-half unit per semester
PREREQUISITE: Instructor’s approval and successful completion of T266 Explorations in Architecture and Engineering
Students who want to further their drafting skills and gain additional experience in industrial related computer aided drafting are encouraged to enroll. Individualized work in selected areas of industrial drafting is planned with the instructor. This is an opportunity for students to become more self-directed in developing skills in an area of their choice. Course content allows preparation for Autodesk Certification test.

T373 Network Administration and Security  LEVEL: 3,4
One year  One unit
PREREQUISITE: T273 Computer Repair or department chair approval.
This course provides students with the instruction necessary to install, configure, and troubleshoot an enterprise-level computer network. It introduces current networking standards, the OSI Model, various protocols and topologies, the interconnections between various hardware components, network operating systems, DNS, DHCP, TCP/IP, Ethernet, wired and wireless transmission, LAN, WAN, intranet, and security. Students will be introduced to practical solutions for identifying, assessing, and preventing external and internal threats to networks. Key components include authentication methods, communication security, infrastructure security, cryptography basics, and security implementation.
Completion of this course will prepare students to earn Comp TIA-Network+ and security++ certifications.

T377, T477 Electronics Independent Study  LEVEL: 3,4
One-half to two years  One-half unit per semester
PREREQUISITE: Instructor’s approval and successful completion of T276 Electronics Technology 2
Electronics Independent Study allows students who are interested in pursuing a career in the field to gain additional knowledge and experience. With the instructor as a resource, students may explore areas such as television, industrial circuitry, digital circuitry, and circuit design in-depth.
Students must possess a degree of initiative and self-direction. With the assistance of the instructor, they will develop goals and plan activities and projects which can be carried out on their own initiative. Research, experimentation, project construction, and report writing are among appropriate student activities. With the instructor’s approval, planned activities may take place outside of the classroom.

T408 PLTW Digital Electronics  LEVEL: 3,4
One year  One unit
PREREQUISITE: Successful completion of T302 PLTW Principles of Engineering or Department Chair approval
This is a year-long honors course in laboratory electronics. This course covers digital electronics, starting with logic levels, truth tables, gates, flip-flops, registers, and counters. An emphasis is placed on the implementation of interfaces between analog and digital electronics, particularly when controlling and recording the results of typical engineering experiments. Students will make extensive use of the LabVIEW, Multi-Sim and other engineering software as a means of communication between a computer and external hardware. An independent project of the student’s design will serve as a semester culminating activity. Digital Electronics is a foundation course for those considering careers in computer science, electric engineering, software engineering, hardware engineering, as well as other fields of engineering. This class is a part of the PLTW Engineering sequence. T60802: Harper College Course ELT203, Digital Electronics, 4 credit hours.

T418 PLTW Civil Engineering and Architecture  LEVEL: 3,4
One year  One unit
PREREQUISITE: Successful completion of T302 Principles of Engineering or the approval of the Department Chair
Civil Engineering and Architecture (CEA) is the study of the design and construction of residential and commercial building projects. This honors course includes an introduction to many of the varied factors involved in building design and construction including building components and systems, structural design, storm water management, site design, utilities and services, cost estimation, energy efficiency, and careers in the design and construction industry. The major focus of the CEA course is to expose students to the design and construction of residential and commercial building projects, design teams and teamwork, communication methods, engineering standards, and technical documentation. Students will analyze, design, and build electronic and physical models of residential and commercial facilities. While implementing these designs...
students will continually hone their interpersonal skills, creative abilities, and understanding of the design process. Students will use state of the art software, as used in the industry, to aid in the design process. Course content allows preparation for Autodesk Certification test. With successful completion of end-of-course assessment, student may obtain college credit.

**T428 PLTW Bioengineering & Environmental Sustainability**  
**LEVEL: 3,4**  
One year

*PREREQUISITE: Successful completion of T302 Principles of Engineering or the approval of the Department Chair*

In this honors course students explore the diverse fields of biotechnology. Hands-on projects engage students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, tissue engineering, biomedical devices, forensics and bioethics. Students, usually at the 11th and 12th grade level, apply biological and engineering concepts to design materials and processes that directly measure, repair, improve and extend living systems. With successful completion of end-of-course assessment, student may obtain college credit.

**T437 NATEF Automotive Independent Study 3**  
**LEVEL: 4**  
One-half or one year

*PREREQUISITE: Instructor’s approval and successful completion of T336 Auto Technology 2*

The Township High School District 211 Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF).

**T438 PLTW Computer Integrated Manufacturing**  
**LEVEL: 3,4**  
One year

*PREREQUISITE: Successful completion of T302 Principles of Engineering or the approval of the Department Chair*

How are things made? What processes go into creating products? Is the process for making a water bottle the same as it is for a musical instrument? How do assembly lines work? How has automation changed the face of manufacturing? While students discover the answers to these questions in this honors course, they're learning about the history of manufacturing, robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems. With successful completion of end-of-course assessment, student may obtain college credit.

**T444 Advanced Manufacturing Technology 3**  
**LEVEL: 4**  
One year

*PREREQUISITE: Successful completion of T344 Advanced Manufacturing Tech 2*

Students will continue to develop skills and knowledge in the setup and operation of machines used in the manufacturing industry. Students will continue to build knowledge on programming Computer Numerical Control (CNC) machines. There will be an opportunity to use industry programming software such as Mastercam to complete projects. In addition, a curriculum focus will be on preventive maintenance of machines. Other processes used in manufacturing will be covered including plastic injection molding, welding, casting and assembly. Course objectives will help prepare students to take industry standard certification exams available from National Institute of Metalworking Skills (NIMS) and Manufacturing Skill Standards Council (MSSC). Harper College MFT 108 (T64401) Manufacturing Processes (3 college credit hours) and MFT 109 (T64402) Intro to Manufacturing Maintenance (2 college credit hours)

**T446 Building Construction Independent Study**  
**LEVEL: 4**  
One year

*PREREQUISITE: Instructor’s approval and successful completion of T346 Building Construction*

Through this course, students are given the opportunity to participate in a second building construction project, through which they can gain additional expertise in the planning and building of a house. Second-year students are given the opportunity to strengthen areas of weakness and to serve as lead carpenters in areas where they have developed confidence and expertise. T64702 Harper College Course MNT215, Commercial Carpentry.

**T487 NATEF Automotive Independent Study 4**  
**LEVEL: 4**  
One-half or one unit

*PREREQUISITE: Instructor’s approval, successful completion of T336 Auto Technology 2 and concurrently enrolled in T-437 NATEF Automotive Independent Study 3*

The Township High School District 211 Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). NATEF certification helps prepare students for post-secondary education, the workplace, and for Automotive Service Excellence (ASE) exams. This course allows students who are interested in a career in automotive repair and maintenance to gain additional knowledge and experience in an area or areas of particular interest. Each student, with the help and supervision of the instructor, will work to complete NATEF tasks of increasing degrees of difficulty in brakes, electrical/electronic systems, engine performance, and suspension and steering. Students working on independent study projects must show personal initiative and self-direction in developing goals and carrying out plans. Students will use industry standard research software to troubleshoot and service vehicles. ASE Certification Prep; NATEF Certified Program. With successful completion of coursework, student may obtain articulated credit with Triton College.
Possible College and Career Paths

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<td>Video &amp; Animation 1</td>
<td>Video &amp; Animation 2: Visual FX and Production</td>
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<td>A195</td>
<td>A397</td>
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<td>Digital Media Arts 1</td>
<td>Digital Media Arts 1: Video Game Design &amp; Interactive Media</td>
<td>Digital Art Studio</td>
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<td>A355</td>
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<td>Graphic Design</td>
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Illustrator, Graphic Designer, Medical Illustrator, Cartooning, Printmaker, Silk Screen Printer, Concept Artist

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<td>Painting, Drawing, &amp; Printmaking 2</td>
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<td>Painting, Drawing, and Printmaking Studio</td>
<td>AP 2D Design</td>
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<tr>
<td>Art in Contemp. Society</td>
<td>AP Art History</td>
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These courses are intended to enrich any curricular area.

Graphic Designer, Flash Designer, Illustrator, Web Designer, Production Artist, 3D Modeler, Interactive and App Designer, Motion Graphics Designer, Visual Effects Artist, Web Content Developer, Video Editor, Digital Photographer, Photo Journalist, Wedding Photographer, Sports Photographer, Video Game Development

Sculptor, Model Maker, Industrial Designer, Potter, Toy Designer, Set Designer, FX Designer for Film and Television
A100 Fine Arts  LEVEL: 1,2,3,4  
One to four years  
½ to 1 unit per year  
(Hoffman Estates, Schaumburg, and Palatine High Schools Only)  
PREREQUISITE: Placement by staff conference recommendation.  
This course is designed to teach students in the areas of art, music, dance and drama through participation in realistic hands-on experiences. Basic objectives and skills will be met through appropriate activities designed for the student’s level of capability.

A152 Painting, Drawing, and Printmaking  LEVEL: 1,2,3,4  
One year  
One unit  
PREREQUISITE: Student must receive a passing grade in the first semester of this course in order to continue for the second semester.  
Are you creative? Would you like to learn how to be? Are your notebooks covered in drawings? In this course, students develop creativity, design, and technical skills basic to the visual arts and numerous creative careers. A wide variety of engaging art techniques and materials are introduced in the study of painting, drawing, and printmaking. You will learn to draw more realistically, mix and apply paint and print images like posters or t-shirts. This full-year course is a great art foundations course and the introduction to the Painting, Drawing and Printmaking curricular path. No experience necessary!

A195 Digital Media Arts  LEVEL: 1,2,3,4  
One-half year  
One-half unit  
PREREQUISITE: None  
Digital Media Arts 1 is the beginning level course and introduction to digital arts and imaging. Students will begin to learn key concepts and basic skills involving digital photography and imaging, digital illustration/vector, graphic design, raster/bitmap imagery, virtual worlds, motion graphics, and game design. Lessons will be geared towards learning tool and techniques basics using industry standard software such as Photoshop, Illustrator, Final Cut Pro, and Unity as students investigate the essentials of interactive media. No experience necessary. This introductory semester course is suggested as a pairing with the introductory semester course A196 Video and Animation.

A196 Video and Animation  LEVEL: 1,2,3,4  
One-half year  
One-half unit  
PREREQUISITE: None  
Video and Animation is the beginning level course and introduction to the essentials of video and animation techniques. Students will use industry standard digital tools such as Photoshop and Final Cut Pro to create artworks in video, audio, 2D animation, 3D animation, motion graphics, and visual effects. Students will work in both real and virtual environments as they develop essential skills in visual communication, digital storytelling, videography, design, and animation. No experience necessary. This introductory semester course is suggested as a pair with the introductory semester course A195 Digital Media Arts.

A233 Graphic Design  LEVEL: 2,3,4  
One-half year  
One-half unit  
PREREQUISITE: None  
Explore the creative and useful field of graphic design and visual communication. Apply your art skills and experience and discover their use in a potential career. Digital graphic design skills produce strong and clearly communicated images that inform, persuade, and command attention. This course familiarizes the student with current methods, techniques, and technology employed in the field of advertising to develop a student portfolio. Graphic Design is structured to emulate a professional setting and offers exposure to graphic design related careers.

A234 Graphic Design  LEVEL: 2,3,4  
One-half year  
One-half unit  
PREREQUISITE: A233 Graphic Design 1 (A,B,C) or Department Approval  
Enroll in this course as a continued professional avenue to the graphic design and advertising industry. You will develop a portfolio that reflects the essential blend of traditional graphic design and digital skills. Learn production and industry standard computer applications, as well as creative marketing and advertising techniques. Included are such topics as branding, identity development, self-promotion, and web banner advertising. Study the relationship between products, services, features, and benefits to potential markets.

A252 Three-Dimensional Design  LEVEL: 1,2,3,4  
One year  
One unit  
PREREQUISITE: None  
This course provides the student with introductory knowledge of three-dimensional design skills and techniques in the lab setting. The qualities of various materials, such as ceramics, plaster, fiber, wood, lost wax, casting, and metal fabrication are investigated and applied in the development of 3D art creations that are usable and wearable. Providing step-by-step demonstrations helps student acquire sound skills. One-on-one guidance facilitates artwork design and quality. Students must receive a passing grade in the first semester of this course in order to continue for the second semester.
A253 Painting, Drawing and Printmaking 2  LEVEL: 2,3,4
One-half year  One-half unit
PREREQUISITE: A152 Painting, Drawing, and Printmaking 1 (A,B,C) or Department Approval
In Painting, Drawing and Printmaking 2, students will continue to increase their technical and creative skills. Students will explore advanced techniques through the use of various processes and media. Painting, Drawing and Printmaking 2 students will increase their art making confidence by developing essential rendering and quality composition skills to include landscapes, imaginative subjects, portrait, and figure studies. The student's confidence increases as their hand/eye coordination improves. This semester course is suggested as a pairing with the semester course A254 Painting, Drawing and Printmaking 2.

A254 Painting, Drawing and Printmaking 2  LEVEL: 2,3,4
One-half year  One-half unit
PREREQUISITE: A152 Painting, Drawing, and Printmaking 1 (A,B,C) or Department Approval
This course is the second half of the level 2 Painting, Drawing, and Printmaking sequence. Students will continue to build upon their technical and creative skills. This class uses printmaking, drawing, and print media as a way of exploring how to combine those various media and techniques to allow the student to develop imagery with a personal thematic approach. Course work increases a student's ability to effectively use composition to create the illusion of reality on a two-dimensional surface. This semester course is suggested as a pairing with the semester course A253 Paint, Drawing and Printmaking 2.

A255 Photography 1  LEVEL: 2,3,4
One-half year  One-half unit
PREREQUISITE: None
Photography 1 introduces professional camera techniques. During this one semester course, students capture and create photographic images. Photography communicates ideas and documents events. The creation of unique photographic images acts as a window to personal experience. Information regarding photographic careers will add direction and focus. While the majority of the materials, technology, and equipment are supplied, the student is required to purchase some photography supplies and have access to a camera as prescribed by the instructor. No experience necessary. This introductory semester course is suggested as a pairing with the introductory semester course A255 Photo 2.

A256 Art in Contemporary Society  LEVEL: 2,3,4
One-half year  One-half unit
Art in Contemporary Society presents the influences of the Arts in a chronological perspective. This course examines the role that dance, drama, music, and the visual arts play in society. Through discussion, critique, and interpretation of the arts, students explore the relationship between contemporary and historical events. No experience necessary. A65603: Harper College Course A105, Introduction to Arts, 3 credit hours.

A295 Digital Media Arts 2: Video Game Design and Interactive Media  LEVEL: 2,3,4
One half-year  One-half unit
PREREQUISITE: A195 Digital Media Arts 1 (A,B,C) or Department Chair Approval
Video Game Design and Interactive Media is the second course in the Digital Media Arts course sequence. It gives students the opportunity to get hands on experience in the ever-growing field of Digital Art. Students will use industry standard programs such as Final Cut Pro, Unity, and Z Brush to learn skills in developing artworks in 3D modeling, 3D animation, virtual worlds, 2D animation, augmented reality, interactive art, digital imaging, and introduction to video game creation.

A296 Video and Animation 2: Visual Effects and Production  LEVEL: 2,3,4
One half-year  One-half unit
PREREQUISITE: A196 Video and Animation 1 (A,B,C) or Department Chair Approval
Visual Effects and Production is the second course in the Video and Animation course sequence. Students will advance their understanding of video and animation techniques as they produce digital video, 2D animation, and 3D animation artworks. Students will use industry standard software such as Photoshop and Final Cut Pro as they develop visual communication and narrative skills using digital art techniques. Students will extend their creative potential as they explore compositing, green screening, and other special effects in video, while developing skills in animation and motion graphics such as motion tracking and using virtual cameras.

A352 Three-Dimensional Design 2  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: A252 Three-Dimensional Design 1 (A,B,C) or department chair approval. Students must receive a passing grade in the first semester of this course in order to continue for the second semester.
This course expands upon the basic 3-D design skills and techniques introduced in A252 Three-Dimensional Design 1. Additional opportunities available to students include: wheel-throwing clay to form pottery; casting and soldering metal to create jewelry; and using additive and subtractive techniques in chosen materials such as plastic, metal, paper, clay, fiber, and wood to create sculptures. Students view artwork by recognized professional sculptors and craftsmen and learn about 3D art-related careers.

A355 Photography 2  LEVEL: 2,3,4
One-half year  One-half unit
PREREQUISITE: A255 Photography 1 (A,B,C) or Department Approval
Photography 2 builds upon skills required in Photography 1 by extending and expanding a student’s experience in camera and printing techniques. Beyond fundamental materials and processes, Photography 2 places more emphasis on the conceptual and expressive qualities of the photographic image. Students produce a portfolio of finished photography that reflects the skills mastered. While the majority of the materials, technology, and equipment are supplied, the student is required to
purchase some photography supplies and have access to a camera as prescribed by the instructor.

**A356 Painting, Drawing, and Printmaking Studio**  
**LEVEL: 2,3,4**  
One unit  
**PREREQUISITE:** A253 Painting, Drawing, and Printmaking 2, and/or A254 Painting, Drawing, and Printmaking 2 (A,B,C) or Department Chair Approval

Painting Drawing and Printmaking 3 will prepare students for the rigor of the AP art courses in the 400 and 500 levels. Students will begin to master various technical skills while integrating observational life drawing, personal context and issues in contemporary society. Students begin to build a portfolio that showcases their art making abilities in a variety of drawing, painting and printmaking media. This portfolio can be used for scholarship, college application or career opportunity. Students will synthesize techniques, processes, and concepts in an increasingly mature manner. Developing an awareness of content, symbolism, and theme in traditional and contemporary artworks, students evaluate and critique their work and the work of others. Students formulate original ideas, personal expressive style, and direction for future art work.

**A379 Digital Art Studio**  
**LEVEL: 3,4**  
One unit  
**PREREQUISITE:** A295 Digital Media Arts II: Video Game Design and Interactive Media, A296 Video and Animation II: Visual Effects and Production, A234 Graphic Design II: (A,B,C) or Department Chair Approval

Digital Studio is the third step in the Digital Media Arts and Video and Animation sequence. Students will work in a wide variety of advanced digital applications to create work that integrates their current skill sets with the current use of technology in the Arts. Multimedia production may include digital illustration, animation, video, web page design, iPad app design, interactive arts, game design, and digital photography. A comprehensive portfolio will be developed emphasizing a variety of technical skills and advanced creative thinking. Students will work in teams on larger scale projects, as they take on roles reflective of potential college and career paths in digital media.

**A397 Digital Art Studio**  
**LEVEL: 3,4**  
One unit  
**PREREQUISITE:** A295 Digital Media Arts II: Video Game Design and Interactive Media, A296 Video and Animation II: Visual Effects and Production, A234 Graphic Design II: (A,B,C) or Department Chair Approval

Advanced Digital Studio is the fourth step in the Digital Media Arts and Video and Animation sequence. This independent study course allows advanced digital art students the opportunity to develop a complete Digital Art portfolio. The focus of this course is on digital art career exploration and preparation. Students advance their knowledge of digital photography, raster imaging, vector-based graphics, character animation, advanced digital audio, virtual reality, video editing, special effects, game design, and interactive art. Advanced Digital Studio students create a comprehensive portfolio, which reflects their artistic achievement. Students in this course may choose to use their portfolio to apply for scholarships, college credit, careers in the field of art, and university applications.

**A487 Three-Dimensional Studio**  
**LEVEL: 3,4**  
One unit  
**PREREQUISITE:** A352 Three-Dimensional Design 2 or Department Chair Approval

Three-Dimensional Design Studio offers each student the opportunity to work in a variety of sculptural media, which may include work in metal, ceramic, textile, wood, and plaster. With the guidance of the instructor, each studio student develops an individualized course of study with timelines providing advanced experience in one or more areas of three-dimensional art. While concentrating in the selected area, students work to improve technical quality and develop a personal style. Each student compiles a comprehensive portfolio of artistic achievements.

**A489 Advanced Placement Studio Art: 3-D Design**

**A499 Advanced Placement Studio Art: 2-D Design**

**A599 Advanced Placement Studio Art: Drawing (3,4)**  
**LEVEL: 4**  
One unit each  
**PREREQUISITE:** Portfolio review by the Art Department

These independent study courses give advanced art students the opportunity to develop an Advanced Placement Art Portfolio. The focus of these courses is on the three sections graded by the College Boards: Quality, Concentration, and Breadth. Students will select works which excel in concept, composition, and execution from their “body of work” or portfolio. Students also will organize a series of work around a compelling visual concept. Finally, students will demonstrate, through their work, broad experience and accomplishment.

**A467 Two-Dimensional Studio/Photography**  
**LEVEL: 3,4**  
One unit  
**PREREQUISITE:** A355 Photography 2 or Department Chair Approval

This division of Two-Dimensional Studio offers training and experience in advanced photographic techniques. Advanced camera techniques, studio lighting, quality composition, and work ethic are emphasized. Students are encouraged to use special techniques and creative expression. The outcome is a comprehensive portfolio that reflects a student's artistic and technical achievement. While the majority of the materials, technology, and equipment are supplied, the student is required to purchase some photography supplies and have access to a camera as prescribed by the instructor.
## Technology Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>B101</td>
<td>Computer Literacy</td>
<td>1 Unit</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>B164/B664#</td>
<td>Technology Applications I</td>
<td>1/2 Unit</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>B232</td>
<td>Emerging Technologies</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B274</td>
<td>Digital Marketing Communications</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B294</td>
<td>Web Design &amp; Development</td>
<td>1 Unit</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>B366</td>
<td>Desktop Publishing Independent Study</td>
<td>1 Unit</td>
<td>3, 4</td>
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</tbody>
</table>

## College Preparatory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level</th>
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</thead>
<tbody>
<tr>
<td>B184*</td>
<td>Business Explorations</td>
<td>1 Unit</td>
<td>1, 2</td>
</tr>
<tr>
<td>B223</td>
<td>Topics in Marketing</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B267</td>
<td>Study Skills</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B285*</td>
<td>Consumer Education</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B384</td>
<td>Business Management</td>
<td>1/2 Unit</td>
<td>3, 4</td>
</tr>
<tr>
<td>B386#/B686#</td>
<td>Accounting I - Financial</td>
<td>1 Unit</td>
<td>2, 3, 4</td>
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</table>

## Career Readiness Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Level</th>
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</thead>
<tbody>
<tr>
<td>B224**</td>
<td>Practices in Entrepreneurship (PIE)</td>
<td>1/2 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B225***</td>
<td>Practices in Entrepreneurship (PIE) Independent Study</td>
<td>1/2 Unit</td>
<td>3, 4</td>
</tr>
<tr>
<td>B332*</td>
<td>Business Internship</td>
<td>2 Units</td>
<td>3, 4</td>
</tr>
<tr>
<td>B396/696</td>
<td>QuickBooks#</td>
<td>1/2 Unit</td>
<td>3, 4</td>
</tr>
<tr>
<td>B397</td>
<td>Business Incubator</td>
<td>1 Unit</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>B488#</td>
<td>Accounting II - Managerial</td>
<td>1 Unit</td>
<td>3, 4</td>
</tr>
</tbody>
</table>

*Satisfies the District 211/State Consumer Education Requirement*

**B224 students must also enroll in H224**

***B225 students must also enroll in H225***

# Students may have the opportunity to earn college credit
Business Education programs prepare young people for the challenge of the college business curriculum, prepare them for employment in business, and provide business-related instruction which can be applied to personal use. Students gain understanding of business concepts, become familiar with the role of technology as a business and personal tool, and prepare for further education in career areas requiring college preparation such as accounting, law, marketing, management, and business administration. Students gain direction concerning the many opportunities available to them in today's global economy.

A Business Internship program is designed to help students gain practical experience through on-the-job training in offices and retail establishments in the community.

**B101 Computer Literacy**  LEVEL: 1,2,3,4  
One year  One unit  
**PREREQUISITE:** Placement through staff recommendation  
Computer Literacy is designed to help students acquire skills to be successful in an academic and career setting. Students will learn proper keyboarding technique and develop skill in operating the computer using various software packages. Document formatting procedures will be taught. Using the Microsoft Office Suite, students learn word processing, spreadsheet applications, desktop publishing, presentation concepts, and basic web page design principles. English language skills are reinforced.

**B164 Technology Applications I & II**  LEVEL: 1,2,3,4  
One year  One unit  
This hands-on course is designed to teach students how to master the use of essential computer software they will apply to high school, college, and personal and professional work. Students increase their computer productivity by completing real-world projects in acceptable business formats using the industry standard for productivity, Microsoft Office (Word, Excel, Access, PowerPoint). Students will create advanced-level spreadsheet applications, web pages, advanced-level word processing applications, desktop publishing projects, professional computer presentations, database management, and integrated applications. Appropriate and ethical use of technology is also explored. B66402: Harper College CAS 160, Intro to Business Software Packages, 3 college credit hours.

**B184 Business Explorations**  LEVEL: 1,2  
One year  One unit  
Business Explorations provides students the opportunity to explore today's global marketplace through the perspectives of both the consumer and the business professional. This course is an introductory survey of business topics, including entrepreneurship, business organization and management, human resources, marketing, financial planning, credit, savings and investing, accounting, business law, insurance, and social responsibility. This course meets and exceeds the D211 Consumer Education graduation requirement.

**B223 Topics in Marketing**  LEVEL: 2,3,4  
One-half year  One-half unit  
Topics in Marketing is a course designed to teach marketing concepts through the examples of different industries such as: sports, music, entertainment, fashion, and technology. Students will learn and apply the functions of marketing through hands-on learning, group activities, and projects related to marketing concepts studied in class. Students will develop a marketing plan where they create a new product/service and then apply target marketing strategies to produce promotional material, find sponsors, create advertisements, and more. Guest speakers and a field trip enhance classroom instruction by sharing personal experience and informing students how to achieve a position in the marketing industry.

**B224 Practices in Entrepreneurship (PIE)**  LEVEL: 2,3,4  
One semester  One-half unit  
**REQUIREMENT:** Any foods course, concurrent enrollment in H224 Practices in Entrepreneurship (PIE)  
This interdisciplinary class offers students the opportunity to manage and operate a small business within the school. Students will acquire the skills necessary to become successful business managers and entrepreneurs, through in-class study of topics such as economics, management, marketing, and accounting. Students gain authentic experience running a small business through this learning opportunity.

**B225 Practices in Entrepreneurship (PIE) Independent Study**  LEVEL: 3,4  
One semester  One-half unit  
**REQUIREMENT:** Successful completion of B224 and H224 Practices in Entrepreneurship (PIE), concurrent enrollment in H225 Practices in Entrepreneurship (PIE) Independent Study  
This independent study class is an extension of B224 and H224. Students will manage and operate a small business through exploration and inquiry of advanced business topics, mastering the skills acquired in B224 and H224.
Emerging Technologies exposes and teaches students about current and emerging hardware and software in the dynamic world of technology. Throughout the semester, topics such as the evolution of Web 2.0, cloud computing and the use of web-based applications in a desktop, mobile and state environment will be explored. Students will interact and experience the latest digital tools through blogging, tagging, social bookmarking, social and professional networking and managing syndicated online materials. Students who take this course will be able to apply these skills in an academic, personal and professional setting.

Study Skills is designed to teach students effective student habits to be successful in high school and beyond. Personal learning styles will be analyzed in order to maximize learning across the curriculum. This course focuses on the development of time management, organizational skills, note-taking skills, test taking strategies, reading literacy, and content area study skills.

B274 Digital Marketing Communications is designed to teach students how businesses leverage digital marketing in today's world of technology and e-commerce. This course will apply the basics of marketing in a simulated business environment to develop brand identity, social media marketing campaigns, and mobile marketing skills to increase customer awareness.

Do you have an interest in designing websites or learning how to build websites? This course teaches you front-end design skills of web design and the back-end coding of web development. Industry leaders from our community helped create this innovative new course in response to an increasing demand for these needed skills. The course culminates in a real-world application of working with a local business to refresh, redesign, and redevelop their website.

B285 Consumer Education: This required course exceeds state requirements for consumer education. Students will receive financial literacy instruction in budgeting, savings, investing, credit, insurance, comparative shopping, banking, income taxes, advertising, consumer economics, and consumer protection.

B322 Business Internship: Business Internship is designed for students with career interests within the business industry. Students are given an opportunity to gain first-hand knowledge of business careers through on-the-job training provided in cooperation with local businesses. Classroom activities focus on general business concepts, career paths, communication skills, employer-employee relations, and consumer-related topics. Students earning one unit of credit for the work experience and one unit of credit for the related class. This course meets the D211/State graduation requirements for Consumer Education.

Desktop Publishing Independent Study provides students with the opportunity to apply skills to real-world applications. Students will produce documents for various school functions that include athletics, activities, music and drama, honors programs, etc. Students will have the opportunity to meet with coaches, teachers, and administrators to plan and create desktop publishing items. Students will further their development in using Microsoft Word, Photoshop, presentation software, and peripheral equipment.

Business Management provides a critical understanding of how business organizations operate and are managed – their goals, strategies, structures, environments, and the motivations and interests of the people involved. Students will analyze the management functions (planning, organizing, leading, staffing, controlling) and their implementation and integration within the business environment. This course will provide students with an opportunity to learn the skills necessary to lead companies through a constantly changing landscape. Through a variety of unique classroom projects, group discussions and lectures, students will take with them the skills to become a leader in the business world. For students planning to attend Northern Illinois University, a proficiency exam is offered that will result in college credit from Northern Illinois University. It is recommended that students complete at least two of the following courses before attempting the proficiency test: B184 Business Explorations, B397 Business Incubator, or B384 Business Management.
B386 Accounting 1 - Financial  LEVEL: 2,3,4  
One year  One unit  
Course content will prepare all business students for the rigorous curriculum of college accounting and is strongly recommended for all future business majors. Students will gain a basic understanding of the accounting industry and procedures, including debit and credit analysis, journalizing, posting, calculating payroll, preparing and analyzing financial statements, preparing adjusting and closing entries, calculating depreciation, and costing inventory. Students will become familiar with computerized accounting software, including Microsoft Excel, and the practical uses of these programs in the business world.

B68602: Harper College, ACC100 Bookkeeping, 3 credit hours.

B387 Business Law  LEVEL: 3,4  
One-half year  One-half unit  
Business Law is offered to students interested in the application of law to their personal lives and to business activities. Students study the administration of the law, various parts of a contract, termination, remedies, defenses for breach as well as real and personal property. Historical and current legal cases that cover constitutional, civil, criminal, and contract laws will be studied. Students demonstrate their knowledge of law and legal procedures by participating in mock trials. This course is recommended for students who are considering careers in law or business as well as those who seek a better understanding of the application of law to their personal lives.

B396 QuickBooks  LEVEL: 3,4  
One-half year  One-half unit  
PREREQUISITE: B386 Accounting 1 - Financial (A,B,C)  
Students are introduced to QuickBooks to apply their prior accounting knowledge into practical use, through industry leading software. Students expand their payroll accounting knowledge from B386 Accounting I through understanding federal and state laws regarding employment, payroll, deductions, and taxes. Upon completion of this class, along with B164 Technology Applications I & II and B386 Accounting I, students will have an opportunity to earn an Accounting Bookkeeper Clerk Certificate from Harper College. B69603: Harper College, ACC112, Quickbooks (2 credit hours).

B397 Business Incubator  LEVEL: 2,3,4  
One year  One unit  
This course is designed to prepare students to become true entrepreneurs. Students will have the opportunity to create and fully develop their own product or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development using the business model canvas approach. Midyear, students will gain in-market experience with “Minimum Viable Product” research and presentations made possible by small grants to student teams. Over the course of the year, students teams will learn about marketing, accounting, human resources, as well as the legal aspects of running a business to prepare for an investor panel presentation. This presentation helps to drive the entrepreneurial spirit by having student teams in front of actual investors to pitch their innovative idea and possibly win funding to turn their business plans into reality.

B488 Accounting 2 - Managerial  LEVEL: 3,4  
One year  One unit  
PREREQUISITE: B386 Accounting 1 - Financial  
This honors class is designed to prepare all college-bound business students and those pursuing a career in accounting or finance with an advanced, integrated approach to accounting. Taking financial accounting to an accelerated level, this course incorporates managerial accounting concepts such as operations, financial, and investment decision making, time value of money, accounting information systems, cost-volume profit analysis, and variance analysis. The combination of these objectives provides students with an understanding about the decisions that must be made in the financial reporting process and the ability to evaluate and use accounting data. Students may earn credit by exam for Harper College ACC101, Intro to Financial Accounting.

The future belongs to those who believe in the beauty of their dreams.  
- Eleanor Roosevelt
*Any elective listed on page 27 may be substituted for any 400 level course to meet graduation requirements. Electives also may be taken in addition to courses listed on this page.
English (cont’d.)

<table>
<thead>
<tr>
<th>Sophomore</th>
<th>Junior</th>
<th>Senior</th>
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**Junior**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>E203/E603</td>
<td>Speech 1</td>
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<tr>
<td>E204</td>
<td>Speech 2</td>
<td>1/2</td>
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<tr>
<td>E205</td>
<td>Journalistic Writing 1</td>
<td>1/2</td>
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<tr>
<td>E207</td>
<td>Journalistic Writing 2</td>
<td>1/2</td>
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<tr>
<td>E212</td>
<td>Dramatics</td>
<td>1/2</td>
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<tr>
<td>E214</td>
<td>Advanced Topics in Lit.</td>
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**Senior**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>E303</td>
<td>Rhetoric of Cinema</td>
<td>1/2</td>
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<tr>
<td>E305</td>
<td>Advanced Reading</td>
<td>1/2</td>
</tr>
<tr>
<td>E307</td>
<td>Creative Composition</td>
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<tr>
<td>E317</td>
<td>Advanced Creative Comp.</td>
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<tr>
<td>E402</td>
<td>English Literature</td>
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<td>E403</td>
<td>Senior Composition</td>
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<td>E404</td>
<td>English Literature</td>
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</tr>
<tr>
<td>E405/E605</td>
<td>Expository Composition</td>
<td>1/2</td>
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</table>
English is not only a discipline in itself, but also a necessary corollary to success in all subject areas. The communication skills of reading, writing, speaking, and listening are essential for meeting the economic, social, and cultural challenges in today’s society. To think clearly and creatively and to express ideas effectively are the responsibility of every human being. The goal of the English Department is to develop these skills to the fullest extent in all students.

In order to meet individual needs, the English Department places students in appropriate ability groups. Placement is based on standardized test scores, past achievement in English, and teacher recommendation. No placement, however, is final, and changes in a student’s assigned level may take place at any time performance warrants such a move.

In addition to the teaching of communications skills, the English Department feels a strong commitment to broaden each student’s understanding that literary works relate to their eras, that certain universal themes span history and that both factors have relevance to the individual today.

Students are engaged in reading and responding to short stories, novels, poems, essays, and plays. The goal is that students will gain an appreciation for literature and become lifelong readers and writers.

E100 English 1  LEVEL: 1
One year  One unit  (Palatine and Hoffman Estates High Schools Only)
PREREQUISITE: Placement through staff conference recommendation
Basic communication skills are taught in this course with emphasis on reading and writing. Students are given added instruction in areas of individual needs. Functional and practical reading skills are emphasized.

E101 English 1  LEVEL: 1
One year  One unit
The course is designed to improve basic language skills in reading and writing. The writing program stresses the application of language skills in a variety of compositions. The reading program develops skill in recalling, summarizing, making predictions, and making inferences. Activities focus on reading strategies useful for a wide range of materials. High-interest materials are utilized at increasing levels of difficulty. (NCAA Core Course)

E102 English 1  LEVEL: 1
One year  One unit
This course for freshmen includes the study of literature and extensive practice in writing. Literature studies involve analysis and appreciation of a variety of types and themes. The composition program stresses clarity, specificity, and creativity. The basic principles of the fine arts are introduced and integrated into the language arts curriculum. (NCAA Core Course)

E104, E105, E106 English as a Second Language – Entry Level  LEVEL: 1,2,3,4
PREREQUISITE: Placement through district assessment and staff recommendation
One year  One unit
This entering level consists of three courses designed to meet the needs of English language learners who have recently arrived with little or no English language skills. In this level, students will acquire listening comprehension, oral language, vocabulary, and basic reading and writing skills.

E108 English 1  LEVEL: 1
One year  One unit
Students in this accelerated course are introduced to a variety of literary elements in different types of literature. Creativity is developed through class study of literature and independent study. The composition program includes experience in both creative and critical writing. The basic principles of the fine arts are introduced and integrated into the language arts curriculum. (NCAA Core Course)

E110-E310 Reading  LEVEL: 1,2,3
One year  One credit  (Palatine and Hoffman Estates High Schools Only)
PREREQUISITE: Placement through staff conference recommendation
These courses offer the student basic reading skills. Students will work to increase vocabulary and comprehension. Instruction is individualized to meet each student’s needs.

E111, E112, E113 English as a Second Language (ESL) Beginner Level  LEVEL: 1,2,3,4
One year  Up to three units
PREREQUISITE: Placement through district assessment and staff recommendation
This ESL course is designed to meet the needs of English language learners. This beginning level course is designed to meet the individual needs in speaking, listening, reading, writing, and the acculturation process.

E120 English  LEVEL: 1
One year  One unit
PREREQUISITE: Placement through staff conference recommendation
This course is designed to improve basic language skills in reading, listening, speaking, and writing. The class emphasizes vocabulary development and the mechanics of writing.

Fairy tales are more than true; not because they tell us that dragons exist, but because they tell us that dragons can be beaten.

– Helen Keller
Author and political activist
E1121, E122 English as a Second Language – Intermediate Level
LEVEL: 1, 2, 3, 4
One year
Up to two units
PREREQUISITE: Successful completion of E111, E112, and E113 or placement through district assessment and staff recommendation
This ESL course is designed to meet the needs of English language learners. This intermediate level course focuses on building reading, writing, speaking, listening, and grammar skills.

E130-E630 English
LEVEL: 1, 2, 3, 4
One year
One unit
PREREQUISITE: Placement by staff conference recommendation
These courses are designed for students with significant communication deficiencies. Students receive instruction in the area of reading, writing, speaking, and listening. Social communication skills necessary for functioning within the community are emphasized. Students are given added instruction according to each student’s individual needs.

E131, E132 English as a Second Language – Advanced Level
LEVEL: 1, 2, 3, 4
One year
Up to two units
PREREQUISITE: Successful completion of E121 and E122 or placement through district assessment and staff recommendation
This advanced ESL course is designed to meet the needs of English language learners. All language skills are practiced and refined with an emphasis on academic reading and writing.

E141 Reading Strategies 1
LEVEL: 1
One year
One unit
PREREQUISITE: Placement determined by the student’s score on the district reading placement test
This course is designed for students for whom the required English class alone is insufficient to meet their needs. Students will be given specific and individualized instruction to improve their reading skills. The course is to be taken concurrently with English 101. (The course credit does not apply towards the 4-credit English requirement for graduation.)

E151 English as a Second Language – Transitional Level
LEVEL: 1, 2, 3, 4
One year
One unit
PREREQUISITE: Placement through staff conference recommendation and/or successful completion of E131 and E132
This transitional ESL course is designed to further students’ development in English through intensive listening, speaking, reading, and writing. This course is designed to transition English language learners into mainstream English classes.

E170, E190, E290, E390 Reading Improvement
LEVEL: 1, 2, 3
One year
One unit each
PREREQUISITE: Placement through staff conference recommendation
These courses utilize the Direct Instruction model to improve reading decoding, expand vocabulary, and increase comprehension skills.

E200 Vocational English
LEVEL: 2
One year
One unit
(Palatine and Hoffman Estates High Schools Only)
PREREQUISITE: Placement through staff conference recommendation
This course is designed as an extension of E100 English. Vocational English emphasizes the practical application of the communications skills acquired in E100 English.

E201 English 2
LEVEL: 2
One year
One unit
PREREQUISITE: E100 English 1 or E101 English 1 or E102 English 1 with department recommendation
This course is structured for the student whose skills are below grade level. English 201 focuses on furthering students’ development in reading, writing, and speaking. Students improve their comprehension and vocabulary skills. Basic analysis of fiction and nonfiction is developed and writing assignments stem from the readings studied and personal experience. Students also have an opportunity to develop effective oral communication skills. (NCAA Core Course)

Life isn’t about finding yourself.
Life is about creating yourself.
– George Bernard Shaw
E202 English 2  LEVEL: 2
One year
One unit
PREREQUISITE: E101 English 1 with department recommendation or E102 English 1 or E108 English 1
The study of literature by either types or themes is continued at the sophomore level. The writing program focuses on various types of compositions. Concentrated units in speech and communication are part of the work at this level. Principles of the fine arts are introduced and integrated with the language arts curriculum. (NCAA Core Course)

E203 Speech 1  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: Concurrent enrollment or completion of E202 or higher or department chair approval.
Speech 1 strengthens oral communication skills which will help the student in future life. Emphasis is placed on gaining confidence before a group, listening, organizing ideas and persuading an audience. Students participate in a variety of exercises, including informative and persuasive speeches. (NCAA Core Course) E60303: Harper College, SPE101, Fundamentals of Speech Communication (3 credits)

E204 Speech 2  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: E203 Speech 1 (A,B,C)
Speech 2 continues to strengthen skills learned in Speech 1. In addition, the course concentrates on group dynamics and discussion, debate, interpretation, advertising, and radio and television production. (NCAA Core Course)

E205 Journalistic Writing 1  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: English (A,B,C)
Journalistic Writing 1 focuses on the process of developing writing skills through systematic instruction in producing newspaper articles such as news, features, sports, and editorials which adhere to techniques and principles of journalistic writing. (NCAA Core Course)

E207 Journalistic Writing 2  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: E205 Journalistic Writing 1 (A,B,C) or recommendation of the journalistic writing teacher
Journalistic Writing 2 is a course for the student who wants additional journalism experience. The course focuses on advanced news and feature writing, specialized sports writing, and critical editorial writing. Classroom instruction highlights writing for print and electronic media, as well as advanced layout and design. (NCAA Core Course)

E208 English 2  LEVEL: 2
One year
One unit
PREREQUISITE: E108 English 1 (A,B) or E102 English 1 with department recommendation
This accelerated course examines a variety of demanding literary works from a number of perspectives. The writing program emphasizes analysis and argumentation. The third major focus of the course is the development of the student’s speaking abilities through formal and informal speeches. Principles of the fine arts are introduced and integrated with the language arts curriculum. (NCAA Core Course)

E212 Dramatics  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: English 1 (A,B,C) or department recommendation
Dramatics provides an overview of and participation in the major areas of theater: pantomime, interpretation, improvisation, acting, play production, criticism, and theater history. Students apply their skills in various exercises and assignments within each unit.

E214 Advanced Topics in Literature  LEVEL: 2,3,4
One-half year
One-half unit
PREREQUISITE: E101 English 1 with department recommendation or E102 English 1 or E108 English 1
This reading-intensive course develops comprehension and fluency through encounters with literature focused on a central topic, yet representing a variety of themes, concepts, eras, and ideas. Through writing assignments and class discussion in response to literature, students also will develop their ability to think, speak, and write with clarity and insight. (NCAA Core Course)

E220 English 2  LEVEL: 2
One year
One unit
PREREQUISITE: Placement through staff conference recommendation
This course is an extension of E120 English 1. The course emphasizes increased reading and practical writing skills. The writing program focuses on outlining, paragraph structure, and essay development.

E241 Reading Strategies 2  LEVEL: 2
One year
One unit
PREREQUISITE: Placement determined by the student’s scores on the district reading placement test and the district reading assessment
This course is designed for students for whom the required English class alone is insufficient to meet their needs. Students will be given specific and individualized instruction to improve their reading skills. The course is to be taken concurrently with the first semester of English 201. E241 Reading 2 course credit does not apply toward the 4-credit English requirement for graduation.

M y will shall shape the future. Whether I fail or succeed shall be no man's doing but my own. I am the force; I can clear any obstacle before me or I can be lost in the maze. My choice; my responsibility; win or lose only I hold the key to my destiny.

– Elaine Maxwell
American author
E300 Business English  LEVEL: 3  One year
One unit
(Palatine and Hoffman Estates High Schools Only)
PREREQUISITE: Placement through staff conference recommendation
This course teaches the keeping of accurate and readable business records. Students learn to record their own financial transactions. Basic clerical skills are taught. Course topics include checking, savings, and credit forms and procedures. Reading improvement is emphasized.

E301 English 3  LEVEL: 3  One year
PREREQUISITE: E201 English 2 or E220 English 2 or E202 English 2 with department recommendation
This course emphasizes reading comprehension and written communication. A variety of American literature selections will be read, interpreted, and discussed. Writing assignments focus on course material, as well as personal experience. Principles of the fine arts are integrated into the language arts curriculum. (NCAA Core Course)

E302 English 3  LEVEL: 3  One year
PREREQUISITE: E201 English 2 with department recommendation or E202 English 2 or E208 English 2
This course includes extensive work on both writing and the study of American literature. Students will be encouraged to think critically and to write logically. They will learn research skills, complete a research project, and write informative, analytical, and persuasive compositions based on literature studied as well as personal experience. Principles of the fine arts are integrated into the language arts curriculum. (NCAA Core Course)

E303 The Rhetoric of Cinema  LEVEL: 3,4  One-half year
This course focuses on film as literature. In addition to studying the literary elements of plot, theme, tone, point of view, style, symbolism, irony, characterization, and setting, the emphasis is on writing, reading, and speaking about cinema while learning to understand and analyze this visual medium through the principles of film language and rhetoric, applicable concepts from politics, art, literature, music, sociology, psychology, history, critical approaches, and genres. (NCAA Core Course)

E304 Advanced Reading  LEVEL: 3,4  One-half year
PREREQUISITE: E202 English 2 or E208 English 2 or department recommendation
Advanced Reading is a course designed for students reading at grade level or above. It provides them with skills necessary for success in college. Emphasis is on higher-level comprehension, vocabulary, study skills, and reading speed. (NCAA Core Course)

E307 Creative Composition  LEVEL: 3,4  One-half year
PREREQUISITE: E202 English 2 (A,B,C) or E208 English 2 or department recommendation
This course is designed for students who want to develop their skill and talent in writing creatively. Students learn to recognize and use techniques such as description, characterization and narration as they progress from specific assignments to independent creative compositions. (NCAA Core Course)

E317 Advanced Creative Composition  LEVEL: 3,4  One-half year
PREREQUISITE: E307 Creative Composition (A,B,C) or department recommendation
This course is designed for students who want to further their skills as creative writers. Students write works of short fiction, creative non-fiction, poetry, drama, and screenplays. Publication is an integral part of the curriculum with students encouraged to submit their writing to various contests and the school literary magazine. (NCAA Core Course)

E319 Advanced Placement Language and Composition  LEVEL: 3, 4  One year
PREREQUISITE: E208 English 2 (A,B) or E202/E302 English 2 with department recommendation
This honors course emphasized college-level language and composition. The student is prepared to enter college with a strong English background. Students are encouraged to take the Language and Composition Advanced Placement Examination of the College Entrance Examination Board. (NCAA Core Course)
E320 English 3  LEVEL: 3
One year
One unit
PREREQUISITE: Placement through staff conference recommendation
This course is an extension of E220 English 2. The emphasis is on reading comprehension and writing skills. The writing program focuses on multi-paragraph essays and the editing process. Reading and writing skills are improved through lessons pertaining to literature with an historical focus.

E331 American Studies — English  LEVEL: 3
One year
One unit
PREREQUISITE: E201 English 2 or E202 English 2 with department recommendation
This course combines the study of American Literature and United States History and fulfills the requirement for third-year English. This course is team taught by teachers from the English Department and the Social Studies Department. Students must be enrolled concurrently in E331 and G331 History. (NCAA Core Course)

E336 American Studies — English  LEVEL: 3
One year
One unit (Double class)
PREREQUISITE: E202 English 2 or E208 English 2 or department recommendation
American Studies offers the student an opportunity to examine the question, “What is an American?” By studying America’s history, literature, music, art, and architecture, the student can discover what makes him or her special as an American. This course combines a chronological or thematic study of United States history and American literature and fulfills the requirements for junior English and United States History. Students must be enrolled concurrently in E336 and G336. Principles of the fine arts are integrated into the language arts curriculum. (NCAA Core Course)

E341 Reading Improvement  LEVEL: 3,4
One-half year
One-half unit
PREREQUISITE: E200 English 2 or E201 English 2 or E220 English 2 or E290 English 2 or department recommendation
Reading Improvement is designed for students reading below grade level. The course concentrates on reading skills needed by students who intend to enter the working world or pursue further education. In addition to increasing comprehension and vocabulary skills, the course aims at developing an appreciation for reading as a lifelong activity. (Juniors who have not met the District minimum reading requirement must take this course concurrently with E301 English 3).

E400 Practical English  LEVEL: 4
(Palatine and Hoffman Estates High Schools Only)
One year
One unit
PREREQUISITE: Placement through staff conference recommendation
This course is an extension of E300 Business English and provides continuing practice in all communication skills. Instruction is individualized to meet each student’s needs.

E401 Modern World Literature  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: E301 English 3 or E331 American Studies—English or E302 English 3 or E336 American Studies—English with department recommendation
This course helps students develop a better understanding of various cultures through literature and writing. Literature from around the world is introduced. Activities concentrate on exploration of common cultural values. (NCAA Core Course)

E402 English Literature Survey  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: E302 English 3 or E336 American Studies—English (D, or C with department recommendation)
This course will help students develop an awareness of the history and development of primarily English literature. Discussion focuses on the themes, style, structure, and language of works of Britain’s major writers. Writing emphasizes analysis of literature. (NCAA Core Course)

E403 Senior Composition  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: E302 English 3 or E336 American Studies—English (D, or C with department recommendation)
Students in this course will concentrate on improving writing skills. Emphasis will be on research. Instruction will focus on organization, unity, and accuracy. (NCAA Core Course)

Everything you can imagine is real.

Pablo Picasso
E404 English Literature Survey  LEVEL: 4
One-half year  One-half unit
PREREQUISITE: E302 English 3 or E336 American Studies–English (A,B,C), E308 English 3 or department recommendation
This course will help college-bound students develop an awareness of the history and development of English literature. Discussion focuses on the themes, style, structure, and language of works of Britain's major writers. Writing emphasizes critical thinking and analysis of literature. (NCAA Core Course)

E405 Expository Composition  LEVEL: 4
One-half year  One-half unit
PREREQUISITE: E302 English 3 or E336 American Studies–English (A,B,C), E308 English 3 or department recommendation
Students in this course develop writing skills, concentrating on organization, unity, and accuracy in expressing ideas. After instruction on how to conduct research and report the findings, students will write a research paper. This course should be given special consideration by every student who plans to go to college. (NCAA Core Course) E60503: Harper College, ENG 101, Composition, 3 college credits.

E411 Communication Skills  LEVEL: 4
One-half year  One-half unit
PREREQUISITE: E301 English 3 or E331 American Studies–English or E302 English 3 or E336 American Studies–English with department recommendation
Focusing on writing, reading, speaking, and listening, this course aims at developing communications skills useful in contemporary society. The writing program emphasizes effective written communication for a variety of purposes and includes a short research project. (NCAA Core Course)

E419 Advanced Placement Literature & Composition  LEVEL: 4
One year  One unit
PREREQUISITE: E319 English 3 (A,B) or E302 English 3 or E336 American Studies with department recommendation
This honors course emphasizes college-level composition and literature. The student is prepared to enter college with a strong English background. Students are encouraged to take the Literature and Composition Advanced Placement Examination of the College Entrance Examination Board. (NCAA Core Course)

E420 English 4  LEVEL: 4
One year  One unit
PREREQUISITE: Placement through staff conference recommendation
This senior-level course is designed to increase students' skills in the areas of word usage, reading comprehension, and writing. Individual objectives are developed for each student.

E423 Introduction to Rhetoric  LEVEL: 4
One unit
PREREQUISITE: Department recommendation
This course will introduce students to the critical thinking and reading skills needed to succeed in writing at the college level. Students successful in this course may earn direct placement into English 101 at Harper College. (NCAA Course)

E490 Reading 4  LEVEL: 4
One year  One unit
PREREQUISITE: Placement through staff conference recommendation
This course is a continuation of the work begun in the E170, E190, E290, and E390 courses. Continued drill and practice is given in the areas of word recognition, vocabulary development, reading comprehension and practical study skills.

Our lives begin to end the day we become silent about things that matter.
– Martin Luther King, Jr.
I Have a Dream; Writings and Speeches that Changed the World
### Possible College & Career Paths

#### Design Pathway

**Freshman**
- H236 Style Studio
  - 1 Unit

**Sophomore**
- H276 Fashion Construction
  - 1 Unit
- H244 Housing/Interior Design
  - 1/2 Unit

**Junior**
- H277 Fashion Construction 2
  - 1 Unit
- H483/H683 Design I.S.
  - 1 Unit - Dual Credit

**Senior**
- H477/H677 Fashion Construction I.S. 2
  - 1 Unit - Dual Credit

**Notes:**
- Fashion Designer, Interior Designer, Buyer, Visual Merchandiser, Fabric Designer, Trend Director, Interior Decorator, Kitchen & Bath Designer, Tailor, Furniture Designer, Residential Designer, Commercial Designer, Fashion Illustrator, Purchasing Agent, Store Planner

#### Education Pathway

**Freshman**
- H256 Early Childhood Studies
  - 1 Unit

**Sophomore**
- H257 Early Childhood Education
  - 1 Unit
- H456/H457/H657 Advanced ECE I.S.
  - 1 Unit - Dual Credit

**Junior**
- H465/H457/H657 Advanced ECE I.S.
  - 1 Unit - Dual Credit

**Senior**
- H453/454/455 Education Internship
  - 1 Unit
- H456/H457/H657 Advanced ECE I.S.
  - 1 Unit - Dual Credit

**Notes:**
- Elementary School Teacher, High School Teacher, Early Childhood Teacher, Day Care Center Director, Day Care Center worker, Residential Youth Care Provider, At-Risk Youth Programming, Crisis Nursery, Child Psychologist, Pediatrician, Therapist

#### Culinary Pathway

**Freshman**
- H266 Modern Cuisine
  - 1 Unit

**Sophomore**
- H267/H665 Culinary Arts
  - 1 Unit - Dual Credit
- H224 P.I.E.
  - 1 Unit

**Junior**
- H225/H667 P.I.E. I.S.
  - 1 Unit - Dual Credit
- H333/H667 Chemistry of Foods
  - 1 Unit - Dual Credit

**Senior**
- H466 Foods I.S.
  - 1 Unit - Dual Credit
- H467/H667 Foods I.S.
  - 1 Unit - Dual Credit

**Notes:**
- Executive Chef, Cook, Pastry Chef, Dietician, Food Technician, Food Scientist, Hospitality, Food Promotion, Sports Nutrition, Government Agencies, Private Chef, Restaurant Management, Food Inspector, Recipe Development
Family and Consumer Science courses are designed for all students. These courses emphasize the understanding of self and others, management of resources, personal and professional productivity, and career exploration.

The following courses are arranged for students interested in each program area; however, courses may be taken in any order as long as prerequisites are met.

**H171 Introduction to Life Studies**  
**LEVEL:** 1, 2, 3, 4  
**One year**  
**One unit**  
**PREREQUISITE:** Placement through staff recommendation  
This course is designed to specifically address needs of a unique population. Students will receive instruction in the areas of personal independence, consumer decision making, life and home management skills, and personal skill development. There is an emphasis on individual written and spoken language development in regard to daily living skills.

**H224 PIE (Practices in Entrepreneurship)**  
**LEVEL:** 2, 3, 4  
**One-half year**  
**One-half unit**  
**PREREQUISITE:** Successful completion of at least one semester of a Foods course or departmental approval  
**REQUIREMENT:** Concurrent enrollment in H224 PIE (Practices in Entrepreneurship)  
This integrated class offers students an opportunity to use their culinary skills in a practical business application. Students who enroll in this two-period connected class will learn the skills required to start and manage a small business. Students will apply economic, management, marketing, accounting, and business law concepts in a bakery/coffee shop scenario.

**H225 PIE (Practices in Entrepreneurship Independent Study)**  
**LEVEL:** 2, 3, 4  
**One-half year**  
**One-half unit**  
**PREREQUISITE:** Successful completion of H224 PIE and/or departmental approval  
This integrated class offers students the opportunity to refine and enhance the skills introduced in H224 PIE. Students who enroll in this two-period connected class will be offered the opportunity for increased responsibilities in the management of the bakery/coffee shop. Students will explore more advanced culinary techniques such as European-style pastry, cake decorating, recipe development, and production management.

**H66702: Harper College FSM114, Food Standards and Sanitation, 2 college credits.**

**H236 Style Studio**  
**LEVEL:** 1, 2, 3, 4  
**One year**  
**One unit**  
Are you interested in the areas of Fashion & Interior Design? This course is designed to strengthen a student’s interest and background in design concepts. Opportunities will be provided for students to explore the curriculum within creative teams and through individual activities. Students will develop an awareness of construction techniques, visual communication, design elements, style trends, and fashion merchandising strategies.

**H243 Consumer Management**  
**LEVEL:** 2, 3, 4  
**One-half year**  
**One-half unit**  
Consumer Management exceeds the state consumer education requirements. Students will learn how to be responsible when managing money, time and energy in today's changing market place. Individual interests and needs are considered as students learn to manage their resources and cope with common consumer issues.

**H244 Housing/Interior Design**  
**LEVEL:** 2, 3, 4  
**One-half year**  
**One-half unit**  
Students will learn about the many aspects of housing and interior design for personal or professional use. Factors which influence housing, reading and evaluating floor plans, furniture selection, the treatment of floors and windows, and the elements and principles of design will be covered in this introductory course. Career opportunities in related fields are explored.

**H256 Early Childhood Studies**  
**LEVEL:** 1, 2, 3, 4  
**One year**  
**One unit**  
This course is designed for students interested in examining the broad spectrum of child development theory from prenatal development through the school-aged years. Various philosophies, along with current research, will be used to present the areas of physical, social, emotional, and intellectual development, prenatal to age five. Through discussion, critique and research, class activities will add direction and focus to career opportunities in the field of child development. Students will have the opportunity to earn the ECE level 1 credential while enrolled in this course.
H257 Early Childhood Education  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: H256 Early Childhood Studies and/or Department approval
This course provides the student an opportunity to apply the information learned in Early Childhood Studies. Working in an actual preschool lab setting, students are provided the chance to work with children ages 3-1/2 to 5 years. Students fulfill the role of “teacher” and are responsible for the planning, implementation, and evaluation of lessons.

H266 Modern Cuisine  LEVEL: 1,2,3,4
One year  One unit
Students learn that cooking starts with planning and preparation and ends with serving, tasting, presentation, and evaluation. Units include: pastries, vegetables, poultry, breads, rice/pasta, and nutrition. Our students gain a variety of skills through the practical application of reading, measuring, teamwork, and individual creativity. During second semester, students will learn to plan and prepare various meals. Emphasis will focus on regional foods of the United States, eggs, and dairy.

H267 Culinary Arts  LEVEL: 1,2,3,4
One year  One unit
This class starts with planning and preparation of food and ends with serving, tasting, presentation, and evaluation. Students apply a variety of skills through the practical application of reading, measuring, teamwork, and individual creativity. Units include meats, vegetables, eggs, seafood, cakes, salads, fruit, soups, appetizers, sauces, and special diets. During second semester, students will explore the exciting areas of gourmet and multicultural food experiences through laboratory preparation and research activities. A quantity food production experience will introduce students to the food service industry. H66502: Harper College FSM109 Intro to Food Prep/Production, 4 credit hours.

H333 Chemistry of Foods  LEVEL: 3,4
(Schaumburg and Palatine Only) (class meets for 2 periods)  One unit
PREREQUISITE: 2 years of Science, and 1 year of Foods (H266 or H267) or department approval and concurrent enrollment in S333 Chemistry of Foods provides students the opportunity to participate in food preparation while learning the scientific basis of chemical and biological processes involved in the culinary arts. Students completing this course will attain Food Safety Certification status by building on and applying the concepts of food preparation and bacteriology. This course will provide guided practice and certification for the student who is pursuing a career in the culinary field, while providing an overview of the restaurant industry for the student who is still expanding their horizons. Students will apply what they learn through participation in an in-house restaurant/catering component. The class meets two periods, and is team taught by teachers from the Family and Consumer Sciences and Science departments. Students enrolled in H333 who pass the Food Safety Certification Examination will have the opportunity to earn college credit H66702: Harper College, FSM 114, Food Standards and Sanitation, 2 credit hours.
Seek first to understand, then to be understood.

Stephen Covey
Best-selling author and professor

H345 Child Education and Family Studies LEVEL: 3,4
One-half year

One-half unit

PREREQUISITE: H253 Early Childhood Studies or department approval
This course continues the study of child development beyond the preschool years. Units of instruction will focus on current issues and challenges facing parents and families. This course allows for the further observation and study of children and will strengthen the background of students interested in this career area. Students will have the opportunity to participate in computerized infant simulation.

H346 Living on Your Own LEVEL: 3,4
One semester

One-half unit

This course presents a fresh look at life in today's world. It studies the foundation of adult living, which includes developing communication and problem-solving skills, dating, marriage, basic nutrition, food preparation, wardrobe selection and care, personal finance, living arrangements, and college and vocational studies. LOYO will help students adapt to living independently in a variety of settings following high school graduation.

H352 Career Internship 1, H452 Career Internship 2 LEVEL: 3,4
One or two years

Two units per year

(Students also must enroll in H362, H372, or H382 Work Experience)
Students must be 16 years of age or older.
Career Internship fulfills a student's need to obtain training in the world of work while developing skills in both employee/employer relationships and living as an independent consumer. Students may enroll in Career Internship for one or two years. This program provides opportunities for on-the-job instruction related to Family and Consumer Sciences. On-the-job training may include work in care and guidance of children, fashion merchandising, clothing, food services or production, health occupations, and other personal and public service occupations. Daily classroom activities are designed to assist students with job adjustment, learning to be a responsible consumer, career planning, and independent study relating to each student's occupational interest. In the second year of the program, a training plan is developed which builds on skills learned the previous year. The first year of this program satisfies the State/District 211 Consumer Education requirement.

H453, H454 Secondary Education Internship LEVEL: 3,4
One to two units per year

PREREQUISITE: Department approval; application process.
Education Internship is designed for students who are interested in exploring careers in the field of education, coaching, psychology, and social services. They must accept the responsibility of good citizenship, regular attendance, and cooperation in working closely with a supervising teacher to carry out a variety of classroom tasks and activities. Secondary Interns are placed at the high school level.

H455 Elementary Education Internship LEVEL: 3,4
Two units

PREREQUISITE: H256 & H257 recommended. Department approval; application process.
Elementary Education Internship has been developed in cooperation with School Districts 15 and 54. Students enrolling in this course should have an interest in working with children and will explore careers in the field of elementary education, psychology, and social services. They must accept the responsibility of good citizenship, regular attendance, and cooperation in working closely with one or more supervising teachers to carry out a variety of classroom tasks and activities.
## Family and Consumer Sciences Independent Study

**PREREQUISITE:** Successful completion of course sequence or department approval

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>H456</td>
<td>Advanced ECE Indep. Study 1</td>
<td>one year/one unit</td>
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<tr>
<td>H457</td>
<td>Advanced ECE Indep. Study 2</td>
<td>one year/one unit</td>
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<tr>
<td></td>
<td>(H65702: Harper College, ECE 101 Intro to Early Childhood Education, 3 college credits)</td>
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<tr>
<td>H466</td>
<td>Foods Indep. Study 1</td>
<td>one year/one unit</td>
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<tr>
<td>H467</td>
<td>Foods Indep. Study 2</td>
<td>one year/one unit</td>
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<tr>
<td></td>
<td>(Hoffman Estates and Fremd High School only – H66702: Harper College, FSM 114 Food Standards and Sanitation, 2 college credits)</td>
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<tr>
<td>H476</td>
<td>Fashion Construction Indep. Study 1</td>
<td>one year/one unit</td>
</tr>
<tr>
<td>H477</td>
<td>Fashion Construction Indep. Study 2</td>
<td>one year/one unit</td>
</tr>
<tr>
<td></td>
<td>(H67702: Harper College, FAS 100 Industrial Sewing Methods, 3 college credits)</td>
<td></td>
</tr>
<tr>
<td>H482</td>
<td>Design Indep. Study 1</td>
<td>one year/one unit</td>
</tr>
<tr>
<td>H483</td>
<td>Design Indep. Study 2</td>
<td>one year/one unit</td>
</tr>
<tr>
<td></td>
<td>(H68302: Harper College, FAS 112 Fashion Basics, 3 college credits)</td>
<td></td>
</tr>
<tr>
<td>H446</td>
<td>Interior Design Indep. Study 1</td>
<td>one semester/one-half unit</td>
</tr>
<tr>
<td>H447</td>
<td>Interior Design Indep. Study 2</td>
<td>one semester/one-half unit</td>
</tr>
</tbody>
</table>

Students who are interested in exploring a specific Family and Consumer Sciences discipline are provided the opportunity to pursue an in-depth study of the special interest area. Students work with the instructor to plan and complete individual projects based on the student’s interest and career goals.
### Mathematics

**Freshman**
- **M328** 1 Unit
  Acc. Algebra 2/Pre-Calculus
- **M218** 1 Unit
  Acc. Geometry
- **M217** 1 Unit
  Plane & Solid Geometry
- **M147** 1.5 Units
  Advanced Algebra 1
- **M117** 1 Unit
  Algebra 1
- **M114** 1 Unit
  Algebra 1
- **M113** 2 Units
  Algebra 1
- **M111** 1 Unit
  Intro. to Sec. Mathem.

**Sophomore**
- **M439** 1 Unit
  Trig./Calculus A
- **M328** 1 Unit
  Acc. Algebra 2/Pre-Calculus
- **M308** 1 Unit
  Advanced Algebra 2
- **M317** 1 Unit
  Algebra 2
- **M248** 1.5 Units
  Adv. Geometry & Trig.
- **M217** 1 Unit
  Plane & Solid Geometry
- **M147** 1.5 Units
  Advanced Algebra 1
- **M117** 1 Unit
  Algebra 1
- **M114** 1 Unit
  Algebra 1
- **M113** 2 Units
  Algebra 1
- **M111** 1 Unit
  Intro. to Sec. Mathem.

**Junior**
- **M479** 1 Unit
  AP Calculus BC
- **M438** 1 Unit
  Trigometry/Calculus A
- **M408** 1 Unit
  Adv. Trig./Pre-Calculus
- **M417** 1 Unit
  Trigometry/Pre-Calculus
- **M348** 1 Unit
  Adv. Algebra 2/Pre-Calc.
- **M317** 1 Unit
  Algebra 2
- **M248** 1.5 Units
  Adv. Geometry & Trig.
- **M217** 1 Unit
  Plane & Solid Geometry
- **M147** 1.5 Units
  Advanced Algebra 1
- **M117** 1 Unit
  Algebra 1
- **M114** 1 Unit
  Algebra 1
- **M113** 2 Units
  Algebra 1
- **M111** 1 Unit
  Intro. to Sec. Mathem.

**Senior**
- **M579** 1 Unit
  Multivariable Calculus
- **M479** 1 Unit
  AP Calculus BC
- **M449** 1 Unit
  AP Calculus AB
- **M447** 1 Unit
  Calculus
- **M419** 1 Unit
  AP Statistics
- **M417** 1 Unit
  Trigometry/Pre-Calculus
- **M435** 1 Unit
  Quantitative Literacy
- **M414** 1 Unit
  Algebra 3
- **M314** 1 Unit
  Algebra 2
- **M312** 1 Unit
  Concepts in Mathematics

**Computer Science Electives**
- **M256** 1 Unit
  Intro to Computer Programming and Software Design
- **M266** 0.5 Unit
  Apps. in Computer Programming
- **M319** 1 Unit
  AP Computer Science Principles
- **M359** 1 Unit
  AP Computer Science A
- **M391** 1 Unit
  Mobile App Development
- **M468** 1 Unit
  Ind. Computer Science

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Solid lines are mainstream sequences; dashed lines are alternative selections made through recommendations.
All freshmen in High School District 211 enroll in a mathematics course. Placement at the freshman level is determined by entrance test scores and junior high school performance. A second year of mathematics is taken during the sophomore year and additional mathematics courses are required until the student successfully completes a 300-level course.

Freshmen who have successfully completed junior high school algebra may be placed in M217 Plane and Solid Geometry or M218 Accelerated Plane and Solid Geometry. Other freshmen may be placed in M117 Algebra 1, M114 Algebra 1, M113 Algebra I, M111 Introduction to Secondary Mathematics, M120 Essential Mathematics, or M100 Applied Mathematics 1.

A student who fails to meet the grade prerequisite for any course must repeat the requisite course to improve the grade in order to proceed to the next sequential course.

College-bound students are encouraged to complete four years of mathematics, including trigonometry. The Mathematics Departments of High School District 211 provide honors and accelerated programs which allow students to complete up to three semesters of calculus leading to Advanced Placement examinations. Advanced Placement testing in computer science (JAVA) and statistics also are available.

**M100 Basic Mathematical Applications**  LEVEL: 1,2  
One year  One unit  
**PREREQUISITE:** Placement through staff conference recommendation.  
This course is designed to teach students basic computational and money skills to increase the student's independence in the community. Money skills, whole number operations, time, and calculator usage are emphasized.

**M111 Introduction to Secondary Mathematics**  LEVEL: 1,2  
One year  One unit  
This course reinforces arithmetic skills, as their mastery is essential for continued study of mathematics. Pre-Algebra skills of variable recognition, signed numbers, formulas, and single variable equations are introduced as well as beginning geometry topics.

**M113 Algebra 1**  LEVEL: 1,2,3  
One year  Two units  
**PREREQUISITE:** Acceptable performance on the entrance examination or department approval  
This course introduces students to the fundamental principles of algebra with extended instruction and practice. Algebraic symbolism, simplifying expressions, solutions to elementary equations, and the graphic representations associated with variables will be introduced. (NCAA Core Course, 1 unit)

**M114 Algebra 1**  LEVEL: 1,2,3  
One year  One unit  
**PREREQUISITE:** Acceptable performance on the entrance examination or department approval  
This course introduces students to the fundamental principles of algebra. Algebraic symbolism, simplifying expressions, solutions to elementary equations, and the graphic representations associated with variables will be introduced. (NCAA Core Course)

**M117 Algebra 1**  LEVEL: 1  
One year  One unit  
**PREREQUISITE:** Acceptable performance on entrance examination  
This course introduces students to the fundamental principles of algebra. Algebraic symbolism, simplifying expressions, solutions to equations, and the graphic representations associated with variables are among the course topics. This course emphasizes the algebraic processes applied to word problems. (NCAA Core Course)

**M147 Advanced Algebra 1**  LEVEL: 1  
One year  One and one-half units  
**PREREQUISITE:** Acceptable performance on entrance exam  
This accelerated course is a comprehensive study of algebra including algebraic symbolism, simplifying expressions, solutions to equations, and graphic representations associated with variables. The course will also include advanced techniques of graphing, solving equations and inequities, and functions in preparation for M248 Advanced Geometry and M247 Advanced Trigonometry. This course requires a graphing calculator. (NCAA Core Course)

**M170 Essential Mathematics**  LEVEL: 1  
One year  One unit  
**PREREQUISITE:** Placement through staff conference recommendation  
This course reinforces arithmetic skills aligned to the state's performance indicators with emphasis on number operation, patterns, ratios, proportions, and estimation. Pre-algebra skills of variable recognition, formulas, and single variable equations are introduced as well as beginning Geometry concepts such as points, lines, planes, and space.

**M212 Explorations of Geometric Topics**  LEVEL: 2,3,4  
One year  One unit  
**PREREQUISITE:** M114, M113, M111  
The course exposes students to a sampling of basic geometric topics including measuring, points, lines, planes, perimeter, area, volume, similarity, congruence, polygons and transformations. This course does not meet the NCAA clearinghouse rules. Students desiring to take Algebra 2 must enroll in at least M214 to satisfy the geometry prerequisite of Algebra 2.
M214 Plane and Solid Geometry  LEVEL: 2,3,4  One year  One unit
PREREQUISITE: M113 Algebra, M114 Algebra 1, or M117 Algebra 1 (D)
This study of geometry involves studying the axioms and theorems that relate points, lines, planes, and solids. An overview of plane and solid geometry is presented through geometric constructions, measurement formulas, and limited writing of formal proofs. (NCAA Core Course)

M217 Plane and Solid Geometry  LEVEL: 1, 2  One year  One unit
PREREQUISITE: M117 Algebra 1 (A,B,C) or acceptable performance on Algebra examinations
This comprehensive study of plane and solid geometry includes constructions, formulas for measurement, and formal proofs. It is based on the axioms and theorems that relate points, lines, planes, and solids. Algebraic techniques are integrated into the solution of many geometric problems. (NCAA Core Course)

M218 Accelerated Plane and Solid Geometry  LEVEL: 1,2  One year  One unit
PREREQUISITE: High performance on Algebra examinations or department approval
This accelerated course is a comprehensive study of plane and solid geometry including constructions, formulas for measurement and formal proofs. It is based on the axioms and theorems that relate points, lines, planes, and solids. Many of the topics are covered in great depth, especially area and volume of solids. Additional emphasis is placed on the integration of algebraic techniques in solving geometric problems. (NCAA Core Course)

M248 Advanced Geometry and Trigonometry  LEVEL: 2  One year  One and one-half units
PREREQUISITE: M147 (A,B,C)
This accelerated course is a comprehensive study of plane and solid geometry including constructions, formulas for measurement and formal proof. It is based on the axioms and theorems that relate points, lines, planes, and solids. Many topics are covered in great depth, especially area and volume of solids. Additional emphasis is placed on the integration of algebraic techniques in solving geometric problems. In the study of trigonometry, the student applies algebra and geometry skills to circular and periodic functions with applications in preparation for M348 Advanced Algebra 2/Pre-Calculus. This course requires a graphing calculator. (NCAA Core Course)

M256 Introduction to Computer Science and Software Design  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: None
Students are introduced to the fundamentals of computer science through the creation of software applications. Examples may include: games, phone apps, interactive web pages, networked programs, and interactive animations. No previous knowledge of computer programming is required. (NCAA Core Course)

M266 Applications of Computer Programming  LEVEL: 2,3,4  One-half year  One-half unit
PREREQUISITE: M256 Computer Programming: A Multimedia Approach and department approval
Through independent study, students apply their computer programming skills to complete highly individualized projects. (NCAA Core Course)

M270 Algebra and Geometry Concepts  LEVEL: 2  One year  One unit
PREREQUISITE: Placement through staff conference recommendation
This course reinforces skills needed for achieving early high school benchmarks of the Illinois Learning Standards. It introduces algebra concepts such as exponents, algebraic expressions, and graphing. Beginning plane and solid geometry topics are introduced.

M296 Geometry in Construction  LEVEL: 2  One year  One unit
PREREQUISITE: M114 or M117
The purpose of this course is to have students experience putting geometry into action by building real world construction projects. Geometry in Construction is a team taught by both math and applied Technology teachers. This interdisciplinary course integrates geometry and construction topics through the building of significant construction projects. The goal is to provide students with a better understanding of both the geometry and the construction content taught in the math department, and prepares students for the subsequent math courses. Students will gain hands-on, real-world experience in

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D o what you can, with what you have, where you are.

— Theodore Roosevelt
different areas of construction. Additional emphasis is given to
teamwork, problem-solving, and the promotion of employable
attributes. This is a double-period course that offers both a
Math credit and an Applied Technology credit.

**M308 Advanced Algebra 2** LEVEL: 2
One year
PREREQUISITE: M217 with department approval
This advanced course is designed for students who have
proficient knowledge of algebra and geometry. M308
Advanced Algebra 2 will place an emphasis on questioning,
summarizing, justifying, and evaluating. Ideas presented
involve advanced techniques of graphing, methods of
solving equations and inequalities, and functions. Students
are prepared to begin their study of M408 Advanced
Trigonometry/PreCalculus. This course requires a graphing
calculator. (NCAA Core Course)

**M312 Concepts in Mathematics** LEVEL: 3,4
One year
PREREQUISITE: Department chair approval and two years of
credit in high school mathematics
The course exposes students to a sampling of basic
mathematical topics including percent, interpretation of
data, probability, tables and graphs, polynomial operations,
linear and quadratic functions. This course does not meet
the NCAA clearinghouse rules. Students desiring to take
Trigonometry must enroll in at least M314 to satisfy the
Algebra 2 prerequisite of Trigonometry.

**M314 Algebra 2** LEVEL: 3,4
One year
PREREQUISITE: M214 Plane and Solid Geometry
This course reviews topics introduced in M114 Algebra 1
and expands upon them. All standard Algebra 2 topics are
covered. The topics include methods of solving equations
and inequalities, graphing techniques, conics, and
logarithms. This course requires a graphing calculator.
(NCAA Core Course)

**M317 Algebra 2** LEVEL: 2,3,4
One year
PREREQUISITE: M117 Algebra 1 (A,B,C) and M217 Plane and
Solid Geometry
This course is designed for students who have a good
knowledge of algebra and geometry. Concepts presented
in earlier course work are reviewed and expanded. Ideas
presented involve advanced techniques of graphing,
methods of solving equations and inequalities, and
functions. Students are prepared to begin their study of
pre-calculus. This course requires a graphing calculator.
(NCAA Core Course)

**M319 AP Computer Science Principles** LEVEL: 1,2,3,4
One year
PREREQUISITE: Concurrent enrollment in any accelerated math
course or completion of M256.
AP Computer Science Principles offers a multidisciplinary
approach to teaching the underlying principles of
computation. The course will introduce students to creative
aspects of programming, using abstractions and algorithms,
working with large data sets understandings of the Internet
and issues of cybersecurity, and impacts of computing that
affect different populations. Students will learn to use current
technologies in order to solve problems and create meaningful
computational artifacts. (NCAA Core Course)

**M328 Accelerated Algebra 2/ Pre-Calculus** LEVEL: 1,2,3
One year
PREREQUISITE: M218 (A,B) or department approval
This accelerated course is designed for students who have
an excellent knowledge of algebra and geometry. M328
Accelerated Algebra 2 briefly reviews concepts presented in
earlier course work and then rigorously expands and applies
them to other areas of mathematics. In addition, selected
topics from pre-calculus are studied. Ideas presented in
this course involve advanced techniques of graphing and
solving equations and inequalities and prepares students to
take M439 Trigonometry/Calculus A. This course requires
a graphing calculator. (NCAA Core Course)

**M348 Advanced Algebra 2/ PreCalculus** LEVEL: 3
One year and one-half units
PREREQUISITE: M248 (A, B, C)
This accelerated course rigorously expands upon the study
of advanced techniques of graphing, solving equations and
inequalities, functions (including circular and periodic
functions), and trigonometric identities. Students will apply
their skills to series and sequences, probability, statistics,
limits, and derivative in preparation for M459 Advanced
Placement Calculus AB. This course requires a graphing
calculator. (NCAA Core Course) M64802: Harper College
Course MTH103, College Algebra, 3 college credit hours.
M359 Advanced Placement Computer Science A  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: Concurrent enrollment in M328 or higher; completion of M319 or M256 (A, B, C) or department approval
The JAVA language allows the programmer to process data as well as perform mathematical calculations. In Advanced Placement Computer Science, data structures, programming algorithms, and structured programming are used. Students are expected to use analytical thinking in solving problems and use top-down design methods in developing programs. AP Computer Science is a strongly encouraged elective any time course prerequisites are met and can be taken in conjunction with another math class. (NCAA Core Course)

M370 Consumer Mathematics  LEVEL: 3, 4
One year
One unit
PREREQUISITE: Placement through staff conference recommendation
This course targets consumer math skills used in everyday situations such as paying taxes, purchasing a car, investing and managing a household. A full year in this course meets the state of Illinois requirement for consumer education.

M408 Advanced Trigonometry and Pre-Calculus  LEVEL: 3
One year
One unit
PREREQUISITE: M308 with department approval
This advanced course is designed to create a foundation of knowledge needed for success in an advanced placement math course senior year. In the study of trigonometry, the student will apply algebra and geometry skills to circular and periodic functions with applications. In the study of pre-calculus, students will apply their skills to series and sequences, probability, statistics, limits, and derivatives in preparation for M419 AP Statistics and M449 AP Calculus AB. This course requires a graphing calculator. (NCAA Core Course)

M414 Algebra 3  LEVEL: 4
One year
One unit
PREREQUISITE: M314 Algebra 2
This computer-based course helps better prepare students for the mathematics needed for career and college by re-enforcing the fundamental concepts of algebra including rational expressions, complex numbers, and functions that are polynomial, rational, exponential or logarithmic. The class also emphasizes mathematical reasoning and problem solving utilizing multiple approaches (algebraic, geometric, and numeric techniques) with focus on mathematical definitions, theorems, symbols, and notation. This course is aligned to the last developmental course MTH080 Foundations of Math II at Harper Community College. (NCAA Core Course)

M435 Quantitative Literacy  LEVEL: 4
One year
One unit
PREREQUISITE: 22 Math ACT or ALEKS score 46 or greater or MTH 080 score 70% or higher.
This dual enrollment course focuses on the analysis and solution of problems and includes representing and analyzing data using statistical measures, using logical reasoning in a real-world context, estimating, approximating, and judging the reasonableness of answers, and the use of appropriate approaches and tools, such as calculators and computers, in formulating and solving real-world problems. This course is aligned to MTH101 Quantitative Literacy at Harper Community College. Successful completion of the course results in college credit. M63502: Harper College Course MTH101, Quantitative Literacy, 4 college credit hours. (NCAA Core Course)

M417 Trigonometry and PreCalculus  LEVEL: 3,4
One year
One unit
PREREQUISITE: M317 Algebra 2 (A,B,C)
In the study of trigonometry, the student applies algebra and geometry skills to circular and periodic functions and rotational velocity. Many topics studied are developed as an extension of concepts introduced in earlier courses as a preparation for calculus. This course requires a graphing calculator. (NCAA Core Course)

M419 Advanced Placement Statistics  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: M328 (with concurrent enrollment in M439), or M408, M417, or M317 (with concurrent enrollment in M417), (A,B,C)
The study of statistics is now a requirement for many university majors. Students in this class will perform statistical tests on data sets using technology in order to organize, analyze, and predict outcomes. This course will follow the guidelines of the Advanced Placement Statistics program. Students are encouraged to take the Advanced Placement exam of the College Entrance Examination Board. This course requires use of a computer and graphing calculator. (NCAA Core Course) AP Statistics is a strongly encouraged elective any time course prerequisites are met and can be taken in conjunction with another math class.

M438 Trigonometry - Calculus A  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: M328 Accelerated Algebra 2/Pre-Calculus (A,B) or department approval
In the study of trigonometry, the student applies algebra and geometry skills to circular and periodic functions and rotational velocity. Additional time is spent on extending the trigonometry identities in the first semester. The second semester study of calculus is no longer limited to those preparing for careers in mathematics and the sciences. The need and demand for students in business and social studies who can design procedures, predict and relate the principles of higher mathematics are increasing dramatically. This
course emphasizes the applications of differentiation. It is the first of three semesters of college-level calculus and satisfies the requirements for the first semester of calculus suggested by the Advanced Placement Program of the College Entrance Examination Board. This course requires use of a graphing calculator. (NCAA Core Course)

M447 Calculus  LEVEL: 4
One year
PREREQUISITE: M417 Trigonometry and Pre-Calculus (A,B,C) or department approval
The study of calculus is no longer limited to those preparing for careers in mathematics and sciences. This course emphasizes the skills of differentiation and integration. These students will not qualify for the Calculus AB Advanced Placement Examination. This course requires a graphing calculator. (NCAA Core Course)

M448 Mobile Application Development  LEVEL: 2,3,4
One year
PREREQUISITE: Completion or concurrent enrollment in M319 or M359 or department chair approval
Students will complete a study of Mobile App development including rapid iterative prototyping. The differences between Web Apps and Native Apps will be highlighted with relationship to the many deployment platforms available. Commonly accepted UI standards will be highlighted for each deployment platform. Students will use agile development techniques to produce quality apps with the intent of making them available to the public. (NCAA Core Course)

M449 Advanced Placement Calculus AB  LEVEL: 4
One year
PREREQUISITE: M328 Accelerated Algebra 2/Pre-Calculus (A,B) and Trigonometry, M417 Trigonometry, and Pre-Calculus (A), or M408
The study of calculus is no longer limited to those preparing for careers in mathematics and the sciences. The need and demand for students in business and social studies who can design procedures, predict, and relate the principles of higher mathematics are increasing dramatically. This course emphasizes the various types and applications of differentiation and integration. Students are encouraged to take the Calculus AB Advanced Placement Exam of the College Entrance Examination Board. This course requires use of a graphing calculator. (NCAA Core Course)

M459 Advanced Placement Calculus AB  LEVEL: 4
One year
PREREQUISITE: M348 (A, B, C)
This accelerated course is the high school equivalent to one semester of college-level calculus. The student is provided additional support in advanced algebra and pre-calculus and prepared to enter college with a strong calculus background. Students are encouraged to take the Calculus AB Advanced Placement Exam. This course requires a graphing calculator. (NCAA Core Course)

M468 Independent Computer Science  LEVEL: 3-4
One year
PREREQUISITE: M319, M359 or department chair approval
Students complete an independent computer science project beyond M359 curriculum in a supportive environment. Projects will be designed and developed through consultation with the student's advisor (teacher) who will act as advisor/consultant throughout the project. (NCAA Core Course)

M479 Advanced Placement Calculus BC  LEVEL: 3,4
One year
PREREQUISITE: M439 Trigonometry-Calculus A (A,B) or department approval
This course emphasizes applications of differentiation and integration in relationship to topics from trigonometry and college algebra. Calculus BC concludes the three-semester high school equivalent to two semesters of college-level calculus. The student is prepared to enter college with a strong calculus background. Students are encouraged to take the Calculus BC Advanced Placement Exam of the College Entrance Examination Board. This course requires a graphing calculator. (NCAA Core Course)

M578 Multivariable Calculus  LEVEL: 3,4
One year
PREREQUISITE: M479 AP Calculus score of 4 or 5
This course is the equivalent to a third course in calculus and analytic geometry including: vector analysis, Euclidean space, partial differentiation, multiple integrals, line and surface integrals, and the integral theorems of vector calculus. M67802: Students with AP Calculus BC scores of 4 or 5 are eligible to enroll in optional University of Illinois credit option at a cost of $300. (NCAA Core Course)

M588 Independent Study Math  LEVEL: 3,4
One year
PREREQUISITE: M579 (A,B) and department chair approval
Students complete an independent project beyond M579. Projects will be determined through consultation with the student's advisor (teacher) who will act as the advisor/consultant throughout the project. M68802: Eligible students may enroll in optional University of Illinois credit option at a cost of set by the university ($800-$1,100). (NCAA Core Course)
Music

Music in Township High School District 211 emphasizes group performance activities. Large ensemble experiences are offered at various levels in Band, Orchestral, and Choral music. Participation in these groups fosters individual musical proficiency while encompassing rudiments of music, music tradition (history), as well as encouraging positive group dynamics.

Education in music promotes development of the whole student and offers each an opportunity to intellectualize in a subjective manner. Through music study, students gain knowledge, skills, and understanding that will enable them to participate productively as individual and group members in the work place and community at large.

Performance groups meet daily during a regularly scheduled school hour. In addition, orchestra directors schedule required evening rehearsals to prepare for major concerts. Participants in all three disciplines are expected to perform scheduled concerts outside the regular school day as a mandatory part of the curriculum.

In instrumental music, larger, more costly instruments are provided by the district. In addition, uniforms and robes are also provided. For those where no provision has been made, the director may ask individuals to purchase apparel. In cases where this causes a financial hardship, each school has a method of accommodating these students. Classroom music is furnished.

Students desiring further preparation and/or academic training in music may elect a one-semester course in music theory or music appreciation.

Members of the performing organization also may be selected to participate in a variety of smaller performing ensembles which meet outside of the school day. These extracurricular groups are active in the community performing for civic, fraternal, and school functions. They also may represent the school in competitions. In addition, the Music Department provides the nucleus for major productions (musical, variety show) giving students further performance opportunities.

Through music discipline, a student develops appreciation, creativity, and sensitivity while becoming an intelligent consumer of the arts. The program also recognizes its obligation to assist those preparing for a career in music.

C100 Fine Arts
LEVEL: 1,2,3,4
One to four years
One-half to one unit per year
(Palatine High School Only)
PREREQUISITE: Placement through staff conference recommendation
This course is designed to teach students to play handbells and experience the principle of sensory, formal technical, and expressive qualities of music and movement. Students will participate in group performances throughout the year.

C124 Orchestra 1
LEVEL: 1,2,3,4
One year
One unit
Orchestra 1 provides instruction in violin, viola, cello, and string bass. Rehearsals will include technical studies, concert preparation, chamber music, repertoire expansion, and basic fundamentals of music theory and music history. Individual skills are developed in daily rehearsals and weekly technique classes, which are an integral part of the orchestra program. Using modern string methods, the course will help prepare the student for participation in Orchestra 2. Students must have consent of the instructor to enroll in C124 Orchestra 1.

C135 Chorus 1
LEVEL: 1,2,3,4
One year
One unit
This course is open to soprano and alto voices who are new to choir at the high school level. Students will receive fundamentals necessary to progress to advanced groups. Individual talent is developed by private and/or class instruction which is an integral part of the chorus program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals and other events may also be required. No instructor approval is needed for this course.
C136 Chorus 1  LEVEL: 1,2,3,4  One year  One unit
This course is open to tenor and bass voices who are new to choir at the high school level. Students will receive fundamentals necessary to progress to advanced groups. Individual talent is developed by private and/or class instruction which is an integral part of the chorus program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals and other events also may be required. No instructor approval is needed for this course.

C157 Band 1  LEVEL: 1,2,3,4  One year  One unit
This course is open to students with previous band experience, as well as those students with limited training and experience. Students will receive fundamentals necessary to progress to advanced groups. Individual talent is developed by private and/or class instruction which is an integral part of the band program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals, home football games, basketball games, and other events also may be required. Students with no previous band experience need instructor approval to enroll.

C172 Music Performance Special Topic  LEVEL: 1,2,3,4  One year  One unit
This course is open to students with little to no prior experience who want to explore performing music. The performance experience may vary by school in the district (guitar, piano, etc.). Students will learn the fundamentals of music theory and practical application of technical demands of their instrument. Public performance outside the school day for parents and community may be part of this course.

C224 Orchestra 2  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: Audition or consent of the director
Orchestra 2 is open to all intermediate string players. Rehearsals will include technical studies, concert preparation, chamber music, repertoire expansion, and basic fundamentals of music theory and history. Students are given a variety of performance opportunities to increase musical maturity, nurture personal growth, and refine technical abilities. Individual skills are developed in daily rehearsals and weekly technique classes, which are an integral part of the orchestra program. Using modern string methods, the course will help prepare the student for participation in Orchestra 3.

C236 Chorus 2  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: Audition or consent of the director
This course is designed to provide intermediate level students with more advanced understanding of musical skills, rehearsal procedures, and general musicianship through the rehearsal and performance of choral literature. Individual talent is developed by private and/or class instruction which is an integral part of the choral program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals and other events also may be required. Students enrolling in C236 Chorus 2 must have previous training and be able to meet minimum objectives set by the department.

C257 Band 2  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: Audition or consent of the director
This course is designed to provide intermediate level students with more advanced understanding of musical skills, rehearsal procedures, and general musicianship through the rehearsal and performance of band literature. Individual talent is developed by private and/or class instruction which is an integral part of the band program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals, home football games, basketball games, and other events also may be required. Students enrolling in C257 Band 2 must have previous training on a band instrument and be able to meet minimum objectives set by the department.

C324 Orchestra 3  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: Audition or consent of the director
Orchestra 3 is open to all advancing string players. Rehearsals will include intermediate to advanced technical studies, concert preparation, chamber music, repertoire expansion, and fundamentals of music theory and history. Students are given a variety of performance opportunities to increase musical maturity, nurture personal growth, and refine technical abilities. Individual skills are developed in daily rehearsals and weekly technique classes, which are an integral part of the orchestra program. Using modern string methods, the course will help prepare the student for participation in Orchestra 4. In addition, students may be selected to audition for membership in the District 211 Honors Symphony Orchestra. The Honors Orchestra represents the highest level of musicianship and presents an annual concert at one of the five District high schools on a rotating basis.

C336 Chorus 3  LEVEL: 1,2,3,4  One year  One unit
PREREQUISITE: Audition or consent of the director
This course is designed to provide intermediate/advanced level students a deeper understanding of musical skills, rehearsal procedure, and general musicianship through the rehearsal and performance of intermediate and advanced choral literature. Individual talent is developed by private and/or class instruction which is an integral part of the choral program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals and other events also may be required. Students enrolling in C336 Chorus 3 must have previous training and be able to meet minimum objectives set by the department.
Without music, life would be a mistake.

– Friedrich Nietzsche
Twilight of the Idols

C357 Band 3 LEVEL: 1,2,3,4
One year
PREREQUISITE: Audition or consent of the director
This course is designed to provide advancing students understanding of musical skills, rehearsal procedure, and general musicianship through the rehearsal and performance of intermediate and advanced band literature. Individual talent is developed by private and/or class instruction which is an integral part of the band program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals, home football games, basketball games, and other events also may be required. Students enrolling in C357 Band 3 must have previous training on a band instrument and be able to meet minimum objectives set by the department.

C364 Music Appreciation LEVEL: 2,3,4
One-half year
Music Appreciation recognizes the need to educate students to be intellectual consumers of music. Emphasis is placed on the development of aural skills and the role of music in society. A prior musical background is helpful, but not necessary for enrollment.

C365 Music Theory LEVEL: 3,4
One-half year
PREREQUISITE: Department approval
Music Theory is an advanced course for those who want to increase their knowledge of the elements of music and/or to prepare for entrance into a college/university level music program. Emphasis is placed on rhythmic, harmonic, and melodic analysis along with development of aural skills. Academic ability and prior participation in high school music (or formal private instruction) are strongly suggested.

C424 Orchestra 4 LEVEL: 1,2,3,4
One unit
PREREQUISITE: Audition or consent of the director
Orchestra 4 is open to all advanced string players. Rehearsals will provide technical studies, concert preparation, chamber music, repertoire expansion, and basic fundamentals of music theory and history. Students are given a variety of performance opportunities to increase musical maturity, nurture personal growth, and refine technical abilities. Individual skills are developed in daily rehearsals and weekly technique classes, which are an integral part of the orchestra program. In addition, advanced string students will be auditioned for membership in the District 211 Honors Symphony Orchestra. The Honors Orchestra represents the highest level of musicianship and presents an annual concert at one of the five District high schools on a rotating basis.

C457 Band 4 LEVEL: 1,2,3,4
One unit
PREREQUISITE: Audition or consent of the director
Since a fairly rigid instrumental balance must be maintained, new members are admitted only when vacancies occur. Emphasis will be placed on advanced band literature, and intellectual and cultural growth. Individual talent is developed by private and/or class instruction which is an integral part of the band program. Participation at all scheduled formal concerts is a requirement of this class. At the discretion of the director, performances at festivals, home football games, basketball games, and other events also may be required. Students enrolling in C457 Band 4 must have previous training on a band instrument and be able to meet minimum objectives set by the department.

C469 AP Music Theory LEVEL: 3,4
One unit
PREREQUISITE: Students must be concurrently enrolled in a 300- or 400-level music course or department chair approval for students with music experience outside of school.
The primary objective of this course is to develop a student’s ability to recognize, understand, describe, and analyze basic materials and processes of tonal music that are heard or presented in a music score. Coursework is designed to integrate the student’s development of aural, compositional, and analytical skills. Emphasis is placed on rhythmic, melodic and harmonic analysis along with the development of aural skills.
P206/P207 Driver Education  LEVEL: 2,3,4
One-half year  One-quarter unit
PREREQUISITE: Eight (8) one-half credits received in the previous two semesters

The Driver Education program consists of 30 hours of mandatory classroom instruction. This program fulfills the State of Illinois safety education and District 211 graduation requirements. It stresses development of skills, attitudes, and knowledge designed to make every student a safer and more skillful driver. Optional behind-the-wheel experience is available to the student for a fee. (Enrollment governed by the date of the student’s 16th birthday)

P242 Health Education  LEVEL: 2,3,4
One-half year  One-half unit

Health Education is a required course for graduation by the Illinois State Board of Education. The course provides students with current health information which reflects physical, mental, emotional, and social health and well-being. Emphasis is placed on the development of healthy lifestyles which will provide students with the opportunity to achieve their full potential as human beings. It is recommended that the course be taken during the sophomore year.

Whatever you are, be a good one.
– Abraham Lincoln
Physical Education

Our purpose in Physical Education is to promote lifelong learning in both the cognitive and physical domains. By motivation and encouragement, students will be introduced to a life of self-improvement and wellness. We strive to build positive self-esteem by teaching communication, cooperation and decision-making skills. These valuable life lessons will prepare students physically and mentally. Our philosophy is to encourage students to be active and fit in the moment and more importantly, to teach concepts, strategies and skills that allow students to be active for a lifetime.

Freshman Level: Required units for freshmen are fitness, group dynamics, and swimming. Other units of instruction may include: nutrition, basketball, badminton, volleyball, gymnastics, dance, weight training, wrestling, soccer, pickle ball, flag football, track and field, and softball.

Sophomore Level: Sophomore level is a fitness based curriculum to introduce, apply and practice fitness based concepts. The required units are fitness, group dynamics, and swimming. Other units may include: cardiovascular fitness, nutrition, muscular strength, muscular endurance, flexibility, body composition, and various wellness concepts.

Junior/Senior Level: This level continues focus on fitness concepts with an emphasis on overall wellness. Students will develop, apply and practice concepts to improve fitness levels. Students have a choice of the following year long courses that will enhance individual wellness: Strength and Conditioning, Adventure Education, Yoga, Stay Fit for Life, Dance, Advanced Basketball, Advanced Soccer, and Aquatics.

Physical Education Course Codes

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<thead>
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Science

Freshman

- S131 Biology 1 Unit
- S137 Biology 1 Unit

Sophomore

- S221 Physical Science 1 Unit
- S233 Physical Science 1 Unit
- S234 Earth Science 1 Unit
- S332 Chemistry 1 Unit

Junior

- S233 Physical Science 1 Unit
- S353 Applied Science 1 Unit
- S234 Earth Science 1 Unit
- S332 Chemistry 1 Unit

- S432 Physics 1 Unit
- S359 AP Physics 1 1 Unit

Senior

- S332 Chemistry 1 Unit
- S347 Biology 2 1 Unit
- S432 Physics 1 Unit
- S457 Adv. Topics in Science 1 Unit
- S458 Advanced Chemistry 1/2 Unit
- S469 AP Physics C 1 Unit
- S468 Advanced Physics 1/2 Unit
- S439 AP Chemistry 1-1/2 Units
- S449 AP Biology 1-1/2 Units

Additional elective upper-level courses. Please check prerequisites.

- S333 Chemistry of Foods 1 Unit
- S334 Astronomy 1/2 Unit
- S335 Geology 1 Unit
- S336 Environmental Studies 1/2 Unit
- S432 Physics 1 Unit
- S433 Applied Science 1 Unit
- S443 Social Implic. of Biology 1/2 Unit
- S478 Applications in Advanced Chemistry 1/2 Unit
- S478 Advanced Chemistry 1/2 Unit

Solid lines are mainstream sequences; dashed lines are alternate selections usually made through recommendations.
Our mission is two-fold. We are preparing some students for further study in science and engineering. We also accept the responsibility to educate all of tomorrow’s citizens for a world that demands increasing familiarity with science and technology.

All students must complete two years of science, which shall consist of one year of biology and one year of a non-biology course. In addition, college-bound students should take chemistry and physics. Students are advised not to specialize in a particular science discipline until they have taken basic courses in several of the major fields.

**S131 Biology**
**LEVEL: 1,2,3,4**
One year
One unit
PREREQUISITE: Placement test and junior high teacher recommendation

This course is designed for student learning through the investigative approach. Areas studied in this laboratory course include the unifying concepts of the cell; the organism and its relationship to its environment; and reproduction, growth, and development of humans in their environment. (NCAA Core Course)

**S137 Biology**
**LEVEL: 1,2,3,4**
One year
One unit
PREREQUISITE: Placement test and junior high teacher recommendation

The investigative approach is used in this laboratory course. The unified cellular approach to biology has the following major themes: science as investigation and inquiry; the relationship of structure and function; diversity of type and unity of pattern; genetic continuity; and the relationship of organism and environment. (NCAA Core Course)

**S138 Biology**
**LEVEL: 1,2,3,4**
One year
One unit
PREREQUISITE: Placement test and junior high teacher recommendation

This is an accelerated course with content similar to S137 Biology; however, areas of study are more thoroughly investigated. A greater emphasis is placed on student-directed laboratory activities. The use of critical thinking and problem-solving skills is stressed. (NCAA Core Course)

**S170 General Science**
**LEVEL: 1,2,3,4**
One year
One unit

Basic divisions of science are covered including the fundamentals of electricity, weather, earth structure and dynamics, astronomy, chemistry, biology, plant science, and geography. Improving organizational skills and reading comprehension also are course goals.

**S200 Physical Science**
**LEVEL: 1,2**
One year
One unit
PREREQUISITE: Placement through staff conference recommendation

Students learn about the basic divisions of science including the fundamentals of geology, ecology, life processes, astronomy, weather, and electricity.

**S221 Physical Science**
**LEVEL: 2,3,4**
One year
One unit
PREREQUISITE: S131 Biology

This course is designed for student study of the principles of measurement, kinetics, mechanics, optics, electricity, magnetism, and chemistry. Classwork emphasizes the learning of science through laboratory experiences. (NCAA Core Course)

**S233 Physical Science**
**LEVEL: 2,3,4**
One year
One unit
PREREQUISITE: S137 Biology or department recommendation

This introductory laboratory course combines the study of physics and chemistry, focusing on theory as well as many practical aspects of both sciences. Topics may include heat, energy, mechanics, motion, waves, sound, classification of matter, chemical formulas, and chemical reactions. (NCAA Core Course)

**S234 Earth Science**
**LEVEL: 2,3,4**
One year
One unit
PREREQUISITE: S137 Biology or department recommendation

Lessons in this laboratory course are designed to survey earth processes. Topics studied include the changing earth, earth materials, earth motions, energy flow, meteorology, oceans, climatic patterns, mountain formation, the earth’s history, and astronomy. (NCAA Core Course)

**S270 Health Science**
**LEVEL: 2**
One year
One unit
PREREQUISITE: Placement through staff conference recommendation

This course is designed to explore our physical, psychological, and emotional needs. Emphasis is given to learning activities which stress the development of healthy lifestyles that will enable students to achieve their full potential as human beings.
S300 Science/Health  LEVEL: 1,2
(Palatine and Hoffman Estates High Schools Only)
One year  One unit
PREREQUISITE: Placement through staff conference recommendation
Students learn the basics of good health and how to assume increased responsibility for their own health. Units of study include birth and early development, psychological systems, disease prevention, environmental health, family living, mental health, and responsible human relations.

S332 Chemistry  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: S233 Physical Science (A,B,C) or S234 Earth Science (A,B,C) or sophomores with department recommendation
Standard topics of the mole concept, periodicity, chemical energy, reaction rates, acids, and bases are introduced. The application of the concepts of chemistry to societal needs and problems is a very important aspect of the course. Heavy emphasis is placed on laboratory work. (NCAA Core Course)

S333 Chemistry of Foods  LEVEL: 3,4
One unit (double class)
PREREQUISITE: 2 years of Science, and 1 year of Foods (H266 or H267), concurrent enrollment in H333 or department recommendation
Chemistry of Foods provides students the opportunity to participate in food preparation while learning the scientific basis of the chemical and biological processes involved in the culinary arts. Students completing this course will attain Food Safety Certification status by building on and applying the concepts of food preparation and bacteriology. This course will provide guided practice and certification for the student who is choosing the profession while providing an overview of the restaurant industry for the student who is still expanding their horizons. Students will apply what they learn through participation in an in-house restaurant/catering component. The class meets two consecutive periods and is team taught by teachers from the Family and Consumer Sciences and Science departments. Students enrolled in the course will have a common lunch period to allow for flexibility on production days. (NCAA Core Course)

S334 Astronomy  LEVEL: 3,4
One-half year  One-half unit
PREREQUISITE: “C” or higher in S233 Physical Science or S234 Earth Science
Astronomy presents a study of both the solar and stellar systems. Topics studied include examination of the properties of the planets, the moon, the sun, comets, meteors, stars, and galaxies. Theories on the origin of the universe and development of the field of astronomy also are examined. (NCAA Core Course)

S335 Geology  LEVEL: 3,4
One-half year  One-half unit
PREREQUISITE: “C” or higher in S234 Earth Science
In this course, students build on knowledge learned in S234 Earth Science. They learn to analyze a specific landscape area, looking for both constructive and destructive forces which have shaped the land. Students will reconstruct a geological history of an area. (NCAA Core Course)

S336 Environmental Studies  LEVEL: 3,4
One-half year  One-half unit
PREREQUISITE: S137 Biology or S138 Biology
This course explores environmental issues with a global perspective. Individual continents are studied to see the conflicts created when man manipulates natural cycles and processes. Examples of some topics covered in this course include: pollution, global warming, endangered species, overpopulation, land usage, and conservation. The course also educates students on environmental conservation projects being used within their own communities. (NCAA Core Course)

S338 Accelerated Chemistry  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: “B” or higher in S138 Biology or department recommendation
This is an accelerated course with topics similar to S332 Chemistry, but covered in more depth with greater emphasis on mathematical concepts and their application to these topics. Laboratory work is emphasized. (NCAA Core Course)

S344 Astronomy  LEVEL: 3,4
One-half year  One-half unit
PREREQUISITE: “C” or higher in S233 Physical Science or S234 Earth Science. C or higher in S334 Astronomy I.
In this course, students build on knowledge learned in S334 Astronomy. Topics studied include examination of the properties of the planets, moon, sun, comets, meteors, stars, and galaxies. (NCAA Core Course)

S347 Biology  LEVEL: 3,4
One year  One unit
PREREQUISITE: “C” or higher in S137 Biology or S138 Biology
The course allows students to pursue a second year of biology. Major areas of study are cells and systems, ecological
relationships, genetics, and biotechnology. The course utilizes a laboratory approach and is taught at a level consistent with student abilities and course prerequisites. This is a course for college-bound students, but it is not an accelerated course. (NCAA Core Course)

S64702: Harper College B10101 Biology Survey, 3 credit hours

**S352 Forensic Science** LEVEL: 3,4
One semester

**PREREQUISITE:** S432 or taking S432 concurrently with department approval

Forensic Science is a one semester course designed for students who have an interest in applying their background of science to the field of forensics. This lab-based course will focus on topics such as: crime scene photography, DNA, ballistics, blood splatter, and fingerprint analysis. (NCAA Core Course)

**S353 Applied Science** LEVEL: 3,4
One year

**PREREQUISITE:** S221 or department recommendation

Applied Science is a topics-based science course exploring the connections between real world issues and classroom science. The emphasis will be on applying the processes of science, interpreting data and research and advancing scientific literacy to understand the role of science in our everyday lives. Forensics, roller coaster design, and sports equipment design are representative topics. Career connections are highlighted.

**S359 AP Physics 1** LEVEL: 3,4
One year

**PREREQUISITE:** “B” or higher in S332 or S338 Chemistry or department recommendation

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore these topics: kinematics, dynamics, circular motion and gravitation, energy, momentum, simple harmonic motion, torque and rotational motion, electric charge and force, DC circuits, and mechanical waves and sound. Students are encouraged to take the AP Physics 1 exam in May. The class meets for one period per day and cannot be taken pass/fail. (NCAA Core Course - pending)

**S369 Advanced Placement Physics 1 & 2** LEVEL: 3,4
One year

**PREREQUISITE:** “B” or higher in S338 Chemistry; “B” or higher in S332 Chemistry with department recommendation

Advanced Placement Physics allows students to pursue college-level study while in high school. The course places emphasis upon the principal topics covered in introductory college physics courses. The course covers mechanics; heat, fluids, kinetice theory and thermodynamics; electricity and magnetism; waves and optics; and atomic and nuclear physics. Students are encouraged to take both the Advanced Placement Physics 1 and Physics 2 exams in May. The class meets 1½ periods per day and cannot be taken pass/fail. (NCAA Core Course)

**S432 Physics** LEVEL: 3,4
One year

**PREREQUISITE:** S332 or S338 Chemistry

This course emphasizes the following major topics: concepts of time, space and matter; motion and forces; optics and light; electricity and magnetism; and atomic physics. A heavy emphasis is placed on laboratory work. (NCAA Core Course)

**S437 Anatomy and Physiology** LEVEL: 3,4
One year

**PREREQUISITE:** “C” or higher in S137 or S138 Biology and S332 or S338 Chemistry

This course focuses on the human body and its complexity. While this class will benefit students who are interested in the healthcare field, all students will have the opportunity to take part in exposure to anatomy and physiology. This will benefit careers such as biotechnology, pharmaceutical, and psychology. This class supports the STEM initiative which encourages high school students to venture into science and engineering professions. This course would earn one credit in science. (NCAA Core Course) S63702: Harper College, B10135 Intro to Anatomy and Physiology, 4 credit hours

**S439 Advanced Placement Chemistry** LEVEL: 3,4
One year

**PREREQUISITE:** “B” or higher in S369 Advanced Placement Physics; B or higher in S432 Physics with department recommendation

Advanced Placement Chemistry allows students to pursue college-level study while in high school. The course places emphasis upon the principal topics covered in introductory college chemistry courses. The topics covered include atomic theory, chemical bonding, equilibrium, gas laws, acid-base reactions, stoichiometry, kinetics, thermodynamics, and organic chemistry. A heavy emphasis is placed on laboratory work. Students are encouraged to take the Advanced Placement exam in May. The class meets 1½ periods per day and cannot be taken pass/fail. (NCAA Core Course)

**S429 Advanced Placement Environmental Science** LEVEL: 3,4
One year

**PREREQUISITE:** “C” or higher in S137 or S138 Biology and “C” or higher in S234 Earth Science or S332 Chemistry or S338 Chemistry; or department approval

Advanced Placement Environmental Science allows students to pursue college-level study while still in high school. The course places emphasis upon the principal topics covered in introductory college environmental science courses. The topics covered include earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution and global change. Students are encouraged to take the Advanced Placement exam in May. (NCAA Core Course)
S443 Social Implications of Biology  LEVEL: 3,4
One-half year
One-half unit
PREREQUISITE: S137 Biology (A,B,C) or S138 Biology
This course presents many of the current advancements in biological science such as genetic engineering, environmental concerns, transplant technology, and methods of extending life. The social, legal, moral, and ethical challenges that they may present to man and society also are discussed. Emphasis is placed on group discussion, journal writing, simulations, and topic investigations.

S449 Advanced Placement Biology  LEVEL: 3,4
One year
One and one-half units
PREREQUISITE: “B” or higher in S369 Advanced Placement Physics; “B” or higher in S432 Physics with department recommendation
Advanced Placement Biology allows students to pursue college-level study while still in high school. The Advanced Placement course places emphasis upon the principal topics covered in college introductory biology courses. The course is divided into three major areas: molecules and cells, genetics and evolution, and organisms and populations. Students are encouraged to take the Advanced Placement exam in May. The class meets for 1½ periods per day and cannot be taken pass/fail. (NCAA Core Course)

S457 Advanced Topics in Science  LEVEL: 4
(Palatine, Schaumburg and Hoffman Estates High Schools)
One year
One unit
PREREQUISITE: “C” or higher in S137 Biology, S332 Chemistry and S432 Physics; or department recommendation
Advanced Topics in Science is a course designed to study the connections between the sciences. Students will learn specific concepts through the study of current issues. Sports technology, genetics, neurology, and chaos theory are representative units of study. Emphasis will be placed on experimental, research, and technology skills. (NCAA Core Course)

S458 Advanced Chemistry  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: “B” or higher in S332 Chemistry or S338 Chemistry and S432 Physics or S369 Advanced Placement Physics; or department recommendation
Basic chemistry topics are reviewed and explored in greater depth than in S332 Chemistry and S338 Chemistry. Heavy emphasis is on laboratory work. (NCAA Core Course)

S468 Advanced Physics  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: “B” or higher in S332 Chemistry or S338 Chemistry and S432 Physics or S369 Advanced Placement Physics; or department recommendation
Basic physics topics are reviewed and explored in greater depth than in S432 Physics and S369 AP Physics. A heavy emphasis is placed on laboratory work. (NCAA Core Course)

S469 Advanced Placement Physics Calculus C  LEVEL: 3,4
One year
One unit
PREREQUISITE: “B” or higher in S369 AP Physics 1 & 2 or S359 AP Physics 1 or S432 Physics; student also must have completed or be concurrently enrolled in an introductory calculus course
Advanced Placement Physics C allows students to pursue calculus-based college-level study while in high school. The course places emphasis upon the principal topics not covered in S432 or S369. This course also looks at the material covered in the students’ introductory-level physics and uses Calculus to solve problems. The course emphasizes the following components: mechanics and electricity and magnetism. Students will study Newtonian Mechanics, Conservation Laws, including Energy and momentum, circular and angular motion, and a broad spectrum of Electricity and Magnetism topics. Students are encouraged to take both of the Advanced Placement Physics C exams in May, Mechanics and Electric and Magnetic. The class meets 1 period per day and cannot be taken pass/fail. (NCAA Core Course)

S478 Applications in Advanced Chemistry  LEVEL: 4
One-half year
One-half unit
PREREQUISITE: “B” or higher in S332 Chemistry or S338 Accelerated Chemistry and “B” or higher in S432 Physics
This lab-intensive course focuses on forensic chemistry, nanotechnology, and materials engineering with an emphasis on “real world” applications. Experiences from the course will include: problem solving within a crime scene, designing/testing prototypes of potential consumer products, fabrications of materials on the microscale, and investigating the ethical implications of developing technologies. This course can be taken independent of S458 Advanced Chemistry. (NCAA Core Course)
## Social Studies

### Freshman
- **G143 World Geography** 1 Unit
- **G146 World History** 1 Unit
- **G161 Global Studies** 1 Unit
- **G339 AP World History** 1 Unit
- **G349 AP Human Geography** 1 Unit

### Sophomore
- **G349 AP Human Geography** 1 Unit
- **G359 AP European History** 1 Unit
- **G216 Multi-Cultural Perspective** 1/2 Unit
- **G236 Women’s Studies** 1/2 Unit
- **G262 World Affairs** 1/2 Unit

### Junior
- **G342 U.S. History** 1 Unit
- **G336 American Studies** 1 Unit
- **G343 Psychology 1** 1/2 Unit
- **G353 Psychology 2** 1/2 Unit
- **G365 Law and the Individual** 1/2 Unit
- **G316 Intro to Criminal Justice** 1/2 Unit
- **G341 U.S. History** 1 Unit
- **G331 American Studies** 1 Unit
- **G379 AP Psychology** 1 Unit

### Senior
- **G359 AP European History** 1 Unit
- **G459 AP Microeconomics** 1/2 Unit
- **G469-G479 AP Macroecon. Am. Gov’t** 1/2 Unit Each
- **G442 Social Science Survey** 1 Unit
- **G466/G462/G472 Intro to Gov’t/Econ.** 1 Unit
- **G466/G462/G472 Intro to Gov’t/Econ.** 1 Unit
- **G441 Social Science Survey** 1 Unit

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*Solid lines are mainstream sequences; dashed lines are alternate selections usually made through recommendation.*
The goals of the Social Studies Department in High School District 211 are:

1. To give students an understanding of our institutions and social environment so that they may adapt to rapidly changing conditions;
2. To prepare students for their opportunities and responsibilities in society by fostering an appreciation of contemporary problems through discussion of current issues and their historical background;
3. To foster attitudes of critical and impartial judgment, tolerance, and open-mindedness;
4. To develop skill in obtaining information pertinent to social issues, in organizing materials, and in communicating ideas;
5. To develop active citizens in our communities.

A major in social studies is recommended for a student who is preparing for law, government service, diplomatic service, social work, teaching of social studies, journalism, psychology, international trade, or business. United States History is a state-required course taken in the junior year. A second unit of Social Studies is required for graduation. It can be Social Science Survey, Introduction to Government/Economics, or Advanced Placement Macroeconomics/Advanced Placement American Government and Politics. A 20-hour community service experience is included in all regular education Social Studies senior-level courses.

**G143 World Geography**  LEVEL: 1,2,3,4  One year  One unit
World Geography is designed to combine a survey of geographic principles pertaining to the physical, economic, and political aspects of the world with an application of these principles to the major continents. (NCAA Core Course)

**G146 World History**  LEVEL: 1,2,3,4  One year  One unit
World History is a survey of western and non-western civilizations. Students will trace the development of nations and learn of the political, economic, intellectual, and social advances of humanity. The course emphasizes the learning of skills that will be helpful in all areas of study. (NCAA Core Course)

**G161 Global Studies**  LEVEL: 1,2  One year  One unit
This course provides a unique integration of culture, history, economics, government, and geography as its framework. The goal is to have the students critically think about making connections, developing solutions, and understanding cultures. In each of the units, the students will learn active strategies for learning in the areas of reading; note-taking; analyzing maps, charts, and graphs; discussion and listening skills; writing and technology skills. (NCAA Core Course)

**G216 Multicultural Perspectives**  LEVEL: 2,3,4  One-half year  One-half unit
Multicultural Perspectives is designed to increase cultural awareness and to prepare students to thrive in a diverse society. Through the examination of prejudice, self-esteem, cultural similarities and differences, students will be more prepared to function constructively in multicultural settings. (NCAA Core Course)

**G236 Women’s Studies**  LEVEL: 2,3,4  One-half year  One-half credit
This course will enhance understanding of the topics and issues of women in contemporary society. It will provide students with a perspective on the role of women in American History, the labor force, education, politics and the law, the family, and research in health care. Various approaches to activism on behalf of women will be investigated so that students will be aware of many perspectives and solutions to challenges facing women in today’s society. (NCAA Core Course)

**G300 United States History**  LEVEL: 3,4  One year  One unit  
*(Palatine and Hoffman Estates High Schools Only)*
PREREQUISITE: Placement through staff conference recommendation
In this course, students gain an understanding of our country’s history. Federal, state, and local government interrelationships and their impact on daily life are examined. In addition, the role and responsibilities of U.S. citizenship are stressed.

**G262 World Affairs**  LEVEL: 2,3,4  One-half year  One-half unit
World Affairs is designed to build upon the concepts and skills learned in Global Studies, World Geography, or World History. The course will promote a better understanding of issues that challenge the modern world and investigate possible solutions to issues. These topics include health care, the environment, human rights, terrorism, global politics, and economic globalization. (NCAA Core Course)
Social Studies

G331 American Studies — History  LEVEL: 3
One year  One unit
PREREQUISITE: E201 English
This course combines the study of United States History and American Literature and fulfills the requirements for the third-year United States History. This class is taught by teachers from the Social Studies Department and English Department. Students should be enrolled concurrently in E331 and G331. (NCAA Core Course)

G336 American Studies — History  LEVEL: 3
One year  One unit
PREREQUISITE: E202 English 2 or E208 English 2
American Studies offers the student an opportunity to examine the question, “What is an American?” By studying America’s history, literature, music, art, and architecture, the student can discover what makes him or her special as an American. This course combines a chronological or thematic study of United States history and American literature and fulfills the requirements for junior English and United States History. Students must be enrolled concurrently in E336 and G336. (NCAA Core Course)

G339 Advanced Placement World History  LEVEL: 1,2,3,4
One year  One unit
LEVEL 1: Fremd and Hoffman Estates High Schools
PREREQUISITE Department recommendation
This course presents a global history from the earliest times to the present. Balanced coverage is offered of Asia, Africa, the Americas, and Europe. Broad themes are explored such as trade, migrations, technology, the spread of religions, disease, war, political organization, gender, and social structure. The course explains how the world has generally become more interdependent. (NCAA Core Course)

G341 United States History  LEVEL: 3
One year  One unit
This course emphasizes objectives and study projects covering the history of our nation from the American Revolution to the present. (NCAA Core Course)

G342 United States History  LEVEL: 3
One year  One unit
The survey course covers the history of our nation from the American Revolution to the present day. (NCAA Core Course)

G343 Psychology 1  LEVEL: 3,4
One-half year  One-half unit
Psychology is the scientific study of human and animal behavior and mental processes. Not only will students learn how to scientifically process what they hear in the media, but they will also have a deeper appreciation for how people think, feel, and act. Topics include the history of psychology, learning and memory, the brain, sensation and perception, personality, consciousness-sleep, dreams, hypnosis, human development, and methods of research. (NCAA Core Course)

G349 Advanced Placement Human Geography  LEVEL: 1,2,3,4
One year  One unit
LEVEL 1: At Palatine and Schaumburg High Schools
Human Geography is designed to further enhance the understanding of issues and concerns that exist between human beings and their environment. The course provides an additional framework of perspectives on multiculturalism, ethnic-racial-religious conflict, the impact of population on resources, global economics, land-use and the politics of a global community. (NCAA Core Course)

G353 Psychology 2  LEVEL: 3,4
One-half year  One-half unit
PREREQUISITE: G343 Psychology 1 (A,B,C)
This course is similar in design to G343 Psychology 1, but offers students additional topics to explore. What makes an individual engage in an ongoing pattern of behaviors, thoughts, and feelings that may be deviant, stressful, or dysfunctional? Psychology 2 explores this question by focusing on social psychology (conformity, attraction, and obedience), stress, drugs, abnormal psychology, treatment, and therapy. (NCAA Core Course)

G359 Advanced Placement European History  LEVEL: 2,3,4
One year  One unit
PREREQUISITE: Department recommendation
This elective course is an introductory-level college humanities course that prepares students for the Advanced Placement European History Test. The course examines the cultural, economic, social and political history of Europe from 1450 to the present. The curriculum also is designed to further develop the student’s inquiry and analytical skills through reading, writing, discussions, and a variety of class activities. The mastery of these skills provide an excellent foundation for college and will enable students to explore other areas of interest throughout their lives. (NCAA Core Course)

Learn the past, watch the present, and create the future.
— Jess Conrad
American author and editor
G365 Law and the Individual  LEVEL: 3,4
One-half year  One-half unit
Students in this class learn about the rights and obligations of citizenship, the historical development of our system of law, our court structure and procedure, and substantive criminal law. A primary purpose of class exercises is for each student to develop the ability to think critically by recognizing the value conflicts present in the law. (NCAA Core Course)

G369 Advanced Placement United States History  LEVEL: 2,3
One year  One unit
PREREQUISITE: E208 English 2 or department recommendation
This is a survey course offered for students of above-average ability and interest. The material used and teaching style employed are at the college level. Students are encouraged to take the Advanced Placement Test. (NCAA Core Course)

G370 United States History  LEVEL: 3
One year  One unit
PREREQUISITE: Placement through staff conference recommendation
This is a general survey course in United States History. It combines an overview of colonial development, westward expansion, urban development, and foreign affairs. Attention also is given to building skills in geography.

G379 Advanced Placement Psychology  LEVEL: 3,4
One year  One unit
PREREQUISITE: Previous successful AP experience, Accelerated English enrollment or department recommendation
Designed for students with above average ability and interest, Advanced Placement Psychology will offer students an in-depth look at the scientific study of human behavior and mental processes. The main goal will be to prepare students for the optional AP exam in May. Through this course, students will gain a deeper appreciation for how people think, feel, and act as they are exposed to empirically supported psychological facts and research findings. Topics include social psychology, consciousness, perception, the brain, motivation and emotion, learning and memory, abnormal psychology and treatment, human development, stress, and drugs. (NCAA Core Course)

G400 Social Science Survey  LEVEL 3,4
One year  One unit
(Palatine and Hoffman Estates High Schools Only)
PREREQUISITE: Placement through staff conference recommendation
Students examine issues that affect their daily lives. Topics covered include family, peer groups, dating, marriage, prejudice, law, and personal decision-making. In addition, students gain an understanding of the responsibilities demanded by the school, the community, and state and federal governments.

G441 Social Science Survey  LEVEL: 4
One year  One unit
The objectives and content of this course focus on the study of four major social disciplines: anthropology, economics, political science, and sociology. (NCAA Core Course)

G442 Social Science Survey  LEVEL: 4
One year  One unit
Social Science Survey is designed to introduce students to the methodology of social studies and to major principles and concepts of the following social studies disciplines: anthropology, economics, political science, and sociology. (NCAA Core Course)

G459 Advanced Placement Microeconomics  LEVELS: 3,4
One-half year  One-half unit
The purpose of the AP course in microeconomics is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision-makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy. Students will be expected, but not required, to take the College Board Advanced Placement test in Microeconomics in the spring. This one semester course does not meet social studies graduation requirements, but is an elective option. (NCAA Core Course)

G462 Introduction to Economics  LEVEL: 4
One-half year  One-half unit
This course is one semester in length, and must be taken with G472 Introduction to Government to meet the senior social studies graduation requirement. The goal of the course is to develop the knowledge and skills needed to understand both the American market economy and the larger global economic system. Topics will include basic concepts of our market economy, the role of the federal government, the business cycle, a comparative study of capitalism and socialism, international trade, and a number of contemporary economic issues ranging from poverty to the deficit. Throughout the course critical thinking skills will be emphasized. (NCAA Core Course)
**G466 Introduction to Government/Economics**  
LEVEL: 4  
One year  
One unit  
This is a full-year course combining G462 Introduction to Economics with G472 Introduction to Government.  
(NCAA Core Course)

**G469 Advanced Placement Macroeconomics**  
LEVEL: 3,4  
One-half year  
One-half unit  
PREREQUISITE: G369 United States History (A,B) or department recommendation  
This course is one semester in length, offered to students of above-average ability. Students would be expected, but not required, to take the College Board Advanced Placement test in Macroeconomics in the spring. This course gives students a thorough understanding of the basic principles of a market economy. Students learn about national income and price determination and become familiar with economic performance measures, economic growth, and international economics.  
(NCAA Core Course)  
This course meets the graduation requirement.

**G470 Social Science Survey**  
LEVEL: 4  
One year  
One unit  
PREREQUISITE: Placement through staff conference recommendation  
This course includes units that examine the various social studies disciplines: anthropology, sociology, political science, and economics. An understanding of our American culture and its political, economic, and social systems is developed. Other cultures and their value systems also are explored. Communication and critical thinking skills are emphasized.

**G472 Introduction to Government**  
LEVEL: 4  
One-half year  
One-half unit  
This course is one semester in length, and must be taken with G462 Economics to meet the senior social studies graduation requirement. The goal of the course is to develop the knowledge, skills, and ideals needed to understand government. Emphasis is placed on political participation and individual responsibilities. The promise of America's future and interdependence of our global community heighten the demand for students to become aware and involved with the political process.  
(NCAA Core Course)

**G479 Advanced Placement American Government and Politics**  
LEVEL: 3,4  
One-half year  
One-half unit  
PREREQUISITE: G369 United States History (A,B) or department recommendation  
This course is one semester in length, and is offered to students of above average ability. Students taking G469 Advanced Placement Macroeconomics are recommended to take this course as well. Students would be expected, but not required, to take the College Board Advanced Placement test in American Government and Politics in May. This course involves the study of general concepts used to interpret U.S. politics. Students would become familiar with the various institutions, groups, beliefs, and ideas that comprise the realities of American politics.  
(NCAA Core Course)

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*Success is not final, failure is not fatal: it is the courage to continue that counts.*  
– Winston S. Churchill
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High School District 211 offers four-year programs in Spanish, French, German, and Chinese. The study of one language for four years is highly recommended for reaching an intermediate to advanced level of proficiency as well as satisfying many college requirements.

Many colleges require or recommend the study of a world language for entrance and/or graduation. Colleges may grant credit for successfully passing the Advanced Placement or college entrance exams, receiving the State Seal of Biliteracy or meeting requirements in a Dual Credit course. In addition to preparing for college, the study of a world language has become important to career readiness.

Students who fail first semester are not eligible to continue in that language course second semester.

**L166 Spanish 1**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
**PREREQUISITE:**  
Incoming Freshmen-satisfactory entrance test score; upper class students, English (A,B,C)  
This is an introductory Spanish class for those students with little or no experience learning the Spanish language. In this beginning level course, an emphasis is placed on developing communication skills in the target language by using authentic materials and a language lab. An emphasis also is placed on learning basic vocabulary words and grammar concepts. These skills are practiced through a variety of activities, including games, songs, worksheets, skits, and classroom projects. Reading and writing skills are introduced and practiced frequently. This course will enable students to learn and appreciate various Hispanic traditions and customs in a low-risk setting. (NCAA Core Course)

**L266 Spanish 2**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
**PREREQUISITE:** L166 Spanish 1 (A,B,C,D)  
This course continues the methods used in Level 1 and is designed to further develop students’ communicative skills using thematic vocabulary units and real-life situations. Authentic audiovisuals, readings, and technology are used to reinforce speaking, listening, reading, writing, and grammar skills and to help students develop a broader cultural understanding of Spanish-speaking countries. (NCAA Core Course)

**L276 Spanish for Native Speakers/Dual Language Students**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
**PREREQUISITE:** Native speaker/Dual language student; recommendation of instructor  
This course is designed to meet the needs of those who already speak and comprehend Spanish. It provides students with the opportunity to develop, or improve, skills in reading, writing, and conventional grammar. Topics in Hispanic life are covered as a vehicle for expanding vocabulary and developing basic rhetorical skills. (NCAA Core Course)

**L366 Spanish 3**  
**LEVEL: 2,3,4**  
One year  
One unit  
**PREREQUISITE:** L266 Spanish 2 (A,B,C) or L165 Spanish 2 for freshmen (A,B,C) or department approval  
Students in this intermediate course will continue to develop reading, writing, listening, and speaking skills as well as learn new grammar and vocabulary. Students are also expected to apply more advanced grammatical structures. An emphasis is put on communication in the target language. Students are expected to speak Spanish on a daily basis with their peers and the teacher. A variety of audio-visual materials and technology are used as well as readings in the target language to enhance the material presented. (NCAA Core Course)

**L376 Spanish for Native Speakers/Dual Language Students with proficiency**  
**LEVEL: 1,2,3,4**  
One year  
One unit  
**PREREQUISITE:** L276 Native speaker/Dual language student; recommendation of instructor  
This advanced course is designed to meet the needs of those who already speak and comprehend Spanish. It provides students with the opportunity to develop, or improve, skills in reading, writing, and conventional grammar. Topics in Hispanic life are covered as a vehicle for expanding vocabulary and developing basic rhetorical skills. (NCAA Core Course)

**L466 Spanish 4**  
**LEVEL: 3,4**  
One year  
One unit  
**PREREQUISITE:** L366 Spanish 3 (A,B,C) or department approval  
This course helps students refine their skills in reading, writing, listening, and speaking Spanish as teachers continue to prepare students for the Spanish 5 AP exam. Students learn new vocabulary and grammar as well as review previously learned grammatical concepts. In addition students will study the history and the culture of various Hispanic countries. Short stories and novels will be used to highlight both cultural material as well as grammar and vocabulary. This course is taught almost exclusively in Spanish and students are expected to interact with peers in the target language as well. To enhance language development, a variety of audio-visual material and technology is used. (NCAA Core Course)

**L66602: Harper College Course SPA202, Intermediate Spanish, 4 college credit hours.**

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*By believing passionately in something that does not yet exist, we create it.*  
— Nikos Kazantzakis  
Greek writer and philosopher
L476 Advanced Topics in Spanish  LEVEL: 3-4  One year  One unit
PREREQUISITE: L376, L466 (A,B,C) or department approval
This is an upper level course designed to provide conversational practice beyond the intermediate level. The focus of this class is to strengthen advanced grammatical concepts, broaden vocabulary, and increase overall student proficiency in all communicative skills. The study of Spanish speaking cultures and current events is also included. Preparation for the AP language course is incorporated throughout the year. (NCAA Core Course) L67602: Harper College Course SPA205, Spanish Intensive Oral Practice, 3 college credit hours.

L579 Advanced Placement Spanish  LEVEL: 4  One year  One unit
PREREQUISITE: L466 Spanish (A,B,C) or department approval
Advanced Placement Spanish is a course designed to prepare students for the Advanced Placement Spanish Language Exam. This course is for highly motivated students willing to do college level work. Students will refine, review, and expand all of their communicative skills. Emphasis is placed on communicative competency in writing and speaking using AP level readings, formal and informal writing, and oral conversation using the language lab. An in-depth grammar review also is included. The course is taught exclusively in the target language and students are expected to interact with peers in Spanish as well. Although the AP curriculum is used, students may choose not to take the actual AP test. The material in this course also will prepare students for college placement examinations. (NCAA Core Course)

L589 AP Spanish Literature and Culture  LEVEL: 3, 4  One unit
PREREQUISITE: L579 AP Spanish Language (A, B) or score of 3 or higher on the AP Spanish Language Exam or department recommendation.
AP Literature and Culture is an advanced level course conducted exclusively in the target language which focuses primarily on college-level Spanish literature. The course introduces students to the formal study literature using a variety of pieces from Spain, Latin America and U.S. Hispanic literature. Students will demonstrate their proficiency in Spanish across the three modes of communication (interpersonal, interpretive, presentational) becoming critical readers and analytical writers. Although not required, students are encouraged to take the Spanish Literature and Culture exam at the conclusion of the course. (NCAA Core Course)

L162 French 1  LEVEL: 1,2,3,4  One unit
PREREQUISITE: Freshmen, satisfactory entrance test scores; upper class students, English (A,B,C)
This beginning level course is designed for students with little or no French speaking experience. French 1 will lay the foundation for future study of French. The emphasis is on communicative activities with a large focus on listening skills. Students will be introduced to speaking, reading, and writing activities over the course of the year. The use of authentic materials as well as a variety of technological resources helps reinforce what is taught in the classroom. Students also are introduced to basic cultural differences between France and the United States. (NCAA Core Course)

L262 French 2  LEVEL: 1,2,3,4  One unit
PREREQUISITE: L162 French 1 (A,B,C,D)
French 2 reinforces skills learned in Level 1 and continue with the development in the four learning areas. Students are introduced to cultural situations they would likely face if they were to travel to a French-speaking country. Vocabulary is introduced thematically to coincide with the grammar introduced in each unit. The integration of technology through the use of video and audio sources as well as the language lab allows students to play an active role in their own language acquisition. (NCAA Core Course)

L362 French 3  LEVEL: 2,3,4  One unit
PREREQUISITE: L262 French 2 (A,B,C) or L142 French 2 for freshmen (A,B,C) or department approval
Students in this intermediate course will continue to develop reading, writing, listening, and speaking skills as well as learn new grammar and vocabulary. Students also are expected to apply more advanced grammatical structures. An emphasis is put on communication and reading in the target language. Students will be introduced to a variety of short stories in the target language. Students are expected to speak French on a daily basis with their peers and the teacher. A variety of materials and technology are used as well as readings in the target language to enhance the material presented. Students study art and learn about French culture as well. (NCAA Core Course)

L462 French 4  LEVEL: 3,4  One unit
PREREQUISITE: L362 French 3 (A,B,C) or department approval
French 4 provides the opportunity for the students to improve the skills necessary to function at a more advanced level. The class will focus heavily on the refinement of students’ grammar and speaking skills. Students also will continue developing their reading skills through a variety of authentic reading materials including Francophone fables, articles, as well as a novel. Paragraph and essay writing skills will be developed throughout the course of the year. This course is conducted almost exclusively in French. (NCAA Core Course) L66202: Harper College Course FRN202, Intermediate French, 4 college credit hours.

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.
– Margaret Mead
L559 Advanced Placement French  LEVEL: 4
One year
One unit
PREREQUISITE: L462 French 4 (A,B,C) or department approval
Advanced Placement French emphasizes a student’s communicative competency through reading, writing, speaking, and listening skills. This class will prepare the students to take the Advanced Placement Test and possibly receive college credit. Students will refine their communication skills through a variety of methods including film study, literature, cultural readings, and the use of the language lab. The class is conducted entirely in French. (NCAA Core Course)

L163 German 1  LEVEL: 1,2,3,4
One year
One unit
PREREQUISITE: Freshmen, satisfactory entrance test scores; upper class, English (A,B,C)
The primary goal of this course is to develop confidence in communication through the mastery of basic language skills. Focus is placed on learning basic vocabulary and grammar topics. The use of multi-media and technology resources are used to promote language and enhance listening comprehension, speaking, reading, writing, and culture. (NCAA Core Course)

L263 German 2  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: L163 German 1 (A,B,C,D)
The goal of this course is to expand the communication skills from Level 1. Vocabulary and grammar is enhanced and reinforced. Students will learn to communicate effectively in the past tense. The use of multi-media and technology resources are used to promote language use and enhance listening comprehension, speaking, reading, writing, and culture. (NCAA Core Course)

L363 German 3  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: L263 German 2 (A,B,C) or L167 German 2 for freshmen or department approval
The goal of this course is to enable the student to be proficient in listening comprehension, reading, writing, speaking, and cultural awareness on a functional level in the German environment. Students will be introduced to a variety of materials covering literature, history, and culture. Technology and multi-media will be used to enhance and promote their skills. (NCAA Core Course)

L569 Advanced Placement German  LEVEL: 4
One year
One unit
PREREQUISITE: L363 German 4 (A,B,C) or department approval
Advanced Placement German places continuing emphasis on the student’s communicative competency through reading, writing, and oral conversation and comprehension skills. This class prepares students to take college placement examinations. Some of the Advanced Placement Curriculum is used although the student may choose not to write the Advanced Placement Test. (NCAA Core Course)

L152 Chinese 1  LEVEL: 1,2,3,4
One year
One unit
PREREQUISITE: Freshmen, satisfactory entrance test scores; upper class students English (A, B, C)
This is an introductory Chinese class for those students with little or no experience learning the Chinese language. In the beginning course, an emphasis is placed on developing communications skills in the target language by using authentic materials and a language lab. An emphasis also is placed on learning basic vocabulary words and concepts. These skills are practiced through a variety of activities including games, songs, worksheets, skits, and classroom projects. Reading and writing skills are introduced and practiced frequently. This course will enable students to learn and appreciate various Chinese traditions and customs in a low risk setting. (NCAA Core Course)

L252 Chinese 2  LEVEL: 2,3,4
One year
One unit
PREREQUISITE: L152 Chinese 1 (A,B,C,D)
This course continues the methods used in Level 1 and is designed to further develop students’ communicative skills using thematic vocabulary units and real-life situations. Authentic materials, CDs, and video are used to reinforce language (speaking, listening, reading, and writing) skills, grammar skills, and an appreciation of the Chinese culture. (NCAA Core Course)

Follow your instincts. That’s where true wisdom manifests itself.
– Oprah Winfrey
Television personality and philanthropist
The Chinese use two brush strokes to write the word 'crisis.' One brush stroke stands for danger; the other for opportunity. In a crisis, be aware of the danger -- but recognize the opportunity.

— John F. Kennedy

L352 Chinese 3
One year
PREREQUISITE: L252 Chinese 2 (A,B,C,D)
This year long course continues the methods used in Level 2 and is designed to further develop the students' communicative skills using thematic vocabulary units and real life situations. Authentic materials, CD's and video are used to reinforce grammar skills and language skills of reading, writing, speaking and listening. Students will develop an appreciation of the Chinese culture as they continue their study of the language. (NCAA Core Course)

L549 Advanced Placement Chinese
LEVEL: 4
One year
PREREQUISITE: L352 Chinese 3 or department chair approval.
The AP Chinese course is designed to immerse students into the language and culture of the Chinese-speaking world. The AP course prepares students to demonstrate their level of Chinese proficiency across the three communicative modes of interpersonal, interpretive, and presentational and the five goal areas of communication, culture, connections, comparisons, and communities as outlined in the Standards for Foreign Language Learning in the 21st Century. Its aim is to provide students with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference reflective of the richness of Chinese language and culture. Students will be prepared to take the Advanced Placement test and possibly receive college credit. (NCAA Core Course)
Non-Departmental Courses

Non-Departmental courses are those that are offered for credit and do not belong to any particular academic department within the school. These courses are taught by a variety of school faculty.

**R151/R251/R351/R451 Life and Learning Strategies** LEVEL: 1,2,3,4

One year

**PREREQUISITE:** Placement through staff conference recommendation

This course is designed for students who receive special services for autism spectrum disorders and related disabilities. Students will develop strategies to increase effective skills of self-determination. The curriculum will emphasize individualized instruction in communication and socialization strategies related to daily problem solving. Content also will include units of study to support organization and study skills to increase overall academic performance.

**R152/R252 Life Strategies** LEVEL: 1,2

One year

**PREREQUISITE:** Placement through staff conference recommendation

This resource program is designed to teach students how to manage various aspects of their lives strategically. The main goal of the course is to ensure that students are able to independently analyze and successfully solve problems in social, personal, and academic situations. The curriculum includes activities and exercises in the areas of responsibility, values, problem-solving, motivation, commitment, and self-determination.

**R153/R253/R353 Learning Strategies** LEVEL: 1,2,3

One year

**PREREQUISITE:** Placement through staff conference recommendation

This resource program is designed to teach students how to manage various aspects of their lives strategically. The main goal of the course is to ensure that students are able to independently analyze and successfully solve problems in social, personal, and academic situations. The curriculum includes activities and exercises in the areas of responsibility, values, problem-solving, motivation, commitment, and self-determination.

**R226 Leadership for Life** LEVEL: 1,2,3,4

One-half year

**PREREQUISITE:** Placement through staff conference recommendation

This one semester elective course offers practical training in communication, group dynamics, planning and goal setting, conflict management, and self-evaluation. It is taught with an interdisciplinary approach offering the opportunity to improve qualities of self-respect, self-management, and goal-setting that cut across issues of personal growth and management.

**R313 Health Career Exploration and Medical Terminology** LEVEL: 3,4

One year

**PREREQUISITE:** Successful completion of Biology and grade level reading scores

This course familiarizes students to the health care delivery system including an introduction to the organization, structure, function, and issues related to the health care environment. Emphasis is placed on the importance of effective communication skills for health care professionals, team building, professionalism, and diversity in the health care center. This class also emphasizes the origin and the basic structure of medical words, including prefixes, suffixes, word roots, combining forms, and plurals. Emphasis is on rendering a professional vocabulary required for work in the health care field. R61302: Harper College Course HSC112, Medical Terminology, 2 college credit hours.

**R110/R210/R310/R410/R450 Functional Academic and Life Skills** LEVEL: 1,2,3,4

One year

**PREREQUISITE:** Placement through staff conference recommendation

This course is designed for students who receive special education services for intellectual disabilities with accompanying physical and/or medical challenges. The curriculum emphasizes functional academics and life skills through participation in hands-on experiences. Students have the opportunity to develop communication

**Nothing is impossible, the word itself says I’m possible!**

- Audrey Hepburn
Non-Departmental Courses

skills through the use of assistive technology and experiences with general education peer mentors and in-building vocational opportunities. Basic objectives and skills will be met through appropriate activities designed for each student's level of ability.

R314 Certified Nursing Assistant

LEVEL: 4

One year

PREREQUISITE: Successful completion of R313 Health Career Exploration and Medical Terminology and Medical Terminology. Must have the ability to lift, move, and transfer patients. Recommend concurrent enrollment in S437 Anatomy and Physiology

Objectives of the course are to teach basic nursing skills that provide "hands-on" care in a safe, competent, and quality manner. Both theory and practical laboratory lessons precede actual clinical experience. As part of the class, clinical experience at local health care facilities occur on designated weekends. Students must arrange their own transportation for the weekend clinicals. Successful completion of the course gives Harper College credit as well as high school credit. In addition, students become eligible to take the Nurse Aide Competency examination and be certified by the State of Illinois as Nurse Aides. A fee is required for healthcare equipment which the student will keep after the course is completed. R61402: Harper College Course CNA101, Nursing Assistant Training, 6 college credit hours.

R332, R432 Related Occupations 1 & 2

LEVEL: 3, 4

One or two years

Two units per years

(Students also must enroll in R362, R372, or R382 Work Experience)

Related Occupations is a general cooperative work program with paid work experience in any career or technology related field and the related classroom instruction. Appropriate training plans are developed and task lists are established based on prior experience and skill development. Students are supervised on-site by a qualified instructor/coordinator. It is a program that extends the realm of the classroom beyond the school setting into the world of careers. It will provide an opportunity to become acquainted with the values important to become successful in the world of work. It provides on-the-job experience in semi-skilled and service occupations in career relate and technology fields.

R359 Advanced Placement Seminar

LEVEL: 3, 4

One year

One unit

PREREQUISITE: Freshmen may enroll in the course only through acceptance to the Gifted Program.

Students will investigate real-world topics of their choosing from multiple perspectives, which often are different or competing. They will learn to collect and analyze information with accuracy and precision, develop arguments based on facts and effectively communicate them. Students will examine materials like news stories, research studies, and literary works to craft arguments to support a point of view and communicate it effectively through the use of various media. Assessment includes a combination of individual and team projects and presentations as well as through a written exam. (NCAA Core Course - pending)

Celebrate what you've accomplished, but raise the bar a little higher each time you succeed.

— Mia Hamm
Professional soccer player
Cooperative Education

Cooperative education programs are planned to provide students on-the-job training not available at the school. With the assistance of their teacher-coordinator and employer, students plan many of their own learning experiences. Serious thought needs to be given to the type of occupation a student wants to explore so that appropriate training stations may be secured.

Students must work a minimum of 15 hours per week in approved training and attend a related class in school. Training arrangements are agreed upon by students, their parents, the teacher-coordinator, and the employer. Students are paid for work they perform on the job.

In each High School District 211 cooperative education program, emphasis is placed on a different occupational cluster. Detailed information on programs offered at each school is available through your counselor.

V352, V452 High School Education for Related Occupations 1 & 2   LEVEL: 3,4
One or two years Two units per year
(Students also must enroll in H362, H372, or H382 Work Experience) PREREQUISITE: Career planning with counselor, department approval; H352 is a prerequisite for H452. Students must be 16 years of age or older.
H.E.R.O. fulfills a student’s need to obtain training in the world of work while developing skills in both employee/employer relationships and living as an independent consumer. The first year of this program satisfies the State/District 211 Consumer Education requirement. Students may enroll in H.E.R.O. for one or two years. This program provides opportunities for on-the-job instruction related to Family and Consumer Sciences. On-the-job training may include work in care and guidance of children, fashion merchandising, clothing, food services or production, health occupations, and other personal and public service occupations. Daily classroom activities are designed to assist students with job adjustment, learning to be a responsible consumer, career planning, and independent study relating to each student’s occupational interest. In the second year of the program, a training plan is developed which builds on skills learned the previous year.

T120 Career Orientation   LEVEL: 1
One year One unit
PREREQUISITE: Placement through staff conference recommendation
Students will use the 16 career clusters to explore possible vocational choices in relationship to their own personal interests, aptitudes and abilities. Additional units of study include job market trends and the skills needed to obtain employment.

T220 Career Exploration   LEVEL: 2
One year One unit
PREREQUISITE: Placement through staff conference recommendation
This course meets the D211 Consumer Education graduation requirement, and includes units of study in financial literacy (budgeting, savings, credit, insurance), consumer rights, comparison shopping, and finding housing and transportation.

T320 Career Preparation   LEVEL: 3,4
One year One unit
(Students may also be enrolled in T560, T570 or T580 Work Experience for an additional unit of credit) PREREQUISITE: Placement through staff conference recommendation
The general studies vocational program offers sequential instruction and work experiences that prepare students to secure and maintain employment. Students will use the 16 career clusters to explore possible vocational choices in relationship to their own personal interests, aptitudes and abilities. This course meets the D211 Consumer Education graduation requirement, and includes topics in financial literacy (paychecks, taxes, credit, budgeting, insurance). Job placement assistance is provided as needed.
Cooperative Education

T420 Career Preparation 2  LEVEL: 4
One year  One unit
(Students may also be enrolled in T560, T570 or T580 Work Experience for an additional unit of credit)
PREREQUISITE: Placement through staff conference recommendation
The general studies vocational program offers sequential instruction and work experiences that prepare students to secure and maintain employment. Students will use the 16 career clusters to explore possible vocational choices in relationship to their own personal interests, aptitudes and abilities. Additional units of study include topics in financial literacy (paychecks, taxes, credit, budgeting, insurance), and understanding the characteristics of a good worker. Individual vocational topics may be assigned based on the student’s interest, aptitude, and need. Job placement assistance is provided as needed.

Community Based Consumer Mathematics T190, T290, T390, T490, T590, T690  LEVEL: 1,2,3,4
(Palatine and Hoffman Estates High Schools Only)
One to four years  Two units per year
(Students also may be enrolled in Work Experience T460, T470, or T480)
PREREQUISITE: Placement through staff conference recommendation
This course is designed for special needs students. The main goal is to teach students with developmental disabilities the skills necessary to begin preparation for transition to community living. The use of basic math, reading, and communication skills is emphasized in the school and the community.
This course may be taken along with the work experience program which gives students specific vocational training on the job. When appropriate, a pre-vocational coordinator will assist the student in finding a job in the school or community.

T250, T350, T450 Cooperative Work Training  LEVEL: 2,3,4
One to three years  Two units per year
(Students also must enroll in T260, T270, or T280 Work Experience)
Cooperative Work Training is for students 16 years of age or older who are interested in developing skills that will prepare them to secure and maintain employment. Students will use the 16 career clusters to explore possible vocational choices in relationship to their own personal interests, aptitudes and abilities. Additional classroom units includee topics in financial literacy (paychecks, taxes, credit, budgeting, insurance), and understanding the characteristics of a good worker. Individual vocational topics may be assigned based on the student’s interest, aptitude, and need. Job placement assistance is provided as needed. The T350 level of Cooperative Work Training meets the D211 Consumer Education graduation requirement.

T355, T455 Industrial Cooperative Education 1 & 2  LEVEL: 3,4
One to two years  Two units per year
(Students also must enroll in T365, T372, or T374 Work Experience)
PREREQUISITE: Evidence of work with your counselor on career planning for the occupational area to be studied or completion of high school course work related to your occupational goal and potential training station. Also department approval; T355 is a prerequisite for T455. Students must be 16 years of age or older
Industrial Cooperative Education 1 & 2 are designed to give students on-the-job training in industrial-related occupations. Students may enroll for one or two years. They may work at a job to improve existing skills or they may be trained on a job for which they have no previous experience. Acceptable occupations require considerable training and include auto mechanics, commercial art, CAD drafting, graphic arts, tool and die, auto body repair, machine operation, welding, construction work, and other industrial-related occupations. Students meet daily with the teacher coordinator to discuss safety on the job, management of time, human relations, and information related to each student’s job. Training experiences are planned by the employer, teacher, and student based on the student’s occupational plans. Students must provide their own transportation to and from the community training station.

T372 & T452, T472 Transitional Program  LEVEL: 3,4
(Palatine High School Only)
Two years  Two units per year
PREREQUISITE: Placement through staff conference recommendation
This course is designed to assist students who are physically challenged in making the transition from school to the world of work. Daily classroom activities are planned to help students strengthen communication and math skills, choose and prepare for an appropriate career, and develop skills needed to be successful in community situations. Work experience may begin in the school setting with second-year students being transitioned into community placements. This is similar to a C.W.T. program, but is designed to meet the special needs of students who are physically challenged.

First say to yourself what you would be; and then do what you have to do.

– Epictetus
Greek stoic philosopher
Off-Campus Courses

V225 Graphic Arts 1
Visual Communications
LEVEL: 4
One-half year
One-half unit
Students gain an overview of the graphic arts industry. The course covers Xerox, laser, ink jet, letter press printing, photography, and photo offset. Major emphasis is placed on development of materials, text, and graphics with use of the computer and computer network. The course is offered through the Educational Council for Student Success at Barrington High School. See your counselor for details on scheduling. Students must provide their own transportation.

V226 Graphic Arts 2
Color Pictures and Printing
LEVEL: 4
One-half year
One-half unit
PREREQUISITE: T225 Graphic Arts I
Graphics Arts II provides instruction on layout design, darkroom technique, masking, platemaking, and printing. Additional topics include computer-scanned graphics, half-tones, and multi-color printing. Major emphasis is placed on computer software integrated and peripheral devices. This laboratory course, offered at Barrington High School, provides basic knowledge and skill development in the use of computers, silkscreen printing, and offset printing. Students must provide their own transportation.

V227 Graphic Arts 1 & 2
LEVEL: 4
One year
One unit
This is a full-year course combining V225 Graphic Arts 1 and V226 Graphic Arts 2. This course is offered at Barrington High School. Students must provide their own transportation.

V62201/V62202 Cosmetology
LEVEL: 4
One year
One credit per semester
Cosmetology classes are held at a private school of beauty. This program includes the first two semesters of a sequence of courses that begin to address Illinois State certification requirements, which concludes with an Illinois State certification examination. Classes run four hours daily and combine classroom and practical experience. This course also may require attendance on some Saturdays and other days of non-attendance. Students must provide their own transportation to the school. Career Counselors at each school have more information regarding specific program requirements, scheduling procedures, and details of additional post-graduate work that is required to achieve State certification.

W61303 Intro to Health Care Today
LEVEL: 4
One-half year
One-half unit
This dual-credit class meets on the Harper College campus. Transportation is provided between the high schools and Harper College. Students learn about common health-related careers by listening to guest speakers, touring health-care facilities, and taking part in classroom activities. Attention is given to fundamental health-care principles, basic patient-care skills, and other job entry skills and information common to many health-care occupations. Occupations explored during the course include nursing, medical office assistant, medical social worker, dietician, operating room technician, X-ray technologist, dental hygienist, mental health technician, pharmacist, inhalation therapist, optometrist, lab technician, and veterinarian. Students wishing to learn more about a particular health occupation also may wish to enroll in one of the district’s cooperative vocational education programs with a community-training station in their particular area of interest. Additional information is available from the career counselor at your school. Harper College Course HSC105, Intro to Health Care Today, 2 college credit hours.

Optimism is the faith that leads to achievement. Nothing can be done without hope and confidence.

– Helen Keller
Author and political activist
W61503 Health Occupations Observations LEVEL: 4
One-half year One-half unit
PREREQUISITE: Concurrent enrollment in W61303 with instructor approval or successful completion of WW61303 with a grade of “C” or higher.
Students are given an opportunity to gain practical experience in a hospital-based internship program designed to observe selected health occupations. By participating, students develop an understanding of healthcare procedures, problems and responsibilities. Successful completion of this course with a grade of “C” or higher gives students one hour of college credit. For more information, contact the career counselor at your school. Students must provide their own transportation. Harper College Course HSC106, Health Occupations Career Observation, 1.5 college credit hours.

W61603 Introduction to Criminal Justice LEVEL: 4
One-half year One-half unit
The course is designed to acquaint students with the field of Criminal Justice. Students are introduced to the need for law enforcement in society; legal aspects of law enforcement, including basic principles of arrest, burden of proof, evaluation of evidence, and court/trial procedure. Students also receive an overview of the basic principles of police administration and government. Students and their parents should be aware that some of the content of this course contains graphic displays and language in keeping with simulations of actual field experiences. Upon successful completion students will earn one-half unit of high school credit and three college credits. This course is offered on the Harper College campus and transportation is provided. Harper College Course LEJ101, Introduction to Criminal Justice, 3 credit hours.

W65403 Intro to Networking LEVEL: 3,4
One-half year One-half unit
PREREQUISITE: “C” or higher in E202 English and Algebra 1
The purpose of this course is to provide students with a basic understanding of networking terminology, protocols, LANs, WANs, topologies, and communications. Students will gain experience in working through the various layers of a CISCO network system in a hands-on environment. This course also is offered as a dual credit course at Harper College. Successful completion gives students three hours of college credit and an opportunity for advanced placement in Harper’s NET program. Transportation is provided between Harper College and the high school. For more information, contact the career counselor at your school. Harper College Course NET121, Intro to Networking, 3 credits.

W66303 Introduction to Fire Science LEVEL: 4
One-half year One-half unit
This course examines the basic fundamentals and many facets of fire protection. Students are introduced to occupations in both public and private agencies related to the fire protection industry. Topics include characteristics and behavior of fire, fire safe building design and construction, fire protection systems and equipment, municipal fire defenses and fire department organization codes and standards. The class meets at Harper College. Successful completion gives the students three hours of college credit and an opportunity for advanced placement in Harper College’s program. Transportation is provided between Harper College and the high school. For more information, contact the career counselor at your school. Harper College Course FIS100, Fundamentals of Fire Protection, 3 college credit hours.
Off-Campus Courses

W66403 Fire Behavior and Combustion
LEVEL: 4
One-half year
One-half credit
PREREQUISITE: Instructor’s approval and successful completion of W66303 Introduction to Fire Science.
This course is designed to better prepare interested students in a career as a fire fighter. Topics are aligned to meet needs related to certification and include such topics as chemistry of fire, flammable liquids, pressurized gases, cryogenics, combustible solids, and oxidizing agents. The class meets at Harper College. Successful completion gives the students three hours of college credit and an opportunity for advanced placement in Harper College's program. Transportation is provided between Harper College and the high school. For more information, contact the career counselor at your school.

Harper College Course FIS121, Fire Behavior & Combustion, 3 college credit hours.

W68403 Heating Principles
LEVEL: 4
One-half year
One-half unit
This class is taught in an open laboratory forum. Students must accumulate five laboratory hours each week.
This course was designed to give students an understanding of heating principles and practical experience in working on heating systems. Students schedule lab times with the RAC (Refrigeration and Air Conditioning) personnel in the RAC lab as soon as possible after registration and begin course work as soon as they are able. This class meets at Harper College. Successful completion gives a student four hours of college credit and an opportunity for advanced placement in Harper College's program. For more information, contact the career counselor at your school.

Harper College Course RAC103, Heating Principles, 4 college credit hours.

W68303 Refrigeration Fundamentals
LEVEL: 4
One-half year
One-half unit
This class is taught in an open laboratory forum. Students must accumulate five laboratory hours each week.
Activities and objectives of this course are designed to introduce students to the array of careers within the HVAC industry as well as to develop some basic competencies. Areas of study include trouble shooting, assembling and charging a refrigeration system, as well as pressure, energy transfer, heat, and matter. This class meets at Harper College. Successful completion gives a student four hours of college credit and an opportunity for advanced placement in Harper College's program. For more information, contact the career counselor at your school.

Harper College Course RAC101, Refrigeration Fundamentals, 4 college credit hours.

W68503 Heating and Cooling Controls
LEVEL: 4
One-half year
One-half unit
PREREQUISITE: Completion of W68403 Heating Principles with a “C” or higher or consent of instructor. This class is taught in an open laboratory forum. Students must accumulate five laboratory hours each week.
This course is designed to provide students knowledge regarding heating and cooling systems and to give them practical experience in identifying and trouble-shooting system problems. Students schedule lab times with RAC (Refrigeration and Air Conditioning) personnel in the RAC shop as soon as possible after registration and begin course work as soon as he/she is able. This class meets at Harper College. Successful completion gives a student four hours of college credit and an opportunity for advanced placement in Harper College's program. For more information, contact the career counselor at your school.

Harper College Course RAC105, Heating and Cooling Controls, 4 college credit hours.

W62603 Forensics
LEVEL: 4
One-half year
One-half unit
This course introduces students to the use of scientific disciplines in crime investigation. It identifies the variety of sources of evidence and the means by which comparative analysis can be made. Introduces student to probability theory. It also develops skills in crime scene technology, fingerprinting, photography and recording. This course is offered on the Harper College campus and transportation is provided.

Harper College Course LEJ116, Forensics, 3 college credit hours.
W61703 Corrections  LEVEL: 4
One-half year  One-half unit
PREREQUISITE: Completion of W61603 Introduction to Criminal Justice with a B or higher and instructor approval.
This course allows students continued study in the field of Criminal Justice. Topics include: Correctional Ideologies, the Processing of Criminal Offenders, Imprisonment, Capital Punishment, Probation, Parole, and Detention Facilities. Upon successful completion, students will earn one-half unit of high school credit and three college credits and continue work toward a degree in Law Enforcement. This course is offered on the Harper College campus and transportation is provided. (NCAA Core Course) Harper College Course LEJ104, Corrections, 3 college credit hours.

W63503/W63603 American Sign Language  LEVEL: 4
One year  One unit
PREREQUISITE: Minimum GPA of 3.00 and strong English skills.
This course begins training for those interested in becoming certified to perform this service. The entire 40-hour college program prepares students to take the written and performance test for national certification. Upon successful completion, students will earn one unit of high school credit and eight college credits. This course is offered on the Harper College campus and transportation is provided. (The course credit does not apply toward the four-year English requirement for graduation.) Harper College Course SGN101 and SGN102, American Sign Language 1 & 2, 4 college credit hours.

W68603 Refrigeration Systems  LEVEL: 4
One-half year  One-half unit
This class is taught in an open laboratory forum. Students must accumulate five laboratory hours each week.
PREREQUISITE: Completion of W68303 Refrigeration Fundamentals with a “C” or higher or instructor consent.
The purpose of this course is to give students an opportunity to continue to develop principles and concepts learned in W68303, Refrigeration Fundamentals and to familiarize students with components and accessories added to basic refrigeration systems for special applications. Students will also develop trouble-diagnosing procedures. This class meets at Harper College. Successful completion gives a student four hours of college credit and an opportunity for advanced placement in Harper College’s program. For more information, contact the career counselor at your school. Harper College Course RAC102, Refrigeration Systems, 4 college credit hours.

W65503 Internet Protocols  LEVEL: 4
One-half year  One-half unit
PREREQUISITE: Successful completion of W65403 Intro to Networking Basics with a “C” or higher or consent of instructor.
The purpose of this course is to provide students with a basic understanding of routers and routing, including router interfaces, components, configurations, IOS, TCP/IP addressing and subnetting, RIP, and IGRP. Students will gain experience in working through the various layers of a CISCO network system in a hands-on environment. This course also is offered as a dual credit course at Harper College. Successful completion gives students three hours of college credit and an opportunity for advanced placement in Harper’s NET program. Transportation is provided between Harper College and the high school. For more information, contact the career counselor at your school. Harper College Course NET122, Internet Protocols.
Technological advances and global competition have transformed the nature of work. Tomorrow’s jobs will require more knowledge, better skills, and more flexible workers than ever before. Tomorrow’s workers must be prepared to change jobs and careers several times, continually updating their knowledge and skills. To prepare today’s students for tomorrow, schools are working to help students achieve in challenging subjects. One key approach to this goal is to provide students with relevant contexts for learning.

With the help of your counselor, teachers, and parents, you can create the right pathway for you – from high school to college and/or to your future career. You can build on what you’re studying now through high school and into college. One way to do that is to explore articulated and dual credit courses at your high school. By taking time to consider the possibilities of your career interests and aspirations, you will have a positive start on your very own pathway to your career.

In preparing for your future,
• Connect what you’re learning in high school to your future career
• Take advantage of resources
• Explore your specific career field interests
• Learn what to study in college - before you get there
• Feel confident and well equipped


Each Career Cluster represents a distinct grouping of occupations and industries based on the knowledge and skills they require. The 16 Career Clusters and related Career Pathways provide an important organizing tool for students.

Partnerships
Secondary and postsecondary education partnerships bring together business and industry employers, labor organizations, community-based organizations, faith-based organizations, parent groups, and others to educate students and address the state’s workforce and economic development. These groups focus on the following:
• Secondary and postsecondary alignment
• Seamless transition
• Reduced remediation
• Non-duplicated courses
• Integrated academic and career-technical education (CTE) curricula
• Dual credit opportunities
• Standards-based curricula aligned with industry credentials and/or certification
• Career development
• Professional development
• Articulation agreements
• Data-sharing agreements
• Partnerships and collaboration
• Accountability, and
• Continuous improvement.

Critical to this approach is the fact that education and employer partners need to develop and implement pathway curricula that lead to employment, including pathways in existing and emerging STEM.

STEM Education
STEM Employment
The U.S. Department of Labor (DOL) predicts that jobs requiring science, engineering, and technical training will increase 34% between 2008 and 2018 (National Science Foundation, 2010). By 2018, the DOL projects that Illinois jobs requiring postsecondary education and training will grow by 418,000, as compared to 148,000 jobs for high school graduates and dropouts. Two million job vacancies will be created from both retirements and new jobs with over half of these requiring postsecondary credentials (Carnevale, A.P., & Smith, N., 2011). By 2018, 64% of all jobs in Illinois will require some postsecondary education and training. Of the jobs needing to be filled, an estimated 348,000 will be
A call for STEM education resonates as advances in technology continue to evolve. Focusing on STEM competencies and skill sets is deemed a major strategy for Illinois as well as the United States to support global competitiveness and reach the goal of increasing the proportion of Illinoisans with-quality degrees and credentials from 44% to 60% by the year 2025 (Illinois Pathways Initiative, 2013).

STEM Education
STEM education refers to Science, Technology, Engineering and Mathematics education that is offered independently or in an integrated fashion. Typically, STEM applies to instruction across all educational levels – elementary, middle school, high school, adult, and postsecondary education – and it is foundational to many college majors and career opportunities. STEM education can be provided through a variety of instructional formats, including classrooms and laboratories within schools and colleges, but also through out-of-classroom and work-based learning (WBL) activities.

The Common Core State Standards (CCSS) and the related content and pedagogy supporting STEM programs of study have major implications for student success (Common Core Standards Initiative, 2012). Integrated, project-based and contextualized learning (sometimes seen as a definitional part of STEM education) includes integration of subject matter and a collaborative environment to achieve a solution or multiple solutions to a problem or challenge. Networking with professionals through WBL opportunities and/or mentoring can offer students a fresh and exciting perspective on a career field or occupation.

The National Career Cluster Initiative
Career Clusters, Career Pathways, and Programs of Study
The Illinois Community College Board (n.d.) provides the following key concepts and definitions:

Career Clusters are groups of occupations and industries that have a set of foundational knowledge and skills in common. There are 16 nationally recognized clusters within which are multiple career pathways.

Cluster Level Knowledge and Skills: The cluster level knowledge and skills set is built on a common core required for career success in the multiple occupations included in the cluster. This shared core consists of the following elements: academic foundations; communication; problem solving and critical thinking; information technology applications; systems; safety, health, and environment; leadership and teamwork; ethics and legal responsibilities; employability and career development; and technical skills.

Career Pathways are multi-year programs of academic and technical study that prepare high school students for a full range of postsecondary options within each of the 16 clusters. Currently, there are 79 nationally recognized pathways, each with specific pathway knowledge and skills. These pathways provide a context for exploring career options at all levels of education and a framework for linking learning to the knowledge and skills needed for future education and employment.

Pathway Level Knowledge and Skills: The pathway level knowledge and skills set is built on a common core of knowledge and skills required for career success in all programs of study aligned with the pathway. This core is specific to the pathway and consists of elements selected by secondary and postsecondary educators with input from business and industry and other stakeholders.

Programs of Study (POS) are sequences of courses that incorporate a non-duplicative progression of secondary and postsecondary elements, which include both academic and career and technical education content. Programs of study should start no later than the ninth grade and continue through at least two years of postsecondary education. Programs of study include opportunities to earn college credit (dual credit) in high school, an industry-recognized credential or certificate at the secondary/postsecondary level, and an associate or baccalaureate degree.
Agriculture, Food & Natural Resources
The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.
  • Food Products and Processing Systems
  • Plant Systems
  • Animal Systems
  • Power, Structural & Technical Systems
  • Natural Resources Systems
  • Environmental Service Systems
  • Agribusiness Systems

Architecture & Construction
Careers in designing, planning, managing, building and maintaining the built environment.
  • Design/Pre-Construction
  • Construction
  • Maintenance/Operations

Arts, A/V Technology & Communications
Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.
  • Audio and Video Technology and Film
  • Printing Technology
  • Visual Arts
  • Performing Arts
  • Journalism and Broadcasting
  • Telecommunications

Business Management & Administration
Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.
  • General Management
  • Business Information Management
  • Human Resources Management
  • Operations Management
  • Administrative Support

Education & Training
Planning, managing and providing education and training services, and related learning support services.
  • Administration and Administrative Support
  • Professional Support Services
  • Teaching/Training

Finance
Planning, services for financial and investment planning, banking, insurance, and business financial management.
  • Securities & Investments
  • Business Finance
  • Accounting
  • Insurance
  • Banking Services

Government & Public Administration
Planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.
  • Governance
  • National Security
  • Foreign Service
  • Planning
  • Revenue and Taxation
  • Regulation
  • Public Management and Administration

Health Science
Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.
  • Therapeutic Services
  • Diagnostic Services
  • Health Informatics
  • Support Services
  • Biotechnology Research and Development

Hospitality & Tourism
Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.
  • Restaurants and Food/Beverage Services
  • Lodging
  • Travel & Tourism
  • Recreation, Amusements & Attractions

Human Services
Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.
  • Early Childhood Development & Services
  • Counseling & Mental Health Services
  • Family & Community Services
  • Personal Care Services
  • Consumer Services
Information Technology
Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.
- Network Systems
- Information Support and Services
- Web and Digital Communications
- Programming and Software Development

Law, Public Safety, Corrections & Security
Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.
- Correction Services
- Emergency and Fire Management Services
- Security & Protective Services
- Law Enforcement Services
- Legal Services

Manufacturing
Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.
- Production
- Manufacturing Production Process Development
- Maintenance, Installation & Repair
- Quality Assurance
- Logistics & Inventory Control
- Health, Safety and Environmental Assurance

Marketing
Planning, managing, and performing marketing activities to reach organizational objectives.
- Marketing Management
- Professional Sales
- Merchandising
- Marketing Communications
- Marketing Research

Science, Technology, Engineering & Mathematics
Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.
- Engineering and Technology
- Science and Math

Transportation, Distribution & Logistics
Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.
- Transportation Operations
- Logistics Planning and Management Services
- Warehousing and Distribution Center Operations
- Facility and Mobile Equipment Maintenance
- Transportation Systems/Infrastructure Planning, Management and Regulation
- Health, Safety and Environmental Management
- Sales and Service