

2020-2021



**Linn-Mar High School
Program of Studies**

Inspire Learning. **Unlock Potential. Empower Achievement.**

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KEY



Regents Admissions Index (RAI) approved course



NCAA approved course



Weighted course graded on a 5.0 scale



Project Lead the Way



Kirkwood Community College credit course



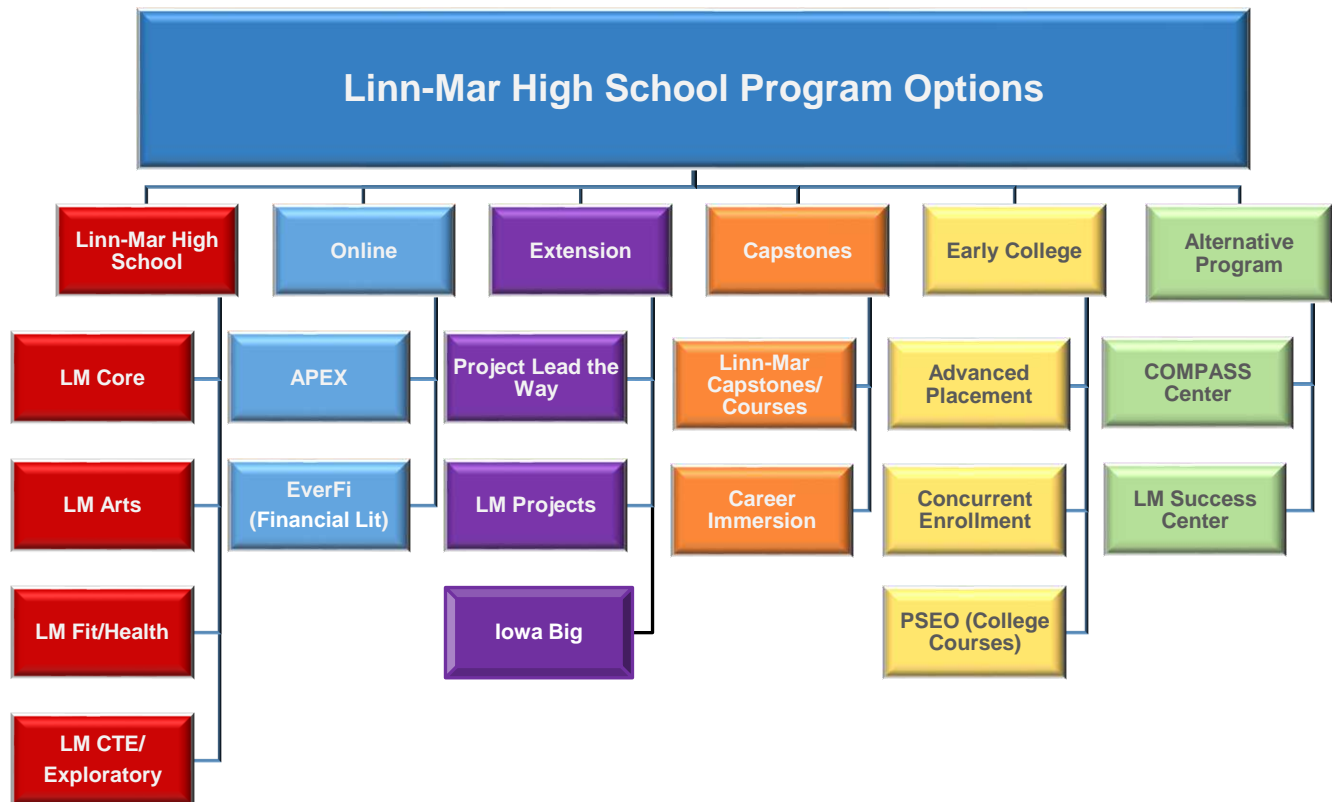
Talented and Gifted Program Course

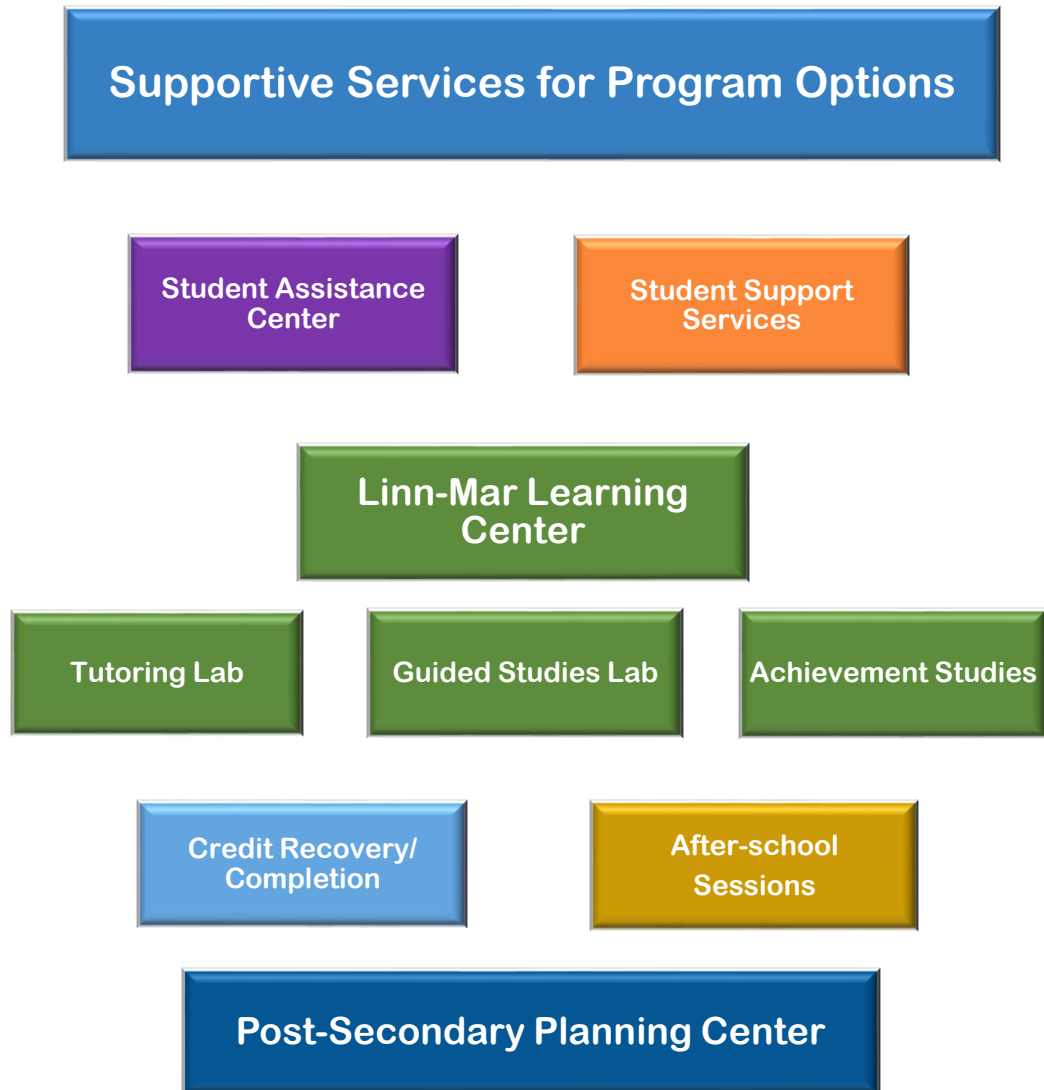


Curriculum for Agricultural Science Education



Blended Course





Linn-Mar Academic Guidelines

Academic Letter

Students who achieve a 3.33 or higher grade point average during a given school year are eligible for a Linn-Mar High School academic letter. Academic letters are presented to students at an assembly each fall. Students must have been in attendance at Linn-Mar High School during both semesters of the previous school year to qualify. Academic Letter recipients who achieve a GPA of 4.00 or higher during a given school year are eligible to receive a Linn-Mar High School Academic Letter *with Distinction*. Recipients with a GPA of 3.75-3.99 during a given school year are eligible to receive a Linn-Mar High School Academic Letter *with Honors*.

Biliteracy Seal

The Seal of Biliteracy is an award given by Linn-Mar High School and the State of Iowa to recognize students who have attained proficiency in two or more languages to include English, by high school graduation.



The Seal of Biliteracy:

- Values language as an asset
- Recognizes the value of language diversity & cultural identity
- Prepares students with 21st century skills that will benefit them in the labor market and the global society
- Provides employers, universities, and grant/scholarship providers with a method to recognize applicants for their dedication to attainment of biliteracy

To be eligible to be awarded the Iowa Seal of Biliteracy, each student shall demonstrate proficiency in English and one or more World languages. The requirement must be met during the course of a student's high school years.

Any student interested in earning the Biliteracy diploma award seal must register with his or her school counselor by January 1 and complete testing by April 1 of the year of graduation.

Course Load

Students in grades 9-11 must enroll in 70 credit hours per year. Students in grade 12 must enroll in 60 credit hours per year.

Credit Hours

Most block courses (which meet 95 minutes per day) are worth five credits per quarter (9 weeks). Most other courses (which meet for 45 minutes per day) are worth five credits per semester (18 weeks).

Credit/Fail Option

Students in grades 10-12 may elect to take a course "Credit/Fail". **Courses needed to satisfy graduation requirements in Math, Science, Social Studies, and English may not be taken Credit/Fail.** A limit of 25 credits may be taken Cr/F during the high school career. A grade C- (70%) or higher must be earned to receive credit. Grades lower than C- will receive an F grade. Students must choose this option by the end of the 5th week for block classes and by the end of the 10th week for semester/traditional classes.

Drop/Add Deadlines

A student must add a new block course before the end of the 3rd day of a new grading period. A new Math, Music, Foreign Language, or **early-bird** course must be added before the end of the 5th day of a new semester. A student must drop a block course before the end of the 4th week of a given grading period. A 45 minute "skinny" course must be dropped before the end of the 8th week.

Grading

Linn-Mar High School uses a standard grading scale: A+ (99%); A (93%); A- (90%); B+ (87%); B (83%); B- (80%); C+ (77%); C (73%); C- (70%); D+ (67%); D (63%); D- (60%); F+ (55%). Percentages are rounded to the nearest whole percentage (0.5 or higher is rounded up and 0.49 or lower is rounded down). Extra credit or same test re-takes may raise a grade to no more than an A-.

Grade Point Calculation

Grade point averages (GPA) are computed on a 4.33 scale as follows: A+ (4.33); A (4.0); A- (3.67); B+ (3.33); B (3.0); B- (2.67); C+ (2.33); C (2.0); C- (1.67); D+ (1.33); D (1.0); D- (0.67). Transfer GPA will be computed using the Linn-Mar High School grade point calculation values.

Graduation – Early

Students meeting all requirements for graduation and **electing to graduate early must apply for early graduation at least one month prior to the student's final quarter.** Applications can be picked up in the 11/12 office and submitted to the Principal's Office. The Principal will meet with each early graduation applicant prior to recommending candidates to the Board of Education for approval.

Graduation Requirements

Linn-Mar High School students are required to earn 250 credits in order to graduate. In addition, the following department requirements must be met in order to earn a diploma:

- **English – 40 credits.** Must include English I or Advanced English I (10 credits each), English II or Advanced English II (may opt out if pass Advanced English I with a 90% or higher grade), English III or Advanced English III, and one speech/acting course (5 credits).
- **Mathematics – 30 credits.** Must include Algebra 1 (10 credits) or Algebra 1A and Algebra 1B (20 credits). Students who successfully complete both semesters of Algebra 1 may not then take Algebra 1A or Algebra 1B to fulfill the Algebra or three year Math requirement.
- **Science - 30 credits.** Must include General Biology (10 credits) or Fundamentals of Biology I and Fundamentals of Biology II (20 credits), a physical science course (Chemistry, Physics, or Earth and Physical Science) (10 credits). Ten elective credits may include the following technical offerings: Agriculture, Food and Natural Resources, Principles of Agricultural Science - Animal, Natural Resources and Ecology, Food Science and Safety, and Aquaculture Science.
- **Science (starting with the Class of 2022) - 30 credits.** Must include General Biology (10 credits) or AP Biology 1&2 (15 credits) an earth science course (Earth Science (10 credits), Earth and Space Science (10 credits), or AP Environmental Science 1&2 (15 credits)), a chemistry course (Applied Chemistry and Physics (10 credits) or Chemistry I (10 credits)), and a physics course (Earth and Space Science (10 credits), Applied Chemistry and Physics (10 credits), Physics I (10 credits), or AP Physics 1&2 (20 credits)).
- **Social Studies – 30 credits.** Must include U.S. History 9 or Advanced U.S. History 9 (10 credits) or AP U.S. History (15 credits), World History (10 credits) or AP World History (15 credits), American Government (5 credits) or AP American Government (10 credits), and one social studies elective (5 credits).
- **Social Studies (starting with the Class of 2022) - 30 credits.** Must include U.S. History 9 or Advanced U.S. History 9 (10 credits) or AP U.S. History (15 credits), World History (10 credits) or AP World History (15 credits), American Government (5 credits) or AP American Government (10 credits), Introductory Psychology or Sociology (5 credits).
- **Personal Finance - 5 credits.** Students must receive credit for Personal Finance (5 credits) or complete and demonstrate financial literacy competencies gained through a designated online financial literacy course.
- **Health/Fitness - 20 credits.** Must include Health I (5 credits). Must include a Lifetime Fitness Course each school year.

Graduation requirements for students with an Individual Education Program (IEP) will be in accordance with a prescribed course of study meeting requirements of the Iowa State Board of Education. Specific requirements will include four years of English, three years of math, three years of social studies, three years of science, and completion of District physical education expectations as written in a student's IEP.

Standards Reporting and Course Grades

Linn-Mar High School reports on Priority Standards of the Iowa Core and content standards in subject areas not included in the Iowa Core. Proficiency scales define increasingly complex levels of performance mastery and provide the basis for evaluation of student knowledge and skill on Priority Standards. The Standard Proficiency Scale used by Linn-Mar High School progresses from Level 1 (Beginning) to Level 4 (Exemplary). A mark of INC or NC (Incomplete or No Credit) will be used to indicate insufficient evidence to assess learning. Category titles and descriptions used in the LMHS standard proficiency scale are subject to update. In addition to standards reporting, a traditional course letter grade will be calculated from individual student performance scores and recorded on the student's personal school transcript. The conversion scale on page 10 will be used to calculate the traditional course letter grade.

Standard Proficiency Scale

Score	Level	Description
4	Exemplary	Student shows in-depth inferences and application in class as taught by the teacher in addition to meeting the standard, such as explaining or demonstrating connections between ideas. Examples could include: <ul style="list-style-type: none"> - real-world application - use of information to solve problems in a different context - demonstration of unique insight or complex understanding - use of advanced analysis skills - demonstration of creative application of skills
3.5		In addition to score 3.0 performance, in-depth inferences and application with partial success.
3	Proficient	Student is able to independently use, apply, and/or demonstrate the standard but may include errors that don't impact demonstration of the standard.
2.5		No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.
2	Approaching	Student can demonstrate foundational processes of the standard.
1.5		No major errors or omissions regarding 1.0 content and partial knowledge of the 2.0 content.
1	Beginning	Student recalls vocabulary and/or understands simpler ideas, skills, and concepts.
INC/NC	Incomplete	No evidence demonstrating knowledge of the standard.

Proficiency Scale Conversion

Scale Score	Traditional Score
4	100
3.5	95
3	90
2.5	85
2	75
1.5	65
1	60
INC/NC	INC

Standardized Testing Program

Standardized testing plays a significant part in the planning process for post-high school transition. The counseling staff, homeroom teachers, parents, and students will collaborate to develop an appropriate four-year academic plan for each student. The LMHS testing plan is designed to comply with Iowa Department of Education requirements. In addition, these tests provide helpful information about students' strengths and interests. Finally, test results are analyzed to provide feedback regarding the effectiveness of curriculum, instruction, and assessment.

** Required assessments are subject to change each year.*

9th Grade

- Iowa Statewide Assessment of Student Progress (ISASP) (required)

10th Grade

- Iowa Statewide Assessment of Student Progress (ISASP) (required)
- NWEA MAP test (math and reading assessment) (required)
- PSAT: Pre-SAT/National Merit Scholarship Qualifying Test (optional) *** fee required*

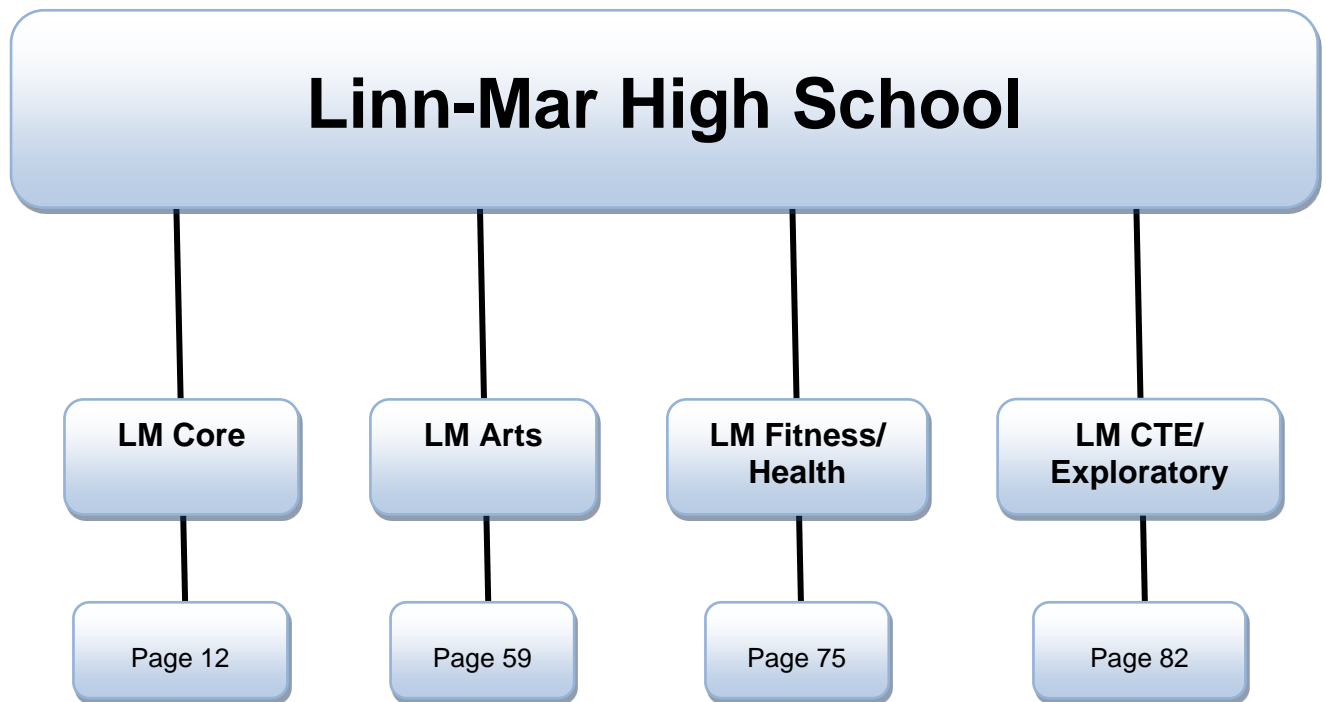
11th Grade

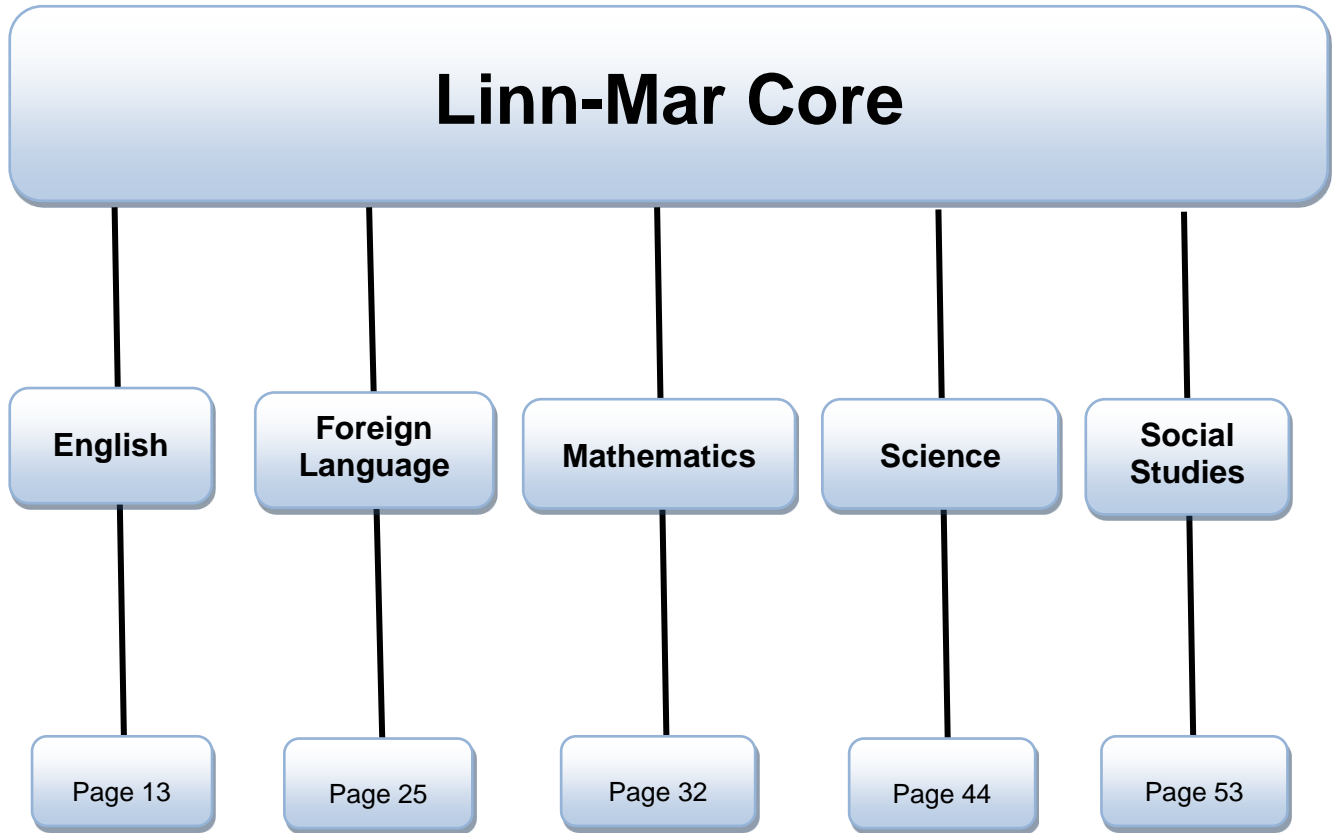
- Iowa Statewide Assessment of Student Progress (ISASP) (required)
- ASVAB – military career inventory (optional)
- ACT (optional) *** fee required*
- SAT I and SAT II (optional) *** fee required*
- PSAT: Pre-SAT/National Merit Scholarship Qualifying Test (optional) *** fee required*

12th Grade

- ACT (optional) *** fee required*
- SAT I and SAT II (optional) *** fee required*
- COMPASS (Kirkwood placement) (optional)
- ASVAB- military career inventory (optional)

** If any test is required by state legislative or Department of Education action, it will be added to this listing for the year required.*

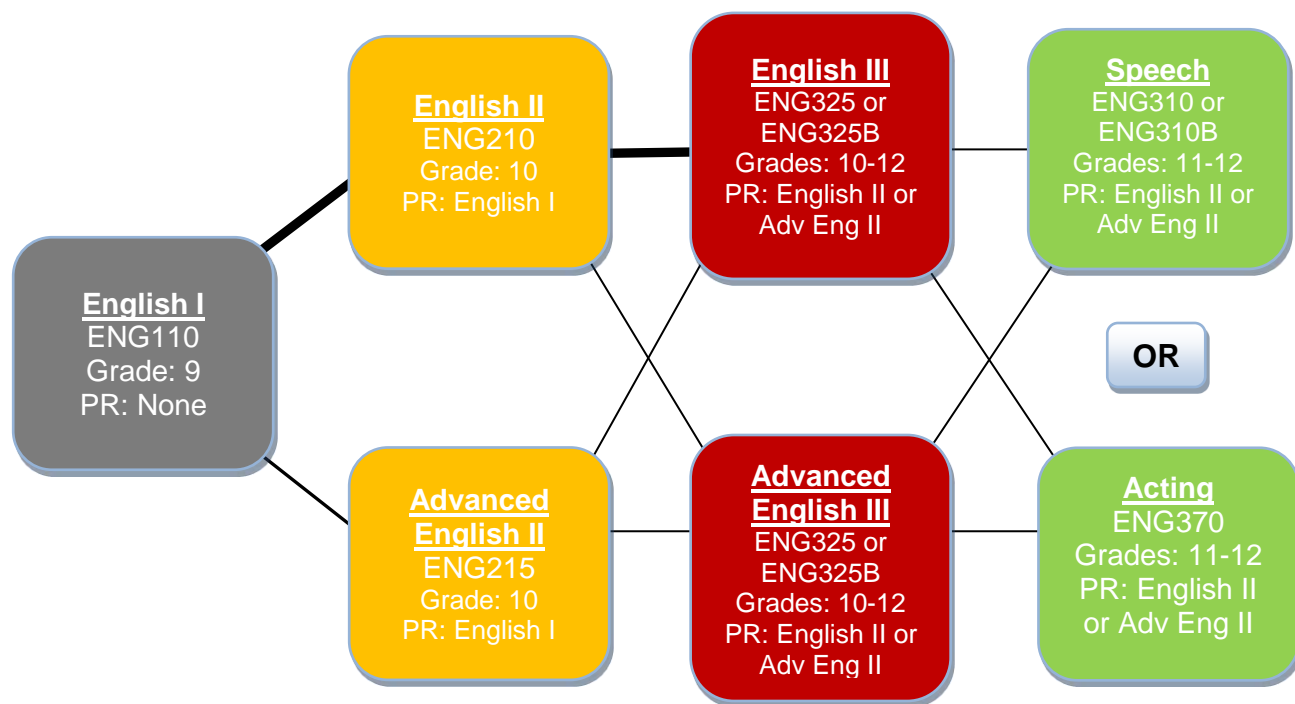




English

English I Path

PR=Prerequisite
Requirement



English Electives p.15

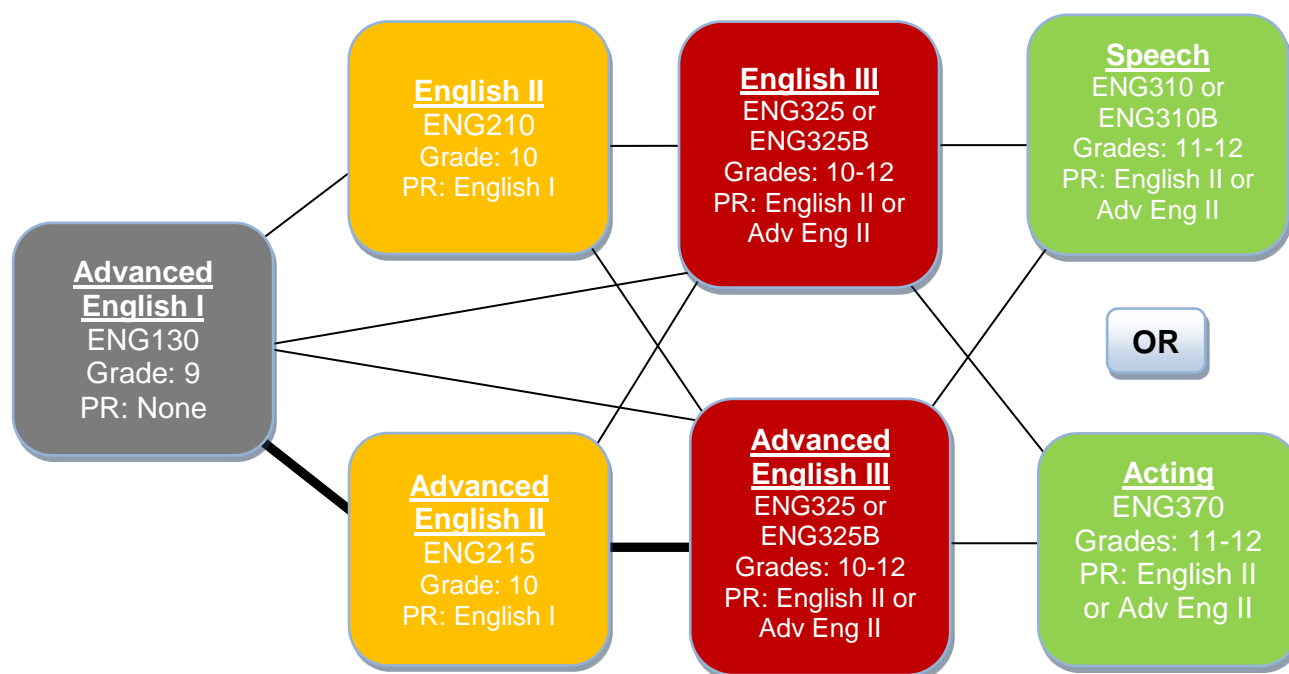
Graduation Requirements

- 40 credits of English (will include at least 1 elective)
- English I or Advanced English I
- English III or Advanced English III
- Speech or Acting

English

Advanced English I Path

PR=Prerequisite



English Electives p.15

Graduation Requirements

- 40 credits of English (will include at least 1 elective)
- English I or Advanced English I
- English III or Advanced English III
- Speech or Acting

Linn-Mar Program of Studies

English Electives

PR=Prerequisite Requirement

Academic Literacy I

ENG105
Grades: 9-10
PR: Placement

Academic Literacy II

ENG205
Grades: 9-10
PR: Placement

The above courses may be required for individual students

Journalism

ENG220
Grades: 10-12
PR: English I or
English II

British Literature

ENG340
Grades: 11-12
PR: English II or
English Dept. Approval

Classics

ENG350
Grades: 11-12
PR: English II or
English Dept. Approval

Contemporary Literature

ENG360 or ENG360B
Grades: 10-12
PR: English II or
English Dept. Approval

Literature of a Selected Author

ENG380
Grades: 10-12
PR: English II

Creative Writing

ENG410 or ENG410B
Grades: 10-12
PR: English I or
English II

Intro to College Writing

ENG420
Grades: 11-12
PR: English III or
Advanced English III

College Grammar

ENG430
Grades: 10-12
PR: English II or
English Dept. Approval

College Reading

ENG450
Grades: 10-12
PR: English II or English
Dept. Approval

Composition I

ENG460
Grades: 11-12
PR: English III or
Advanced English III and
qualifying placement
score

Composition II

ENG465
Grades: 11-12
PR: Composition I

AP English

ENG511 & ENG512
Grades: 11-12
PR: English III or
Advanced English III

Academic Literacy I

Course #: ENG105
 Grade Level: 9-10
 Credits: 5
 Length: 1 Semester
 Format: Skinny
 Prerequisite: approval



Considerations: Students are placed in this course per recommendation of the 8th grade language arts teachers, Iowa Assessment scores and other indicators. This course is designed for students reading significantly below grade level.

* May be required for individual students.

Course Description: This course develops reading rate and comprehension skills of material presented in all content areas. Each unit will include the reading process, independent reading and vocabulary. Specific units will focus on reading textbooks, fiction, non-fiction, internet, graphics and tests.

English I

Course #: ENG110
 Grade Level: 9
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none



Considerations: English I or Advanced English I required for graduation.

Course Description: This course develops communication skills in reading, speaking, listening, thinking and writing. It includes units in the short story, the novel, poetry, drama and research. The student will practice various forms of writing and will work toward improving grammar, mechanics, and vocabulary.

Advanced English I

Course #: ENG130
 Grade Level: 9
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none



Considerations: English I or Advanced English I required for graduation. Students need to be highly motivated in reading and writing. Expectations are high regarding motivation and achievement, reflected in the pace and rigor of the curriculum. Additionally, good basic writing and research skills are expected.

Course Description: This is an accelerated class which emphasizes analytical reading and writing. Students should be independent learners. Students will read several novels, non-fiction, drama and short stories.

Academic Literacy II

Course #: ENG205
 Grade Level: 9-10
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Academic Literacy I or approval

Considerations: Students are placed in this course per recommendation of 9th grade English teachers, Iowa Assessment scores, and other indicators. This course is designed for students reading significantly below grade level. *May be required for individual students.

Course Description: This course continues to develop reading rate and comprehension of material presented in all content areas. This course reinforces strategies learning in Academic Literacy I.

English II

Course #: ENG210
 Grade Level: 10
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: English I or
 Advanced English I



Considerations: See prerequisite. Fulfills the 10th grade English requirement for graduation.

Course Description: This course continues to develop and refine student skills in the areas of reading, writing, listening, and speaking. It includes units in the short story, novel, and drama. It will also introduce various writing styles (literary analysis, narrative, and research.) In English II work continues on student responsibility, respect for each other, intellectual curiosity, and embracing of for varying viewpoints.

Journalism

Course #: ENG220
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or
 English Department
 approval



Considerations: See prerequisite.

Course Description: This course is an introductory, overview class which teaches basic journalism skills while examining the role of newspapers in our society. Areas explored include newspaper interviewing, writing, and editing. Students are also introduced to the concepts of Press Law. This course DOES NOT meet the composition requirement for admission to UNI.

Advanced English II

Course #: ENG215
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English I or Advanced
 English I



Considerations: See prerequisite. Fulfills the 10th grade English requirement for graduation.

Course Description: This is an accelerated version of English II where students will analyze/interpret a variety of American and global literature with an emphasis on analytical writing and interpreting literary pieces. Students will also write informative, persuasive, research, and personal essays. Students should be highly self-motivated and independent and should expect homework each night. This course has a high level of rigor and expectations.

The following text will be covered in class:

- Lord of the Flies
- Fahrenheit 451
- Of Mice and Men
- Shakespeare
- Selections of poetry
- Short pieces of fiction and nonfiction from American authors and those outside of the global North
- An additional 2-3 book-length texts offering global or cosmopolitan perspectives

Speech



Course #: ENG310 or ENG310B
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or English Department approval

Considerations: See prerequisite. Speech or Acting is required for graduation.

Course Description: Speech is designed to make students more effective communicators by emphasizing a variety of real-life speaking situations and building self-confidence in all of these settings. Because this is a performance-based class, students should carefully consider conflicts which may result in absences. Sophomores who have passed English 1 with high marks may ask their counselor to be put on a waiting list for this class. Admission to the class is subject to availability.

English III



Course #: ENG315 or ENG315B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: English II or English Department approval

Considerations: See prerequisite.

Course Description: Students will analyze and interpret a variety of American literature, including selections from our earliest writers to our foremost contemporaries. Students will also write informative, argumentative, research and personal essays. This is a process-oriented class where students will revise and edit their own work. The following text will be covered in class:

- Short pieces of fiction and nonfiction from American authors
- Selections of poetry from Walt Whitman, Emily Dickinson and other American poets
- The Great Gatsby
- The Crucible
- I Know Why the Caged Bird Sings
- A Raisin in the Sun

Advanced English III



Course #: ENG325 or ENG325B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: English II or English Department approval

Considerations: Fulfills the literature and writing requirement for graduation and is encouraged for students planning to take AP English.

Course Description: This is an accelerated version of English III where students will analyze/interpret a variety of American literature with an emphasis on analytical writing and interpreting literary pieces. Students will also write informative, persuasive, research and personal essays. Students should be highly self-motivated and independent and should expect homework each night. This course has a high level of rigor and expectations. The following text will be covered in class:

- Billy Budd
- The Awakening
- The Jungle
- The Adventures of Huckleberry Finn
- The Great Gatsby
- I Know Why the Caged Bird Sings
- The Crucible
- Selections of poetry from Walt Whitman, Emily Dickinson and other American poets
- Short pieces of fiction and nonfiction from American authors

British Literature



Course #: ENG340
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or English Department approval

Considerations: See prerequisite.

Course Description: This course is designed to broaden a student's reading and writing experiences. Students will read approximately five novels, excerpts from classic British works, historical overviews of the literary periods and articles related to Britain. Students will do individual and group presentations. Among these are: serve on a discussion group for a novel, present their research project, and design and discuss their coat-of-arms.

Classics



Course #: ENG350
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite:

Considerations: See prerequisites.

Course Description: Students in this course will analyze selected works of literature that speak compassionately of the human experience, that relate human values and that represent some of the best of the literary traditions in order to gain new awareness of themselves and others.

Contemporary Literature



Course #: ENG360 or ENG360B
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or English Department approval

Considerations: See prerequisites.

Course Description: Students will read a variety of selected contemporary titles in multiple genres, including fiction, non-fiction, memoir, short stories, essays and poetry. Specific attention will be devoted to identifying classifications, and the study of theme, author voice and specific author intent within the writing. Students will complete multiple projects to promote lifelong literacy and will discover how technology and the internet can enhance reading selections. Some selections in this course have a more mature theme.

Acting

Course #: ENG370
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or English Department approval

Considerations: See prerequisites. Acting or Speech is required for graduation. Acting DOES NOT meet the Board of Regents criteria for the RAI. Admission to the class is subject to availability.

Course Description: Acting is designed to make students more effective communicators by emphasizing a variety of speaking situations and building self-confidence in all these settings. Because this is a performance based class, students should carefully consider potential conflicts that may result in absences.

Literature of a Selected Author



Course #: ENG380
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II, English III, or English Department approval

Considerations: See prerequisites. This is an advanced, college preparatory literature course.

Course Description: Students will read, discuss, and analyze a variety of texts surrounding a selected author. Students will relate historical events and their impact on the literature, will relate the author's life, world/regional events of the time, and social conditions of the works of the author. Students will respond to common elements and themes in the author's major body of work.

Communications



Course #: ENG390
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Prerequisite: English I or Advanced English I

Considerations: May be used to fulfill the graduation requirement for Speech/Acting through Iowa BIG.

Course Description: Communications will prepare students to effectively publicly speak for career and professional endeavors and interactions. Students will understand and apply necessary skills for interviewing, team collaboration, public presentations to school boards and community organizations, creating professional digital profiles, and professional use of social media. Students will develop speaking and listening skills in authentic learning opportunities that address an evolving definition of public speaking.

Creative Writing



Course #: ENG410 or ENG410B
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II or English Department approval

Considerations: See prerequisites.

Course Description: This course is designed for students who genuinely like to write in a variety of forms. Students will take writing from the initial idea through the developmental and polishing stages.

Intro to College Writing



Course #: ENG420
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English III or Adv. English III

Consideration: Students should take this class if they need to improve their writing skills, and do not yet feel comfortable taking a college-level writing class.

Course Description: This course is designed for any student who is considering college, interested in improving general writing skills, and/or considering taking Composition I. Students will improve organizational skills in writing, learn how to develop their ideas, improve their skills in word choice and sentence structure, improve their mechanics in writing, improve their research skills, and learn how to better develop and write a research paper in MLA style. Papers may include the following essays: Personal, Definition, Division/Classification, Comparison/Contrast, and Persuasive. In addition, students will write a research paper in which they will support their position on a contemporary issue.

College Grammar



Course #: ENG430
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II or English Department approval

Considerations: See prerequisites.

Course Description: This course develops skills in analyzing sentences and applying rules of standard written English. Included are units on vocabulary development, grammatical punctuation, and editing written products.

College Reading



Course #: ENG450
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: English II

Considerations: See prerequisites.

Course Description: This course is designed for students who wish to improve their reading rate and comprehension skills in order to be successful in their studies beyond high school.

Composition I

Course #: ENG460
 Grade Level: 11-12
 Credits: 5 (LM), 3 (KW)
 Length: 1 Quarter
 Format: Block
 Prerequisite: English III or
 Adv. English III AND
 qualifying placement score



Considerations: See prerequisite. Basic writing and research skills are expected and needed. This is a dual-credit course, and the expectations reflect those of college courses.

Course Description: This course strengthens students' writing skills that have been developed in previous English courses. Particular emphasis is on furthering skills in argument writing. The course also seeks to develop a student's ability to think critically. Students will complete several formal papers, impromptu essays in response to current events, and two papers involving research. Additionally, students will make presentations and frequently conduct peer review. This class is combination of seminar and lab time.

Composition II

Course #: ENG465
 Grade Level: 11-12
 Credits: 5 (LM), 3 (KW)
 Length: 1 Quarter
 Format: Block
 Prerequisite: Composition I



Considerations: See prerequisite. This is a dual-credit course, and the expectations reflect those of college courses.

Course Description: This course continues to develop writing skills and critical thinking skills introduced in Composition I, with a particular emphasis on argument analysis. The course requires critical analysis of reading materials, audience and self, and further emphasizes precise and effective use of research tools while honing a student's ability to analyze and construct logical arguments. This class is a combination of seminar and lab time.

Advanced Placement English 1 & 2

Course #: ENG511 & ENG512
 Grade Level: 11-12
 Credits: 15
 Length: 3 Quarters
 Format: Block
 Prerequisite: Advanced English III is strongly recommended



Considerations: See prerequisite. Students MUST sign up for both sections listed above. This course is a three-quarter class beginning the second quarter of the year and prepares students to take the AP English Literature and Composition exam in May.

Course Description: This course is for highly motivated students capable of college level work. Students will further develop critical thinking skills through the study of complex literature and writing numerous literary analyses. Students will be expected to have read one text prior to the beginning of the course, and should check with their instructor for further information.

English Language Learners Fundamentals

Course #: ENG140
Grade Level: 9-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to develop students' speaking, listening, reading and writing skills in the English language and develop the skills that students need to be successful at L-M and beyond.

English Language Learners I

Course #: ENG145
Grade Level: 9-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to continue to develop students' speaking, listening, reading, and writing skills in the English Language. This course focuses on academic reading and writing, analyzing and interpreting different genres which build academic vocabulary and grammar skills.

English Language Learners II

Course #: ENG245
Grade Level: 9-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to continue to develop students' speaking, listening, reading, and writing skills in the English language. This course focuses on academic reading and writing, analyzing and interpreting different genres which build academic vocabulary and grammar skills. This course will also focus on the writing process, a variety of essay styles, and writing research papers.

English Language Learners III

Course #: ENG335
Grade Level: 9-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to continue to develop students' speaking, listening, reading, and writing skills in the English language. This course focuses on academic reading and writing, analyzing and interpreting different genres which build academic vocabulary and grammar skills. In this course, students will read texts that relate to American history and culture in order to increase students' background on these subjects while honing their reading skills. This course will also focus on the writing process, a variety of essay styles, and writing research papers.

English Language Learners Civics and Culture I

Course #: ELL100
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to help English Language Learners develop their academic language while building background knowledge about history, government, and culture in the United States.

English Language Learners Directed Studies

Course #: ELL001DS
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to assist students with their other academic classes. Supports provided include help with understanding the expectations and assignments for classes, one-on-one tutoring and administration of assessments when necessary.

English Language Learners College Prep

Course #: ELL001CP
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Considerations: Students are placed in the course based on the Home Language Survey and their scores on the English Language Proficiency Assessments.

Course Description: This course is designed to continue to develop students' composition skills in the English language. This course will focus on preparing for the ACT and SAT exams through extensive vocabulary, grammar, reading and composition practice. Focus will also be given to the college admissions process, financial aid concerns, scholarship opportunities, personal finance, and career skills.

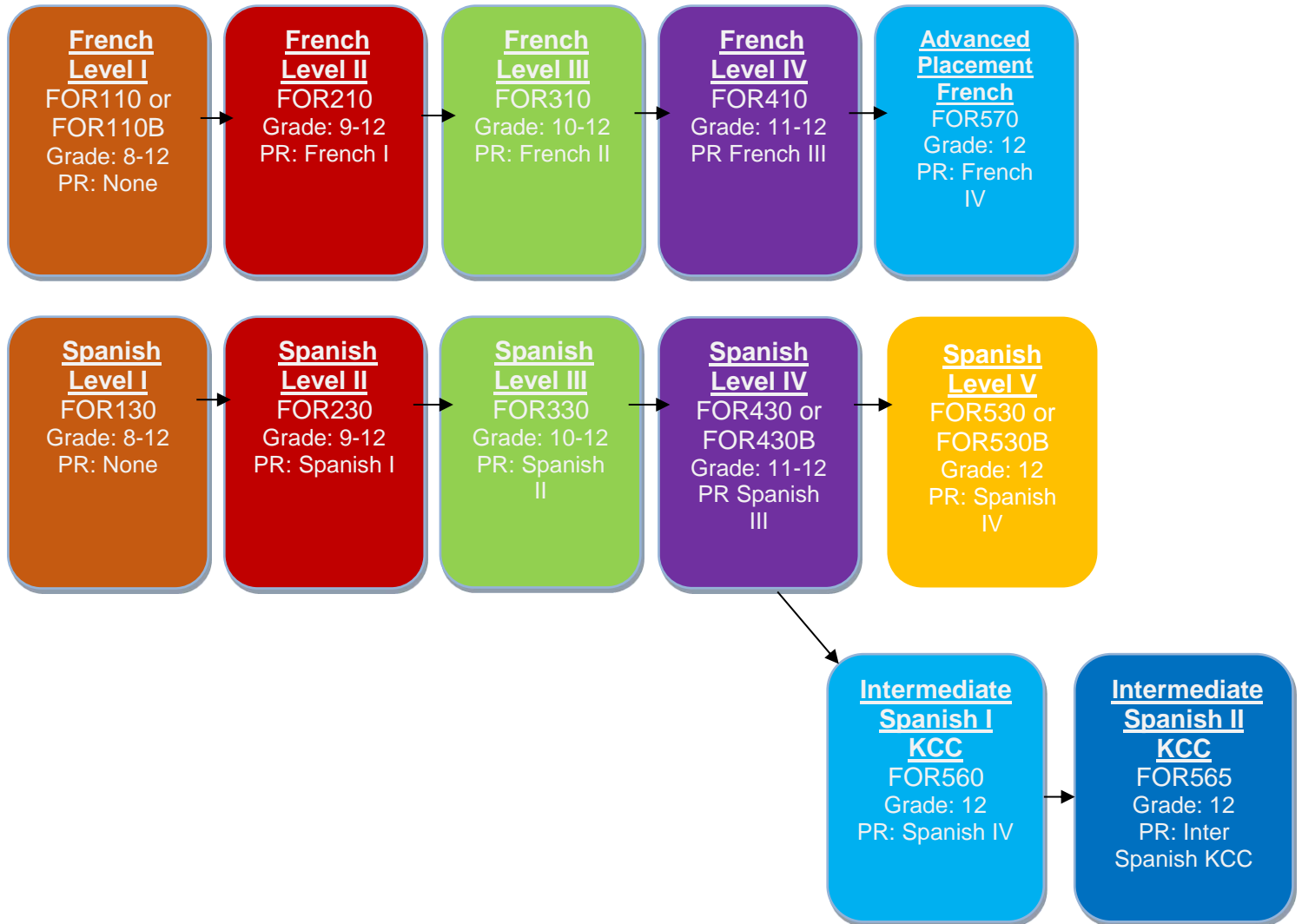
Work Experience - Yearbook

Course #: GUI411
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny- Early Bird (7:45-8:20 AM)
 Prerequisite: none

Considerations: The class is a blended class meeting 2 days a week before school. During blended days students will be covering school events or working on yearbook work assignments on their own time. Though taught through the English Department, credits earned through yearbook are elective only and do not count toward English graduation requirements.

Course Description: Yearbook is a project-based class where students will work with the yearbook printing company on real-time deadlines to complete the school yearbook. Students will take photos of school events, write copy, interview students and staff, and design pages for the yearbook. NOTE: Class will be flexible with any interested Marching Band students Q1.

Foreign Language



Level I French

Course #: FOR110 or FOR110B
 Grade Level: 8-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: none

Considerations: none

Course Description: This course develops the communicative skills of reading, writing, speaking, and listening. Basic grammar concepts and vocabulary are introduced. The target language is used during class time.

Topics include school schedules and subjects, pastimes and activities, likes and dislikes, places, weather, time, family and Paris. Grammar concepts include adjectives and agreement, present tense of –er verbs, and irregular verbs avoir, etre, faire, aller, venir as well as stem changing verbs acheter and preferer and the –re group of verbs. Students also learn possessive adjectives and the near future.

Level I Spanish

Course #: FOR130
 Grade Level: 8-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: none

Considerations: none

Course Description: This course develops the communicative skills of reading, writing, speaking, and listening. Basic grammar concepts and vocabulary are introduced. The target language is used during class time.

Topics include school schedules and subjects, food and beverages, and pastimes. Grammar concepts include adjectives and agreement, me gusta, present tense ar, er, ir verbs, and irregular verbs estar, ser, ir, tener, and jugar.

Level II French

Course #: FOR210
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: French I

Considerations: Second semester grade of 60% or higher in Level I is required.

Course Description: This course continues to emphasize the communicative skills of reading, writing, speaking, and listening. Grammar concepts, vocabulary, and use of target language are expanded.

Topics include eating in a café, clothing and shopping, household chores and parts of the house, shops and stores and travel. Additional units include provinces of France and a cinematographic unit on Marcel Pagnol. Grammar concepts include passe compose, demonstrative adjectives, interrogative adjectives, the partitive and prepositions with places. New verbs are mettre, boire, voir, prendre, savoir, connaitre, appeler, dormir, partir, sortir, vouloir, pouvoir as well as –ir verbs. Student also learn command forms.

Level II Spanish

Course #: FOR230
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Spanish I



Considerations: Second semester grade of 60% or higher in Level I is required.

Course Description: This course continues to emphasize the communicative skills of reading, writing, speaking, and listening. Grammar concepts, vocabulary, and use of target language are expanded.

Topics include families, parties, and restaurants, rooms in the house, clothing, stores, and vacation.

Grammar concepts include possessive adjectives, comparatives and superlatives, direct object and indirect object pronouns, affirmative tu commands, present progressive and preterite tense. The irregular verbs tener, venir, ser, estar, poder, dormir, pensar, preferir, querer, and decir are introduced.

Level III French

Course #: FOR310
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: French II



Considerations: Second semester grade of 60% or higher in level II is required.

Course Description: This course continues to develop and refine the communicative skills of reading, writing, speaking, and listening. Complex grammar concepts are introduced. The target language will be widely utilized.

Topics include expansion on prior topics and prior preparation and francophone holidays and cuisine, school places and events, morning routine, childhood memories and activities, animal vocabulary. Grammar topics addressed are direct and indirect object pronouns as well as y and en, extension of passe compose and learning of the imperfect tense, negative expressions, reflexive verbs, comparative and superlative adjectives and nouns. Students should be able to use the near future, present tense and both past tenses. There is also a cinematographic unit with two additional Pagnol films. Students begin to write more extensive and styles of communication in French.

Level III Spanish

Course #: FOR330
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Spanish II



Considerations: Second semester grade of 60% or higher in Level II is required.

Course Description: This course continues to develop and refine the communicative skills of reading, writing, speaking and listening. Complex grammar concepts are introduced. The target language will be widely utilized.

Topics include school, extracurricular activities, special events, clothing, errands, places in the city, and childhood. Grammar concepts include stem changing verbs, negative and affirmative words, reflexive verbs, demonstrative adjectives, direct and indirect object pronouns, affirmative tu commands, present progressive, preterite, and the imperfect tense. The irregular verbs of saber and conocer are introduced.

Level IV French

Course #: FOR410
 Grade Level: 11-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: French III



Considerations: Second semester grade of 60% or higher in Level III is required.

Course Description: Level IV expands the communicative skills of reading, writing, speaking, and listening. Complex grammar concepts are introduced. Class will be conducted extensively in the target language.

Topics include outdoor activities, fitness and health, professions, travel plans, movies and reading, the Renaissance. Informal speech register, slang and texting language is also taught. Grammar concepts include the future, the conditional and subjunctive verb tenses, demonstrative, interrogative and possessive pronouns. Present participles and relative pronouns are also learned. There is also a Victor Hugo poetry unit. Students will study current events of the francophone world on a weekly basis.

Level IV Spanish



Course #: FOR430 or FOR430B
 Grade Level: 11-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Spanish III

Considerations: Grade of 60% or higher for second semester in Level III is required.

Course Description: Level IV expands the communicative skills of reading, writing, speaking, and listening. Complex grammar concepts are introduced. Class will be conducted extensively in the target language.

Topics include natural disasters, accidents, emergency room, TV programs, and sporting events, movies, cooking, and camping. Grammar concepts include preterite vs. imperfect, reflexive verbs, gustar-like verbs, impersonal se, por vs. para, imperfect progressive, present perfect, and commands.

Level V Spanish



Course #: FOR530 or FOR530B
 Grade Level: 12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Spanish IV

Considerations: Second semester grade of 60% or higher in Level IV is required.

Course Description: Level V will focus on the communicative skills of reading, writing, speaking, and listening. Complex grammar concepts are introduced. Class will be conducted extensively in the target language.

Topics include visiting an airport, planning a trip and traveling to a foreign country, staying in a hotel, professions and making plans for the future, and discussing environmental problems and possible solutions.

Grammar concepts includes the review of present, preterite, imperfect, and perfect tenses and the introduction of nosotros commands, future, conditional, and subjunctive tenses.

Spanish V will offer students an opportunity to explore the Hispanic culture.

Intermediate Spanish I KCC



Course #: FOR560
Grade Level: 12
Credits: 5 (LM), 4 (KW)
Length: 1 Semester
Format: Skinny
Prerequisite: Spanish IV

Considerations: see prerequisite. Class is conducted in Spanish.

Course Description: In this class, students will continue to develop their ability to communicate in Spanish in everyday, practical situations that they might encounter both in the U.S. and abroad. Along with the development of oral skills, students will also work on the other 3 vital components of language: reading, writing and listening comprehension. Students will actively engage themselves in pair/group activities to express themselves in basic situations. Classroom time will be used for intensive language practice in meaningful contexts (i.e. applying important grammatical concepts, essential vocabulary, and cultural norms needed to maintain basic communication.) Class time will consist of communication activities following grammatical explanations. Students are expected to study and complete assigned workbook, video, lab and textbook activities outside of class.

Intermediate Spanish II KCC



Course #: FOR565
Grade Level: 12
Credits: 5 (LM), 4 (KW)
Length: 1 Semester
Format: Skinny
Prerequisite: Intermediate Spanish I

Considerations: see prerequisite. Class is conducted in Spanish.

Course Description: In this class, students will continue to develop their ability to communicate in Spanish in everyday, practical situations that they might encounter both in the U.S. and abroad. Along with the developments of oral skills, students will also work on the other 3 vital components of language: reading, writing and listening comprehension. Students will actively engage themselves in pair/group activities to express themselves in basic situations. Classroom time will be used for intensive language practice in meaningful contexts. (i.e. applying important grammatical concepts, essential vocabulary, and cultural norms needed to maintain basic communication.) Class time will consist of communication activities following grammatical explanations. Students are expected to study and complete assigned workbook, video, lab and textbook activities outside of class.

Advanced Placement French

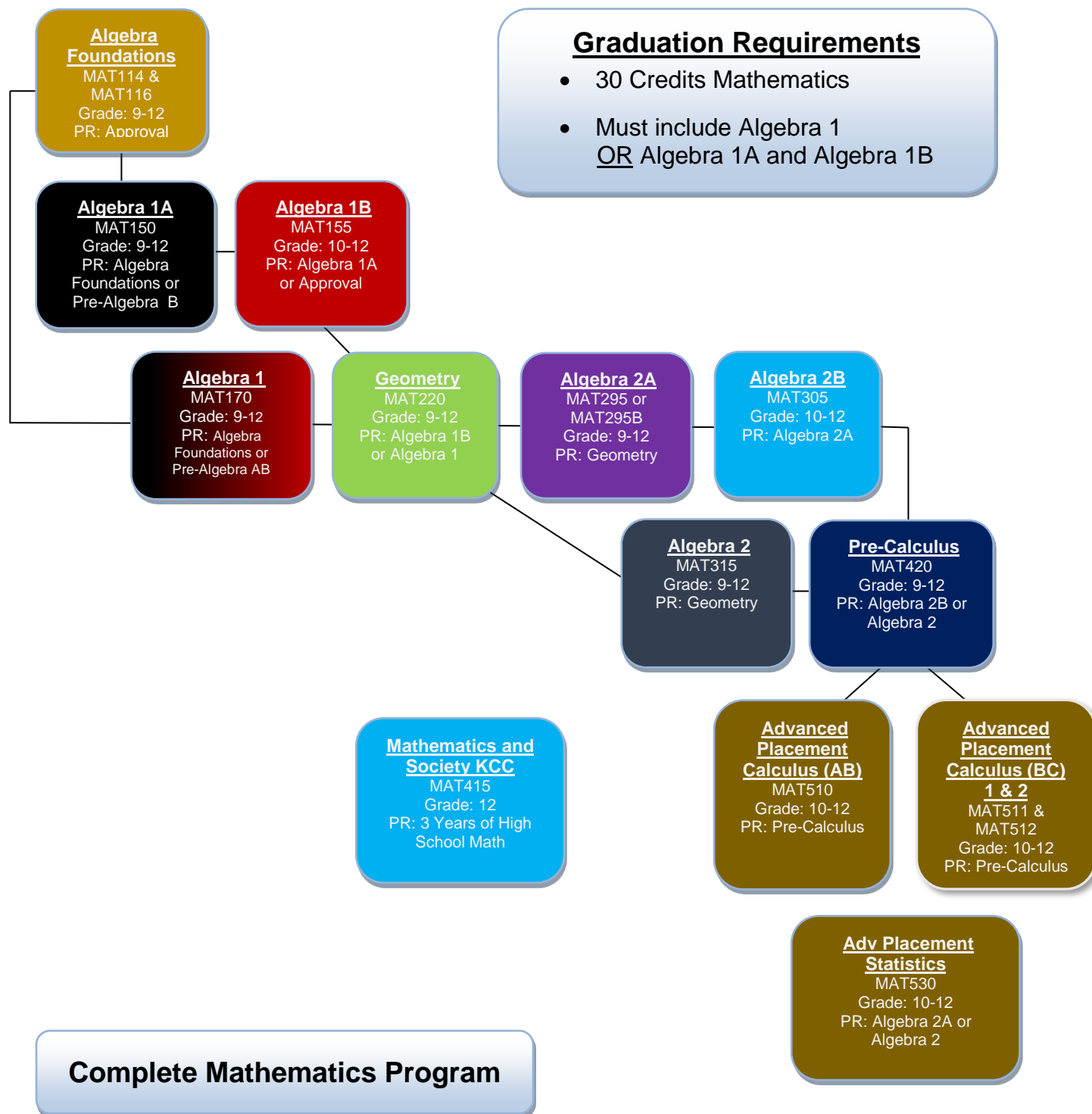
Course #: FOR570
 Grade Level: 12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: French IV



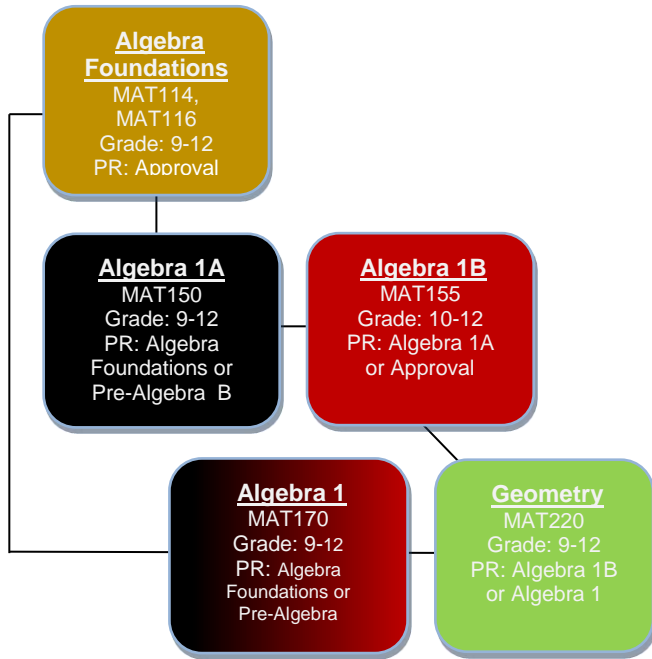
Considerations: See prerequisite. Class is conducted in French.

Course Description: This course continues to develop the “5 Cs” of second language acquisition (communication, cultures, connections, comparisons, and communities) by providing intensive practice in the fundamental communicative skills of listening, speaking, reading and writing, with a methodic study of different cultural contexts. This class offers the opportunity for language use beyond the sphere of the elementary language courses. Discussion of the cultural practices and products of Francophone countries presented in the readings and viewing materials constitute an important part of the course. Comparisons and connections between Francophone and Anglophone cultures and language are also studied as it is a major portion of the AP exam. This course offers university credit in the form of an AP Exam and therefore is considered a college level class.

Mathematics



Mathematics



Graduation Requirements

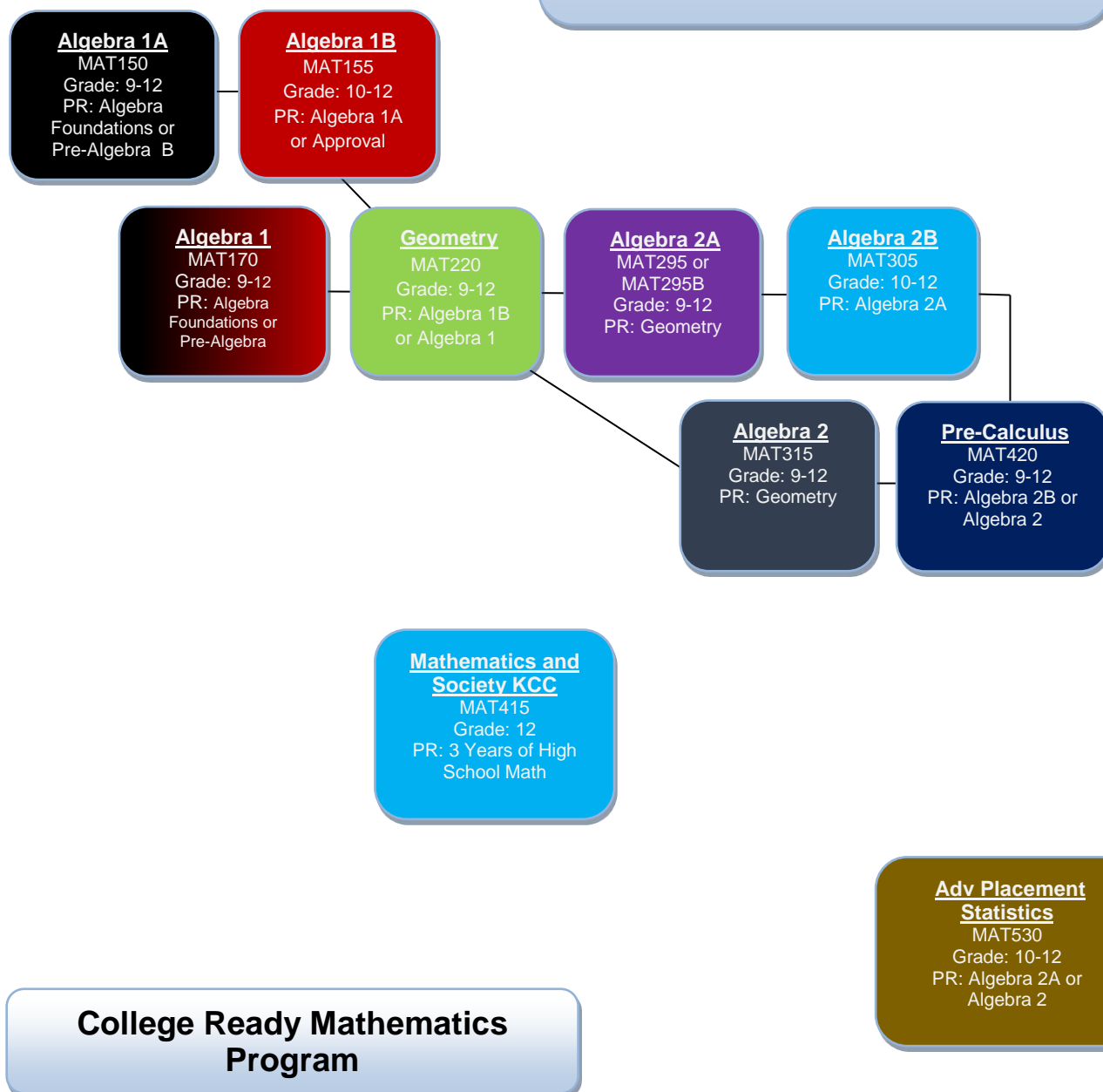
- 30 Credits Mathematics
- Must include Algebra 1
OR Algebra 1A and Algebra 1B

Basic Mathematics Program

Mathematics

Graduation Requirements

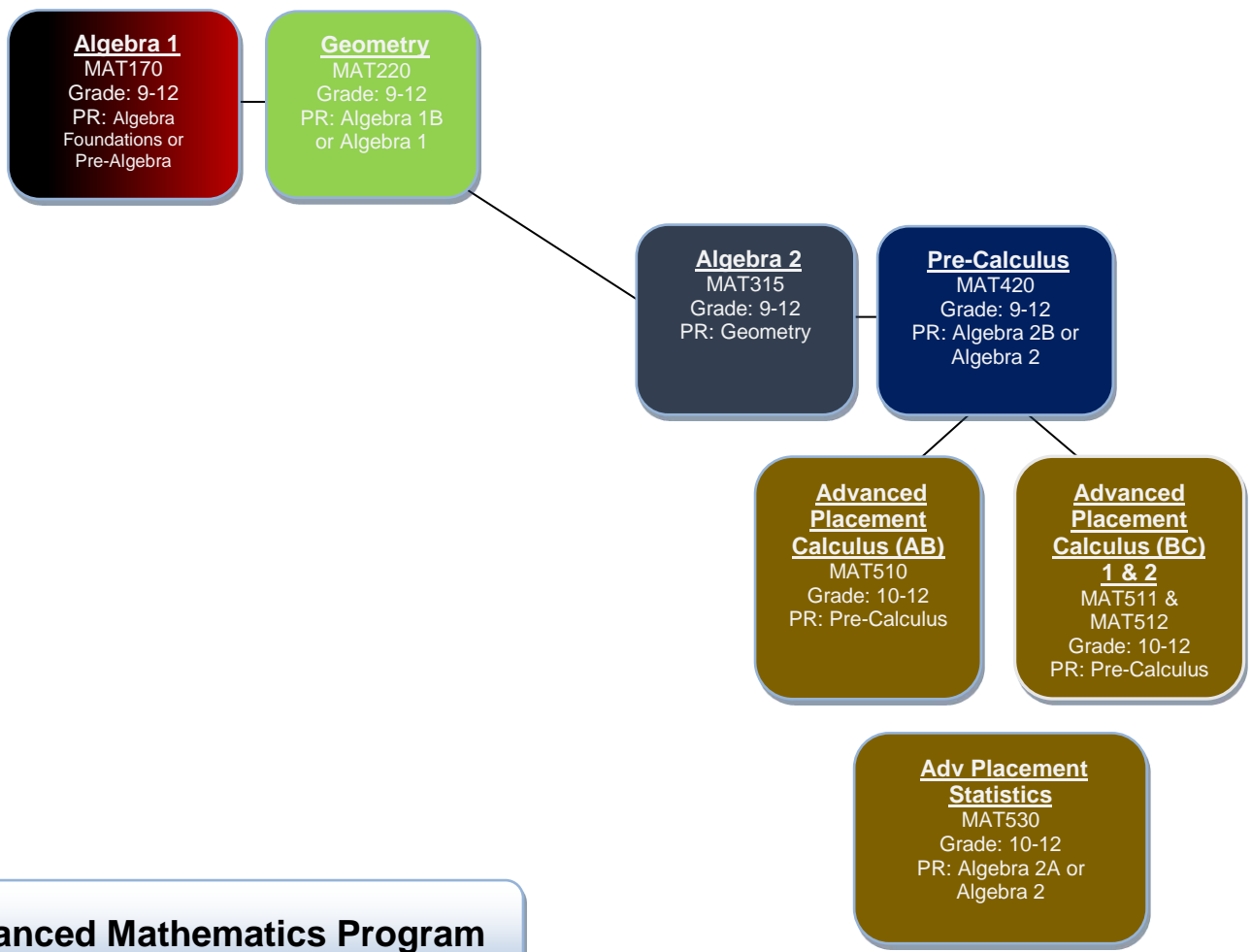
- 30 Credits Mathematics
- Must include Algebra 1
OR Algebra 1A and Algebra 1B



Mathematics

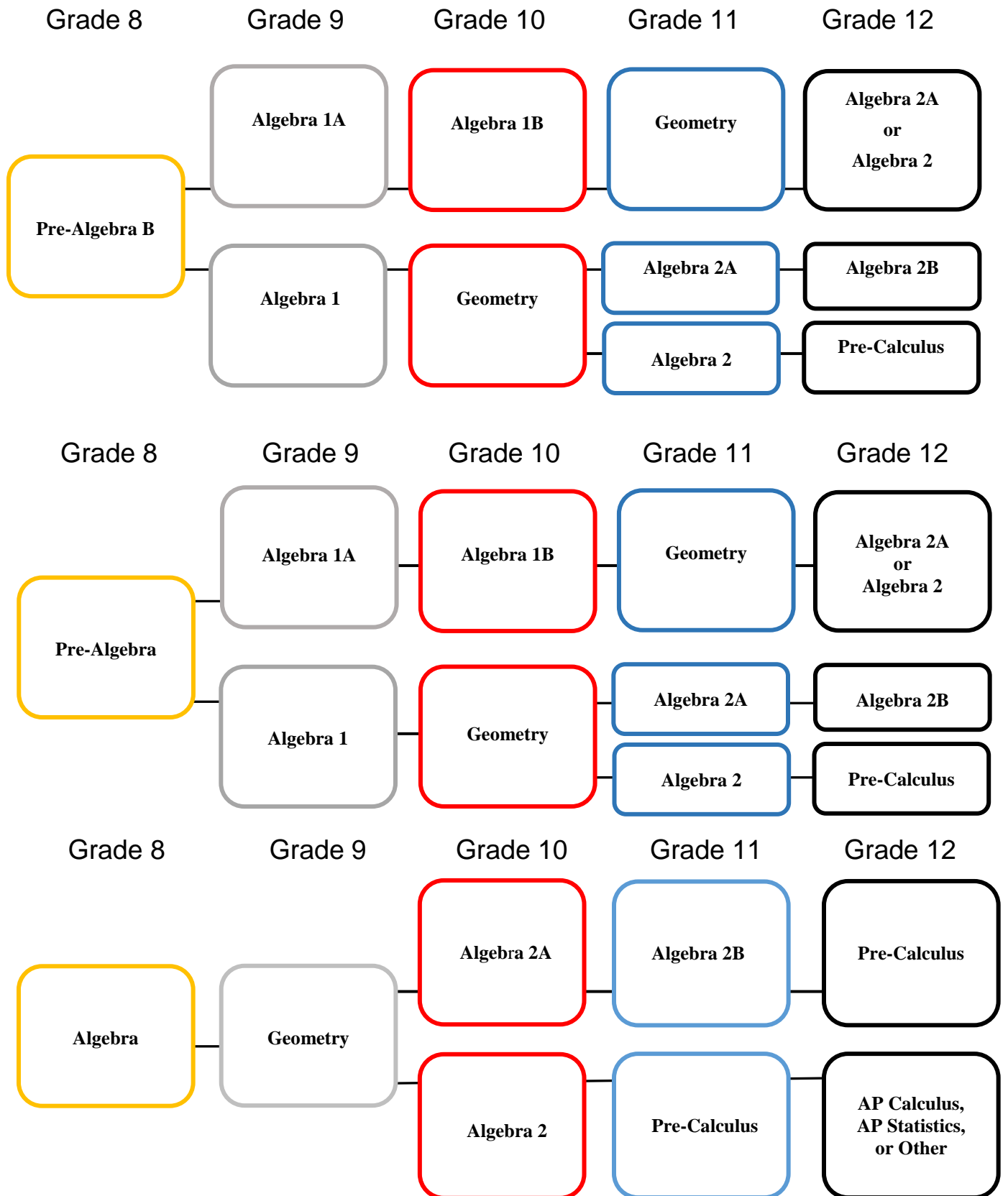
Graduation Requirements

- 30 Credits Mathematics
- Must include Algebra 1
OR Algebra 1A and Algebra 1B

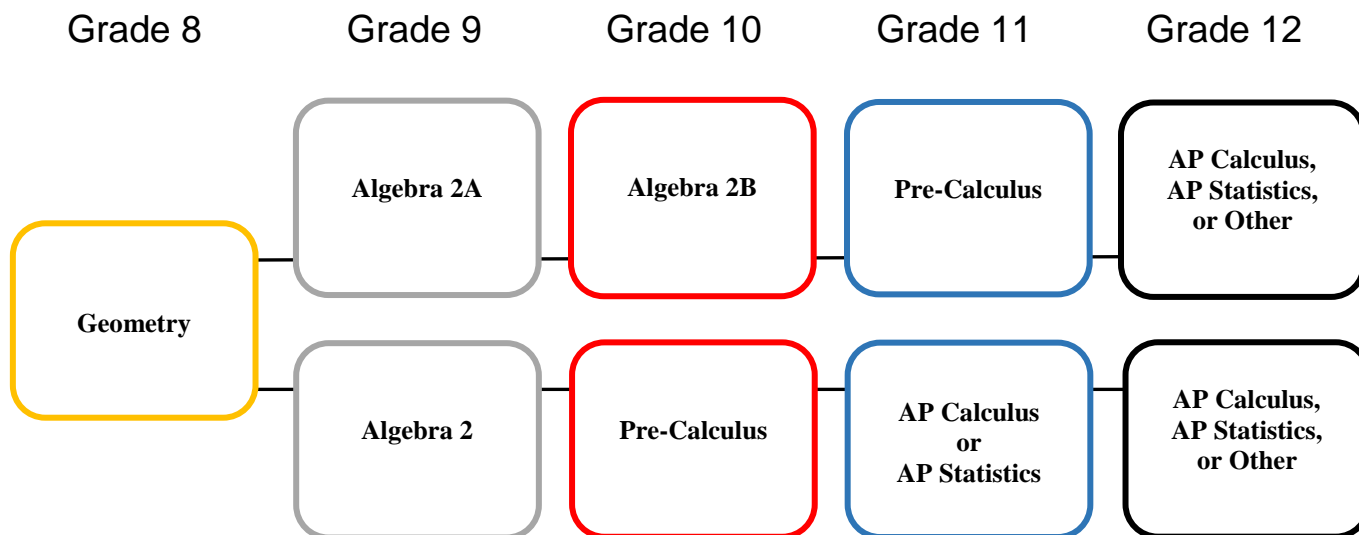


Advanced Mathematics Program

Math Pathways



Math Pathways

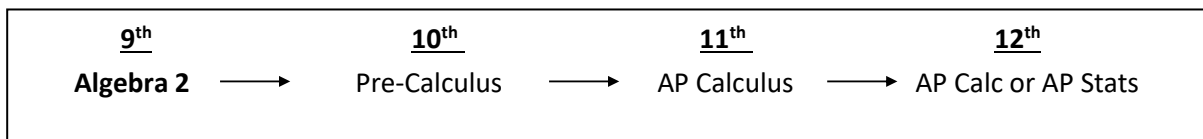


Algebra 2

This course is a combination of Algebra 2A and Algebra 2B in one course.

Things to consider before selecting Algebra 2 in 9th grade:

Incoming 9th grade students taking the Algebra 2 course will be maintaining acceleration in math which can result in serious math pathway concerns if they struggle with Algebra 2, Pre-Calculus, AP Calculus, or AP Statistics (three years of math are required for graduation).



- 1) Math skill level and effort: Students should have earned high level grades for Algebra 1A, Algebra 1B, or Algebra 1, and Geometry.
- 2) Students who struggle in Algebra 2 after the first three days of school must stay in the Algebra 2 course **or** they can drop it and take Algebra 2A the following year (sophomore year). The last option means that they would not be in a math class their freshman year and would eliminate the option of taking AP Calculus in high school.
- 3) Please choose the appropriate course based on the student's future math goals and for their passion for the subject matter.

Algebra Foundations

Course #: MAT114 and MAT116
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny, 2 times per day
 Prerequisite: Teacher recommendation and administrative approval
 Subsequent: Algebra 1A or Algebra 1

Considerations: A scientific calculator or its equivalent required. Graphing calculators are not allowed in this course.

Course Description: This course is an introductory class for Algebra 1A or Algebra 1. It is designed to review basic skills and math concepts. Elementary algebra skills with variables and problem-solving techniques will be imperative to the curriculum.

Algebra 1A

Course #: MAT150
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra Foundations, Pre-Algebra or Pre-Algebra B
 Subsequent: Algebra 1B

Considerations: Students are placed in this course per approval of the math department based on Pre-Algebra performance. A scientific calculator or equivalent is required. Graphing calculators are not allowed in this course. *Algebra 1A and Algebra 1B together meet the Algebra graduation requirement.*

Course Description: This course is designed to include material covered in the first semester of Algebra 1. Topics include negative numbers, absolute values, opposites, linear equations, and inequalities in word problems.

Algebra 1B

Course #: MAT155
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra 1A
 Subsequent: Geometry (recommended) Mathematics and Society



Considerations: Students are placed in this course per approval of the math department based on Pre-Algebra and Iowa Assessment scores. A scientific calculator or equivalent is required. Graphing calculators are not allowed in this course. *Algebra 1A and Algebra 1B together meet the Algebra graduation requirement.*

Course Description: This course is designed to include material covered in the second semester of Algebra 1. Topics include negative numbers, absolute values, opposites, linear equations, and inequalities in one variable word problems, factoring, graphing, and quadratic equations.

Algebra 1

Course #: MAT170
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Pre-Algebra, Pre-Algebra B, or Algebra Foundations
 Subsequent: Geometry



Considerations: A scientific or graphing calculator is required.

Course Description: Algebra 1 deals with variables, properties of operations and formulas. Topics include negative numbers, absolute value, opposites, and linear equations in one variable, inequalities in one variable, word problems, factoring, graphing, and quadratic equations.

Algebra Priority Standards

Course #: MAT170PS
 Grade Level: 9-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Teacher and/or Counselor Recommendation;
 Concurrent enrollment in Algebra 1

Considerations: Students are placed into this course by recommendation of a mathematics teacher or school counselor. This course is designed for students who struggle with the core concepts of Algebra 1.

Course Description: This course develops mathematical skills focused on the priority standards of Algebra 1. These topics include algebraic operations and reasoning, one-variable equations and inequalities, linear equations, exponents, factoring, and quadratics.

“Credit earned for Priority Standards classes does not count toward the 30 credit math graduation requirement.”

Geometry

Course #: MAT220
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra 1 or Algebra 1B
 Subsequent: Algebra 2A or Accelerated Algebra 2 or Mathematics & Society



Considerations: A scientific or graphing calculator is required. Graphing calculators are not allowed in this course.

Course Description: Geometry introduces the study of points, lines, planes, polygons, circles, solid figures, and their associated relationships as a mathematical system. Emphasis is placed on the description and use of inductive, deductive, and intuitive reasoning skills. Power of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Focus on comparisons between figures concerning surface areas, volumes, congruency, similarity, transformations, and coordinate geometry is also studied through two and three dimensions.

Geometry Priority Standards

Course #: MAT220PS
 Grade Level: 9-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Teacher and/or Counselor Recommendation;
 Concurrent enrollment in Geometry

Considerations: Students are placed into this course by recommendation of a mathematics teacher or school counselor. This course is designed for students who struggle with the core concepts of Geometry.

Course Description: This course develops mathematical skills focused on the priority standards of Geometry. These topics include points, lines, planes, polygons, circles, solid figures, and their associated relationships as a mathematical system. Emphasis is placed on the application of knowledge in algebraic and proof contexts.

“Credit earned for Priority Standards classes does not count toward the 30 credit math graduation requirement.”

Algebra 2A



Course #: MAT295 or MAT295B
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Geometry
 Subsequent: Algebra 2B (recommended) or Mathematics Society or AP Statistics

Considerations: A graphing calculator is required. TI89 or TI-Nspire calculators are NOT allowed.

Course Description: This course includes a variety of topics, including equations, inequalities, linear functions and relations, systems of equations and inequalities, quadratic functions and relations, polynomials and functions, inverse functions and relations, radical functions and relations, exponential functions and relations, logarithmic functions and relations, and rational functions and relations. This course fulfills minimum requirement for entry into most regent universities.

Algebra 2B



Course #: MAT305
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra 2A
 Subsequent: Pre-Calculus (recommended) or AP Statistics or Mathematics & Society

Considerations: A graphing calculator is required. TI89 or TI-Nspire calculators are NOT allowed.

Course Description: This course covers all topics in Algebra 2, not included in Algebra 2A: conic sections, sequences and series, statistics and probability. There is a heavy emphasis on trigonometric functions, trigonometric identities, and trigonometric equations.

Algebra 2

Course #: MAT315
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra 1 proficiency of Level 3 or higher (greater than or equal to 90%) and Geometry
 Subsequent: Pre-Calculus (recommended) or Mathematics & Society or AP Statistics



Considerations: Recommendation from a mathematics teacher. A graphing calculator IS required. TI89 or TI-Nspire calculators are NOT allowed.

Course Description: This course includes a variety of topics, including equations, inequalities, linear functions and relations, systems of equations and inequalities, quadratic functions and relations, polynomials and functions, inverse functions and relations, radical functions and relations, exponential functions and relations, logarithmic functions and relations, and rational functions and relations; and also included in this course is an extension of the above topics, as well as the new additional topics. These include factoring, solving equations, logarithmic functions and relations, conics (including rotations and transformations), sequences and series, trigonometry functions, trigonometry identities, and trigonometry equations.

Pre-Calculus

Course #: MAT420
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Algebra 2B or Algebra 2
 Subsequent: AP Calculus (recommended) or Mathematics & Society or AP Statistics



Considerations: Graphing calculator is required. TI89 and TI-Nspire calculators are not allowed.

Course Description: This course is designed for students who want to be better prepared for College Calculus or AP Calculus. This course has been enhanced with additional materials that promote a deeper mathematical understanding of the topics, extend known topics and present new topics that are generally not included in a high school curriculum. These topics will prepare the student for subsequent courses by improving their understanding of algebra and geometry concepts.

Advanced Placement Calculus (AB)



Course #: MAT510
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: Pre-Calculus

Considerations: Students may take the AP Calculus exam in May. Graphing calculator is required. TI84 is recommended.

Course Description: AP Calculus AB is roughly equivalent to a first semester college Calculus I course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. You'll learn how to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and how to make connections amongst these representations. You will learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

Advanced Placement Calculus (BC) 1 & 2



Course #: MAT511 & MAT512
Grade Level: 10-12
Credits: 15
Length: 2 Semesters
Format: Skinny-1st semester
Block-2nd semester
Prerequisite: Pre-Calculus

Considerations: Students MUST sign up for both sections listed above. Students may take the AP Calculus exam in May. Graphing calculator is required.

Course Description: AP Calculus BC is equivalent to a full year of college Calculus. It covers both Calculus I and Calculus II. Students will analyze and solve non-trivial mathematical problems related to calculus. Mathematical modeling and communication will be emphasized. The course surveys the mathematics of change from elementary derivatives through sophisticated integrals to infinite series.

Advanced Placement Statistics



Course #: MAT530
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: Algebra 2A or Algebra 2
Subsequent: Mathematics & Society or AP Calculus

Considerations: Students may take the AP Statistics exam in May. Graphing calculator is required.

Course Description: This course is a typical introductory college statistics course. It is divided into 4 major themes: exploratory data analysis, probability, statistical inference and planning, and conducting a study. Students will use both graphical and numerical techniques, probability to anticipate the distribution of data to be collected, design ways to collect data while avoiding bias, and make inferences from samples of data.

Mathematics and Society KCC

Course #: MAT415
 Grade Level: 12th Grade Only
 Credits: 5 (L-M) 3 (KCC)
 Length: 1 Semester
 Format: Skinny
 Prerequisite: Three years of High School math



Considerations: See prerequisite. This is a dual-credit course and the expectations reflect those of a college course. In order to take this class, the student needs to register as a Kirkwood student earning college credit in high school by using this link:

<https://www.kirkwood.edu/site/index.php?d=725>.

An additional requirement is an ACT score of 19 or higher OR a score of 30 or higher on the ALEKS math placement test

(<https://www.kirkwood.edu/placement>). Students can register for this course through Linn-Mar's registration procedures, but will need to meet the necessary test requirement by the first day of class at LMHS.

The following link provides information regarding taking placement tests in Kirkwood:

<https://www.kirkwood.edu/testcenter>.

Course Description: This course introduces selected areas of mathematics in familiar settings and develops students' conceptual and problem-solving skills. The course includes a study of mathematical concepts selected from finance, statistics, probability, growth patterns and voting techniques.

Science

Requirements through the Class of 2021

Physical Science Options

PR=Prerequisite Requirement

Electives

Earth Science

SCI125 or
SCI125
Grade: 9-12

AP Environ Science 1&2

SCI541 & SCI542
Grade: 10-12
PR: General Biology,
Algebra

Astronomy

SCI390 or
SCI390B
Grade: 11-12
PR: Geometry &
ACP or Chem I

Meteorology

SCI395
Grade: 11-12
PR: Geometry
& ACP or
Chem I

Chemistry I

SCI320
Grade: 9-12
PR: Algebra

AP Chemistry 1&2

SCI521 & SCI522
Grade: 10-12
PR: Algebra 2A &
Chemistry I

Geology

SCI380
Grade: 11-12
PR: Geometry &
ACP or Chem I

Environmental Sustainability

SCI620
Grade: 10-12
PR: Algebra &
General Biology

Physics I

SCI350 or SCI350
Grade: 10-12
PR: Geometry

AP Physics 1&2

SCI531 & SCI532
Grade: 10-12
PR: Chemistry I AND
Algebra 2A

Applied Chemistry & Physics

SCI360
Grade: 10-12
PR: Algebra

Earth & Space Science

SCI340
Grade: 10-12
PR: Algebra

Graduation Requirements

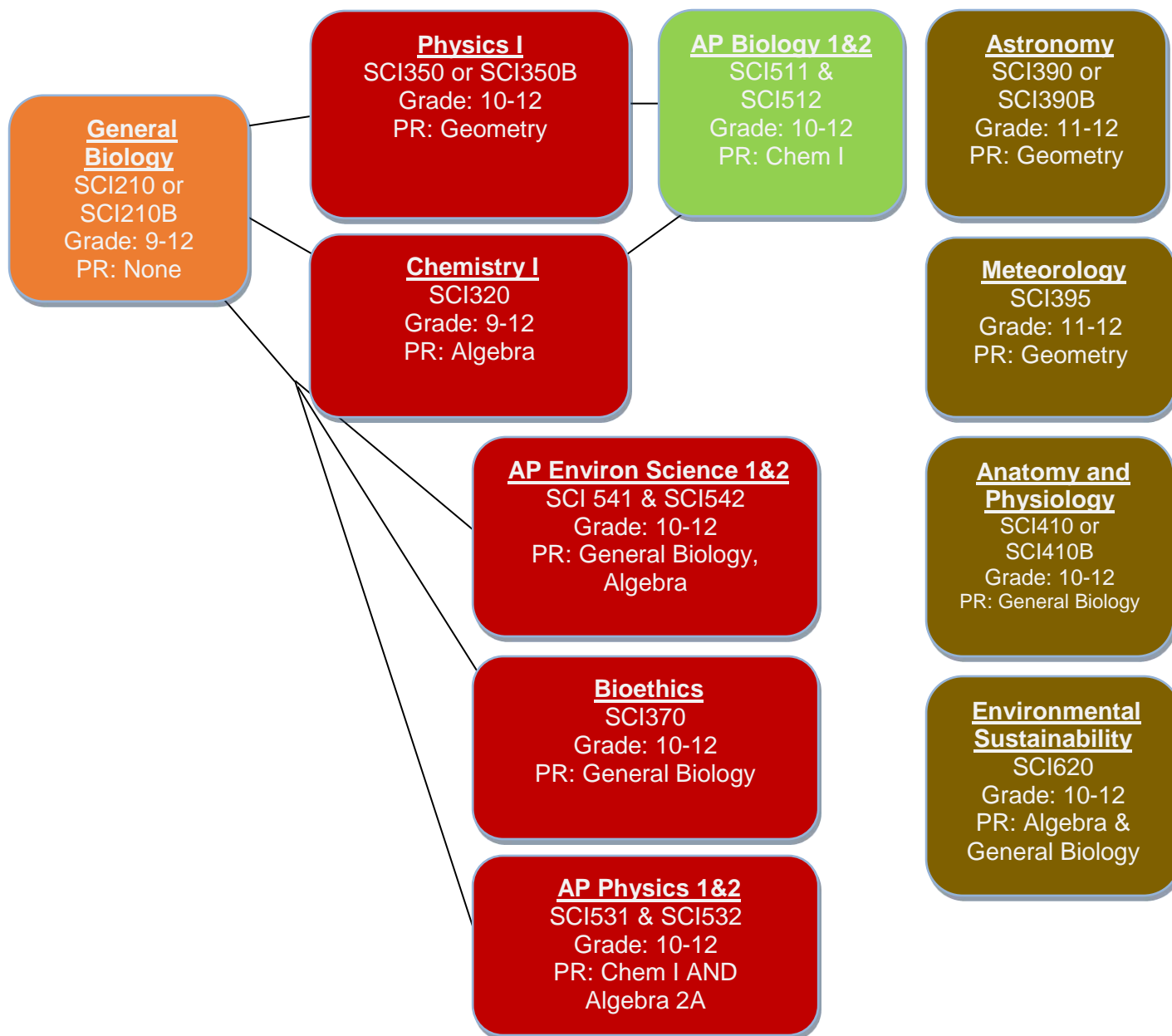
- 30 Credits of Science
- Must include General Biology or Biology Fundamentals I and Biology Fundamentals II and a Physical Science Course

Life Science Options

PR=Prerequisite Requirement

Electives

Requirements through the Class of 2021



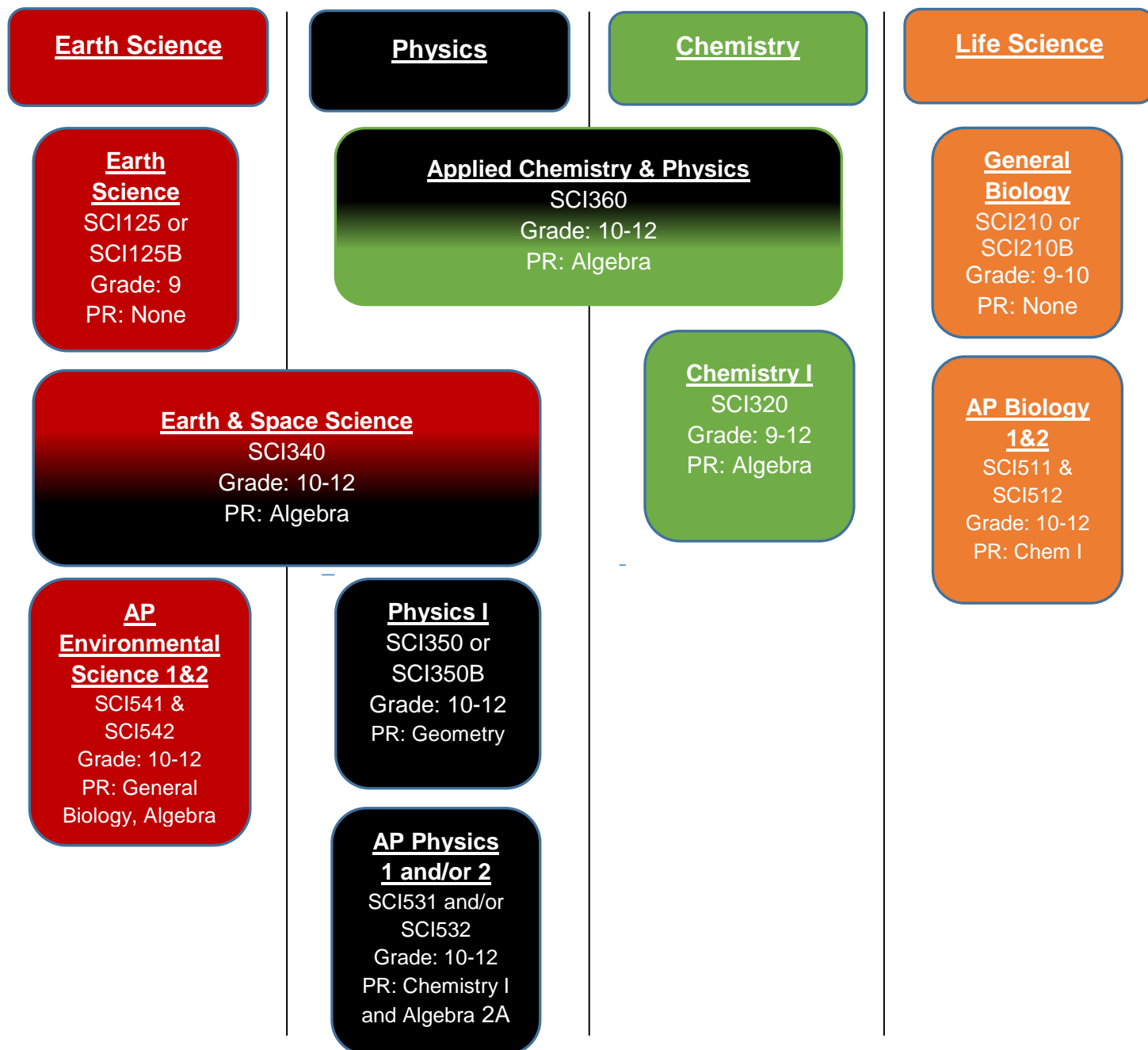
Graduation Requirements

- 30 Credits of Science
- Must include General Biology or Biology Fundamentals I and Biology Fundamentals II and a Physical Science Course

Science

Class of 2022 and later

GRADUATION REQUIREMENT – Must take a course from each discipline (column) for a minimum of 30 credits. Two courses meet requirements for two different disciplines.



Science Electives

Class of 2022 and later.

Elective Science credits DO NOT fulfill Science credit requirements for graduation.

Earth Science

Geology

SCI380

Grade: 11-12
PR: Geometry
and ACP or
Chemistry I

Meteorology

SCI395

Grade: 11-12
PR: Geometry
and ACP or
Chemistry I

Astronomy

SCI390 or
SCI390B

Grade: 11-12
PR: Geometry
and ACP or
Chemistry I

Chemistry

AP Chemistry 1&2

SCI521 &
SCI522

Grade: 10-12
PR: Algebra &
Chemistry 1

Organic Chemistry

SCI330

Grade: 10-12
PR: Chemistry 1

Life Science

Anatomy & Physiology

SCI410 or
SCI410B

Grade: 10-12
PR: General
Biology

Bioethics

SCI370

Grade: 10-12
PR: General
Biology

Environmental Sustainability

SCI620

Grade: 10-12
PR: Algebra &
Gen. Biology

Integrated Sciences

Agri – Aqua Sciences

See
pp 75-80

PLTW
Project Lead
the Way
See
pp 102-106

Earth Science

Course #: SCI125, SCI125B
 Grade Level: 9-10
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations: Earth Science (SCI125, B) is a NGSS course based on the completion of NGSS Earth and Space Standards and successful completion will meet the earth science graduation requirement. This course may not be taken subsequent to Earth and Space Science (SCI340).

Course Description: This course is designed to allow students to develop an understanding of Earth's origin and interactions. Students will examine Earth's systems, Earth's place in the universe, and Earth and human activity.

General Biology

Course #: SCI210, SCI210B
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none

Considerations: General Biology is a NGSS course based on the completion of NGSS Life Science Standards and successful completion will meet the life science requirement. Students taking this course should have a strong comprehensive vocabulary, reading and study skills.

Course Description: This course is designed as a survey class in life science. The themes investigated are: From Molecules to Organisms; Heredity; Biological Evolution; and Ecosystems.

Chemistry I

Course #: SCI320
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra

Considerations: Chemistry I is a NGSS course based on the completion of NGSS Physical Science Standards and successful completion will meet the chemistry portion of the physical science requirement. Students taking this course must have completed Algebra. This course is also required for students wishing to take AP Chemistry, AP Biology or AP Environmental Science.

Course Description: This course is designed to explore the nature of matter and how it changes. It emphasizes the relationship between chemistry and real-world applications. Chemistry I is intended for students with a strong interest in science, math, or engineering careers.

Organic Chemistry

Course #: SCI330
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Chemistry I

Considerations: See prerequisites.

Course Description: This quarter-long course is designed to provide a limited exploration of the concepts essential to college-level Organic Chemistry: Bonding, Isomers, Properties, Naming, Functional Groups and Types of Reactions/ Reaction Mechanisms associated with each – substitution, elimination & addition, as well as an introduction to the limitless applications of organic chemistry throughout agriculture, life sciences, medicine, and issues related to consumers, the environment and society.

Earth and Space Science

Course #: SCI340, SCI340B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra



Considerations: Earth and Space Science is based on the completion of NGSS Physical Science Standards and Earth and Space Standards and successful completion will meet the physics portion of the physical science graduation requirement and the earth science graduation requirement. Students taking this course must have completed Algebra.

Course Description: This course is designed to help students develop an understanding of the big ideas of the Physics Standards and will be applied through the Earth Science Standards. Physics content includes force, motion, momentum, collisions, energy transformations, electromagnetism, waves and light. Earth Science content includes materials of Earth, its internal and exterior processes, geological history, and how Earth's systems interact, change over time and its role in the universe.

Physics I

Course #: SCI350, SCI350B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Geometry



Considerations: Physics I is based on the completion of NGSS Physical Science Standards and successful completion will meet the physics portion of the physical science graduation requirement. Students taking this course must have completed Geometry.

Course Description: This course is designed to examine the fundamental properties and laws of the physical world. These properties include motion, forces, momentum, energy and waves.

Applied Chemistry and Physics

Course #: SCI360, SCI360B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra



Considerations: Applied Chemistry and Physics is based on the completion of NGSS Physical Science Standards and successful completion will meet the physical science graduation requirement. Students taking this course must have completed Algebra.

Course Description: This course is designed to allow students to explore the big ideas in Chemistry and Physics. Chemistry concepts include properties of matter, the influence of electrons on behavior of the chemical elements, behavior of chemical reactions, and nuclear reactions. Physics content includes force, motion, momentum, collisions, energy transformations, electromagnetism, waves, and light.

Bioethics

Course #: SCI370
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: General Biology



Considerations: Bioethics is a science elective course. Students taking this course must have completed General Biology.

Course Description: This course examines contemporary ethical issues in genetics, medicine, health, animal use, and the environment, reflecting on the ways in which technology and varying perspectives have resulted in conflict within society.

Geology

Course #: SCI380
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Geometry and Chemistry 1 or Applied Chemistry and Physics



Considerations: Geology is a science elective course. Students taking this course must have completed Geometry and Applied Chemistry and Physics or Chemistry I.

Course Description: This course is designed to allow students to receive an intense, in-depth look into the core subjects of geology including physical, structural and environmental geology, crystallography, mineralogy, stratigraphy, and geomorphology.

Astronomy

Course #: SCI390B
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Geometry and Applied Chemistry and Physics or Chemistry I



Considerations: Astronomy is a science elective course. Students taking this course must have completed Geometry and Applied Chemistry and Physics or Chemistry I.

Course Description: This course is designed to allow students to receive an intense, in-depth look at astronomy topics including astronomical history, stellar measuring, stellar evolution, forces (gravitational, inertial, nuclear, magnetic, etc.) and the universe (theories, black matter, quasars, etc.).

Meteorology

Course #: SCI395
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Geometry and Applied Chemistry and Physics or Chemistry I



Considerations: Meteorology is a science elective course. Students taking this course must have completed Geometry and ACP (Applied Chemistry and Physics) or Chemistry I.

Course Description: This course is designed to allow students to receive an intense, in-depth look at topics relating to the atmosphere. Students will focus on forecasting weather, using severe weather as its guideline.

Anatomy & Physiology



Course #: SCI410, SCI410B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: General Biology

Considerations: Anatomy & Physiology is a science elective course. Students taking this course must have completed General Biology.

Course Description: This course is designed to allow students to study the fundamental concepts of human structure and function as it pertains to their bodies. It is designed to lead students into a basic career in the health field and prepare students for post-secondary education. One critical instructional element of anatomy to help foster an understanding of structures and functions is the exploration and dissection of animal tissues, organs, and bodies.

Advanced Placement Biology 1 & 2



Course #: SCI511 & SCI512
 Grade Level: 10-12
 Credits: 15
 Length: 3 Quarters
 Format: Block
 Prerequisite: Chemistry I

Considerations: Advanced Placement Biology 1 & 2 is a NGSS course based on the completion of NGSS Life Science Standards and successful completion will meet the life science requirement for graduation. Students MUST sign up for both sections listed above. General Biology is recommended but not required for enrollment in AP Biology. Students taking this course must have completed Chemistry I. Students may take the AP Biology exam in May.

Course Description: This course is designed as an in-depth study of the field of biology. Areas of emphasis include energy pathways; the cell; genetics and genetic engineering; and organisms and their environments.

Advanced Placement Chemistry 1 & 2



Course #: SCI521 & SCI522
 Grade Level: 10-12
 Credits: 15
 Length: 3 Quarters
 Format: Block
 Prerequisite: Chemistry I and Advanced Algebra IIA

Considerations: Students MUST sign up for both sections listed above. Students taking this course must have completed Chemistry I and Advance Algebra IIA. Students may take the Chemistry AP exam in May.

Course Description: This course is designed to cover the basics of chemistry at the college level. Areas of emphasis include atomic structure, molecular bonding, thermochemistry, kinetics, and chemical equilibria.

Advanced Placement Physics 1



Course #: SCI531
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Chemistry I AND Algebra 2A

Considerations: Advanced Placement Physics I is based on the completion of NGSS Physical Science Standards and successful completion will meet the physics portion of the physical science graduation requirement. It is recommended that students sign up for both AP Physics I and AP Physics II. Physics I is NOT a prerequisite for this class. See prerequisites. Students may take the AP Physics 1 exam in May.

Course Description: This course covers College Physics I. Students taking this class should have a strong interest in the practical applications of mathematics to real-life scenarios. Areas of emphasis include; experimental design, kinematics, newton's laws, gravitation, electricity, and waves.

Advanced Placement Physics 2

Course #: SCI532
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: AP Physics I or Physics I



Considerations: Physics I or AP Physics 1 is a prerequisite for this class. Students may take the AP Physics 2 exam in May.

Course Description: This course covers College Physics II. Students taking this course should have a strong interest in the practical applications of mathematics to real-life scenarios. Areas of emphasis include; experimental design, thermodynamics, fluid-mechanics, optics, electric circuits, magnetism, and modern physics.

Environmental Sustainability

(Previously was Biotechnical Engineering)

Course #: SCI620
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra AND General Biology



Considerations: See prerequisites. This is course in the Project Lead the Way engineering sequence. Students will earn credit for this course from Kirkwood Community College upon successful completion.

Course Description: Students will investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy. Applying their knowledge through hands-on activities and simulations, students' research and design potential solutions to these true-to-life challenges.

Advanced Placement Environmental Science 1 & 2

Course #: SCI541 & SCI542
 Grade Level: 10-12
 Credits: 15
 Length: 3 Quarters
 Format: Block
 Prerequisite: General Biology and Algebra



Considerations: Advanced Placement Environmental Science 1 & 2 is a NGSS course based on the completion of NGSS Earth Science Standards and successful completion will meet the earth science requirement for graduation. Students MUST sign up for both sections listed above. Students taking this course must have completed General Biology and Algebra. Students MUST sign up for both sections listed above. Students may take the AP exam in May.

Course Description: The goal of AP Environmental Science is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them.

**Elective Science credit
 can also be found in the
 Agricultural Science
 and PLTW sections.**

Social Studies

PR = Prerequisite Requirement

Electives

Requirements through the year 2021

US History 9

SOC110 or
SOC110B
Grade: 9-12
PR: None

OR

Advanced US History 9

SOC130
Grade: 9-12
PR: None

OR

AP US History 1 & 2

SOC521 &
SOC522
Grade: 10-12

Economics

SOC310
Grade: 11-12
PR: None

World History

SOC270 or
SOC270B
Grade: 10-12
PR: None

OR

AP World History 1 & 2

SOC541 &
SOC542
Grade: 10-12

Law and the Constitution

SOC320
Grade: 11-12
PR: None

Sociology

SOC330 or
SOC330B
Grade: 11-12
PR: None

Government

SOC400 or
SOC400B
Grade: 12
PR: None

OR

AP American Government

SOC500
Grade: 11-12
PR: None



AP Comparative Government

SOC550
Grade: 11-12
PR: US Govt. or
AP US Govt.

Introductory Psychology

SOC340 or
SOC340B
Grade: 11-12
PR: None

AP Psychology 1 & 2

SOC530
Grade: 11-12
PR: Intro
Psychology or
Approval

Graduation Requirements

- 30 Credits of Social Studies
- US History 9, Advanced US History 9, or AP US History
- World History or AP World History
- Government
- One Social Studies Elective

Social Studies

PR = Prerequisite Requirement

Electives

Class of 2022 and after.

US History 9

SOC110 or
SOC110B
Grade: 9-12
PR: None

OR

Advanced US History 9

SOC130 or
SOC130B
Grade: 9-12
PR: None

OR

AP US History 1 & 2

SOC521 &
SOC522
Grade: 10-12

Economics

SOC310
Grade: 11-12
PR: None

World History

SOC270 or
SOC270B
Grade: 10-12
PR: None

OR

AP World History 1 & 2

SOC541 &
SOC542
Grade: 10-12

Law and the Constitution

SOC320
Grade: 11-12
PR: None

Sociology

SOC330 or
SOC330B
Grade: 11-12
PR: None

OR

Introductory Psychology

SOC340 or
SOC340B
Grade: 11-12
PR: None

AP Psychology 1 & 2

SOC530
Grade: 11-12
PR: Intro Psychology
or Approval

Government

SOC400
Grade: 12
PR: None

OR

AP American Government

SOC500
Grade: 11-12
PR: None

AP Comparative Government

SOC550
Grade: 11-12
PR: US Govt. or
AP US Govt.

Graduation Requirements

- 30 Credits of Social Studies
- US History 9, Advanced US History 9, or AP US History
- World History or AP World History
- Sociology or Introductory Psychology
- Government

US History 9



Course #: SOC110 or SOC110B
 Grade Level: 9
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations: Required for graduation.

Course Description: US History 9 examines American history from the Gilded Age to the present, focusing on the people, ideas and events that have helped create the nation and world we live in today. Students are required to examine why events happened as they did and explain how our past is related to our present. A variety of learning activities, requiring both group and individual effort, allow students to become actively involved learners.

Advanced US History 9



Course #: SOC130 or SOC130B
 Grade Level: 9
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations: Recommended for students with a strong interest in reading and writing in history. Students successful in this course may move into the AP World History elective to satisfy their world history requirement. US History 9, Advanced US History 9, OR AP US History is required for graduation.

Course Description: This course explores the Gilded Age to present focusing on people, ideas, and events that have helped to create the nation and world we live in today. Strong emphasis is placed on developing skills in writing, interpretation and analysis of primary historical documents. Students will examine events and ideas from a variety of perspectives as they learn how to take a position on an issue, develop a thesis statement and use evidence to defend their position.

World History



Course #: SOC270 or SOC270B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations: See prerequisites. World History OR AP World History is required for graduation.

Course Description: This course investigates the foundations of our modern world. This will be done by researching various civilizations from ancient civilizations through modern times. Students will evaluate the changing nature of the world's political, economic and social systems.

Economics



Course #: SOC310
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: Students should be comfortable working with charts and tables.

Course Description: This course will focus on economic concepts (scarcity, choice, incentives); supply, demand, and markets; microeconomics (production, productivity, competitive markets); and macroeconomics (the economy in the aggregate, inflation, unemployment).

Law and the Constitution



Course #: SOC320
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: Meets the social studies elective graduation requirement.

Course Description: This course focuses on the origins of legal rights in the United States. With a particular focus on Constitutional structure and the Bill of Rights, students will examine the development, structure and operation of the American legal system including citizen rights and responsibilities, the role of the US Supreme Court and the Iowa court system, the Iowa Code and the functions of the courts by experiencing a mock trial.

Sociology



Course #: SOC330 or SOC330B
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: Meets the Behavioral Sciences graduation requirement.

Course Description: This course is a study of human group behavior and social problems. The course will explore the following concepts: culture, socialization, deviance and social control, social stratification, minority groups, marriage and family.

Introductory Psychology



Course #: SOC340 or SOC340B
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: Meets the Behavioral Sciences graduation requirement. This course is taught at the college-prep level and requires higher order thinking skills and work outside of the class room to be successful.

Course Description: This course is designed to help students understand human behavior. Students will learn about psychology as a science, career options, methods of learning, human development, personality development and psychological illness.

Government



Course #: SOC400 or SOC400B
 Grade Level: 12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: Government or AP American Government is required for graduation.

Course Description: Course highlights will include a study of the three branches of government, political voting behavior, political party membership, interest groups and elected officials. Students will study the underlying principles upon which the US government is based: limited government, rules of law, federalism and protection of individual rights.

Advanced Placement American Government



Course #: SOC500
Grade Level: 11-12 or approval
Credits: 10
Length: 2 Quarters during
second semester
Format: Block
Prerequisite: none

Considerations: Instructor approval for 10th graders. Fulfills the government graduation requirement. Students may take the American Government AP exam in May.

Course Description: Several topics covered in this course include: Constitutional underpinnings, political beliefs & behaviors, political parties, interest groups & mass media, institutions of national government, public policy & civil rights and civil liberties.

Advanced Placement Comparative Government



Course #: SOC550
Grade Level: 11-12
Credits: 5
Length: 2 Quarters
Format: Block
Prerequisite: US Govt. or
AP US Govt.

Considerations: Could be linked with AP US Government for a year-long AP Government course. AP exam would be optional.

Course Description: AP Comparative Government is a semester-long (block) course comparing governmental systems of Great Britain, Russia, China, Mexico, Nigeria and Iran. It is intended to follow US Government in greater depth and introduce students to more global international relations concepts and a broader, current understanding of the world we live in.

Advanced Placement US History 1 & 2



Course #: SOC521 & SOC522
Grade Level: 10-12
Credits: 15
Length: 3 Quarters
Format: Block
Prerequisite: US History 9 OR
Advanced US History 9 is
recommended

Considerations: Instructor approval for 10th graders. Students MUST sign up for both sections listed above. Fulfills the US history graduation requirement. This course begins in 2nd quarter. Students may take the US History AP exam in May.

Course Description: Students will participate in reading primary and secondary history materials, lectures, research projects, and group and individual presentations. College level work is expected in this survey course which covers the full range of US history from the early European explorations to the present.

Advanced Placement Psychology 1 & 2



Course #: SOC530
Grade Level: 11-12
Credits: 10
Length: 2 Quarters
Format: Block
Prerequisite: Intro. Psychology
OR approval

Considerations: Textbooks are available for purchase online but one will be provided in class. Class is geared to prep students to take the national AP Psychology exam in May.

Course Description: Areas studied: history and approaches, states of consciousness, biological bases of behavior, cognition, testing and individual differences, sensation and perception, motivation and emotion, abnormal psychology and treatment, and social psychology. College level work is expected, as this is a college level course.

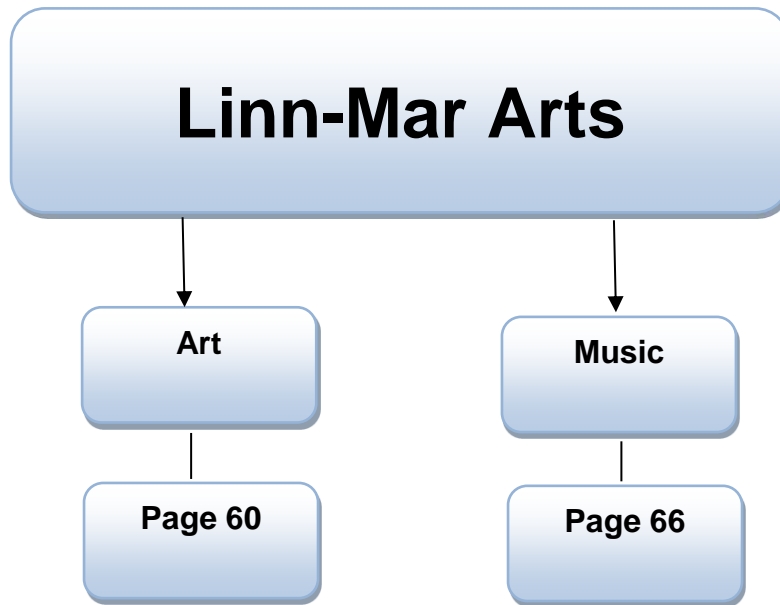
Advanced Placement
World History 1 & 2



Course #: SOC541 & SOC542
Grade Level: 10-12
Credits: 15
Length: 3 Quarters
Format: Block
Prerequisite: none

Considerations: Students MUST sign up for both sections listed above. Fulfills the required world history requirement. Duration is three quarters beginning in 2nd quarter. Students may take the World History AP exam in May.

Course Description: This course is a broad survey of the major periods of human history from a global comparative perspective. Students will study the events and trends that have shaped the world into what it is today, while refining their study, writing and critical thinking skills.



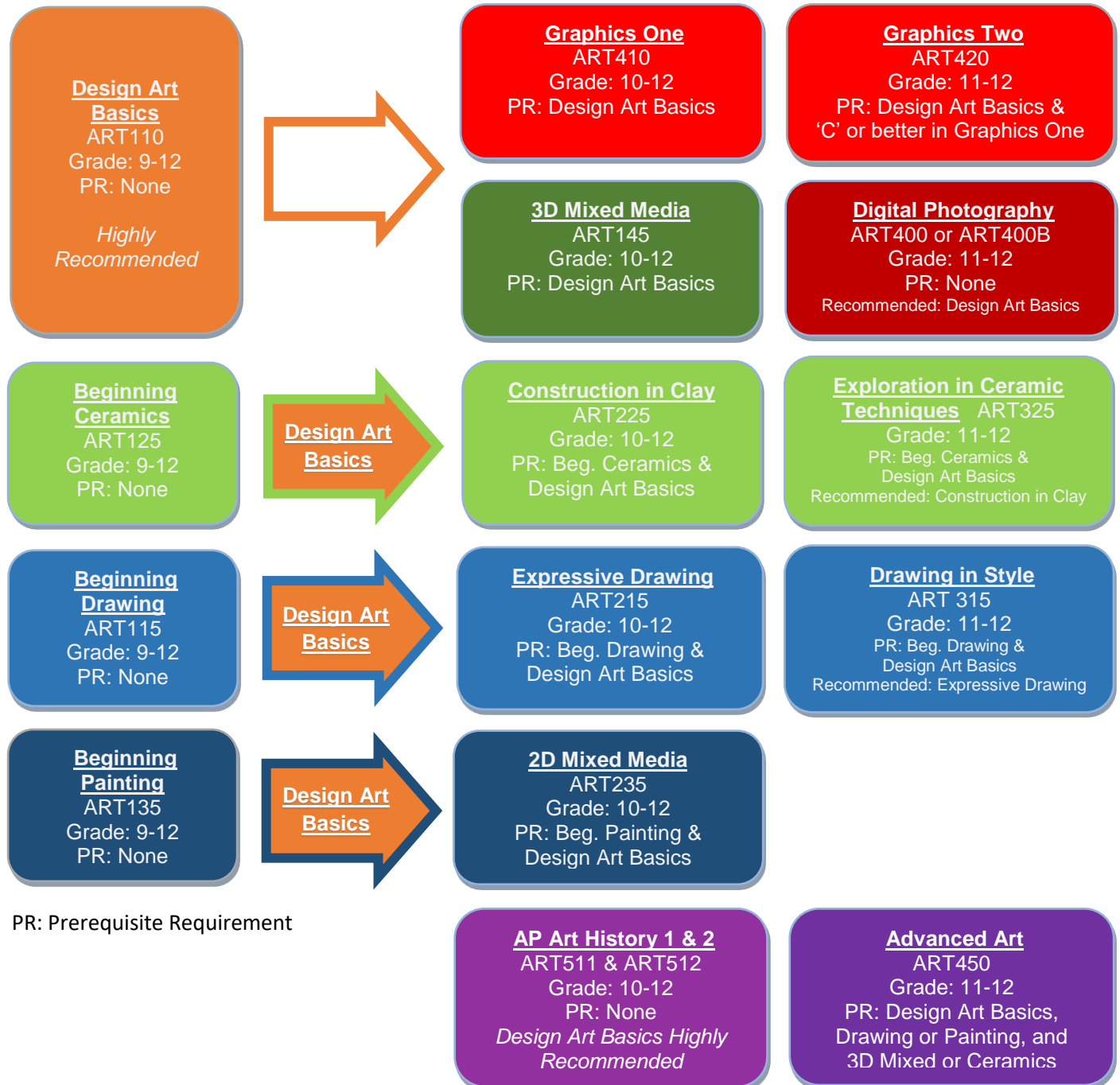
Visual Arts Program of Studies



Entry Level

Intermediate Level

Advanced Level



PR: Prerequisite Requirement

Design Art Basics

Course #: ART110
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: This course is a basic design course which is **highly recommended** before taking any art course.

Course Description: This is a design course that teaches basic visual literacy. By learning about the elements and principles of art, students will learn what visual images communicate. Students will gain a better understanding of how and what they are communicating in their art work through direct application of the elements and principals. Students will develop technical skills through the use of a variety of mediums including computer-generated images.

Beginning Drawing

Course #: ART115
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: This course is for the student that wants to improve their drawing skills. Design Art Basics is highly recommended.

Course Description: Students will draw from both life and photographic images. Emphasis will be placed on tone, line, value, and proportion. Students will also learn linear perspective drawing. The works of other artists, past and present, will be studied.

Beginning Ceramics

Course #: ART125
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: Design Art Basics is strongly encouraged before taking this course. Students will be required to take a written midterm, as well as a written final. Students may need to spend extra time in the studio to complete all of their course work. This class is for motivated, hands-on students.

Course Description: Like getting dirty? Working with your hands? Then Beginning Ceramics is right for you. Beginning Ceramics allows students to dig into clay and learn the basic hand building methods: pinch, coil, slab and sculpting. Students will also learn how to use the potter's wheel to create simple forms. Students will learn the scientific principle of clay and glazes. Class will be spent learning these skills and applying these skills to specific projects over the course of the quarter. Creativity is a must as well as using fundamentally sound techniques.

Beginning Painting

Course #: ART135
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: Design Art Basics

Course Description: Students will be introduced to a variety of water-based paints: water color, tempera and acrylic. Students will explore the history, vocabulary, and process used in this type of painting. Students will learn how art is used for personal expression and as social statements.

3-D Mixed Media

Course #: ART145
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Design Art Basics

Considerations: Design Art Basics is required. This course will involve written work as well as art work projects. Presentations and class discussions are regular occurrences in this course.

Course Description: Students will learn a variety of techniques related to 3-D Art, such as, sculpture in the round, relief, assemblage, mobiles, and installations. Students will learn to create art by reflecting on their own personal experiences and by researching other cultures.

Expressive Drawing

Course #: ART215
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Beg. Drawing and Design Art Basics

Considerations: Students will draw everyday developing ideas, revising compositions and creating projects. Students will participate in oral class critiques.

Course Description: Students will continue to build on the skills learned in Beginning Drawing. Emphasis will be placed on composition and mood of each drawing. Human figure studies and experimentation of a variety of media will be stressed throughout the quarter. The works of the artists, past and present, will be studied.

Construction in Clay

Course #: ART225
 Grade Level: 10-12
 Credit Hours: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Beg. Ceramics and Design Art Basics

Considerations: This class is for the more serious ceramic student. More in-depth work will be done on the wheel as well as hand building. Beginning Ceramic and Design Art Basics are required for taking this class.

Course Description: Students will review and expand on techniques learned in Beginning Ceramics. Emphasis in this class will be placed on alternative firings and construction methods. Students will investigate new ways of hand-building, firing, artists and styles. Skills will continue to be developed on the wheel to create bowls and cylinders. Students will use clay as an expressive medium to communicate ideas, feelings, thoughts, emotions and moods in their work.

2-D Mixed Media

Course #: ART235
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Design Art Basics And Beg. Painting

Considerations:

Course Description: Students will continue to develop the skills learned in Art Basics and experiment new techniques using a wide variety of materials, including oil paint, collage, and Xerox transfer. Students will learn how to communicate their ideas in creative ways by combining paint with other materials to create their art work.

Drawing In Style

Course #: ART315
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Beginning Drawing and Design Art Basics

Considerations: This course will require drawing on a daily basis and researching a variety of topics to provide inspiration for artwork. This course is recommended to be taken after ART215.

Course Description: This course is for students who desire to create in-depth drawings in a variety of media including ink, charcoal, pencil, chalk, and computer. Students will begin to develop a personal style and applying their imagination to create unique and original works of art. The works of other artist, past and present, will be studied.

Exploration in Ceramic Technique

Course #: ART325
 Grade Level: 11-12
 Credits: 5
 Length: 1Quarter
 Format: Block
 Prerequisite: Beg. Ceramics and Design Art Basics

Considerations: Construction in Clay is highly recommended before this course. This class is for the serious, dedicated ceramic student looking to develop a portfolio, considering art as a career or highly interested in ceramic arts.

Course Description: This class places an emphasis on the wheel and requires the production of wheel throwing portfolio. Students will also select different hand-building techniques to communicate visual ideas in clay. This class allows for deeper exploration of ceramic techniques, glazing and firings. Students will experiment using various new ways of working with clay.

Digital Photography



Course #: ART400 or ART400B
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: Design Art Basics is strongly recommended before taking this class.

Course Description: In this class students will become familiar with the fundamentals of digital photography. Topics will include: basic workings of a digital camera, compositions for photography, how lighting affects photographs and use of Adobe Photoshop editing programs. Students will participate in various photo shoots including: portrait, landscape, still life and various others. Critiques and regular class discussions are the norm for this class. Digital photography will change your way of seeing; taking pictures will become more than just capturing a moment in time, but creating visual communication through the use of a camera.

Graphics One

Course # ART410
 Grade Level: 10 -12
 Credits: 5
 Length 1 Quarter
 Format Block
 Prerequisite Design Art Basics

Considerations: The coursework relies heavily on the use of the Adobe Creative Suite as well as emerging technologies. The class requires students to be creative, independent, focused, and project driven.

Course Description: Graphics One will explore several areas of the current graphics industry. The class will provide rigorous, real world situations where students utilize professional programs from the Adobe Creative Suite along with their knowledge of the fine arts to create high end, visually stunning art and presentations. Projects will stem from the graphically visual world we live in today and pull from such topics as Brand Identity, Marketing, and Web Presence. We will also discuss the benefits of digital portfolios as well as the importance of the creative mind in today's technology driven society.

Graphics Two

Course #	ART420
Grade Level:	11-12
Credits:	5
Length	1 Quarter
Format	Block
Prerequisite	"C" or better in Graphics One & Design Art Basics

Considerations: The coursework relies heavily on the use of the Adobe Creative Suite, specifically Adobe Illustrator. The class requires students to be creative, independent, focused, and project driven. Student/ course work will be cloud based utilizing the school shared drive as well as Power School Learning.

Course Description: Graphics Two continues to push the boundaries of design with in-depth rigorous approaches utilizing the skills learned in Graphics One. Projects will continue to challenge and polish a student's understanding of typography, grid, composition, & layout. Students will have the opportunity to further develop their skills using the Adobe Creative Suite, as well as having access to iPad Pro's and Digital SLR Camera's. Additionally, all coursework will benefit students interested in developing a design portfolio.

Advanced Art

Course #:	ART450
Grade Level:	11-12
Credits:	5
Length:	1 Quarter
Format:	Block
Prerequisite:	1) Design Art Basics 2) Painting or Drawing 3) 3-D Mixed or Ceramics

Considerations: 11th and 12th grade students only

Course Description: This class will emphasize preparing a portfolio for scholarship, college admission, and learning about art-related careers. Students will learn attitudes that promote independent idea development and problem solving. They will explore selected ideas and media in depth in their development as beginning artist.

AP Art History 1 & 2

Course #:	ART511 & ART512
Grade Level:	10-12
Credits:	15
Length:	3 Quarters
Format:	Block
Prerequisite:	None, Design highly Recommended

W

Considerations: Students MUST sign up for both sections listed above. Instructor approval for 10th graders. Students may take the AP Art History exam in May. Students scoring a 3 or above will earn college course credit at most universities, which will satisfy a general education requirement.

Course Description: This course will engage students at the same level as an introductory college art history survey. Students will develop an understanding and knowledge of diverse historical, religious, political, and sociological contexts of architecture, sculpture and painting. The students will examine and critically analyze works from the past and present from all corners of the World. The essential question for this class is, "What does it mean to be Human?"

Music

PR=Prerequisite Requirement

Linn-Mar High School Band Program

Concert Band

MUS110
Grade: 9
PR: 8th Grade Band
OR Instructor
Approval

Wind Symphony

MUS200C
Grade: 10-12
PR: Instructor
Approval

Marching Band

MUS280
Grade: 10-12 (9th
Grade by Audition)
PR: None

Symphony Band

MUS150A
Grade: 9-11
PR: Instructor
Approval

Wind Ensemble

MUS200A
Grade: 10-12
PR: Instructor
Approval

AP Music Theory

MUS500
Grade: 10--12
PR: Instructor
Approval

Symphonic Winds

MUS150B
Grade: 10-12
PR: Instructor
Approval

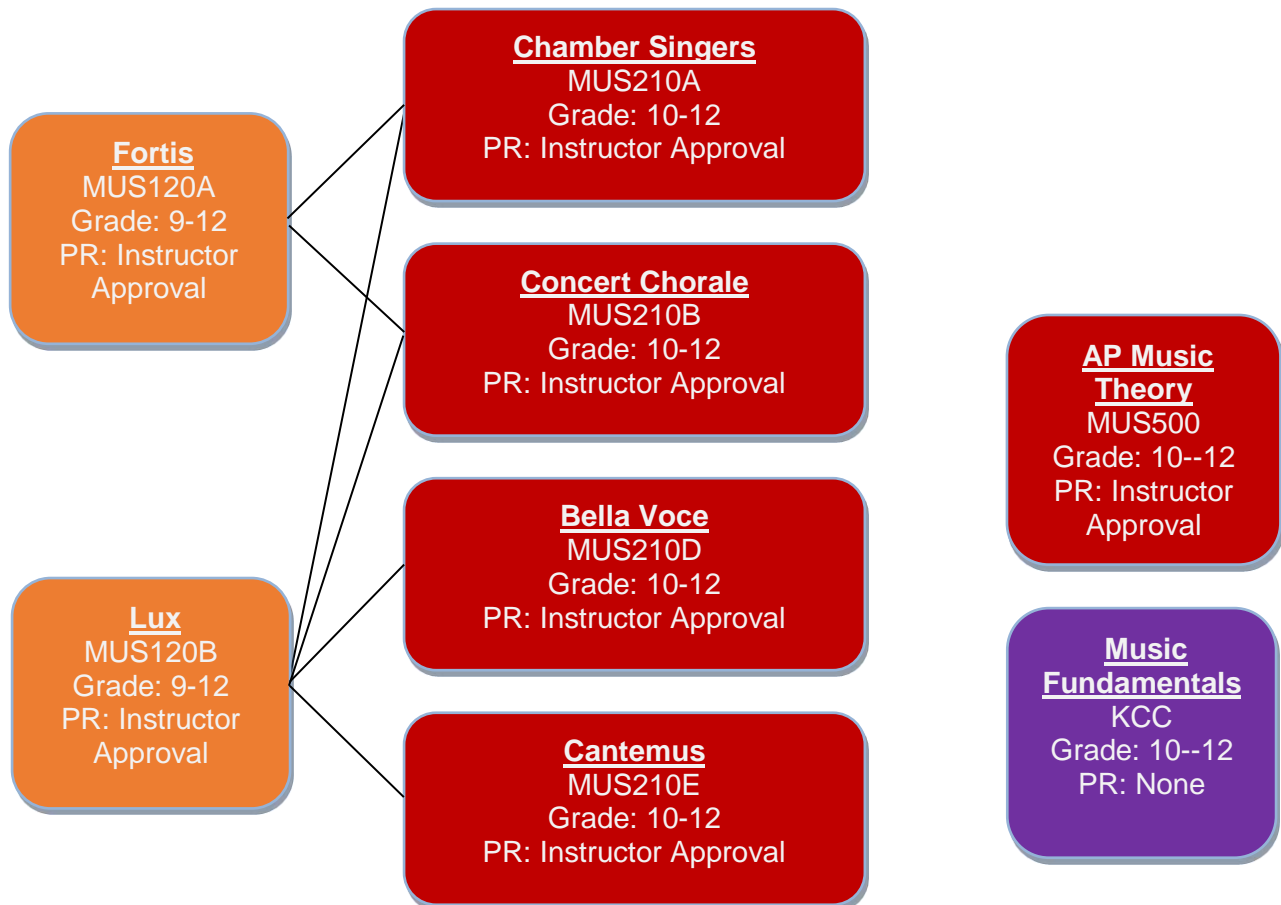
Music Fundamentals

KCC
Grade: 10--12
PR: None

Music

PR=Prerequisite Requirement

Linn-Mar High School Choral Program



Music

PR=Prerequisite Requirement

Linn-Mar High School Orchestra Program

Concert Orchestra (Red)

MUS230-1

Grade: 9-11

PR: Instructor Placement

Concert Orchestra (Black)

MUS230-2

Grade: 9-12

PR: Instructor Approval

Philharmonic Orchestra

MUS290

Grade: 9-12

PR: Instructor Approval

AP Music Theory

MUS500

Grade: 10--12

PR: Instructor Approval

Symphony Strings

MUS240

Grade: 9-12

PR: Instructor Placement

Music Fundamentals

KCC

Grade: 10-12

PR: None

Concert Band

Course #: MUS110
 Grade Level: 9
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: 8th grade band OR
 Instructor approval

Fees: \$45.00 rental if using a school wind instrument or percussion instrument.

Considerations: Some instruments are provided. Most students own their own instrument.

Course Description: This course is a concert band which rehearses daily. . The group learns and performs concert band music- Emphasis is on the preparation and performance of high school level quality music literature. Students will also participate in a brass, woodwind, or percussion ensemble during the third quarter. In addition, members will learn fundamentals of marching. Each member receives a lesson each six day cycle.

Symphony Band

Course #: MUS150A
 Grade Level: 9-11
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Participation in a school band the prior year OR Instructor Approval

Fees: \$45.00 rental if using a school wind instrument or percussion instrument.

Considerations: Some instruments are provided. Most students own their own instrument.

Course Description: This course is a concert band which rehearses daily. The group learns and performs concert band music. Emphasis is on the preparation and performance of high school level quality music literature. Students will also participate in a brass, woodwind, or percussion ensemble during the third quarter. Each member in grades 9-10 receives a lesson each six day cycle.

Symphonic Winds

Course #: MUS150B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Participation in a school band the prior year OR instructor approval

Fees: \$45.00 rental if using a school wind instrument or percussion instrument.

Considerations: Some instruments are provided. Most students own their own instrument.

Course Description: This course is a concert band which rehearses daily. The group learns and performs concert band music. Emphasis is on the preparation and performance of high school level quality music literature. Students will also participate in a brass, woodwind, or percussion ensemble during the third quarter. Each member in grade 10 receives a lesson each six day cycle.

Wind Symphony

Course #: MUS200C
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Participation in a school band the prior year OR Instructor Approval

Fees: \$45.00 rental if using a school wind instrument or percussion instrument.

Considerations: Some instruments are provided. Most students own their own instrument.

Course Description: This course is a concert band which rehearses daily. The group learns and performs concert band music. Emphasis is on the preparation and performance of advanced high school and college level music. Students will also participate in a brass, woodwind, or percussion ensemble during the third quarter. Each member in Grade 10 receives a lesson each six day cycle. Private lessons are recommended.

Wind Ensemble

Course #: MUS200A
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: Participation in a school band
the prior year OR Instructor
Approval

Fees: \$45.00 rental if using a school wind
instrument or percussion instrument.

Considerations: Some instruments are provided.
Most students own their own instrument.

Course Description: This course is a concert and
which rehearses daily. The group learns and
performs concert band music. Emphasis is on the
preparation and performance of college/university
level band music. Students will also participate in a
brass, woodwind, or percussion ensemble during
the third quarter. Each member in grade 10
receives a lesson each six day cycle. Private
lessons are recommended.

Fortis

Course #: MUS120A
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Instructor Approval

Considerations: 10-12 grade Tenor and Bass voices must audition to be placed in this choir. 9th grade Tenor and Bass voices are automatically placed in this choir.

Course Description: The choir of Tenor and Bass voices rehearses and performs four concerts locally each school year. Fundamentals of good singing, musical literacy, and group dynamics are stressed. Each student will receive a private lesson every week of the school year starting the 2nd quarter.

Lux

Course #: MUS120B
 Grade: 9-12
 Credits: 10
 Length: 2 semesters
 Format: Skinny
 Prerequisite: Instructor Approval

Considerations: 10-12 grades Sopranos and Altos must audition to be placed in this choir. 9th grade Soprano and Alto voices are automatically placed in this choir.

Course Description: The choir of only Soprano and Alto voices rehearses and performs four concerts locally each school year. Fundamentals of good singing, musical literacy, and group dynamics are stressed. Each student will receive a private lesson every week of the school year starting 2nd quarter.

Chamber Singers

Course #: MUS210A
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: 9th grade choir OR Instructor approval

Considerations: All registrants will complete a vocal audition and be placed in the appropriate ensemble by the instructors.

Course Description: Emphasis will be on the preparation of choral works for smaller groups, i.e. madrigals, early music, and contemporary music. Private lessons are recommended.

Concert Choral

Course #: MUS210B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: 9th grade choir OR Instructor approval

Considerations: All registrants will complete a vocal audition and be placed in the appropriate ensemble by the instructors.

Course Description: Emphasis will be on the preparation of choral works for larger groups, i.e. music for double choir, major choral works with orchestra, music for operatic choruses, as well as standard acapella literature.

Bella Voce

Course #: MUS210D
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: 9th grade choir OR
Instructor approval

Considerations: All registrants will complete a vocal audition and be placed in the appropriate ensemble by the instructors.

Course Description: Emphasis will be on preparation of advanced quality choral music by established and emerging composers for this genre. Soloist voice as well as strong choral singers will be the foundation of the group. Students will receive a weekly lesson in each nine week period. Private lessons are recommended.

Cantemus

Course #: MUS210E
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: 9th grade choir OR
Instructor approval

Considerations: All registrants will complete a vocal audition and be placed in the appropriate ensemble by the instructors.

Course Description: Emphasis will be on preparation of advanced quality choral music by established and emerging composers for this genre. Soloist voice as well as strong choral singers will be the foundation of the group. Private lessons are recommended.

Concert Orchestra (Red)

Course #: MUS230-1
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Fees: \$45.00 rental instrument fee.

Considerations: Entry-level ensemble no audition required. Cellos and Basses are provided for daily rehearsal only. Students must provide their own instrument for home use.

Course Description: Emphasis is on the preparation and performance of high school level quality music literature for the string instruments. Lessons are offered during a six-day cycle and scheduled based on schedule availability. Private lessons are recommended.

Philharmonic Orchestra

Course #: MUS290
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Fees: \$45.00 rental instrument fee.

Considerations: All students must audition for the director to be enrolled in this ensemble. Specific audition materials are required for the audition and can be acquired from the director.

Course Description: Emphasis is on the preparation and performance of high school level quality music with some literature for string instruments. Lessons are offered during a six-day cycle and scheduled based on schedule availability. Private lessons are recommended.

Concert Orchestra (Black)

Course #: MUS230-2
 Grade Level: 9-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Fees: \$45.00 rental instrument fee.

Considerations: Entry-level ensemble no audition required. Cellos and Basses are provided for daily rehearsal only. Students must provide their own instrument for home use.

Course Description: Emphasis is on the preparation and performance of high school level quality music literature for the string instruments. Lessons are offered during a six-day cycle and scheduled based on schedule availability. Private lessons are recommended.

Symphony Strings

Course #: MUS240
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: approval

Fees: \$45.00 rental instrument fee.

Considerations: All students must audition for the director to be enrolled in this ensemble. Specific audition materials are required for the audition and can be acquired from the director.

Course Description: Emphasis is on the preparation and performance of college/university/professional level quality music literature for string instruments. Students also participate along with the wind, brass, and percussion to form the Full-Symphony Orchestra. Lessons are offered during a six-day cycle and are scheduled based on schedule availability. Private lessons are recommended.

Marching Band

Course #: MUS280
 Grade Level: 10-12
 (9th by audition)
 Credits: 2.5
 Length: 1 Quarter
 Format: Early-Bird (7:15-8:00)
 Prerequisite: none

Course Description: Meets daily during 1st quarter and is recommended for all grade 10-12 band members. The color guard is open to both band and non-band members with dance experience, or students who have the desire to perform. Auditions for the color guard and incoming 9th graders will be during the 2nd semester of the previous school year. The Marching Lions perform at the Linn-Mar Homecoming parade, all home football games, 4-5 contests, the Metro Marching Band Classic, and the Band Extravaganza.

Advanced Placement Music Theory



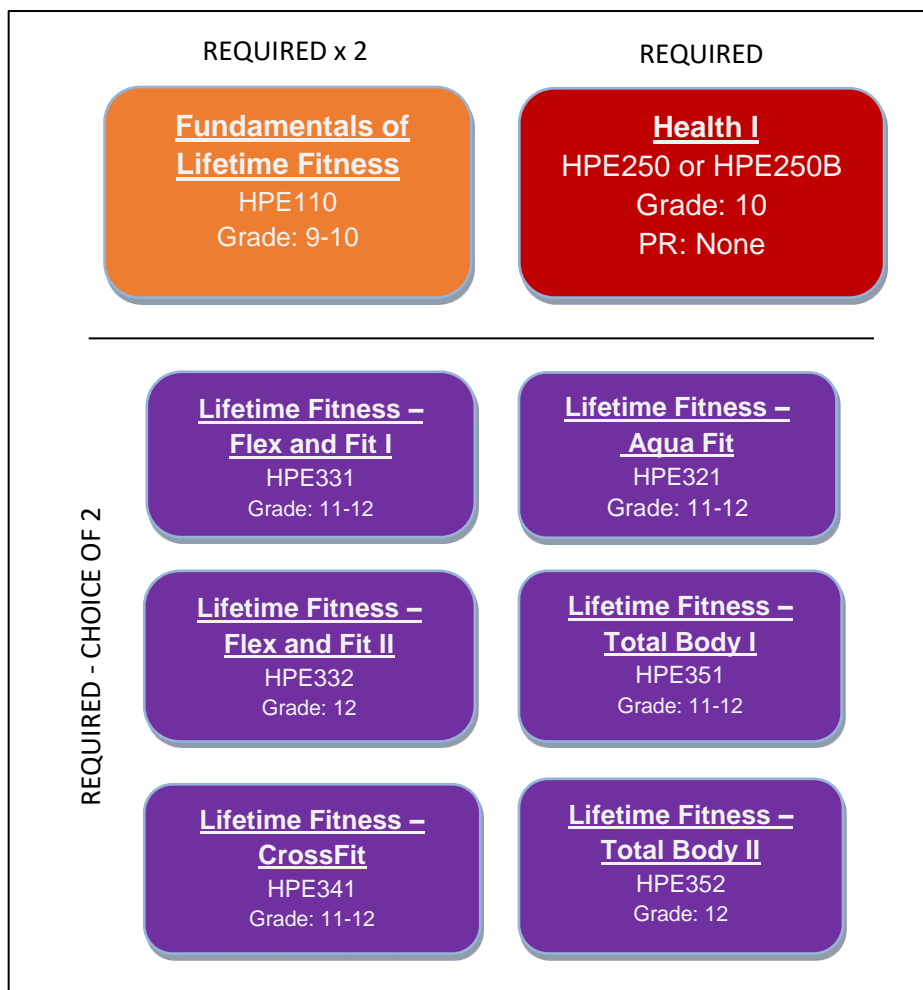
Course #: MUS500
 Grade Level: 10-12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: Music Fundamentals or Instructor approval

Considerations: Students may take the Music Theory AP exam in May. This course is strongly recommended for students considering studying music at the college/university level.

Course Description: This college-level class is progressive with each unit building on the previous. Major areas of study include the basic materials of music, time classification, notation, intervals, scales, time signatures, structure of tonality, triads, phrase structure and harmonization, seventh chords, musical style, exploration of arranging, composing, sight-singing, melodic and harmonic dictation.

**MUSIC FUNDAMENTALS HIGHLY
 RECOMMENDED (See p. 124)**

Linn-Mar Fitness/Health



Health II
 HPE260
 Grade: 11-12
 PR: Health I,
 General Biology, Anatomy
 and Physiology

Super Sport
 ALT400
 Grade: 9-12
 PR: Approval

Health Careers
 HPE450
 Grade: 12
 PR: None

Graduation Requirements

- 20 Credits of Fitness/Health
- Must include **Health I** and CPR
- Must include 5 credits of **Fundamentals of Lifetime Fitness** each year for grades 9 and 10, and a minimum of 2.5 credits of **Lifetime Fitness** each year for grades 11 and 12.

Fitness/Health

PR=Prerequisite Requirement

Physical education is required for every student in Iowa (Department of Education regulations, chapter 12). The focus of the Fitness Program at Linn-Mar High School is activity in the core component areas of cardiovascular fitness, strength training, endurance fitness, flexibility, competitive fitness activities and CPR/Water Safety Skills. All students are required to demonstrate an acceptable level of effort during activities while working towards a goal in each component area and complete district-approved fitness assessments each quarter. Students must take one Fitness course each school year and Health I to meet the state-required guidelines. Students may not enroll in the same Lifetime Fitness course (grades 11 and 12) in consecutive years.

Health I

Course #: HPE250 or HPE250B
 Grade Level: 10
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: This course is **required** for graduation.

Course Description: This course is designed to lead students to healthy lifestyle choices through use of decision making processes. Students are encouraged to assess their attitudes and behavior patterns and to understand the impact their lifestyle choices have on their communities and on their own well-being. Topics covered include: fitness and wellness, CPR/choking/AED for infant, child and adult; nutrition; eating disorders; sexual education; substance abuse; STDs; HIV/AIDS; cancer; infectious and non-infectious diseases.

Health II

Course #: HPE260
 Grade Level: 11-12
 Credits: 10
 Length: 1 Semester
 Format: Block
 Prerequisite: General Biology, Anatomy & Physiology, and Health 1

Considerations: None

Course Description: This is an in-depth course for students interested in the health related field. This broad spectrum includes but is not limited to: nutrition, sports medicine, sports management, exercise science, sports psychology, and mental/emotional health.

Super Sport

Course #: ALT400
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Approval

Considerations: Specific skills taught and assessed are determined by a student's individualized education plan. Must have administrative approval to enroll.

Course Description: This adaptive physical education course focuses on individual and team activities to promote an active and healthy lifestyle. This course will adapt the activities to meet the physical needs of all students.

Fundamentals of Lifetime Fitness

Course #: HPE110
 Grade Level: 9-10
 Credits: 5 (Each Year)
 Length: 1 Quarter
 Format: Block
 Prerequisite: None
 Grading: Credit/No Credit

Considerations: This course is **required** for both freshmen and sophomores. This course is **required** for graduation.

Course Description: The class emphasis includes; enhancing personal fitness through Activity Labs and Group Games designed to improve Aerobic Capacity, Core Endurance, Muscular Fitness and overall Flexibility. The Student will demonstrate a beginning ability to use Goal-Setting Skills to aid in enhancing personal fitness. The Student will be encouraged to achieve an improved level of fitness while demonstrating beginning knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - Aqua Fit

Course #: HPE321
 Grade Level: 11-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Fundamentals of Lifetime Fitness or Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Junior and Senior years.

Course Description: This section explores the unique buoyancy, resistance and movement of water to improve overall fitness. The Student will design and implement an Individualized Aquatic Fitness Plan. The class emphasis includes: enhancing fitness through Activity Labs designed to improve Aerobic Capacity, Core Endurance, Muscular Fitness and overall Flexibility. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness, and complete a Life Skills Unit. The Student will be challenged to achieve an improved level of fitness while demonstrating knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - Flex and Fit I

Course #: HPE331
 Grade Level: 11-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Fundamentals of
 Lifetime Fitness or
 Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Junior and Senior years.

Course Description: This section is designed for the developing fitness Student and will provide opportunities for the Student to improve their personal fitness and concept knowledge. This section will utilize Group Activity Labs to support functional fitness improvement. The Student will explore ways to design, and adjust a fitness plan tailored to meet their goals. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness, and complete a Life Skills Unit. The Student will be encouraged to achieve an improved level of fitness while demonstrating knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - Flex and Fit II

Course #: HPE332
 Grade Level: 12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Lifetime Fitness – Flex and
 Fit I or Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Senior year.

Course Description: This section is designed to provide advanced opportunities for the Student to improve their personal fitness and concept knowledge. This section will utilize Group Activity Labs to support the functional fitness improvement. The Student will create and utilize a Personal Fitness Portfolio to track and reflect on Activity Lab results. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness, and complete a Life Skills Unit. The Student will be challenged to achieve an improved level of fitness while demonstrating advanced knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - CrossFit

Course #: HPE341
 Grade Level: 11-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Fundamentals of
 Lifetime Fitness or
 Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Junior and Senior years.

Course Description: This section will utilize Group Activity Labs to support fitness improvement. The Student will explore ways to design and adjust a CrossFit Fitness Plan tailored to meet their goals. The class emphasis includes; enhancing personal fitness through Activity Labs designed to improve Aerobic Capacity, Core Endurance, Muscular Fitness and overall Flexibility. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness and complete a Life Skills Unit. The Student will be challenged to achieve an improved level of fitness while demonstrating an advanced knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - Total Body I

Course #: HPE351
 Grade Level: 11-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Fundamentals of
 Lifetime Fitness or
 Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Junior and Senior years.

Course Description: This section will focus on Introductory Strength Training concepts, skills and Activity Labs. The Student will explore ways to design a Total Body Strength Program. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness, and complete a Life Skills Unit. The Student will be encouraged to achieve an improved level of Muscular Fitness while demonstrating a beginning knowledge of concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Lifetime Fitness - Total Body II

Course #: HPE352
 Grade Level: 12
 Credits: 2.5
 Length: 1 Quarter
 Format: Skinny
 Prerequisite: Lifetime Fitness – Total Body I or Permission
 Grading: Credit/No credit

Considerations: A different Lifetime Fitness course is **required** for the Senior year.

Course Description: This section is designed to allow the advanced Student to apply learned Strength Training Principles and Techniques. The Student will be engaged in demonstrations/ discussions and evaluations of lift performances during Activity Labs. The goal will be to improve Muscular Fitness and further knowledge and understanding of Strength Training Theory and Practice. The Student will demonstrate the ability to use Goal-Setting Skills to aid in enhancing personal fitness, and complete a Life Skills Unit. The Student will be challenged to achieve an improved level of Muscular Fitness while demonstrating advanced knowledge of fitness concepts and principles. The Student will complete and reflect on district-approved fitness assessments for completion of the class.

Health Careers



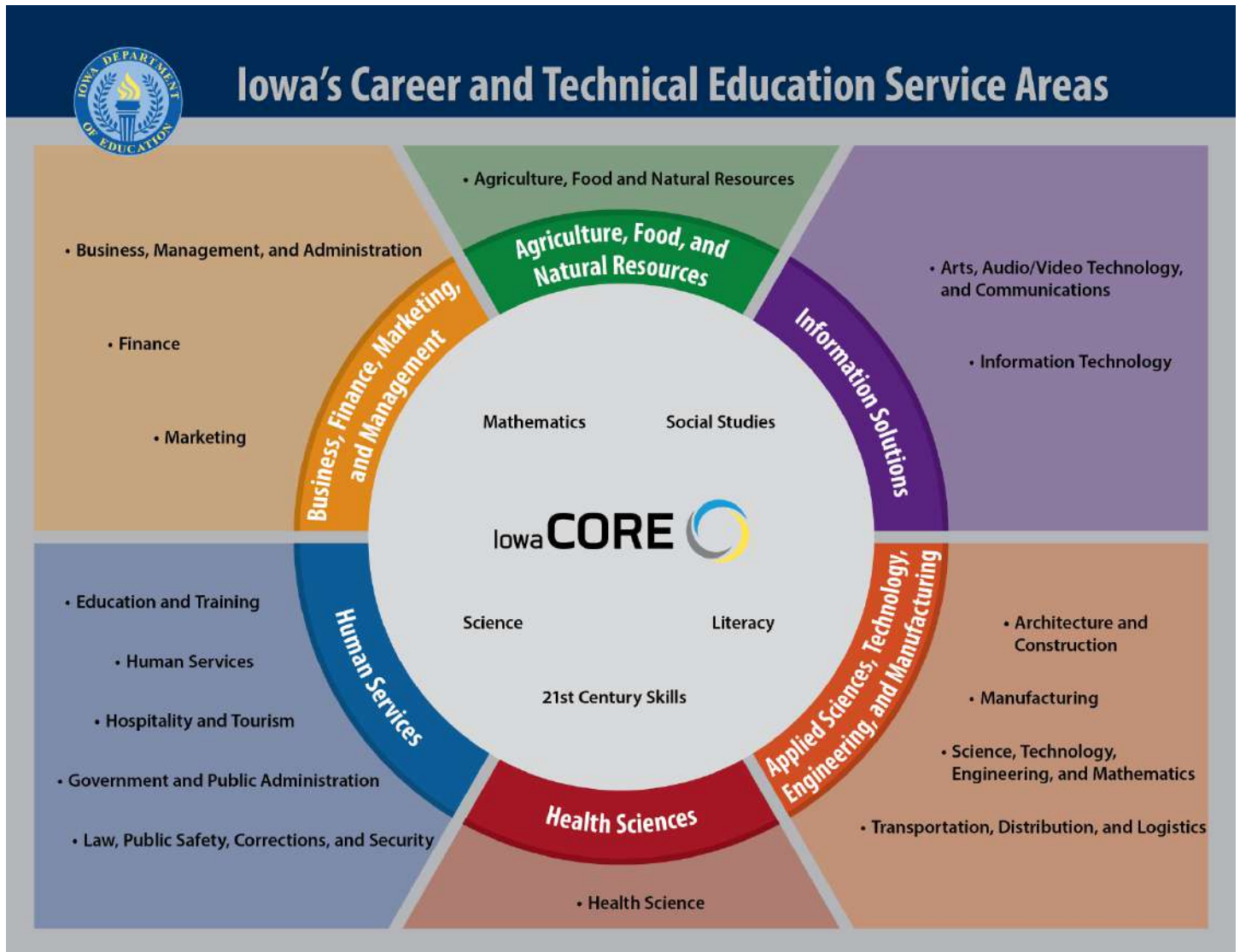
Course #: HPE450
 Grade Level: 12
 Credits: Up to 21 credits
 Length: 2 Semesters
 Format: Block
 Prerequisite: None

Considerations: This course is a part of the **Career Edge Academy** and is taught at Linn Regional Center by Kirkwood staff.

Fee: Purchase of safety and consumable materials used in the course may be required.

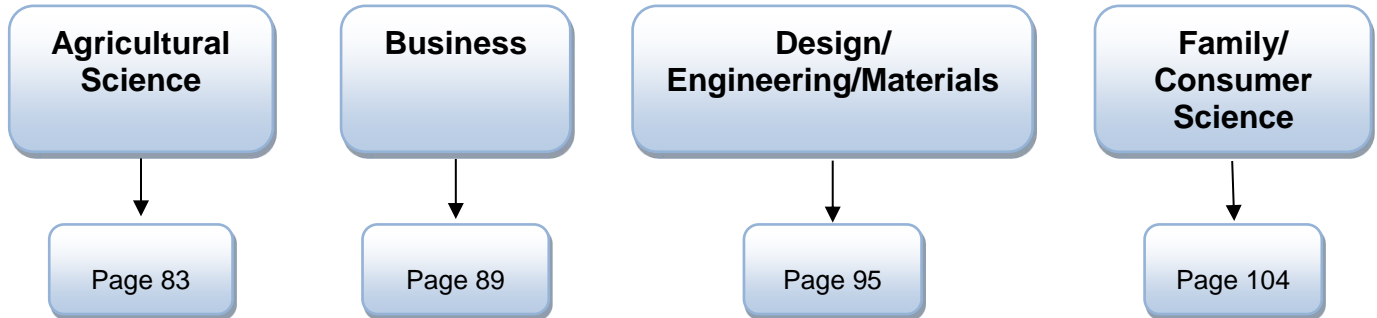
Course Description: The Health Sciences Academy includes hands-on patient care and meets for 85 minutes per day for the entire school year. Students will learn the basic expectations of a health care professional through a combination of coursework, job shadows and assisting with patient care. When completed, students will be eligible to take the Licensed Practical Nurse certification test

Career and Technical Education Service Areas and Career Clusters



Linn-Mar Career and Technical Education Pathways begin on page 135.

Linn-Mar CTE/Exploratory



Agricultural Science

PR=Prerequisite Requirement

Introduction to Agriculture, Food, and Natural Resources

AGR110
Grade: 9-10
PR: None

Aquaculture Science

AGR225
Grade: 10-12
PR: None

Principles of Agricultural Science- Animal

AGR240 or AGR240B
Grade: 10-12
PR: None

Principles of Agricultural Science- Plant

AGR250
Grade: 10-12
PR: None

Natural Resources and Ecology

AGR260
Grade: 10-12
PR: None

Food Science and Safety

AGR270
Grade: 10-12
PR: None

Animal and Plant Biotechnology

AGR280
Grade: 10-12
PR: None

Environmental Science Issues

AGR290
Grade: 10-12
PR: None

Agricultural Business Foundations

AGR325
Grade: 10-12
PR: None

Agricultural Research and Development

AGR500
Grade: 10-12
PR: None

Introduction to Agriculture, Food, and Natural Resources

Course #: AGR110
Grade Level: 9-10
Credits: 10
Length: 2 Quarters
Format: Block
Prerequisite: None



Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Introduction to Agriculture, Food, and Natural Resources introduces students to the range of agricultural opportunities and the pathways of study they may pursue.

Students will learn:

- Circles of Agricultural Education
- Communicating Today
- Science of Agriculture
- Natural Resources
- Plants and Animals
- Ag Power and Technology
- Looking Ahead

Aquaculture Science

Course #: AGR225
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Aquaculture Science is a course engaging students in hands-on laboratories and activities to explore the world of animal and plant aquaculture. Students will acquire the skills in meeting aquatic biology needs of finfish and plants while working in the department's aquaculture laboratory.

Students will learn:

- Aquaculture Industry
- Taxonomy, Habitat and Genetics
- Aquatic Biology
- Nutrients and Feeding
- Disease and Pest Management
- Water Quality and Management
- Ornamental Aquaculture
- Recreational Aquaculture

Principles of Agricultural Science-Animal



Course #: AGR240 or AGR240B
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Principles of Agricultural Science-Animal is a foundational-level course engaging students in hands-on laboratories and activities to explore the world of animal agriculture. During the course, students develop a comprehensive Producer's Management Guide for an animal of their choice.

Students will learn:

- History & Use of Animals
- Animal Handling & Safety
- Cells & Tissues
- Animal Nutrition
- Animal Reproduction
- Genetics
- Animal Health
- Animal Products, Selection & Marketing

Principles of Agricultural Science-Plant



Course #: AGR250
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Principles of Agricultural Science-Plant is a foundational-level course teaching students the form and function of plant systems. Students discover the value of plant production and its impact on the individual, the local, and the global economy.

Students will learn:

- Soils
- Anatomy and Physiology
- Taxonomy
- Growing Environment
- Reproduction
- Pest and Disease Management
- Crop Production and Marketing

Natural Resources and Ecology



Course #: AGR260
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Natural Resources and Ecology is a foundation-level course that provides students with a variety of experiences. Students select an ecosystem to study throughout the course and apply principles of natural resources and ecology from each unit of study to that ecosystem.

Students will learn:

- Biomass & Ecosystems
- Soil, Water, & Air
- Energy
- Flora and Fauna
- Human Impact
- Agriculture, Forestry, & Mining
- Multiple Use Resource Management
- Sustainability
- Environmental Policies

Environmental Science Issues



Course #: AGR290
 Grade Level: 10-12
 Credit Hours: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Environmental Science Issues is a specialization-level course that enables students to research, analyze, and propose sustainable solutions to environmental issues. Students are immersed in inquiry-based exercises filled with activities, projects, and problems, which develop data acquisition and analysis techniques, critical thinking and evaluation abilities related to environmental issues, as well as independent research and problem-solving skills.

Students will learn:

- Issue Analysis
- Biodiversity
- Energy, Technology, and Society
- Agriculture and the Environment
- Pollution Sources and Solutions
- Independent Research Project

Food Science and Safety

Course #: AGR270
Grade Level: 10-12
Credit Hours: 10
Length: 2 Quarters
Format: Block
Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Food Science and Safety is a specialization course where students explore the science behind food through chemistry and microbiology, food safety, and processing. Students apply all aspects of food science in a culminating project of food product development.

Students will learn:

- Food Chemistry & Microbiology
- Nutrition
- Processing
- Food Quality & Safety
- Product Development

Animal and Plant Biotechnology



Course #: AGR280
Grade Level: 10-12
Credit Hours: 10
Length: 2 Quarters
Format: Block
Prerequisite: None

Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Animal and Plant Biotechnology is a specialization-level course where students maintain a research level Laboratory Notebook documenting their experiences in the laboratory.

Students will learn:

- Laboratory Protocols & Safety
- Cells
- DNA & Protein
- Genetically Modified Organisms
Micropropagation
- Polymerase Chain Reaction
- Research in Biotechnology

Agricultural Business Foundations

Course #: AGR325
Grade Level: 10-12
Credit Hours: 10
Length: 2 Quarters
Format: Block
Prerequisite: None



Considerations:

Students will learn to:

- Solve problems
- Conduct research
- Analyze data
- Work in teams
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Agricultural Business Foundations introduces students to business management in agriculture. Students investigate, experiment, and learn about developing a business plan, solving problems, and communicating ideas to their peers and members of the professional community.

Students will learn:

- Starting a Business
- Financial Documents
- Risk Management
- Writing a Business Plan

Agricultural Research and Development

Course #: AGR500
Grade Level: 10-12
Credit Hours: 10
Length: 2 Quarters
Format: Block
Prerequisite: None



Considerations:

Students will learn to:

- Solve complex real-world problems
- Conduct research
- Analyze data
- Work in teams
- Develop new products
- Take responsibility for their work, actions and learning

In addition, students will understand specific connections between their lessons and SAE (supervised agricultural experience) and FFA components that are important for the development of an informed agricultural science education student.

Course Description:

Agricultural Research and Development is the capstone course designed to culminate students' experiences in agriculture, based on the pathway of study they pursued. Woven throughout the course are projects and problems based on practical applications and designed to develop and improve employability skills of students.

Students will learn:

- Defining Agricultural Research and Development
- Problems and Solutions
- Methodology
- Reporting Data
- Communication

Business Accounting/Finance

PR=Prerequisite Requirement

Personal Finance

BUS110
Grade: 9-12
PR: None

Accounting

BUS330
Grade: 10-12
PR: None

theROARstore

BUS550
Grade: 11-12
PR: Any of 2 or more Business
Courses

Advanced Accounting (AP Accounting)

BUS430
Grade: 12
PR: Accounting

Career Immersion

MOC

BUS440
Grade: 12
PR: Application and Interview

Career Immersion

MOC

BUS450
Grade: 12
PR: Application and Interview

Business Marketing/Entrepreneurship

PR=Prerequisite Requirement

Introduction to Business

BUS120
Grade: 9-12
PR: None

Economics

SOC310
Grade: 11-12
PR: None

Marketing

BUS355
Grade: 10-12
PR: None

Business/Consumer Law

BUS410
Grade: 11-12
PR: None

Entrepreneurship

BUS460
Grade: 11-12
PR: None

theROARstore

BUS550
Grade: 11-12
PR: Any of 2 or more Business Courses

AP Microeconomics

BUS510
Grade: 10-12
PR: None

Career Immersion

MOC
BUS440
Grade: 12
PR: Application and Interview

Career Immersion

MOC
BUS450
Grade: 12
PR: **Application** and Interview

Personal Finance

Course #: BUS110
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: This course meets financial literacy standards of the Iowa Core required for graduation.

Course Description: This course exposes students to areas of personal finance that they will likely encounter. The curriculum covers, among other topics: consumer awareness, money management, opening bank accounts, managing a checkbook, managing credit, applying for a job and basic information about saving and investing. Information will be presented through projects, activities, guest speakers and multimedia presentations.

Accounting

Course #: BUS330
Grade Level: 10-12
Credits: 10
Length: 2 Quarters
Format: Block
Prerequisite: None

Considerations: None

Course Description: Students will learn the fundamentals of double-entry accounting for personal and small business use. They will also learn about payroll, income tax and banking activities. Computers and various business forms will be used to help students develop a beginning understanding of the business world.

Marketing

Course #: BUS355
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: none

Course Description: Marketing is an all-encompassing look at today's business model and focuses on areas of study including, but not limited to: market planning, selling, promotion, distribution, pricing, marketing research and brand development.

Business/Consumer Law

Course #: BUS410
Grade Level: 11-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: None

Course Description: This course will develop a general understanding of legal concepts for personal and business use. As students become familiar with these concepts, they will better understand the importance of the law in general, become familiar with relevant specific laws, and explore the applications of law both in business and in personal transactions. This will be achieved through field trips and/or guest speakers, and analyzing real cases.

Advanced Accounting

Course #: BUS430
 Grade Level: 11/12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Accounting

Considerations: See prerequisite. HP 10b11. Financial calculator is required.

Course Description: This course uses an integrated approach to teach accounting, by learning how businesses plan for and evaluate their operating, financing and investing decisions and then how accounting systems gather and provide data to decision makers. The course covers all the objectives of a traditional college level financial accounting course, plus those from a managerial accounting course. Topics include: accounting information systems, time value of money, and accounting for merchandising firms, sales and receivables, fixed assets, debt, equity, statement of cash flows, financial ratios, cost-volume profit analysis and variance analysis.

MOC Internship

Career Immersion

Course #: BUS440
 Grade Level: 12
 Credits: 20
 Length: 2 Semesters
 Format: Block
 Prerequisite: See Considerations

Considerations: Must also enroll in MOC Related; admitted when hired by an MOC teacher-approved employer; receive pay in addition to credit; must commit to one year, must complete MOC application.

Course Description: MOC is a cooperative training program with area business and industry. Student interns work a minimum of 15 hours per week, learning specific career related skills and attitudes. The type of internship is based on the student's career interest and skills.

MOC Related

Career Immersion

Course #: BUS450
 Grade Level: 12
 Credits: 10
 Length: 2 Semesters
 Format: Skinny
 Prerequisite: See Considerations

Considerations: Must also enroll in MOC Internship; must commit to one year, must complete MOC application.

Course Description: Student will learn job seeking and keeping skills (teamwork, problem solving, job application, career exploration, workplace diversity, time management, listening and oral communication).

Entrepreneurship

Course #: BUS460
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: It is recommended that students enroll in one or more of the following courses prior to enrolling in Entrepreneurship; Accounting, Marketing, Business/Consumer Law, Personal Finance.

Course Description: Students will learn about starting and running their own business. A custom business plan will be developed after exploring topics such as innovation & creativity, business opportunities, marketing & marketing research, finance business operations, and monitoring success. BizInnovator Curriculum, developed by the University of Iowa, will be used and is tied into the National Entrepreneurship Standards, the Iowa Core Curriculum, and 21st Century Skills.

Introduction to Business

Course #: BUS120
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: This course will give students an overview of the study of business. It will allow students to see and briefly experience all aspects, including Business Ownership and Entrepreneurship, Management and Organization, Human Resources, Marketing, Finance and Accounting.

Economics

Course #: SOC310
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: Students should be comfortable working with charts and tables.

Course Description: This course will focus on economic concepts (scarcity, choice, incentives); supply, demand, and markets; microeconomics (production, productivity, competitive markets); and macroeconomics (the economy in the aggregate, inflation, unemployment).

AP Microeconomics

W

Course #: BUS510
 Grade Level: 11-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Economics is recommended

Considerations: Students should be comfortable working with charts, tables, numbers, and equations. Students may take the AP Microeconomics exam in May.

Course Description: This course will focus on economic concepts (scarcity, choice, incentives); supply, demand, and markets; product markets (production, productivity, competitive markets); resource markets (demand for resources, wage rates); microeconomics of government; microeconomic issues and policies.

theROARstore

Course #: BUS550
Grade Level: 11-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Any of 2 or more Business courses

Considerations: This class has a work component built-in and may require students to work outside of normal instructional time.

Course Description: Students will be involved in the continued development and on-going operations of theROARstore. theROARstore is a student-run business, specializing in selling branded Linn-Mar merchandise. Students will learn customer service and selling skills in the classroom and develop & hone them while working in the store. In addition, students will spend time on developing theROARstore's product mix, price the products accordingly, and promote them using social media, email marketing, and website design. Activities may include (but are not limited to): research and development, market & product planning, promotion, pricing, merchandising, selling, management, distribution, and financial analysis. Skills needed to be successful include: creative and logical thinking, timeliness, dependability, willingness to work as a team, effective communication, attention to detail, ethical behavior, and professional and mature demeanor when working with customers, advisors, and individuals in positions of authority.

Design/Engineering/Materials

Design & Engineering

PR=Prerequisite Requirement

Introduction to Engineering Design (IED)

IND600
Grade: 9-12
PR: Algebra

Computer Science Essentials (CSE)

IND645
Grade: 9-12
PR: None

Principles of Engineering (POE)

IND610
Grade: 10 -12
PR: Algebra

Computer Science Principles (CSP)

IND650
Grade: 9-12
PR: Algebra

Civil Engineering and Architecture Design (CEA)

IND630
Grade: 10-12
PR: Algebra

Advanced Placement Computer Science A (CSA)

IND660
Grade: 10-12
PR: IND645 or IND650

Digital Electronics

IND620
Grade: 10-12
PR: Algebra

Career Immersion MOC

BUS450
Grade: 12
PR: Application and Interview

Aerospace Engineering

IND670
Grade: 10-12
PR: Introduction into Engineering
Design

Design/Engineering/Materials Construction/Carpentry

PR=Prerequisite Requirement

Woods: Materials & Processes

IND240

Grade: 10-12

PR: None

Cabinet Making (Woods II)

IND250

Grade: 10-12

PR: Woods: M&P

Residential Construction I

IND120

Grade: 9-12

PR: None

Residential Construction II

IND125

Grade: 11-12

PR: Residential Construction I

Capstone Building Trades

IND500

Grade: 12

PR: Application and Interview

Career Immersion

MOC

BUS450

Grade: 12

PR: Application and Interview

Design/Engineering/Materials Manufacturing

PR=Prerequisite Requirement

Mechanical Drawing

IND110

Grade: 9-12

PR: None

Computer Integrated Manufacturing

IND640

Grade: 9-12

PR: Algebra

Metals: Materials and Processes

IND310

Grade: 11-12

PR: None

Engineering Design and Development (EDD)

IND680

Grade: 12

PR: Introduction to Eng. Design and one
other PLTW Engineering course.

Career Immersion

MOC

BUS450

Grade: 12

PR: Application and Interview

Mechanical Drawing

Course #: IND110
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: None

Course Description: This course is designed to provide practical application of drafting knowledge practices through sketching and computer aided drafting (CAD). Students learn to use different types of drawing to describe and communicate ideas.

Residential Construction I

Course #: IND120
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: none

Considerations: None

Course Description: This is an introductory course for students who wish to explore the construction industry and related careers. Major activities covered through construction of a wall section include: concrete framing, roofing, plumbing and electrical.

Residential Construction II

Course #: IND125
Grade Level: 11-12 or approval
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Residential Const I

Considerations: None

Course Description: This is an advance course that provides students an opportunity to learn about materials, processes and careers found in Residential Construction. Activities include building and expanding on basics covered in Residential Construction I.

Woods: Materials and Processes

Course #: IND240
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none

Considerations: Grade of 80% or higher for second quarter of Woods: Materials and Processes is required.

Course Description: This course is designed to teach skills necessary for basic woodworking applications. The course stresses student safety through a series of demonstrations and safety tests. Students will plan and construct introductory projects to gain skills necessary to complete a final project of their choosing. A lathe project is also required.

Cabinet Making

Course #: IND250
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Woods: Materials and Processes

Considerations: Grade of 80% or higher for second quarter of Woods: Materials and Processes is required.

Fees: Students will be allotted materials for required projects. Additional fees may be charged if a student exceeds the allotted amount

Course Description: This course is designed to expand basic skills learned in Woods: Materials and Processes. A review of machine safety will precede project work. Students will design and draw plans for their project, calculate costs and devise a plan of procedure for completion of their project prior to starting work. Project work will be required to include at least one dovetailed drawer, rail, stile and panel piece.

Metals: Materials and Processes

Course #: IND310
 Grade Level: 11-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none

Considerations: Fees the same as Cabinet Making

Course Description: This course will provide students the opportunity to explore the field of metal and develop skills in working with metal fabrication. The areas covered are welding, sheet metal, machining, and foundry.

Building Trades Capstone Course

Course #: IND500
 Grade Level: 12
 Credits: 20
 Length: 2 Semesters
 Format: Block
 Prerequisite: none
 Fees: purchase of safety equipment such as glasses or ear protection

Considerations: Limit of seven Linn-Mar students. Students are selected by recommendation of Linn-Mar staff. Student must provide transportation to off-campus site.

Course Description: Linn-Mar and Marion High School students work two hours a day to build a full-sized house. The course includes all skills and tasks needed to complete this activity.

Intro to Engineering Design

Course #: IND600
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Co-requisite: Have taken or currently taking Algebra



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: Students in this hands-on, project-based course will focus on creative design processes, communication and teamwork skills. 3D CAD software will be used to produce, analyze, and evaluate product modes. Sketching, geometric relationships, 3D modeling, production and marketing will be studied through the development of designs.

Principles of Engineering

Course #: IND610
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra



Considerations: See prerequisites. Students will earn credit for this course from Kirkwood Community College upon successful completion.

Course Description: Students will apply science and math to solve practical problems. Topics covered include machines, kinematics, thermodynamics, control systems and materials. This course will give students an idea of what some college engineering coursework is like.

Digital Electronics (DE)

Course #: IND620
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: This course is the study of electronic circuits that are used to process and control digital signals as opposed to analog signals that are varying. This distinction allows for greater signal speed and storage capabilities and has revolutionized the world of electronics. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.

Civil Engineering and Architectural Design (CEA)

Course #: IND630
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra

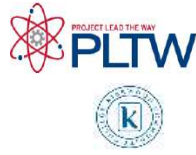


Considerations: This course articulates credit with Kirkwood Community College.

Course Description: Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. Students will use 3D design software to design and document solutions for major course projects. Students communicate and present solutions to their peers and members of a professional community of engineers and architects.

Computer Integrated Manufacturing (CIM)

Course #: IND640
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Co-requisite: Algebra



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: 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, they are learning about the history of manufacturing, robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems.

Computer Science Essentials (CSE)

Course #: IND645
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None



Considerations: Students with no prior computer science experience can take this as a first computer science course. Academically confident/motivated students or students with a bit of prior programming experience may skip CSE and sign up for Computer Science Principles (CSP).

Course Description: In this entry level computer science course, students will learn to program apps using a graphical, block-based programming language. After learning fundamentals of programming, student's transition to text-based programming using the Python language. Students will continue using Python as they learn to create web applications. Students will use a variety of tools and computational thinking concepts as they build confidence and gain experience in the field of computer science.

Computer Science Principles (CSP)

Course#: IND650
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Corequisite: Algebra or concurrent enrollment in Algebra



Considerations: Students who want a beginner level computer science experience should take Computer Science Essentials (CSE) as their first course. Academically motivated / confident students or students with a bit of prior programming experience may choose to skip CSE and register for CSP.

Course Description: Explore a variety of fields within computer science: Python programming, app development, visualization of data, image data manipulation, graphical user interfaces, cybersecurity, simulation, and creating webpages. This course aims to develop computational thinking, generate interest in career paths that utilize computing, and introduce a variety of professional tools that foster creativity and collaboration. CSP helps students develop programming experience, confidence and explore the workings of the Internet.

Advanced Placement Computer Science A (CSA)

Course #: IND660
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Corequisite: Computer Science Essentials (CSE) or Computer Science Principles (CSP)



Considerations: Students need prior programming experience outside of school. Computer Science A is a very challenging course. This is a Project Lead The Way (PLTW) course. This course prepares students for the AP Computer Science A exam.

Course Description: CSA students will learn fundamentals of the Java programming language and continue on to object oriented programming. Students develop skills in solving computational problems, writing algorithms, testing code, and processing data.

Aerospace Engineering (AE)

Course #: IND670
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None



Considerations: It is recommended that students have prior experience with Autodesk Inventor.

Course Description: The major focus of the Aerospace Engineering course is to expose students to the world of aeronautics, flight, and engineering. Students will employ engineering and scientific concepts in the solution of aerospace problems. Lessons will engage students in engineering design problems related to aerospace information systems, astronautics, rocketry, propulsion, the physics of space science, space life sciences, the biology of space science, principles of aeronautics, structures and materials, and systems engineering.

Engineering Design and Development (EDD)

Course #: IND680
 Grade Level: 12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Introduction to Engineering Design and one other PLTW Engineering course.

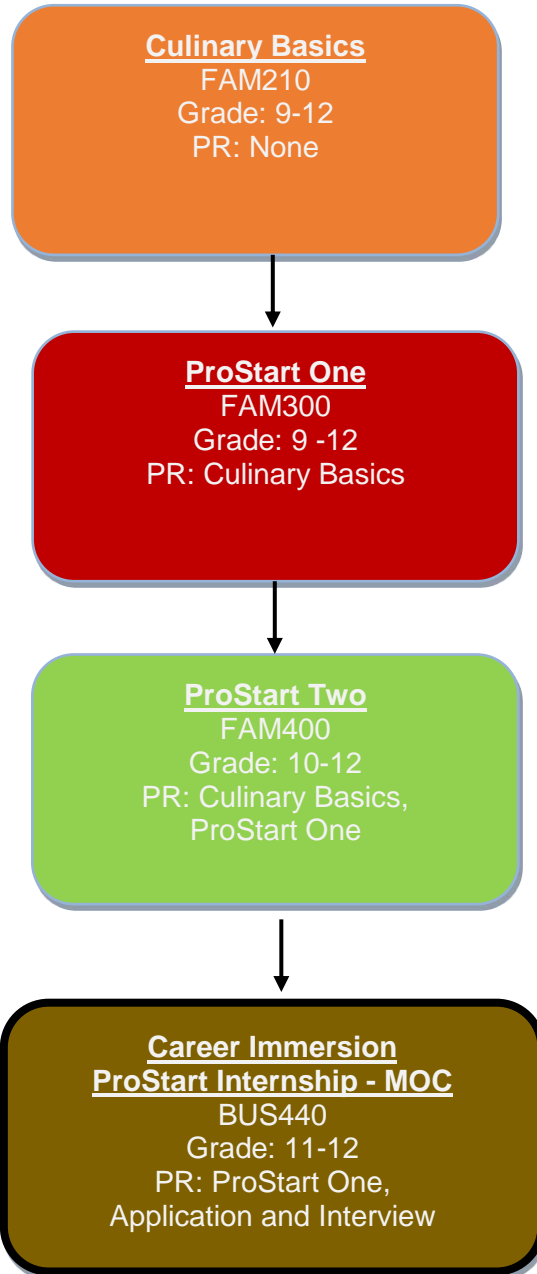


Considerations: EDD is a culminating capstone course. In order to have a solid foundation for this course, students need successful completion of the prerequisites Introduction to Engineering Design and one of the following courses: Principles of Engineering, Digital Electronics, Aerospace Engineering, Civil Engineering and Architecture, Computer Integrated Manufacturing, Environmental Sustainability, or Computer Science Principles.

Course Description: Utilizing activity-project-problem-based (APPB) teaching and learning pedagogy, students will perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams of students will design, build, and test their solution. Finally, student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem solving abilities, and their understanding of the design process.

Family/Consumer Sciences Culinary

PR=Prerequisite Requirement



Family/Consumer Sciences

Child Development/Education

PR=Prerequisite Requirement

Foundations of Living

FAM100

Grade: 9-12

PR: None

Human Growth and Development

FAM440

Grade: 10-12

PR: None

KCC Child Growth and Development

FAM425

Grade: 11-12

PR: KCC qualifying
placement score

Exploring Teaching

FAM450

Grade: 11-12

PR: KCC qualifying
placement score and one Growth
and Development course

Career Immersion

MOC

BUS450

Grade: 12

PR: Application and Interview

Family/Consumer Sciences Home

PR=Prerequisite Requirement

Foundations of Living

FAM100
Grade: 9-12
PR: None

Fashion and Sewing / Creative Sewing

FAM220
Grade: 10-12
PR: None

Interior Design

FAM240 or FAM240B
Grade: 9-12
PR: None

Advanced Sewing

FAM250
Grade: 10-12
PR: Creative Sewing

Career Immersion

MOC
BUS450
Grade: 12
PR: Application and Interview

Foundations of Living

Course #: FAM100
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: none

Considerations: none

Course Description: Students explore basic fundamentals of home and life management. Curriculum covers multiple focuses, including Child Development- infant through preschool, Home Design- living spaces and design principles, and Fashion and Sewing- Clothing choices and sewing skills.

Culinary Basics

Course #: FAM210
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: none

Considerations: none

Course Description: This is an introductory foods course that develops skills and techniques related to the selection, storage, and preparation of basic foods.

Fashion and Sewing / Creative Sewing

Course #: FAM220
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: none

Considerations: none

Course Description: Students will learn to sew or increase sewing skills in this hands-on project based course. Various tools and equipment will be used to produce a variety of projects. Students will also examine their personal style, apply design principles to clothing and learn about careers in the fashion industry.

Interior Design

Course #: FAM240 or FAM240B
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: none

Considerations: none

Course Description: This course investigates housing choices and the design of living areas. Students explore, apply, and evaluate the elements and principles of design, wall and floor treatments, furniture styles and arrangement, housing types available, floor plan design, landscaping, financial aspects related to housing, and related careers.



Advanced Sewing

Course #: FAM250
Grade Level: 10-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Fashion & Sewing/
Creative Sewing with
grade of B or better

Considerations: This is an advanced level, project-based class for independent sewers.

Course Description: Students in this class will increase sewing machine skills by creating multiple projects with minimal instructor assistance. Also, students will explore other textile production methods such as embroidery, knitting, dyeing, and weaving.

ProStart One

Course #: FAM300
Grade Level: 9 - 12
Credits: 10
Length: 1 Semester
Format: Block
Prerequisite: Culinary Basics

Considerations: Kirkwood Credits upon completion of ProStart program

Course Description: Topics addressed in ProStart One include successful customer relations, food safety, workplace safety, kitchen basics, foodservice equipment, communication, workplace ethics, and careers in the hospitality and tourism industry. Food preparation labs will include the following foods: stocks, soups, sauces, fruits, vegetables, potatoes, and grains.

ProStart Two

Course #: FAM400
Grade Level: 10 - 12
Credits: 10
Length: 1 Semester
Format: Block
Prerequisite: Culinary Basics, ProStart One, ProStart Internship (ongoing)

Considerations: Kirkwood credits earned upon completion of ProStart program

Course Description:

Topics include sustainability in the food service industry and global cuisine in America, Europe, the Mediterranean, the Middle East, and in Asia with an emphasis on nutrition and cost control. Food preparation labs will include the following: breakfast foods and sandwiches, salads, garnishing, meat, poultry, seafood, desserts, and baked goods.

Human Growth and Development

Course #: FAM440
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: This is a general comprehensive course of human development. This course combines the two previously taught courses of Child Development and Parenting. Relevant career paths include education, child care, nursing, counseling, therapy, social work, public health, and other service-related fields.

Course Description: This course explores the different stages of human life- Prenatal, Infancy, Childhood, Adolescence, and Adulthood. Developmental milestones and major life events of an individual will be examined. This course provides an opportunity to interact with children of various ages to learn about will be practiced.

KCC Child Growth and Development



Course #: FAM425
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: KCC qualifying placement score

Considerations: This is a concurrent course with Kirkwood Community College and is encouraged for those considering careers in education, social work, nursing, therapy, psychology, coaching etc. It is recommended to have taken Human Growth and Development as a foundation but is not required. This is the first course necessary to obtain the Para-Educator Generalist Certification. The second course is Exploring Teaching and the third course is Behavior Management-online.

Course Description: Students will earn credit from Kirkwood Community College upon successful completion of this course. This course will study the development of children thru adolescence age. Areas of study will examine interactions between child, family, school and society. Theories and evidence-based practices associated with understanding and supporting children will be covered. This course provides opportunities to observe in an elementary classroom.

KCC Exploring Teaching



Course #: FAM450
Grade Level: 11-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: Human Growth and Development or KCC Child Growth and Development

Considerations: This is a concurrent course with Kirkwood Community College and is recommended for those considering careers in education. This is the second course necessary to obtain the Para-Educator Generalist Certification. The third course is Behavior Management-online.

Course Description: This class will promote understanding of the teaching and learning process. Students will be given an introduction to the activities and concerns of beginning teachers. The focus is on developing the skills, knowledge and attitude that will be needed to teach in elementary and secondary classrooms. Microteachings are utilized to simulate actual teaching situations and common teaching problems are discussed through case studies.

ProStart Internship

Course #: BUS440
Grade Level: 10 - 12
Credits: 20
Length: 1 Semester
Format: Block
Prerequisite: Culinary Basics and ProStart One

Considerations: Kirkwood credits earned upon completion of ProStart program

Course Description:

Should be taken between ProStart One and ProStart Two. Must be taken if interested in Kirkwood Community College credit. While classroom experience is necessary to learn the foundational culinary and management skills, nothing beats real-life experience gained by working in the industry. Students must have a minimum of 400 hours of paid work experience. They must complete 52 of 75 competencies from the Student Work Experience Checklist, to be determined by employers.



These courses are also found in the Science and DEM Department courses offered.

Intro to Engineering Design

Course #: IND600
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Co-requisite: Have taken or currently taking Algebra



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: Students in this hands-on, project-based course will focus on creative design processes, communication and teamwork skills. 3D CAD software will be used to produce, analyze, and evaluate product modes. Sketching, geometric relationships, 3D modeling, production and marketing will be studied through the development of designs.

Principles of Engineering

Course #: IND610
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra



Considerations: See prerequisites. Students will earn credit for this course from Kirkwood Community College upon successful completion.

Course Description: Students will apply science and math to solve practical problems. Topics covered include machines, kinematics, thermodynamics, control systems and materials. This course will give students an idea of what some college engineering coursework is like.

Digital Electronics (DE)

Course #: IND620
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: none



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: This course is the study of electronic circuits that are used to process and control digital signals as opposed to analog signals that are varying. This distinction allows for greater signal speed and storage capabilities and has revolutionized the world of electronics. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.

Civil Engineering and Architectural Design (CEA)

Course #: IND630
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Algebra

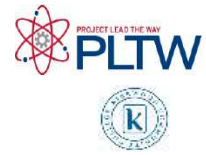


Considerations: This course articulates credit with Kirkwood Community College.

Course Description: Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. Students will use 3D design software to design and document solutions for major course projects. Students communicate and present solutions to their peers and members of a professional community of engineers and architects.

Computer Integrated Manufacturing (CIM)

Course #: IND640
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Co-requisite: Algebra



Considerations: This course articulates credit with Kirkwood Community College.

Course Description: 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, they are learning about the history of manufacturing, robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems.

Computer Science Essentials (CSE)

Course #: IND645
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None



Considerations: Students with no prior computer science experience can take this as a first computer science course. Academically confident/motivated students or students with a bit of prior programming experience may skip CSE and sign up for Computer Science Principles (CSP).

Course Description: In this entry level computer science course, students will learn to program apps using a graphical, block-based programming language. After learning fundamentals of programming, student's transition to text-based programming using the Python language. Students will continue using Python as they learn to create web applications. Students will use a variety of tools and computational thinking concepts as they build confidence and gain experience in the field of computer science.

Computer Science Principles (CSP)

Course#: IND650
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Corequisite: Algebra or concurrent enrollment in Algebra



Considerations: Students who want a beginner level computer science experience should take Computer Science Essentials (CSE) as their first course. Academically motivated / confident students or students with a bit of prior programming experience may choose to skip CSE and register for CSP.

Course Description: Explore a variety of fields within computer science: Python programming, app development, visualization of data, image data manipulation, graphical user interfaces, cybersecurity, simulation, and creating webpages. This course aims to develop computational thinking, generate interest in career paths that utilize computing, and introduce a variety of professional tools that foster creativity and collaboration. CSP helps students develop programming experience, confidence and explore the workings of the Internet.

Advanced Placement Computer Science A (CSA)

Course #: IND660
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Corequisite: Computer Science Essentials (CSE) or Computer Science Principles (CSP)



Considerations: Students need prior programming experience outside of school. Computer Science A is a very challenging course. This is a Project Lead The Way (PLTW) course. This course prepares students for the AP Computer Science A exam.

Course Description: CSA students will learn fundamentals of the Java programming language and continue on to object oriented programming. Students develop skills in solving computational problems, writing algorithms, testing code, and processing data.

Aerospace Engineering (AE)

Course #: IND670
 Grade Level: 10-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None



Considerations: It is recommended that students have prior experience with Autodesk Inventor.

Course Description: The major focus of the Aerospace Engineering course is to expose students to the world of aeronautics, flight, and engineering. Students will employ engineering and scientific concepts in the solution of aerospace problems. Lessons will engage students in engineering design problems related to aerospace information systems, astronautics, rocketry, propulsion, the physics of space science, space life sciences, the biology of space science, principles of aeronautics, structures and materials, and systems engineering.

Engineering Design and Development (EDD)

Course #: IND680
 Grade Level: 12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: Introduction to Engineering Design and one other PLTW Engineering course.



Considerations: EDD is a culminating capstone course. In order to have a solid foundation for this course, students need successful completion of the prerequisites Introduction to Engineering Design and one of the following courses: Principles of Engineering, Digital Electronics, Aerospace Engineering, Civil Engineering and Architecture, Computer Integrated Manufacturing, Environmental Sustainability, or Computer Science Principles.

Course Description: Utilizing activity-project-problem-based (APPB) teaching and learning pedagogy, students will perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams of students will design, build, and test their solution. Finally, student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem-solving abilities, and their understanding of the design process.

Environmental Sustainability

(Previously was Biotechnical Engineering)

Course #: SCI620
Grade Level: 10-12
Credits: 10
Length: 2 Quarters
Format: Block
Prerequisite: Algebra AND
General Biology



Considerations: See prerequisites. This is course in the Project Lead the Way engineering sequence. Students will earn credit for this course from Kirkwood Community College upon successful completion.

Course Description: Students will investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy. Applying their knowledge through hands-on activities and simulations, students' research and design potential solutions to these true-to-life challenges.

Linn-Mar Digital Learning

Blended Learning

A variety of courses at Linn-Mar High School are offered in a Blended Learning format. Blended Learning courses currently include:

Advanced English III	Interior Design
Advanced US History 9	Introductory Psychology
Algebra 2A	Physics I
Anatomy & Physiology	PLTW Computer Science A (CSA)
Applied Chemistry and Physics	PLTW Computer Science Principles (CSP)
Astronomy	Principles of Ag Science - Animal
Contemporary Literature	Sociology
Creative Writing	Spanish III
Digital Photography	Spanish IV
Earth Science	Spanish V
English III	Speech
French I	US History 9
French IV	Work Experience - Yearbook
General Biology	World History
Health I	

Students involved in Blended Learning will interact with course content through a combination of face-to-face and digital instructional methods. Students participating in Blended coursework are exposed to both face-to-face instruction and online learning on a schedule that flexes day-to-day and week-to-week, depending on individual student and course needs.

Credit Recovery

APEX As more opportunities become available online for academic preparation, LMHS is developing a framework for such options as deemed appropriate. Currently, APEX offerings are available, primarily for Credit Recovery, through the Academic Assistance Center.

Financial Literacy

EVERFI - Financial Literacy™ will be a significant component of an option for students to meet required financial literacy standards.

Linn-Mar Extension Opportunities

In an effort to provide students the opportunity to extend interest in a particular area, Linn-Mar High School is developing a framework to allow for these opportunities. While a Linn-Mar Projects component is under development, current extension offerings are provided through courses in the Project Lead the Way (PLTW) program and for those students identified to be a part of the Linn-Mar Talented and Gifted program.

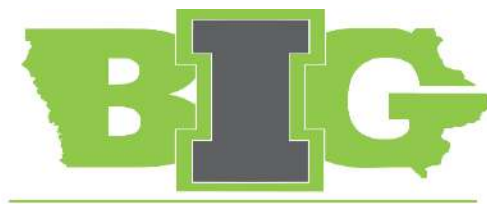
Project Lead the Way (PLTW) is a national program with courses designed to prepare students for a career in engineering or engineering technology. Emphasis is placed on applied learning through a challenging and engaging “hands-on” project-based approach. A national standards-based curriculum is followed. Courses for Project Lead the Way offered at Linn-Mar High School include:

- Introduction to Engineering Design (IED)
- Digital Electronics (DE)
- Principles of Engineering (PoE)
- Environmental Sustainability (ES)
- Computer Integrated Manufacturing (CIM)
- Civil Engineering and Architectural Design (CEA)
- Computer Science Essentials (CSE)
- Computer Science Principles (CSP)
- Computer Science A (CSA)
- Aerospace Engineering (AE)
- Engineering Design and Development (EDD)

Talented and Gifted

This program is for students identified according to established district guidelines. The program begins in 9th grade with a required quarter-long career awareness and college planning seminar designed especially for TAG students. 9th grade students also have the option of choosing to take Advanced US History 9 and Advanced English I; both of which are open to all students, but stress academic rigor and presenting the student with challenge.

10th, 11th, and 12th grade students may elect to take an independent study course, allowing them to design their own in-depth study. Advanced Placement courses are also available to all students in these upper grades.



Iowa BIG

The **core design principles** are:

- Use student passion to drive deep learning and deliver core academic credits
- Engage students in authentic community projects, problems, and opportunities
- Connect students more deeply to the people and resources of their community (Marion and Cedar Rapids).

We believe that educational options are necessary for every student to be successful. We must provide students with as many contextually-rich experiences as possible so they not only develop basic skills, but, more importantly, they can competently use those skills to solve real problems and make new things happen.

To reach every student, we would have to create a model that had the exact same goal as our local public schools—a rigorous and applicable education—but achieve that goal through very different means.


As a result, Iowa BIG’s pedagogy centers on the following tenets:

1. *The student must choose and love the project.* Iowa BIG employs a project pool that is custom generated for us by our community. These projects come from the real needs of businesses, non-profits, and government agencies and are translated into “teenager” by our faculty. Students are free to choose projects they are passionate about. Students and faculty also pitch projects into the pool, which are then partnered with our community.
2. *The project must be interdisciplinary.* All projects at Iowa BIG cover material and require understandings of content from multiple traditional courses. This ensures the efficiency of our model and that our projects never become solely “problems from the back of the book.”

2020-2021 Linn-Mar Course Credit through Iowa BIG

<u>Site</u>	<u>Linn-Mar Course</u>	<u>Discipline</u>	<u>Iowa BIG Course</u>
Boyson	Business elective	Business	Advanced Professional Studies
Boyson	Marketing (BUS355)	Business	Sales & Marketing
Boyson	Personal Finance (BUS110)	Business	Advanced Financial Decision Making
Boyson	Journalism (ENG 220)	English	Journalism
Boyson/NewBo	Business elective	Business	Project Management Basics (KCC)
Boyson/NewBo	Entrepreneurship (BUS460)	Business	Entrepreneurship
Boyson/NewBo	Computer Science A (IND660)	Computer Science	Computer Science A
Boyson/NewBo	Communications (ENG390)	English	Communications
Boyson/NewBo	Contemporary Lit (ENG310)	English	Contemporary Literature
Boyson/NewBo	Creative Writing (ENG410)	English	Creative Writing
Boyson/NewBo	Intro to College Writing (ENG420)	English	Introduction to College Writing
Boyson/NewBo	English elective	English	Perspectives in Lit & Composition
Boyson/NewBo	English elective	English	US Humanities & Composition
Boyson/NewBo	English II (ENG210)	English	English II
Boyson/NewBo	Probability & Statistics (MAT330)	Mathematics	Probability & Statistics
Boyson/NewBo	General elective	Science	Introduction to Agile Mindset
Boyson/NewBo	Science elective	Science	Environmental & Ecological Problems
Boyson/NewBo	Science elective	Science	Honors Scientific Research & Design
Boyson/NewBo	Economics (SOC310)	Social Studies	Economics
Boyson/NewBo	Government (SOC400)	Social Studies	Government
Boyson/NewBo	Introductory Psychology (SOC340)	Social Studies	Introductory Psychology
Boyson/NewBo	Social Studies elective	Social Studies	Using Tech to Solve Social Issues
Boyson/NewBo	Sociology (SOC330)	Social Studies	Sociology
NewBo	Art elective	Art	Digital Imaging
NewBo	Art elective	Art	Foundation of Art
NewBo	Design Art Basics (ART110)	Art	Design Art Basics
NewBo	Digital Photography (ART400)	Art	Digital Photography
NewBo	Math elective	Mathematics	Finite Topics with Statistics
NewBo	Math elective	Mathematics	Senior Math


Freshman Seminar TAG 1

Course #: TAG410 
Grade Level: 9
Credits: 2.5
Length: 1 Quarter
Format: Skinny
Prerequisite: Instructor Approval

Considerations: This course is for students identified by established district guidelines.

Course Description: Students explore how their skills, abilities, and specific personality traits relate to educational and career options. They will also study the college admissions process, scholarship application process, and how to find a college that best suits their goals. Students also participate in a community service project.


Independent Study TAG 5

Course #: TAG510 
Grade Level: 10-12
Credits: 5
Length: 1 Semester
Prerequisite: Instructor Approval

Considerations: This course is for students identified by established district guidelines.

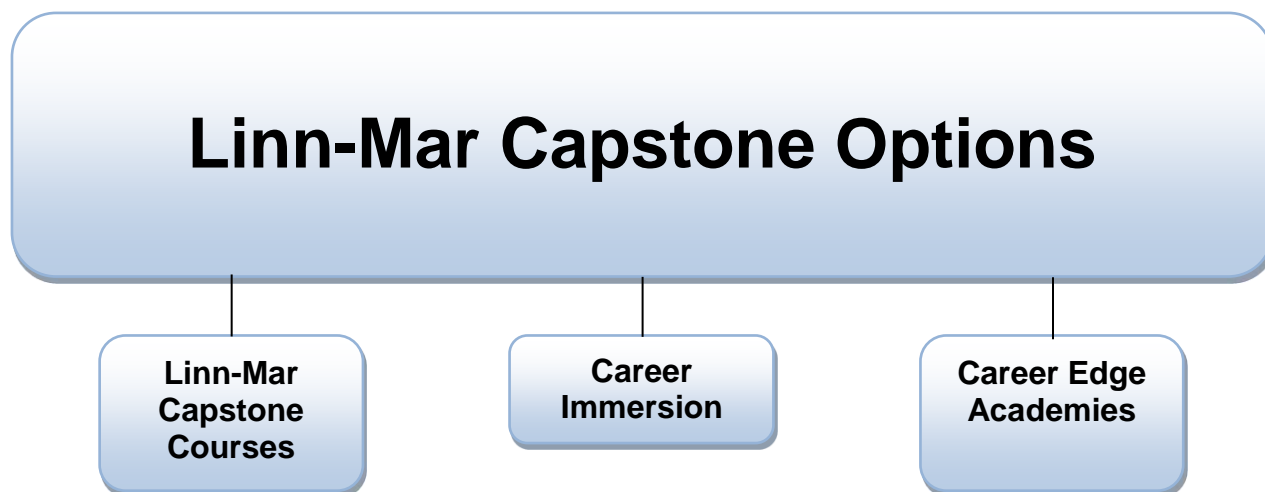
Course Description: This course is designed for students with demonstrated research skills who have a commitment to independent learning. Working with mentors from the community, students will plan and complete independent in-depth projects.

AP Independent Study

Course #: TAG620 
Grade Level: 10-12
Credits: 5-10
Length: 1-2 Semesters
Prerequisite: Instructor Approval

Considerations: This course is for students identified by established district guidelines.

Course Description: This course is offered through the Iowa Online AP Academy. You need at least one skinny in your schedule. Limited enrollment.



Linn-Mar Capstone Courses

A “capstone” experience is an in-school immersion into the actual work environment of a particular job/subject area. These application opportunities allow a student to be trained in the specific skills of a particular work environment, as well as to be provided with experience in the career area. The following Capstone courses are currently being offered or developed:

- Building and Trades
- LM Store
- LM Culinary (developing)
- LM Teaching and Development
- Engineering Design and Development (EDD)
- Capstone Project in Agriculture, Aquaculture, Food and Natural Resources (developing)

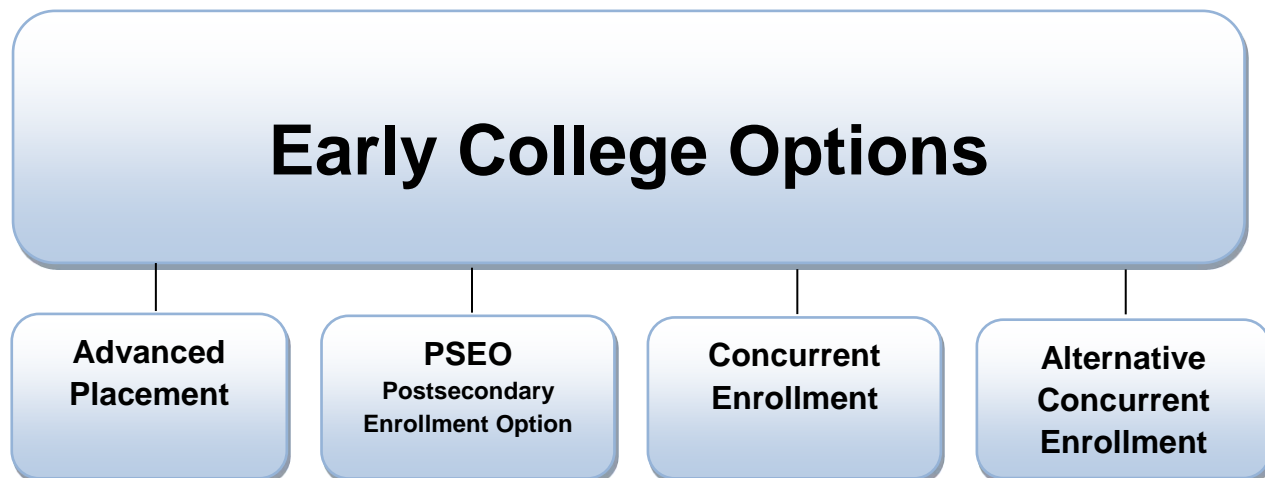
Career Immersion

Career Immersion opportunities include internships, job shadows, and other experiences on the actual job site. These opportunities are provided through the MOC program, a partnership with The Workplace Learning Connection, and other businesses and agencies. Please see a counselor for more information on these opportunities.

Career Edge Academies

Career Edge Academies are opportunities to explore high demand careers while earning both high school and college credit. Linn-Mar and other area high schools have teamed with Kirkwood Community College to create several courses that will help students explore careers, develop new skills, and gain insights into today's workplace. Academics include:

- Advanced Manufacturing with Robotics and Welding
- Architecture, Construction & Engineering (ACE)
- Automotive Technology and Collision Repair & Restoration
- Computer Programming & Software Development (Coding)
- Dental
- Emergency Medical Technician (EMT)
- Energy, Electrical and Automation
- Network & Cyber Security
- Patient Care
- Pharmacy Technician
- Pre-Professional Health Careers
- Transportation



Advanced Placement

Linn-Mar High School offers Advanced Placement (AP) courses in Art History, Calculus (AB and BC), Statistics, Biology, Chemistry, Environmental Science, Physics (1 & 2), Computer Science A, English Literature and Composition, French, Microeconomics, Music Theory, Comparative Government, World History, Psychology, U.S. Government, and U.S. History. A minimal number of AP courses are available through the Iowa AP Online Academy. Students who complete these courses can take a standard AP exam. Many colleges and universities accept AP courses for college credit, depending upon individual AP exam scores. More information is available in the Counseling Office or the TAG Office.

AP course are weighted for grade point calculation purposes as follows:

A+; A (5.0); A- (4.67); B+ (4.33); B (4.0); B- (3.67); C+ (3.33); C (3.0); C- (2.67); D+ (2.33); D (2.0); D- (1.67)

Post-Secondary Opportunities (PSEO)

Credit may be awarded by a college or university upon successful completion of course requirements. Any college credit determination is made by an individual college.

Students may enroll in college courses under the following provisions:

- The PSEO is intended for 11th and 12th grade students as part of their four-year plan.
- A course chosen under this option must not be a comparable course to one offered in the local high school curriculum.
- The chosen course may not replace graduation requirements.
- The school district will pay up to \$250 for related tuition and related course fees. Students are responsible for textbook fees.
- A student must complete the course with a passing grade in order for the school district to pay for the course.
- Students must maintain the minimum high school course load.

Concurrent and Alternative Concurrent Enrollment Courses

Concurrent and Alternative Concurrent Enrollment courses receive both Linn-Mar and Kirkwood Community College credit upon successful completion of course requirements. Students taking a Concurrent or an Alternative Concurrent Enrollment course must meet and follow all course guidelines of Kirkwood Community College and understand that course performance becomes part of the individual's permanent college record.

Concurrent and Alternative Concurrent Enrollment Courses (cont.)

Students may enroll in Concurrent or Alternative Concurrent college courses under the following provisions:

- Alternative Concurrent Enrollment courses are intended for 9-12th grade students as part of their four-year plan.
- A course chosen under this option must be on the 28E agreement list (courses listed below) between Linn-Mar and Kirkwood Community College.
- The chosen course may not replace graduation requirements.
- The school district will pay for related tuition and related course fees.
- Students must maintain the minimum high school course load.
- Students wishing to enroll in Alternative Concurrent Enrollment courses must have a qualifying ACT, Accuplacer (Reading & Writing), or ALEKS (Math) placement exam score as required on file with Kirkwood Community College.

Concurrent Enrollment Courses

The following is a list of college-level courses offered on the Linn-Mar campus:

Childhood Growth and Development	Exploring Teaching
Civil Engineering and Architectural Design	Intermediate Spanish I
Composition I	Intermediate Spanish II
Composition II	Intro to Engineering Design
Computer Integrated Manufacturing	Mathematics and Society
Computer Science Principles	Principles of Engineering
Digital Electronics	Project Management Basics
Environmental Sustainability	

Alternative Concurrent Enrollment Courses

The Linn-Mar Community School District contracts with Kirkwood Community College to offer the following alternative concurrent enrollment college courses on a Kirkwood Community College campus:

American Sign Language I, II, III, IV	Introduction to Sociology
Art Appreciation	Marriage and Family
Behavior Management	Mass Media
Calculus III	Medical Terminology
Cultural Anthropology	Music Fundamentals
Encounters in Humanities	Nurse Aide
Exploring Health Careers	Nutrition
Fundamentals of Oral Communication	Popular Culture
Human Relations in Management	Professionals in Health
Intro to Criminal Justice	Social Problems
Human Anatomy I	Survey of World Religions
Human Anatomy II	Topics in Education
Introduction to Business	US History Since 1877
Introduction to Ethics	US History to 1877

Alternative Programming Options

Academic Assistance Program

Linn-Mar High School's Academic Assistance program has two components:

Credit Completion is for students who receive F+ (55% - 59%). Credit completion allows students to complete course work taken during the previous grading period in order to receive a passing grade.

Credit Recovery is the second component of the program and is intended for junior/senior students who are significantly behind pace in earning credits for graduation. The Academic Assistance Counselor can answer questions for students and parents about guidelines and eligibility for the program.

Test Out Option

Students who wish to "test out" of various courses must notify **the building principal** in writing of their intent by May 1 for Year-Long and fall semester classes, and by December 1 for spring block classes. Within a six-week period, students will receive information related to critical course objectives and the criteria for assessment. Students will then be asked to demonstrate, via multiple performance measures, critical objective mastery for the course.

COMPASS Alternative Program

High School credits are available via the COMPASS alternative program. Linn-Mar will accept credit hours for approved courses that can be applied to requirements for the Linn-Mar High School diploma. Students should visit with their assigned counselor or the Academic Assistance Counselor to develop an approved plan for this option.

Teacher-Led Courses

Compass Core

English 9

Course #: ENG110
 Grade Level: 9
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None



Considerations: English 9 or English I required for graduation.

Course Description: This course develops communication skills in reading, speaking, listening, thinking and writing. It includes units in the short story, the novel, poetry, drama and research. The student will practice various forms of writing and will work toward improving grammar, mechanics, and vocabulary.

English 10

Course #: ENG200
 Grade Level: 10
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: English 9

Considerations: English 10 or English II is required for graduation

Course Description: This course develops communication skills in reading, speaking, listening, thinking and writing. It includes units in the short story, the novel, poetry, drama and research. The student will practice various forms of writing and will work toward improving grammar, mechanics, and vocabulary.

American Literature I

Course #: ENG210e
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: Students will read, discuss, and analyze a variety of texts written by American authors, including short stories, plays, and The Great Gatsby. Students will research, collaborate, and present on topics related to the literature.

Journalism

Course #: ENG220
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: None

Course Description: This course is an introductory, overview class which teaches basic journalism skills while examining the role of newspapers in our society. Areas explored include newspaper interviewing, writing, and editing. Students are also introduced to the concepts of Press Law. This course DOES NOT meet the composition requirement for admission to UNI.

Multicultural Literature

Course #: ENG255
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: Students will read selections that deal with across a variety of cultures. Students will complete multiple projects to promote lifelong literacy and will discover how technology and the internet can enhance reading selections. Some selections in this course have a more mature theme.

Writing

Course #: ENG270
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Consideration: Students should take this class if they need to improve their writing skills, and do not yet feel comfortable taking a college-level writing class.

Course Description: This course is designed for any student who is considering college, interested in improving general writing skills, and/or considering taking Composition I. Students will improve organizational skills in writing, learn how to develop their ideas, improve their skills in word choice and sentence structure, improve their mechanics in writing, improve their research skills, and learn how to better develop and write a research paper in MLA style. Papers may include the following essays: Personal, Definition, Division/Classification, Comparison/Contrast, and Persuasive. In addition, students will write a research paper in which they will support their position on a contemporary issue.

Reading I

Course #: ENG290
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: Students will read *Jurassic Park*. They will work on reading fluency and comprehension. Students will research, collaborate, and present on relevant topics. Students will also improve their writing skills.

Reading II

Course #: ENG300
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Reading I

Considerations: None

Course Description: Students will read *The Lost World*. They will work on reading fluency and comprehension. Students will research, collaborate, and present on relevant topics. Students will also improve their writing skills. They will create a project that illustrates their learning over the course of the quarter.

Speech

Course #: ENG310
 Grade Level: 11-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: Speech or Acting is required for graduation.

Course Description: Speech is designed to make students more effective communicators by emphasizing a variety of real-life speaking situations and building self-confidence in all of these settings. Because this is a performance based class, students should carefully consider conflicts which may result in absences.

English Skills

Course #: ENG335
 Grade Level: 9-12
 Credits: 2.5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: Meets on Fridays only

Course Description: Students will work on their areas of weakness in relation to reading, writing, or speaking. Students will demonstrate growth in this area through a relevant project.

Contemporary Literature

Course #: ENG360
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: None

Course Description: Students will read a variety of selected contemporary titles. Students will complete multiple projects to promote lifelong literacy and will discover how technology and the internet can enhance reading selections. Some selections in this course have a more mature theme.

Contemporary Literature II

Course #: ENG250
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: This course is designed for students who are motivated to read and complete projects independently.

Course Description: Students will read multiple novels of their choice of the appropriate reading level. Students will complete multiple projects to promote lifelong literacy and will discover how technology and the internet can enhance reading selections. Students will then present their projects to their peers.

Independent Novel Writing

Course #: ENG400
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Writing and Creative Writing

Considerations: This course is designed for the student who is considering writing as a profession.

Course Description: Students will spend their classes writing, revising, and meeting with their instructor to improve their writing skills.

Creative Writing

Course #: ENG410
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None



Considerations: None

Course Description: This course is designed for students who genuinely like to write in a variety of forms. Students will take writing from the initial idea through the developmental and polishing stages.

Pre-Algebra

Course #: MAT115
 Grade Level: 9-12
 Credits: 5 credits per quarter
 Length: 1 Semester
 Format: Block
 Prerequisite: None

Considerations: A scientific calculator or its equivalent required. Graphing calculators are not allowed in this course.

Course Description: This course is an introductory class for Algebra. It is designed to review basic skills and math concepts. Elementary algebra skills with variables and problem-solving techniques will be imperative to the curriculum.

Algebra Fundamentals I

Course #: MAT150
 Grade Level: 10-11
 Credits: 5 credits per quarter
 Length: 1 Semester
 Format: Block
 Prerequisite: Pre-Algebra and approval



Considerations: Students are placed in this course per approval of the math department based on Pre-Algebra performance. A scientific calculator or equivalent is required. Graphing calculators are not allowed in this course. Algebra Fundamentals I and Algebra Fundamentals II together meet the algebra graduation requirement.

Course Description: This course is designed to include material covered in the first semester of Algebra. Topics include negative numbers, absolute values, opposites, linear equations, and inequalities in word problems.

Algebra Fundamentals II

Course #: MAT155
 Grade Level: 10-12
 Credits: 5 credits per quarter
 Length: 1 Semester
 Format: Block
 Prerequisite: Algebra Fundamentals I or approval



Considerations: Students are placed in this course per approval of the math department based on Algebra, and Iowa Assessment scores. A scientific calculator or equivalent is required. Graphing calculators are not allowed in this course. Algebra Fundamentals I and Algebra Fundamentals II together meet the algebra graduation requirement.

Course Description: This course is designed to include material covered in the second semester of Algebra. Topics include negative numbers, absolute values, opposites, linear equations, and inequalities in one variable word problems, factoring, graphing, and quadratic equations.

Geometry

Course #: MAT220
 Grade Level: 9-12
 Credits: 5 Credits per quarter
 Length: 2 Semesters
 Format: Block
 Prerequisite: Algebra OR Algebra Fundamentals II



Considerations: A scientific calculator is required. Graphing calculators are not allowed in this course.

Course Description: Geometry introduces the study of points, lines, planes, polygons, circles, solid figures, and their associated relationships as a mathematical system. Emphasis is placed on the description and use of inductive, deductive, and intuitive reasoning skills. Power of abstract reasoning, spatial visualization and logical reasoning patterns are improved through this course. Focus on comparisons between figures concerning surface areas, volumes, congruency, similarity, transformations, and coordinate geometry is also studied through two and three Diagrams.

General Biology I & II

Course #: SCI210
 Grade Level: 9-12
 Credits: 10
 Length: 2 Quarters
 Format: Block
 Prerequisite: None

Considerations: Strong comprehensive vocabulary, reading and study skills.

Course Description: This course is a survey class in life science. The areas investigated include: biological structure and function; heredity; life's continuity and change; diversity of life.

Stream & Field Biology

Course #: SCI280
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarters
 Format: Block
 Prerequisite: General Biology

Considerations: See prerequisites. Strong comprehensive vocabulary, reading and study skills. This course meets the L-M science elective requirement.

Course Description: This course emphasizes critical thinking and application of scientific process skills in the identification, analysis, and evaluation of environmental problems and issues, as well as discussions of potential solutions.

Human Anatomy

Course #: SCI240
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: General Biology

Considerations: See prerequisites. Strong comprehensive vocabulary, reading and study skills. This course meets the L-M science elective requirement.

Course Description: This course provides students with the fundamental concepts of human structure and function as it pertains to their bodies.

Nature of Science

Course #: SCI260
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: Strong comprehensive vocabulary, reading and study skills. This course meets the physical science requirement for graduation.

Course Description: This course examines what science is, how it works, and what it can and cannot do. A number of activities and open inquiries look at some fundamental properties and laws of the physical world. These properties include motion, forces, momentum, and energy.

Advanced Biology

Course #: SCI230
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: General Biology

Considerations: See prerequisites. See prerequisites. Strong comprehensive vocabulary, reading and study skills. This course meets the L-M science elective requirement

Course Description: This course provides a more in-depth study of many areas of biology. The areas of emphasis include cell processes, energy pathways, genetics, DNA structure, and the regulation of gene expression.

Compass Electives

Botany

Course #: AGR230
 Grade Level: 10-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Biology I

Considerations: See prerequisites. Strong comprehensive vocabulary, reading and study skills. This course meets L-M science elective credit requirement.

Course Description: Students will have experiences with a number of plant science concepts with many “hands-on” activities, projects, and problems. Student experiences will involve the study of plant anatomy and physiology, classification, and the planning, planting and caring for a school garden.

Personal Finance

Course #: BUS110
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: none

Considerations: This course meets all financial literary standards of the Iowa Core.

Course Description: This course exposes students to areas of personal finance that they will likely encounter. The curriculum covers, among other topics: consumer awareness, money management, opening bank accounts, managing a checkbook, managing credit, applying for a job and basic information about saving and investing. Information will be presented through projects, activities, guest speakers and multimedia presentations.

Math for the Building Trades

Course #: MAT425
 Grade Level: 9-12
 Credits: 5 Credits per quarter
 Length: 1 Semester
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: This course is directed toward students who are considering employment in the building trades upon graduation. Students will integrate arithmetic, algebra, and geometry to perform calculations required in all of the major building trades, including construction, carpentry, plumbing, electrical, HVAC, and roofing.

Teen Insights

Course #: HPE350
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: The class is a combination of notes, chapters from *7 Habits of Highly Effective Teens*, movies, projects, and community speakers including Planned Parenthood and ASAC. Students will explore a variety of topics and issues relevant to teens. Students will research and present on multiple topics throughout the course.

Teacher's Assistant

Course #: ELT100
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: Student must have passed the course for which they are the Teacher's Assistant.

Considerations: Instructor must approve

Course Description: Students will help the teacher with day to day activities.

Introduction to Business

Course #: BUS120
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: This course will give students an overview of the study of business including: economic decisions, systems, and roles, business structures, economic measurements and leadership, social responsibility and business ethics.

Introduction to Business II

Course #: BUS150
 Grade Level: 9-12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: None

Course Description: This course will continue the overview of the study of business including: International business, small business management, maintaining financial information, human resources, career planning, and the role of the consumer.

Economics I

Course #: SOC310
 Grade Level: 9 -12
 Credits: 5
 Length: 1 Quarter
 Format: Block
 Prerequisite: None

Considerations: Students should be comfortable working with graphs.

Course Description: This course will focus on economic concepts: free enterprise, supply, demand, equilibrium, shifting demand and supply curves, consumers, savers, and investors, and financing.

Economics II

Course #: SOC311
Grade Level: 9-12
Credits: 5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: Students should be comfortable working with graphs.

Course Description: This course will continue to focus on economic concepts: GDP, productivity, the labor force, competition, the government's role in the economy, the money supply, international trade and globalization.

PE

Course #: HPE300
Grade Level: 9-12
Credits: 2.5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: Meets on Fridays only

Course Description: Students will improve their strength, agility, and speed while participating in activities that will develop lifelong healthy habits.

Independent Foods

Course #: HPE115
Grade Level: 9-12
Credits: 2.5
Length: 1 Quarter
Format: Block
Prerequisite: None

Considerations: Meets on Fridays only

Course Description: Students will explore what goes into budgeting and meal planning. Student will prepare a variety of foods

Career and Technical Education Service Areas and Career Clusters

Applied Science, Technology, Engineering, and Manufacturing

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2019-2020

Career Pathway: Agriculture



A career in agriculture, food, and natural resources requires certain skills and education depending on job requirements. Skills include promotion, processing, marketing, distribution, financing, and development of agricultural commodities including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

Exposure Pathways

High School Courses

Introduction to Ag., Food & Nat. Resources	Food Science & Safety
Aquaculture Science	Animal & Plant Biotechnology
Principles of Ag. Science-Animal	Ag. Business Foundations
Principles of Ag. Science-Plant	Ag. Research & Development
Natural Resources & Ecology	AP Environmental Science
Environmental Science Issues	Environmental Sustainability

Job Shadows & Internships

Ag Mechanic	Landscaper
Agriculture Sales	Microbiologist
Agronomist	Naturalist
Botanist	Veterinarian Tech
Conservationist	Wastewater Mngt.
Floral Designer	Park Ranger
Geologist	Pet Groomer
Golf Course & Turfgrass Management	Veterinarian
GPS/GIS Specialist - Agriculture	

High School Clubs & Organizations

FFA

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Pursuit Pathways

Certificates/Diplomas

Ag Production	Water Environmental Technology
Pet Grooming	Water Treatment Specialist
Golf Course & Athletic Turfgrass Mgmt	Wastewater Specialist
Veterinary Asst	Ag Geospatial Technology
Animal control Asst	Water Environmental Technology
Landscape Construction & Design	

Careers & Median Salary Information

Animal Care Worker \$54,000	Recycling Coordinator \$56,000
Food Science Technician \$46,000	Geothermal Technician \$38,000
Agricultural Inspector \$45,000	Heavy Equipment Mechanic: \$51,000

Associate Degrees

Ag Geospatial Technology	Veterinary Technology
Ag Business	Humane Officer
Ag Production Mgmt	Landscape Construction & Design
Diesel Ag Technology	Parks & Natural Resources
Golf Course & Athletic Turfgrass Mgmt	Water Environmental Technology

Careers & Median Salary Information

Veterinary Technologist \$33,500	Chemical Technician \$41,500
Landscaping & Groundskeeping \$40,100	

Bachelor Degrees

Environmental Studies
Food Science
Animal Science

Careers & Median Salary Information

Food Scientist \$62,500	Greenhouse Manager \$42,000
Aquacultural Manager \$42,000	Environmental Scientist \$68,000



Explore other Education & Training in the ICR Region



Explore other Careers in the ICR Region

2019-2020

Career Pathway: Architecture



A career in architecture and construction requires certain skills and education depending on job requirements. Skills include designing, planning, managing, building, and maintaining the built environment.

Exposure Pathways

High School Courses

Mechanical Drawing	Metals
Residential Construction 1	Building Trades
Residential Construction 2	PLTW Civil Engineering & Architect
Woods	Design
Cabinetmaking	Interior Design

Job Shadows & Internships

Civil Engineer	Project Engineer
Construction	Project Management
Pre-Fabrication	CAD Design
Architecture	



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High School Clubs & Organizations

Robotics	Femineers
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Experience Pathways

College CTE Courses in High School

Civil Engineering and Architectural Design

Kirkwood Career Academies

Architecture, Construction & Engineering (ACE) Academy

Pursuit Pathways

Certificates/Diplomas

CAD/Mechanical Engineering Tech.	Construction Estimator
Carpentry	Construction Supervision Certificate
HVAC Installer	
Plumbing Pre-Apprenticeship	

Careers & Median Salary Information

Solar Energy Installation \$60,000	Pipe Fitter & Steamfitter \$55,700
Plumber \$55,700	Crane Operator \$53,600

Associate Degrees

Architecture Technology	Construction Management
CAD/Mechanical Engineering Tech.	Interior Design

Careers & Median Salary Information

Electronic Drafter \$57,000	Survey Technician \$51,000
Mechanical Drafting \$54,000	

Bachelor Degrees

Architecture	Industrial Engineer
Civil Engineering	Construction Management
Industrial Design	

Careers & Median Salary Information

Commercial & Industrial Designer \$60,000	Commercial Designer \$60,000
Surveyor \$54,500	Landscape Architect \$46,700



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: Arts, Audio/Visual Technology, and Communications



A career in arts, audio/visual technology and communications requires certain skills and education depending on job requirements. Skills include designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Exposure Pathways

High School Courses

Design: Art Basics	Drawing in Style	Fashion & Sewing
Beginning Painting	Exploration in Ceramic	Advanced Sewing
Beginning Drawing	Technique	Journalism
Beginning Ceramics	Digital Photography	Creative Writing
3-D Mixed Media	Graphics One	College Grammar
Expressive Drawing	Graphics Two	Intro to College Writing
Construction in Clay	Advanced Art	Speech
2-D Mixed Media	Interior Design	Acting

Job Shadows & Internships

Graphic Designer	Photography
Events Assistant	News & Broadcast
Production Assistant	Radio
Marketing	Writing
Sports	Community Engagement

Learn more & apply

High School Clubs & Organizations

Art Club	Student Newspaper
Anime Club	LMTV
Yearbook	

Experience Pathways

College CTE Courses in High School

Art Appreciation	Fundamentals of Oral Comm.
Composition 1	Mass Media
Composition 2	

Pursuit Pathways

Certificates/Diplomas

Social Media Marketing	Web Design
Web Development	

Careers & Median Salary Information

Fine Artist \$19,200	Floral Designer \$26,000
Broadcast Technician \$31,660	Printing Press Operator \$32,700

Associate Degrees

Graphic Communication Technology	Web Design
Web Development	

Careers & Median Salary Information

Desktop Publisher \$40,000	Camera Operator \$28,800
Fashion Designer \$41,220	

Bachelor Degrees

Broadcasting	Theater
English	

Careers & Median Salary Information

Proofreader \$24,500	Talent Director \$42,500
Stage Director \$42,500	Editor \$41,200



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Business Management*



A career in business management and administration requires certain skills and education depending on job requirements. Skills include planning, organizing, directing, and evaluating business functions essential to productive business operations.

Exposure Pathways

High School Courses

Accounting	Marketing
Advanced Accounting	Business/Consumer Law
theROARstore	Entrepreneurship
Introduction to Business	Agriculture Business Foundations
Economics	

High School Clubs & Organizations

FBLA (Future Business Leaders of America)
Student Council

Job Shadows & Internships

Business Management	Operations
Clerical Assistant	Publications
Hockey Operations	Safety & Loss
Hospital Administration	Administrative
Human Resources	Business Development
Marketing	



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Experience Pathways

College CTE Courses in High School

Introduction to Business Human Relations in Management

Pursuit Pathways

Certificates/Diplomas

Office Assistant	Entrepreneurship
Medical Coding	Human Resources
Medical Transcription	Project Management
Technical Accounting	Medical Transcription
Global Perspectives in Business	

Careers & Median Salary Information

Admin. Assistant \$35,800	Tax Preparer \$38,300
Data Entry \$32,500	Bookkeeping \$37,800
Payroll Clerk \$42,100	

Associate Degrees

Business Admin.: Accounting	Administrative Management
Business Admin.: Financial Services	Health Information Technology
Business Admin.: Management	Business Admin. w/ Transfer Option

Careers & Median Salary Information

Executive Secretary \$50,000	Legal Secretary \$35,900
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Bachelor Degrees

Business	Business Management
Business Administration	Human Resources
Business Information Systems	

Careers & Median Salary Information

Marketing Manager \$91,600	Technical Writer \$57,300
Search Marketing Strategist \$71,300	Human Resources Manager \$95,700



Explore other Education & Training in the ICR Region



Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Education & Training*



A career in education and training requires certain skills and education depending on job requirements. Skills include planning, managing, and providing education and training service, and related learning support services.

Exposure Pathways

High School Courses

Human Growth and Development	KCC Child Growth and Development
Introductory Psychology	Exploring Teaching
AP Psychology	

High School Clubs & Organizations

LM Buddies	TRY (Teens Reaching Youth)
Ok Without Drugs and Alcohol	Student Ambassadors

Job Shadows & Internships

Counselor	Librarian
Child Development Specialist	Teacher & Classroom Assistant
High School Athletic Director	Youth Ministry
Hockey Assistant Coaching	Tutorial Admin. Assistant



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Experience Pathways

College CTE Courses in High School

KCC Child Growth and Development	Behavior Management
Exploring Teaching	

Pursuit Pathways

Certificates/Diplomas

Early Childhood Paraeducator	Early Childhood Education
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Careers & Median Salary Information

Library Assistant \$22,400	Special Education Teacher \$44,400
Vocational Education Teacher \$73,150	Teacher Assistant \$26,400

Associate Degrees

Early Childhood Education	Liberal Arts: Ed. w/ Transfer Option
Exercise Science and Wellness	

Careers & Median Salary Information

Education Administrator, Preschool & Childcare Center \$31,200
--

Bachelor Degrees

Elementary Education	Organizational Leadership
Secondary Education	Athletic Training

Careers & Median Salary Information

Kindergarten Teacher \$63,100	Special Education Teacher \$57,300
Physical Education Teacher \$59,400	Middle School Teacher \$55,400



Explore other Education & Training in the ICR Region



Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Finance*



A career in finance requires certain skills and education depending on job requirements. Skills include planning services for financial and investment planning, banking, insurance, and business financial management.

Exposure Pathways

High School Courses

Personal Finance	Marketing
Accounting	Business/Consumer Law
Advanced Accounting	Entrepreneurship
Economics	Agriculture Business Foundations
AP Microeconomics	Introduction to Business
the ROARstore	

Job Shadows & Internships

Accounting	Finance & Sales
Finance	



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High School Clubs & Organizations

FBLA (Future Business Leaders of America)

Experience Pathways

College CTE Courses in High School

Mathematics and Society

Pursuit Pathways

Certificates/Diplomas

Technical Accounting

Careers & Median Salary Information

Statement Clerk \$40,200	Loan Counselor \$33,000
Bill & Account Collector \$36,000	Bank Teller \$28,200

Associate Degrees

Business Administration: Accounting
Business Administration: Financial Services

Careers & Median Salary Information

Insurance Appraiser
\$34,200

Bachelor Degrees

Accounting
Finance

Financial Counseling and Planning

Careers & Median Salary Information

Financial Analyst \$73,800	Budget Analyst \$70,300
Financial Examiner \$73,000	Actuary \$83,800



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: Government



A career in government and public administration requires certain skills and education depending on job requirements. Skills include planning and performing government functions at the local, state, and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.

Exposure Pathways

High School Courses

Law and Constitution	AP Comparative Government
Government	Business/Consumer Law
AP Government	

Job Shadows & Internships

City Clerk	Presidential Campaign
Congressional Campaign	Civil Rights



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High School Clubs & Organizations

Young Democrats	Model UN
Young Republicans	

Experience Pathways

College CTE Courses in High School

Introduction to Criminal Justice	Social Problems
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Pursuit Pathways

Certificates/Diplomas

Office Assistant

Careers & Median Salary Information

Administrative Service Manager	Postmaster
\$83,900	\$49,900
Postal Service Mail Carrier	Meter Reader
\$50,000	\$36,000

Associate Degrees

Business Administration	Administrative Management
Business Administration: Management	Water Environmental Technology

Careers & Median Salary Information

Assessor
\$73,200

Bachelor Degrees

Urban Planning	Accounting
Public Administration	

Careers & Median Salary Information

Statistical Assistant	Legislator
\$51,100	\$22,100
Social and Community Service Manager	Financial Examiner
\$54,300	\$72,900



Explore other Education & Training in the ICR Region



Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Health Sciences*



A career in health sciences requires certain skills and education depending on job requirements. Skills include planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Exposure Pathways

High School Courses

Anatomy & Physiology	AP Biology
General Biology	AP Chemistry
Physics	Health II
Chemistry I	

High School Clubs & Organizations

HOSA	Science Club
Red Cross Club	

Job Shadows & Internships

Chiropractic & Wellness	Oncology
Nursing	Optician
Dental	Physical Therapy
Dietary	Personal Trainer
Dermatology	Radiology
Occupational Therapy	Physician Assistant


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Experience Pathways

College CTE Courses in High School

Human Anatomy I	Nutrition
Human Anatomy II	Medical Terminology

Kirkwood Career Academies

[Emergency Medical Tech.\(EMT\)](#) [Pre-Prof. Health Careers Academy](#)
[Patient Care Academy](#)
[Pharmacy Technician Academy](#)

Pursuit Pathways

Certificates/Diplomas

Dental Assisting	Pharmacy Technician
Medical Coding	Surgical Technology
Medical Assisting	Medical Transcription
Medical Transcription	Nurse Aide
Practical Nursing (LPN)	EMT

Careers & Median Salary Information

Licensed Practical & Licensed Vocational Nurse	Dental Lab Tech
\$42,100	\$41,200
Ophthalmic Medical Tech	Dental Assistant
\$41,500	\$40,300

Associate Degrees

Dental Assisting	Exercise Science & Wellness	Occupational Therapy
Dental Hygiene	Health Information Tech.	Paramedic
Dental Technology	Medical Assisting	Physical Therapy Assistant
Diagnostic Assistant (Rad. Tech.)	Medical Laboratory Tech.	Respiratory Therapist
Electroneurodiagnostic Tech.	Associate Degree Nursing, RN	Surgical Technology

Careers & Median Salary Inf.

Dental Hygienist	Registered Nurse
\$69,100	\$69,100
Diagnostic Medical Sonographer	Histotechnologist
\$62,800	\$48,400

Bachelor Degrees

Biology	Culinary Food Science,
Dietetics	Diet and Exercise
Healthcare Administration	Food Science & Global Health Studies
Nursing	

Careers & Median Salary Information

Clinical Research Coordinator	Natural Science Manager
\$111,800	\$111,700
Clinical Data Manager	Recreational Therapist
\$65,200	\$52,200

Community PROMISE
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Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Hospitality & Tourism*



A career in hospitality and tourism requires certain skills and education depending on job requirements. Skills include management, marketing, and operations of restaurants and other culinary arts services, lodging, attractions, recreation events, and travel related services.

Exposure Pathways

High School Courses

Culinary Basics	ProStart Two
Foundations of Living	Food Science and Safety
ProStart One	

Job Shadows & Internships

Cafe Line Cook	Special Events
Chef Assistant	Travel Agent
Cosmetology	



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Experience Pathways

College CTE Courses in High School

ProStart One	ProStart Two
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Pursuit Pathways

Certificates/Diplomas

Baking & Pastry Arts	Hospitality Management
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Careers & Median Salary Information

Gaming Manager \$57,600	Tour Guide \$28,800
Animal Trainer \$31,500	Hotel, Motel, & Resort Desk Clerk \$21,400

Associate Degrees

Culinary Arts	Hospitality Management
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Careers & Median Salary Information

Travel Agent \$4,700	Chef & Head Cook \$37,000
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Bachelor Degrees

Hospitality Management	Event Management
Business Administration	

Careers & Median Salary Information

Lodging Manager \$36,000	Interpreter & Translator \$35,000
Residential Advisor \$23,800	Meeting, Convention & Event Planner \$42,000



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Human Services*



A career in human services requires certain skills and education depending on job requirements. Skills include preparing individuals that relates to family and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.

Exposure Pathways

High School Courses

Introductory Psychology	Human Growth and Development
Sociology	KCC Child Growth and Development
AP Psychology	Exploring Teaching

Job Shadows & Internships

Activity Coordinator	Therapist Assistant
Event Planning	Waypoint Ambassador
Medical Clinic	Volunteer Coordinator



High School Clubs & Organizations

Best Buddies	TRY (Teens Reaching Youth)
SODA (Students Ok Without Drugs and Alcohol)	Student Ambassadors

Experience Pathways

College CTE Courses in High School

Marriage and Family	KCC Child Growth and Dev.
Social Problems	Exploring Teaching
Introductory to Sociology	Behavior Management
Introduction to Criminal Justice	

Pursuit Pathways

Certificates/Diplomas

Early Childhood Paraeducator	Early Childhood Education
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Careers & Median Salary Information

Preschool Teacher \$26,000	Nanny \$19,300
Childcare Worker \$19,300	Fitness Trainer \$37,700

Associate Degrees

Early Childhood Education	Human Services
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Careers & Median Salary Information

Funeral Service Manager \$54,000

Bachelor Degrees

Social Work	Psychology
Elementary Education	

Careers & Median Salary Information

Social & Community Service Manager \$54,300	Probation Officer \$65,000
Religious Activities & Education \$42,000	Social & Community Service Officer \$54,300



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Information Technology*



A career in information technology requires certain skills and education depending on job requirements. Skills include 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.

Exposure Pathways

High School Courses

PLTW Computer Science Essentials	PLTW Computer Science Applications
PLTW Computer Science Principles	PLTW Digital Electronics

High School Clubs & Organizations

Technology Club	Robotics
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Job Shadows & Internships

Quality Analyst	Software Development
Computer Technician	Technology Support
Information Tech	Web Development
IT/Help Desk	



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Experience Pathways

College CTE Courses in High School

PLTW Computer Science Essentials	PLTW Computer Science Applications
PLTW Computer Science Principles	PLTW Digital Electronics

Kirkwood Career Academies

[Computer Software Development \(Coding\)](#)

Pursuit Pathways

Certificates/Diplomas

Database Technologies	Web Design
Java Programming	Network Security
Mobile App Development	Network and System Administration
.NET Programming	PC Technician
Healthcare IT Technician	Desktop Customer Service
Web Development	

Careers & Median Salary Information

Statement Clerk \$40,200	Loan Counselor \$33,000
Bill & Account Collector \$36,000	Bank Teller \$28,200

Associate Degrees

Computer Software Development	Web Technologies
Computer Support Specialist	Network and System Administration
Graphic Communication Technology	

Careers & Median Salary Information

Computer Operator \$46,200

Bachelor Degrees

Technology	Business Analytics & Information Systems
Technology and Engineering Education	Technical Communication
Technology Management	

Careers & Median Salary Information

Computer & Info. Systems Manager \$123,600	Database Administrator \$80,000
Computer Hardware Engineer \$85,600	Software Developer \$88,000



[Explore other Education & Training in the ICR Region](#)



[Explore other Careers in the ICR Region](#)

2019-2020

Career Pathway: *Law*



A career in law, public safety, corrections, and security requires certain skills and education depending on job requirements. Skills include planning, managing, and providing legal, public safety, protective services, and homeland security, including professional and technical support services.

Exposure Pathways

High School Courses

Government	AP Comparative Government
Law & the Constitution	Sociology
AP American Government	

High School Clubs & Organizations

Debate Club	Republicans of Linn-Mar
Democrats of Linn-Mar	Model United Nations

Job Shadows & Internships

Legal Administrative Assistant	Receptionist & Security
Legal Support	Safety & Security
Police Officer	



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Experience Pathways

College CTE Courses in High School

Introduction to Criminal Justice	Introduction to Sociology
Social Problems	

Kirkwood Career Academies

[Emergency Medical Technician](#)

Pursuit Pathways

Certificates/Diplomas

Entry-Level Firefighter	Entry-Level Firefighter
Emergency Medical Technician	

Careers & Median Salary Information

Legal Secretary \$36,000	Fire Inspector \$70,000
Correctional Officer \$50,700	Fire Fighter \$67,600

Associate Degrees

Criminal Justice	Paramedic
Entry-Level Firefighter	
Paralegal Studies	

Careers & Median Salary Information

Paralegal
\$44,000

Bachelor Degrees

Public Health	Linguistics
Criminology	

Careers & Median Salary Information

Private Detective \$75,000	Intelligence Analyst \$58,000
Loss Prevention Manager \$63,400	Arbitrator, Mediator & Conciliator \$81,500



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Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Manufacturing*



A career in manufacturing requires certain skills and education depending on job requirements. Skills include planning, managing, and performing the process 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.

Exposure Pathways

High School Courses

PLTW Computer Integrated Man.	PLTW Principles of Engineering
Mechanical Drawing	Woods
Metals	Digital Electronics
PLTW Intro to Engineering	Cabinetmaking

Job Shadows & Internships

Welding



[Learn more & apply](#)

High School Clubs & Organizations

Robotics

Experience Pathways

College CTE Courses in High School

Introduction to Criminal Justice	Introduction to Sociology
Social Problems	

Kirkwood Career Academies

Advanced Man. with Robotics & Welding	Energy, Electrical, and Automation Academy
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Pursuit Pathways

Certificates/Diplomas

Industrial Robotics Certificate	CAD/Mechanical Engineering Tec.
Entry-Level Welding	HVAC Installer
CNC Machining Technology	Electromechanical Technology
Electronics Engineering Technology	Plumbing Pre-Apprenticeship

Careers & Median Salary Information

Radio Mechanic \$77,000	Industrial Machinery Mechanic \$53,300
Elevator Installer \$57,200	Tool and Die Makers \$45,000

Associate Degrees

Advanced Manufacturing & Robotics Tech.	Electronics Engineering Tech.
Advanced Welding Tech.	CAD/Mechanical Engineering Tech.
Automation & Instrumentation Tech.	Energy Production & Distribution Tech.
CNC Machining Tech.	Industrial Maintenance

Careers & Median Salary Information

Robotic Technician \$49,000	Methane/Landfill Gas Generation System Technicians \$55,000
Computer, Automated Teller, and Office Machine Repairer \$36,000	

Bachelor Degrees

Aerospace Engineering	Manufacturing Technology
Mechanical Engineering	

Careers & Median Salary Information

Industrial Production Manager \$91,000	Industrial Engineers \$79,000
Quality Control Systems Managers \$91,000	Environmental Engineering Technicians \$41,000



Explore other Education & Training in the ICR Region



Explore other Careers in the ICR Region

2019-2020

Career Pathway: *Marketing*



A career in marketing requires certain skills and education depending on job requirements. Skills such as anticipating, planning, managing, and performing marketing activities to reach organizational objectives such as advertising and promotion techniques, business communication, and business development.

Exposure Pathways

High School Courses

Personal Finance	Business/Consumer Law
Accounting	Entrepreneurship
Advanced Accounting	Agriculture Business Foundations
Economics	Graphics One
AP Microeconomics	Graphics Two
theROARstore	Introduction to Business
Marketing	

Job Shadows & Internships

Business Development & Event Promotions

Market Research Analyst

Marketing & Communications


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High School Clubs & Organizations

Future Business Leaders of America

Experience Pathways

College CTE Courses in High School

Introduction to Business

Pursuit Pathways

Certificates/Diplomas

Retail Marketing	Social Media Marketing
Sales	Office Assistant



Careers & Median Salary Information

Demonstrators & Product Promoters \$24,000	Parts Salespersons \$34,000
Real Estate Sales Agents \$48,000	Telemarketers \$28,600

Associate Degrees

Business Administration: Marketing Management	Apparel Merchandising
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Careers & Median Salary Information

Procurement Clerks \$42,000
Assessors \$73,000

Bachelor Degrees

Marketing	Communication Studies
Advertising and Digital Media	



Careers & Median Salary Information

Online Merchants \$59,000	Sales Engineers \$87,000
Sales Managers \$98,000	Appraisers, Real Estate \$73,000



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Explore other Careers in the ICR Region

2019-2020



Career Pathway: *Transportation*



A career in transportation, distribution, and logistics requires certain skills and education depending on job requirements. Skills include planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional support services such as transportation infrastructure planning and management, logistic services, mobile equipment and facility maintenance.

Exposure Pathways

High School Courses

Mechanical Drawing
Metals

Job Shadows & Internships

Auto Mechanic Assistant Flight Operations
Diesel Technician



[Learn more & apply](#)

High School Clubs & Organizations

Robotics

Experience Pathways

Kirkwood Career Academies

[Automotive Collision](#)
[Automotive Technology](#)

Pursuit Pathways

Certificates/Diplomas

Automotive Collision Repair

Careers & Median Salary Information

Transportation Vehicle, Equipment and Systems Inspectors \$83,000	Cargo and Freight Agents \$33,000
Customs Brokers \$59,000	Traffic Technicians \$31,000

Associate Degrees

Automotive Technology Diesel Truck Technology
Diesel Ag Technology

Careers & Median Salary Information

Aviation Inspectors \$83,000	Signal and Track Switch Repairers \$36,000
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Bachelor Degrees

Finance Supply Chain Management
Business Administration

Careers & Median Salary Information

Transportation Managers \$81,000	Logistics Managers \$81,000
Storage and Distribution Managers \$81,000	Airline Pilots, Copilots, and Flight Engineers \$76,000



Explore other Education &
Training in the ICR Region



Explore other Careers in
the ICR Region

2019-2020

Career Pathway: Science, Technology, Engineering & Math



A career in science, technology, engineering, and mathematics requires certain skills and education depending on job requirements. Skills include providing, planning, and managing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Exposure Pathways

High School Courses

Algebra 1A	General Biology	Animal and Plant Biotechnology	Bioethics
Algebra 1B	Chemistry I	Agricultural Research & Dev.	AP Environmental Science
Algebra 1	Earth and Space Science	Environmental Sustainability	PLTW Environmental Sustainability
Geometry	Applied Chemistry & Physics	PLTW Engineering Design & Dev.	PLTW Intro to Eng.
Algebra 2A	Mechanical Drawing	Physics	PLTW Principles of Eng.
Algebra 2B	Int. to Agriculture, Food & Natural Res.	AP Chemistry	PLTW Aerospace Eng.
Algebra 2	Aquaculture Science	AP Biology	PLTW Civil Engineering & Architect Design
Pre-Calculus	Principles of Ag. Science-Animal	AP Physics	PLTW Computer Integrated Manufacturing
AP Calculus AB	Principles of Ag. Science-Plant	Anatomy & Physiology	PLTW Digital Electronics
AP Calculus BC	Natural Resources & Ecology	Geology	
AP Statistics	Environmental Science Issues	Astronomy	
Earth Science	Food Science & Safety	Meteorology	

Job Shadows & Internships

Analytical Chemistry Research	Conservation Biology Research
CAD Design	Organic Chemistry Assistant
Chemistry Lab	Wastewater Plant Operations &
Civil & Electrical Engineering	Maintenance

High School Clubs & Organizations

Femineers	Science Club
Robotics	Math Club

[Learn more & apply](#)

Experience Pathways

College CTE Courses in High School

Math and Society	Human Anatomy I
Nutrition	Human Anatomy II

Kirkwood Career Academies

Adv.Man.with Robotics & Welding	Computer Programming & Web Development
Architectural & Engineering Design (Pre-Apprenticeship)	Pre-Professional Health Careers

Pursuit Pathways

Certificates/Diplomas

Industrial Robotics	Network Security
Database Technologies	Network & System Admin.
Java Programming	PC Technician
Mobile App Development	CAD/Mechanical Eng. Tech.
.NET Programming	Desktop Customer Service
Healthcare IT Technician	Electromechanical Tech.

Careers & Median Salary Information

Civil Engineering Technicians \$50,000	Food Science Technicians \$46,000
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2019-2020

Career Pathway: Science, Technology, Engineering & Math - Continued.

Associate Degrees

Advanced Manufacturing & Robotic Tech.	Exercise Science & Wellness
CAD/Mechanical Engineering Tech.	Industrial Maintenance
Computer Software Development	Network & System Administration
Computer Support Specialist	Water Environmental Tech.
Energy Production & Distribution	

Careers & Median Salary Information

Chemical Technicians \$41,500	Fuel Cell Technicians \$54,000
Surveying Technicians \$51,000	

Bachelor Degrees

Bio Chemistry	Applied Physics
Actuarial Science	Civil Engineering
Seed Science	Industrial Technology
Ag Engineering	Software Engineering
Electrical Engineering	Graphic Technology
Microbiology	Bio Medical Engineering
Physics	Computer Engineering
Geo Science	Management and Information Systems,
Ag and Life Sciences Education	Statistics
Environmental Science	Military Science
Nutritional Science	Business Analytics & Information Systems
Bio Chemistry	Construction Engineering
Technology and Engineering Education	Materials Engineering
Animal Science	Technical Communication
Family & Consumer Science Education	Movement and Exercise Science
Physics	Mortuary Science
Communication Sciences & Disorder	Culinary Food Science
Technology Management	Mathematics
Biological Systems Engineering	Biology
Food Science	Science Education
Political Science	Nuclear Medicine Technology
Computer Science	Dairy Science
Technology	Mechanical Engineering
Chemical Engineering	Chemistry
Industrial Engineering	Social Science
Seed Science	Radiation Sciences
Earth Science	

Careers & Median Salary Information

Chemical Engineers \$88,000	Civil Engineers \$76,000
Chemists \$79,000	Marine Engineers \$64,000
Materials Engineers \$75,400	
Biochemical Engineers \$71,000	

