2020-2021


# Linn-Mar High School
# Program of Studies

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

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Regents Admissions Index (RAI) approved course

NCAA approved course

Weighted course graded on a 5.0 scale

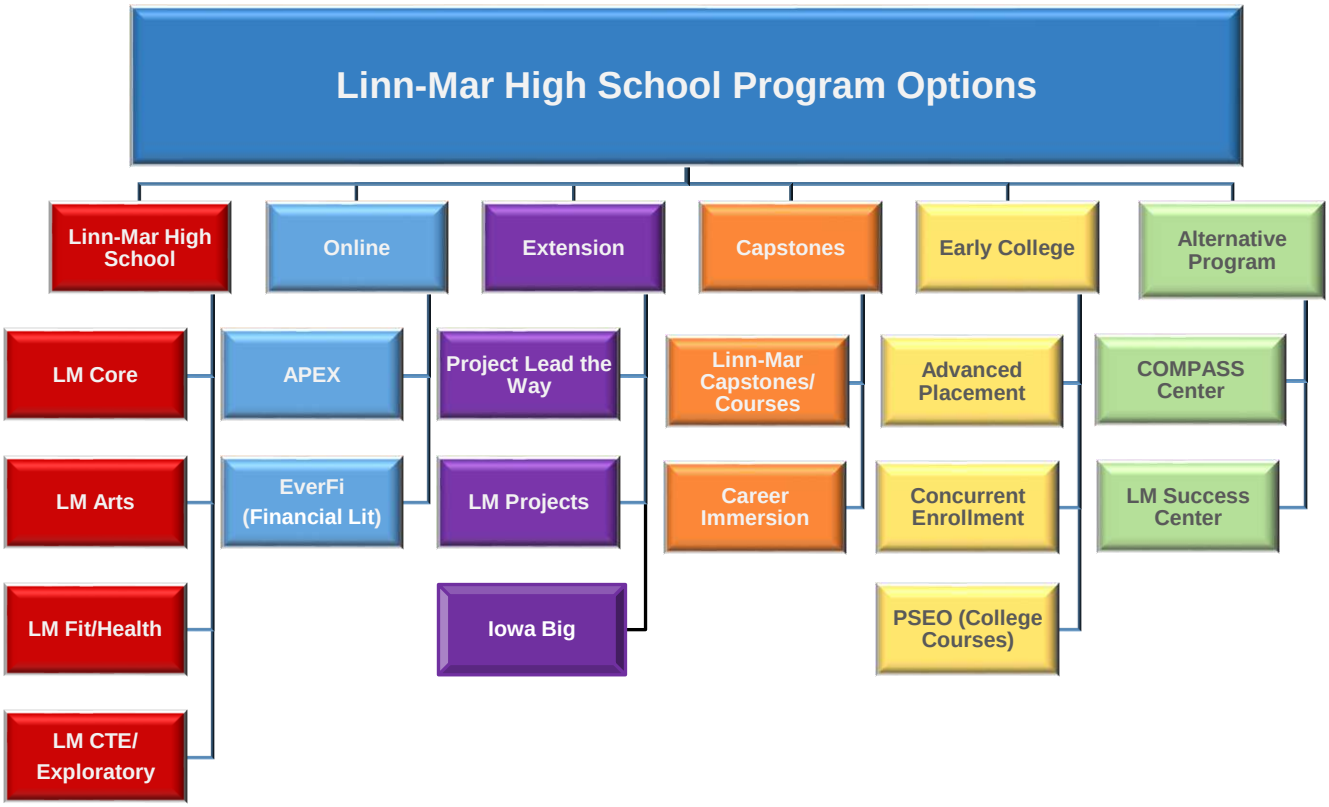
Project Lead the Way

Kirkwood Community College credit course

Talented and Gifted Program Course

Curriculum for Agricultural Science Education

Blended Course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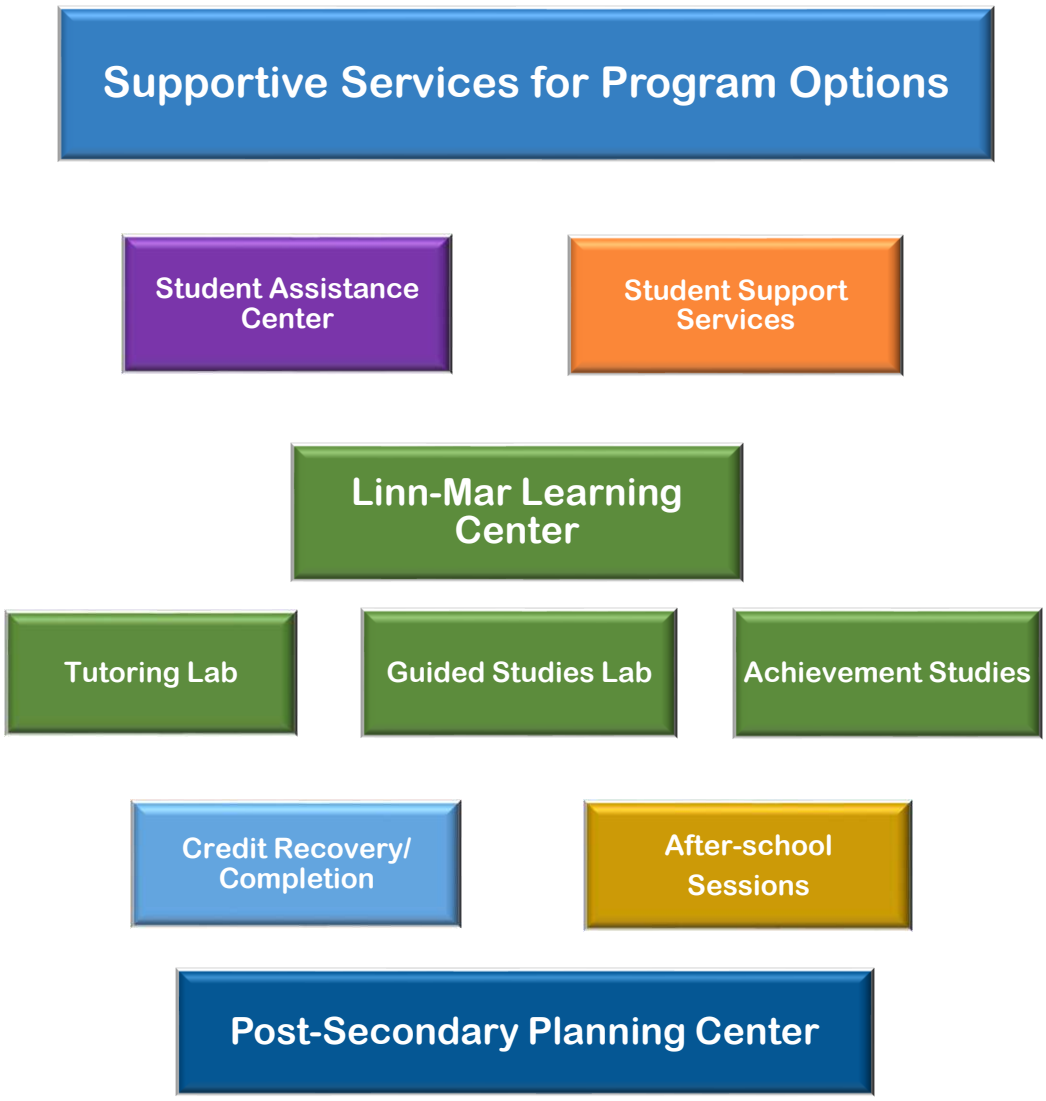
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# Linn-Mar Academic Guidelines

**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.<br>Examples could include:<br>- real-world application<br>- use of information to solve problems in a different context<br>- demonstration of unique insight or complex understanding<br>- use of advanced analysis skills<br>- 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*

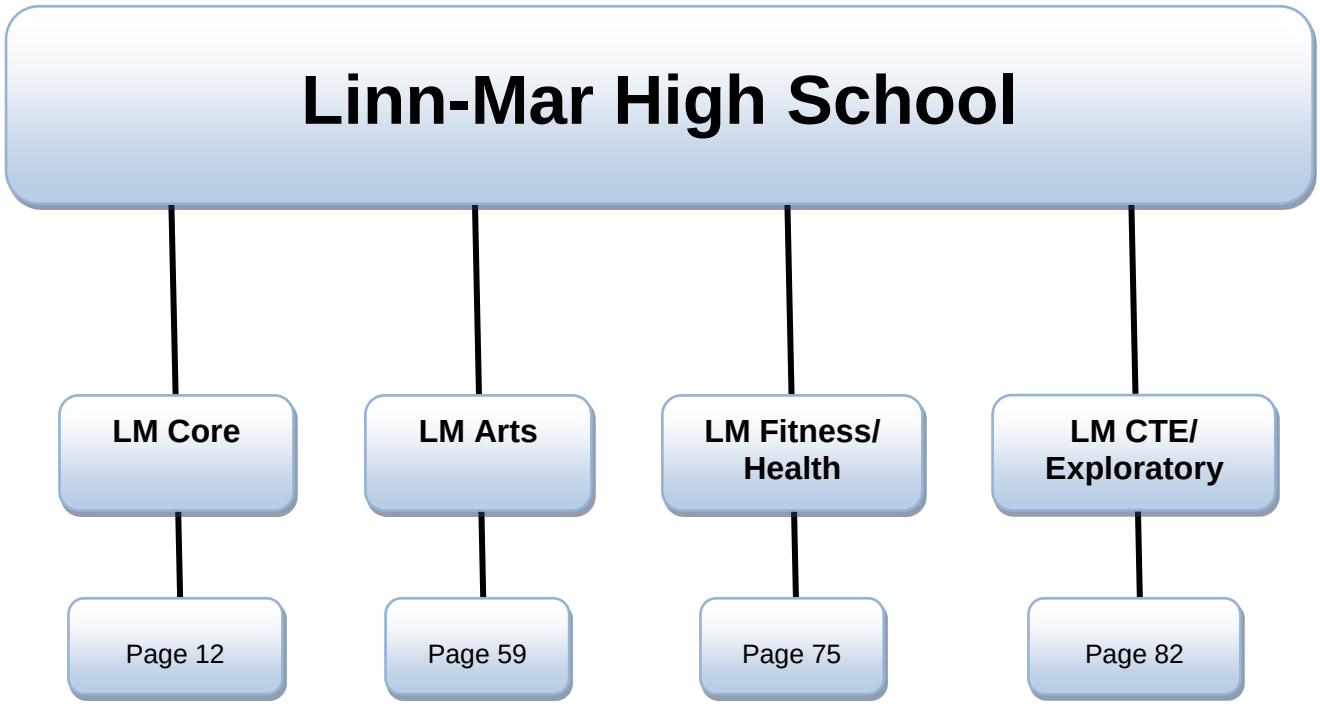
**11th Grade**

- 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.*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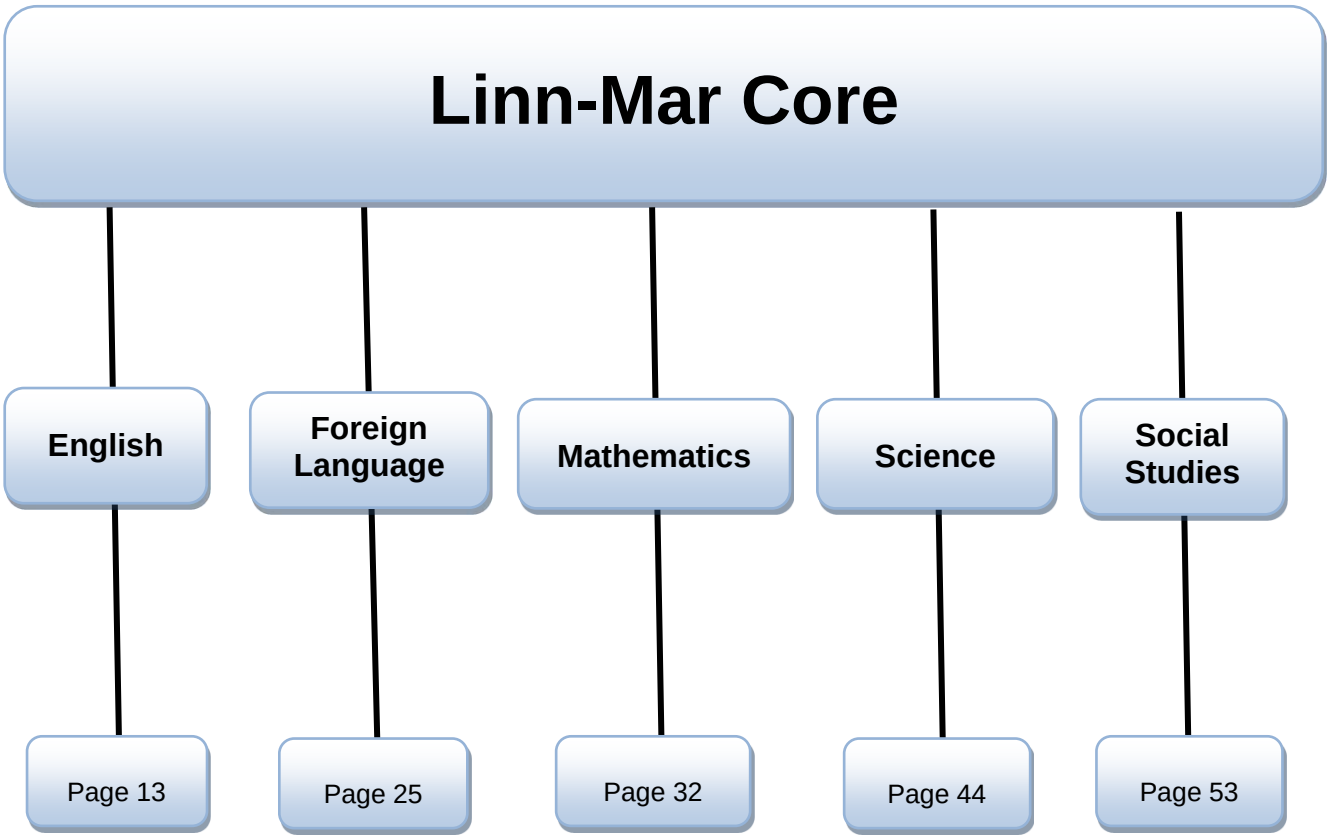
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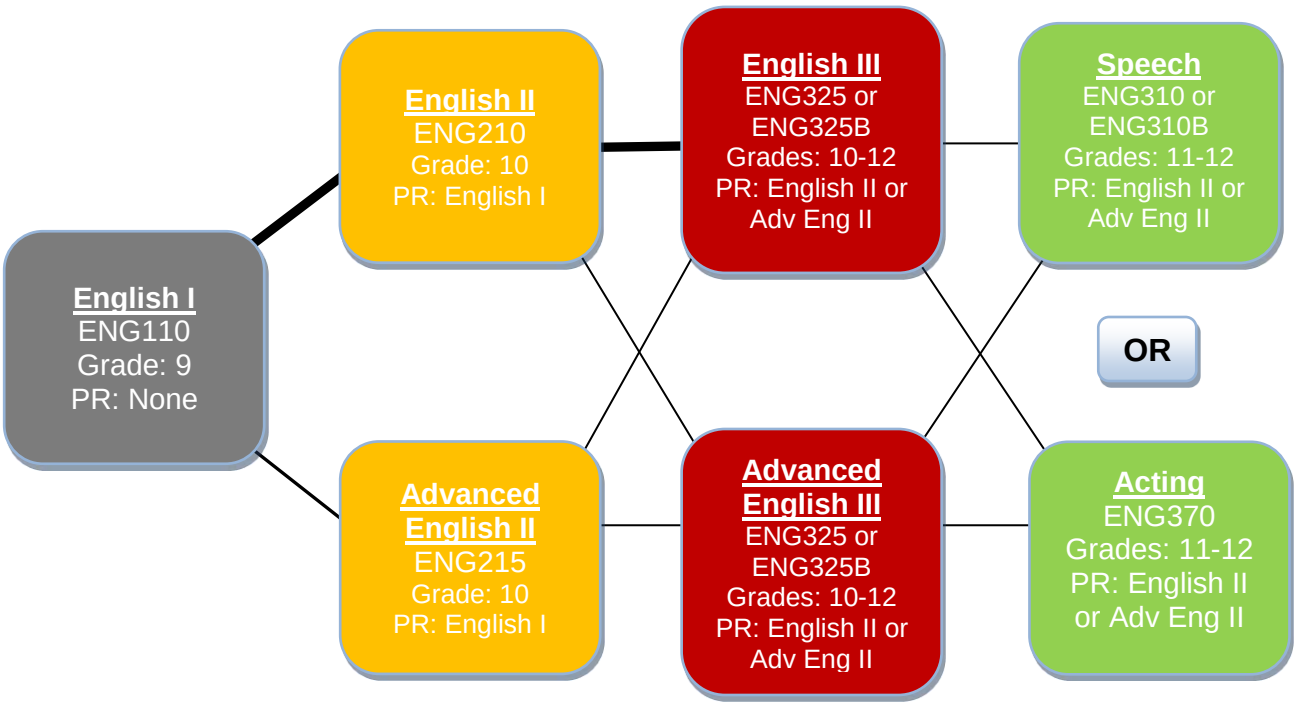
# English

## English I Path

PR=Prerequisite
Requirement




**English Electives p.15**

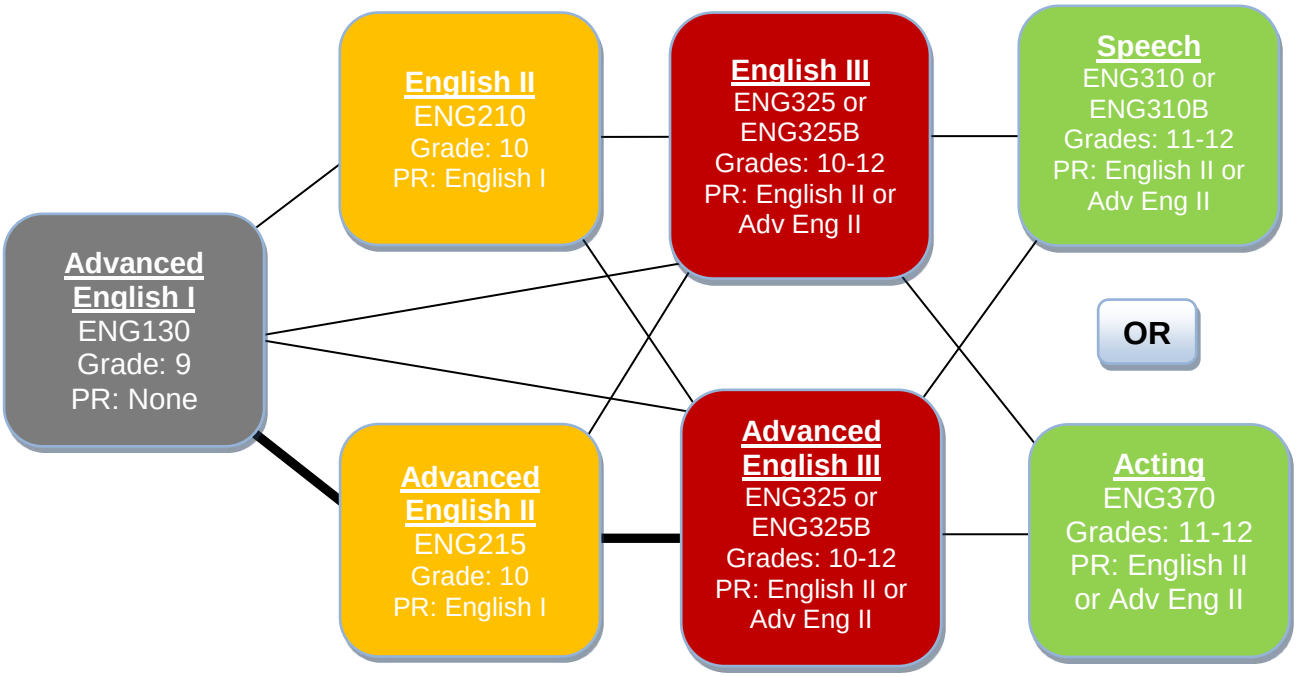
## Graduation Requirements

- **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**

## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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**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,dormer, 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, dormer, 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.

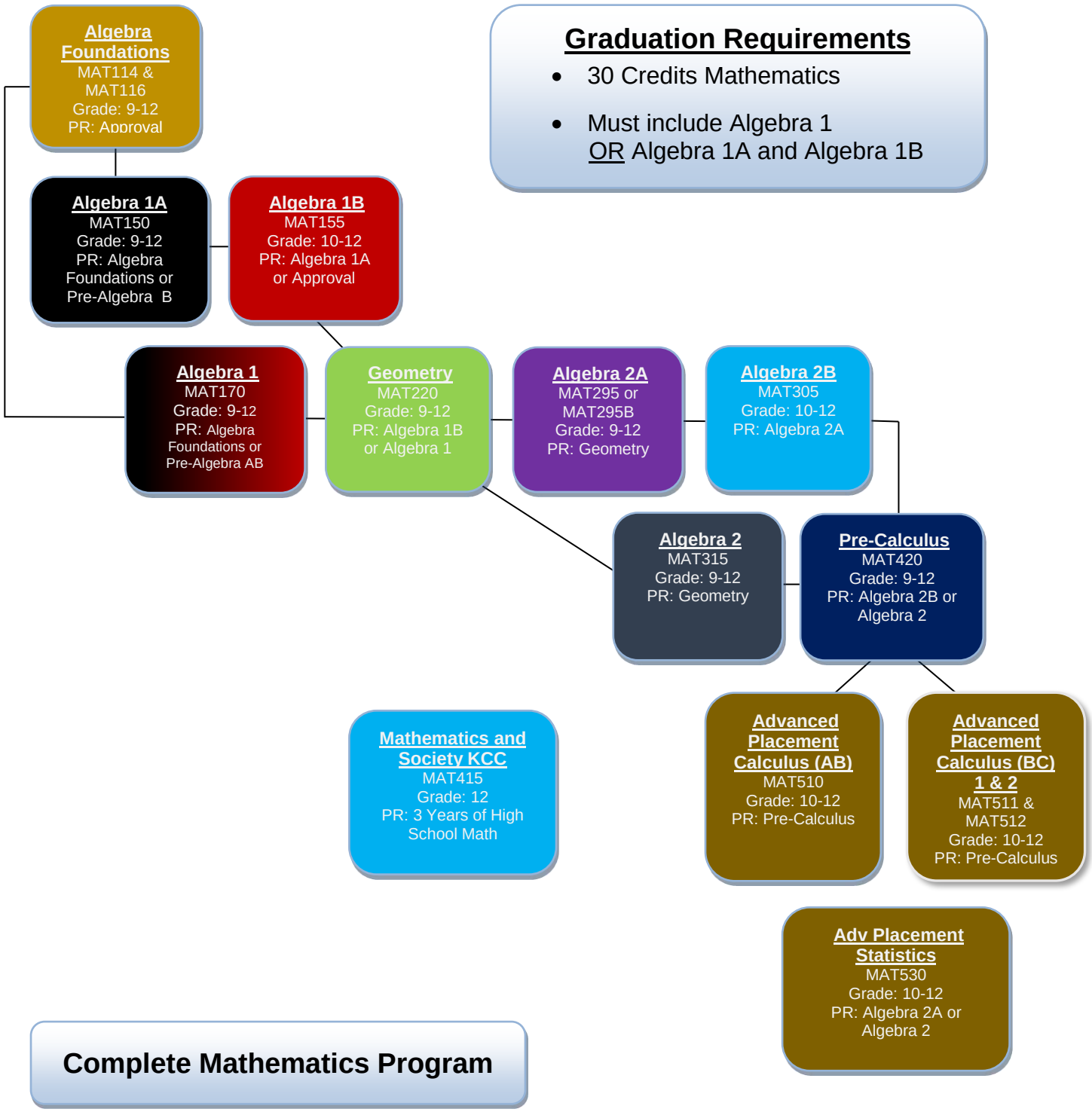
## Advanced Placement French

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

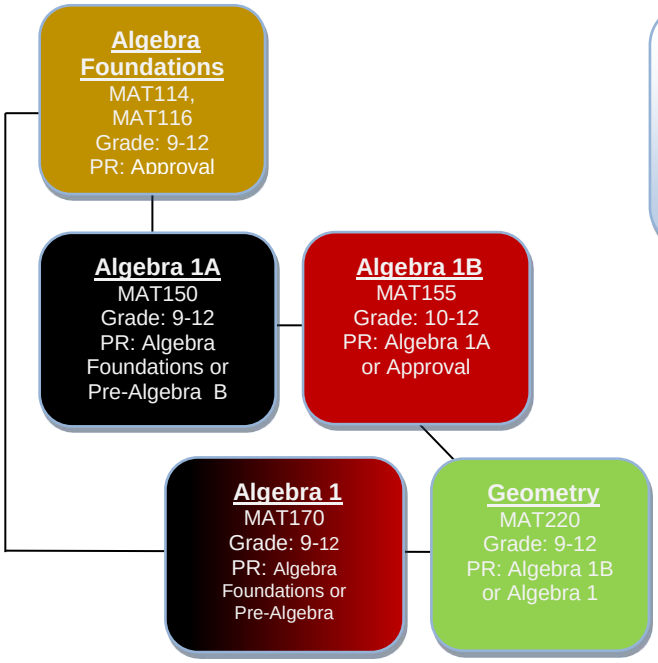
**Considerations:** See prerequisite. Class is conducted in French.

**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

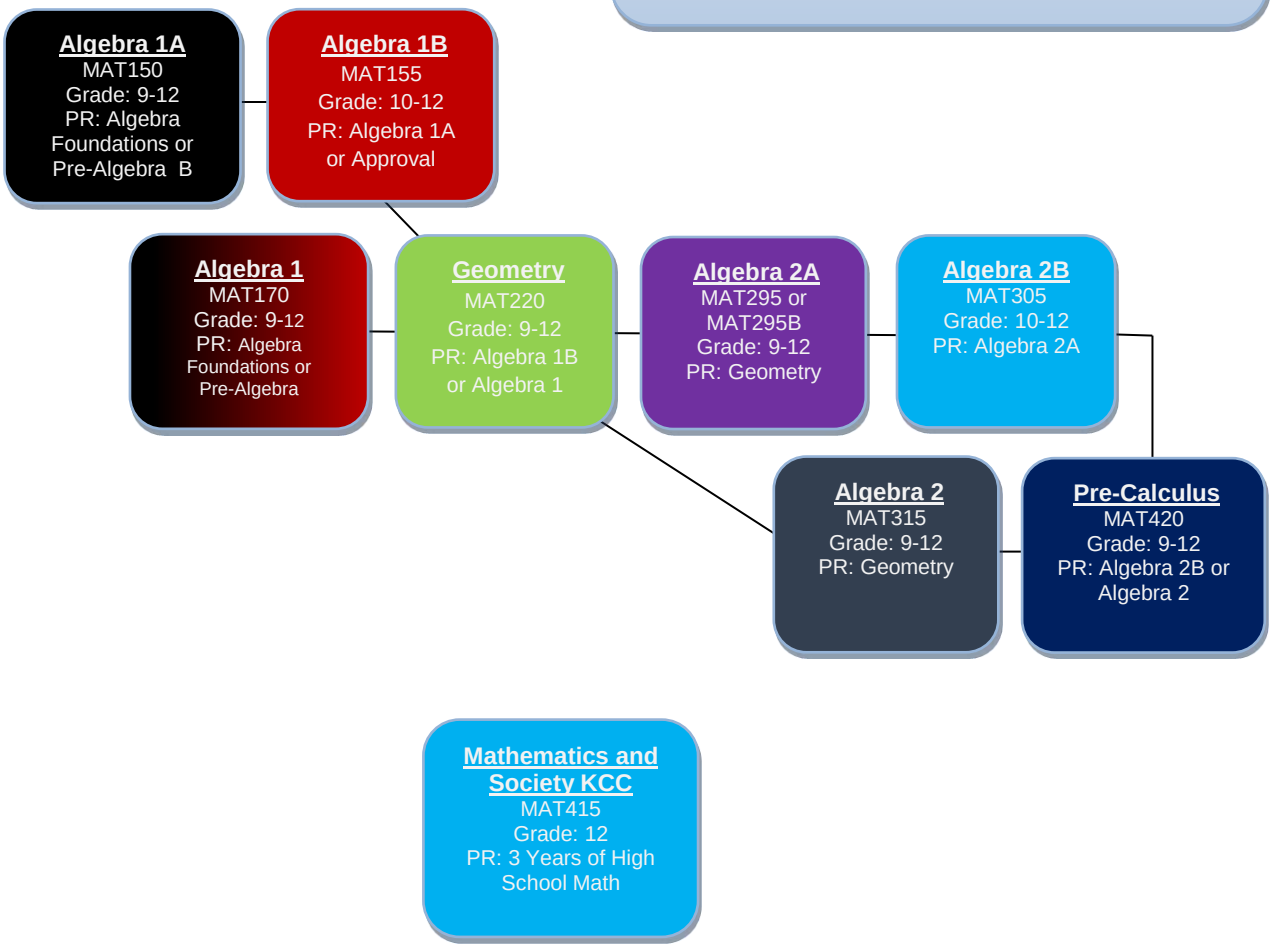
- 30 Credits Mathematics
- Must include Algebra 1 OR Algebra 1A and Algebra 1B

## Basic Mathematics Program

# Mathematics

## Graduation Requirements

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




**Mathematics and Society KCC**
MAT415
Grade: 12
PR: 3 Years of High School Math

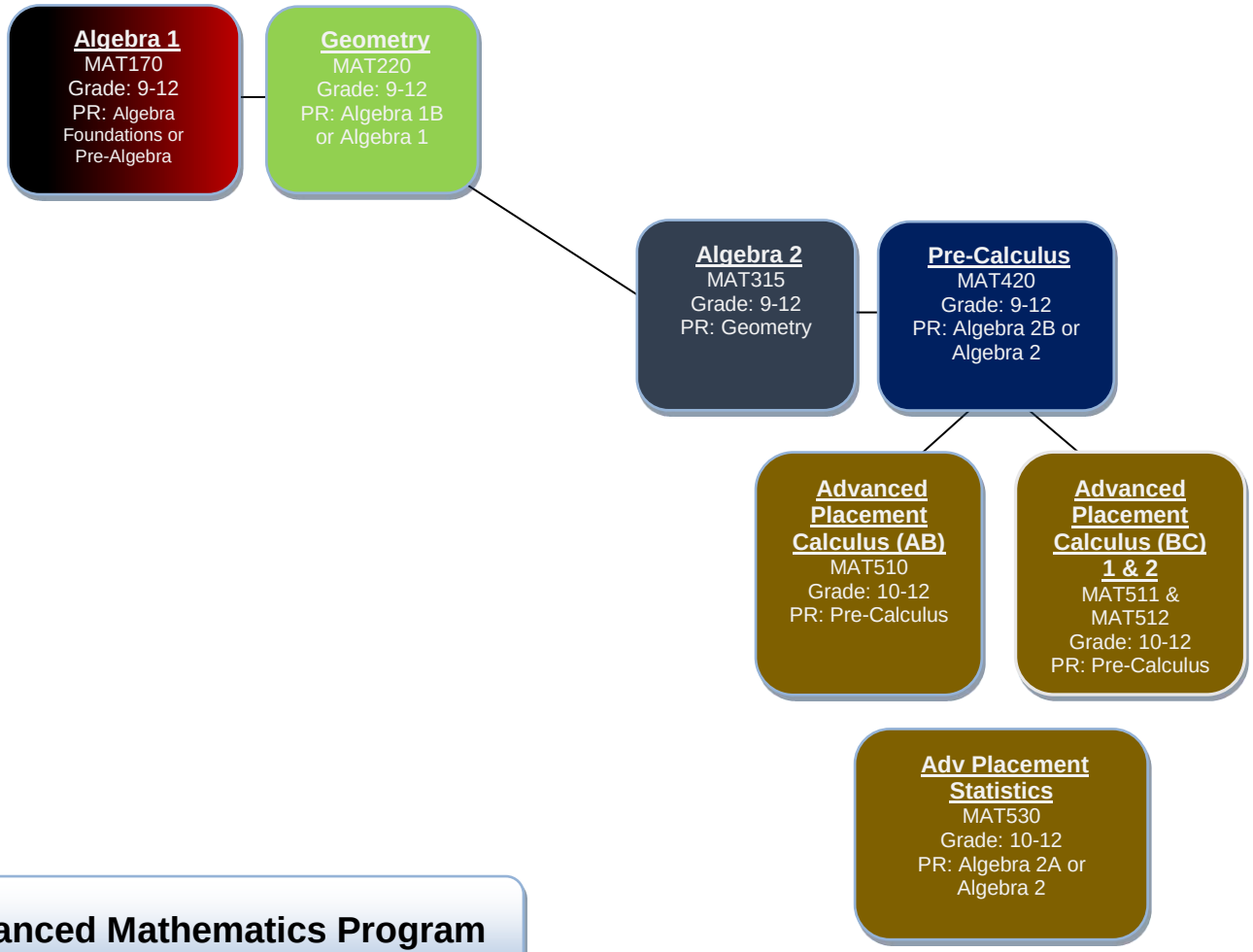
**Adv Placement Statistics**
MAT530
Grade: 10-12
PR: Algebra 2A or Algebra 2

## College Ready Mathematics Program

# Mathematics

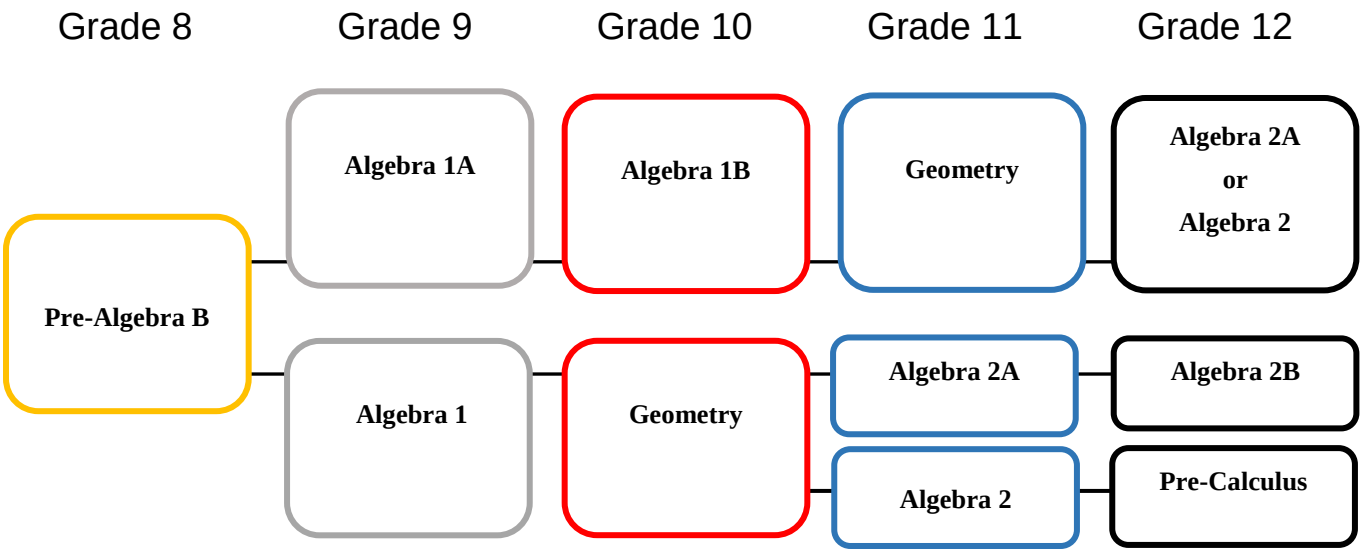
## Graduation Requirements

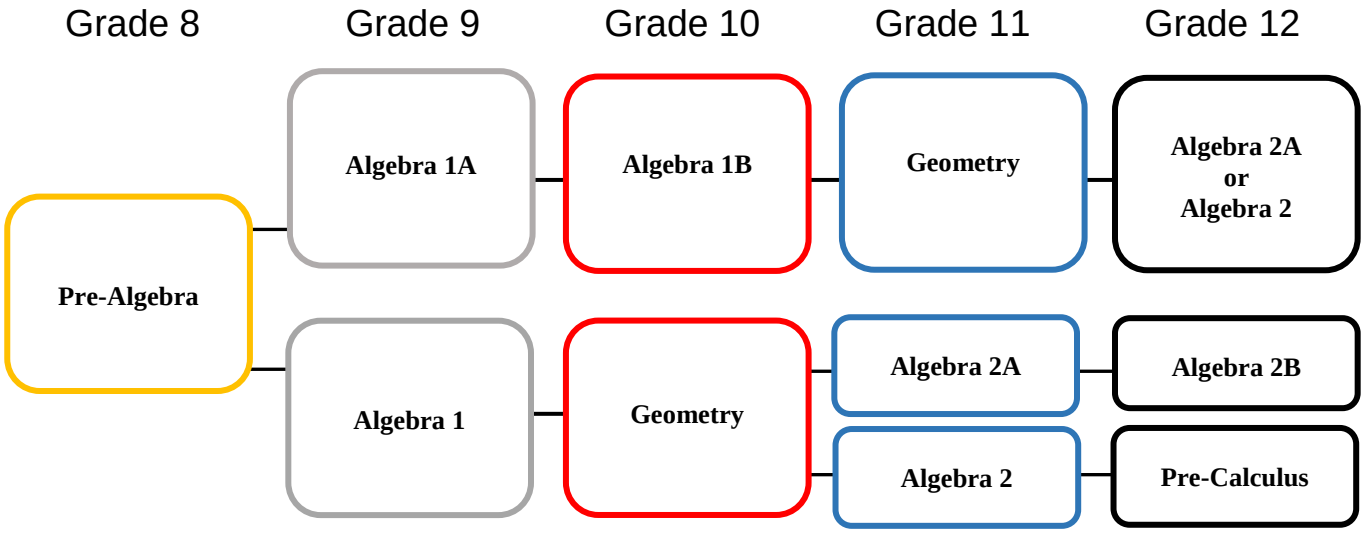
- 30 Credits Mathematics
- Must include Algebra 1 OR Algebra 1A and Algebra 1B

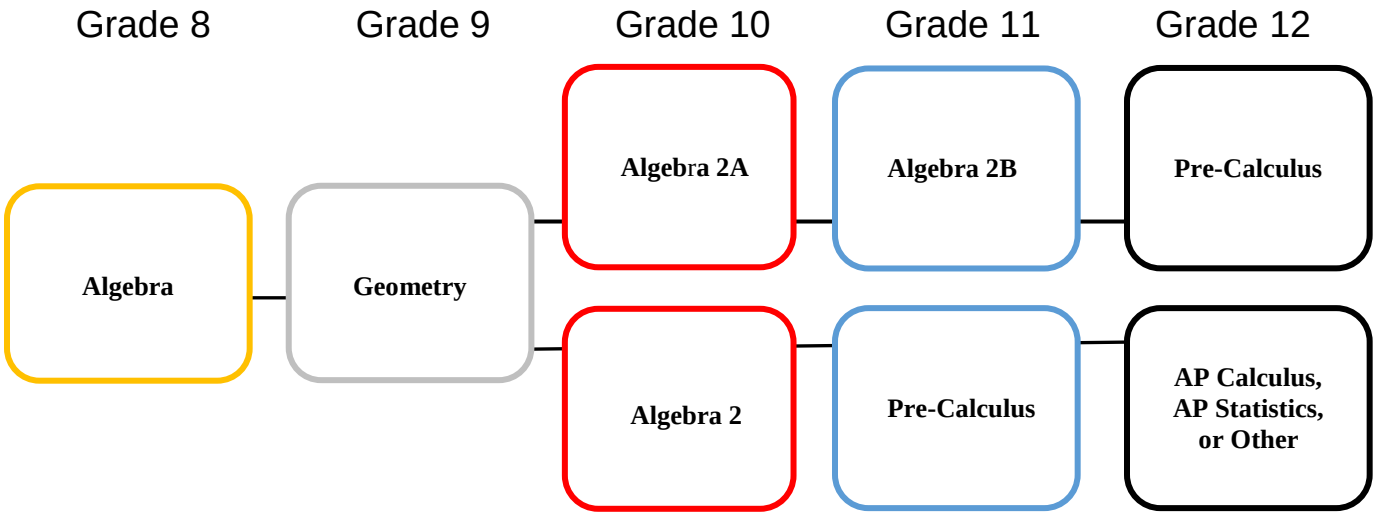



## Advanced Mathematics Program

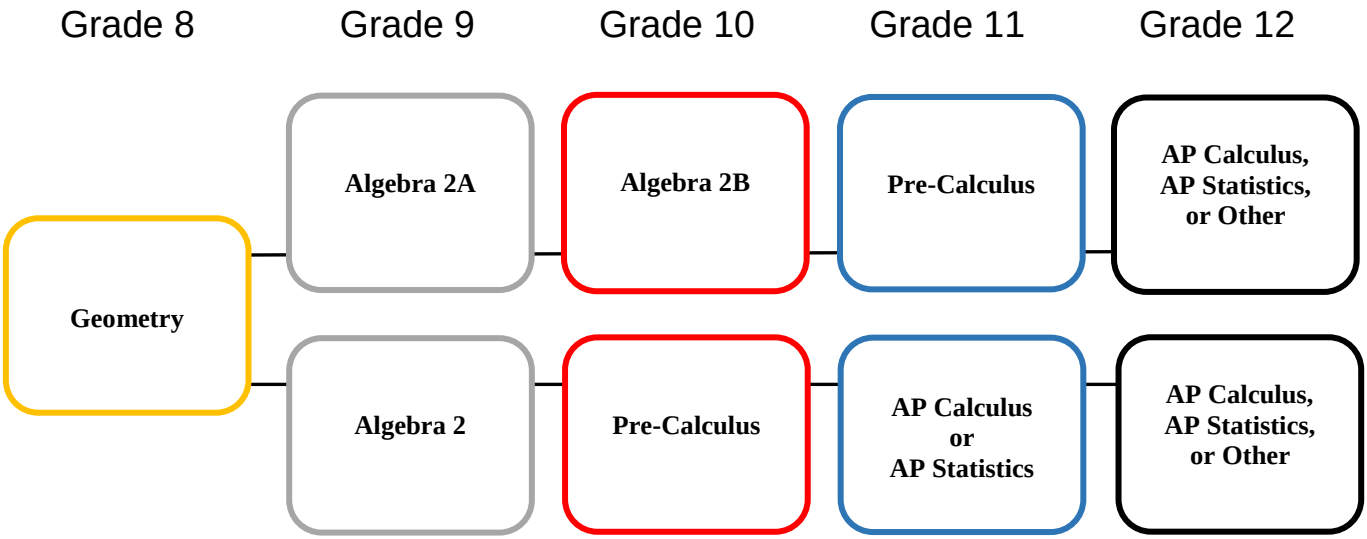
## Math Pathways



## 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).

| 9th | 10th | 11th | 12th |
|---|---|---|---|
| **Algebra 2** → | Pre-Calculus → | AP Calculus → | AP Calc or AP Stats |

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)<br>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.

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## 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

**Earth Science**
SCI125 or SCI125
Grade: 9-12

**AP Environ Science 1&2**
SCI541 & SCI542
Grade: 10-12
PR: General Biology, Algebra

**Chemistry I**
SCI320
Grade: 9-12
PR: Algebra

**AP Chemistry 1&2**
SCI521 & SCI522
Grade: 10-12
PR: Algebra 2A & Chemistry I

**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

## Electives

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

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

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

**Environmental Sustainability**
SCI620
Grade: 10-12
PR: Algebra & General Biology

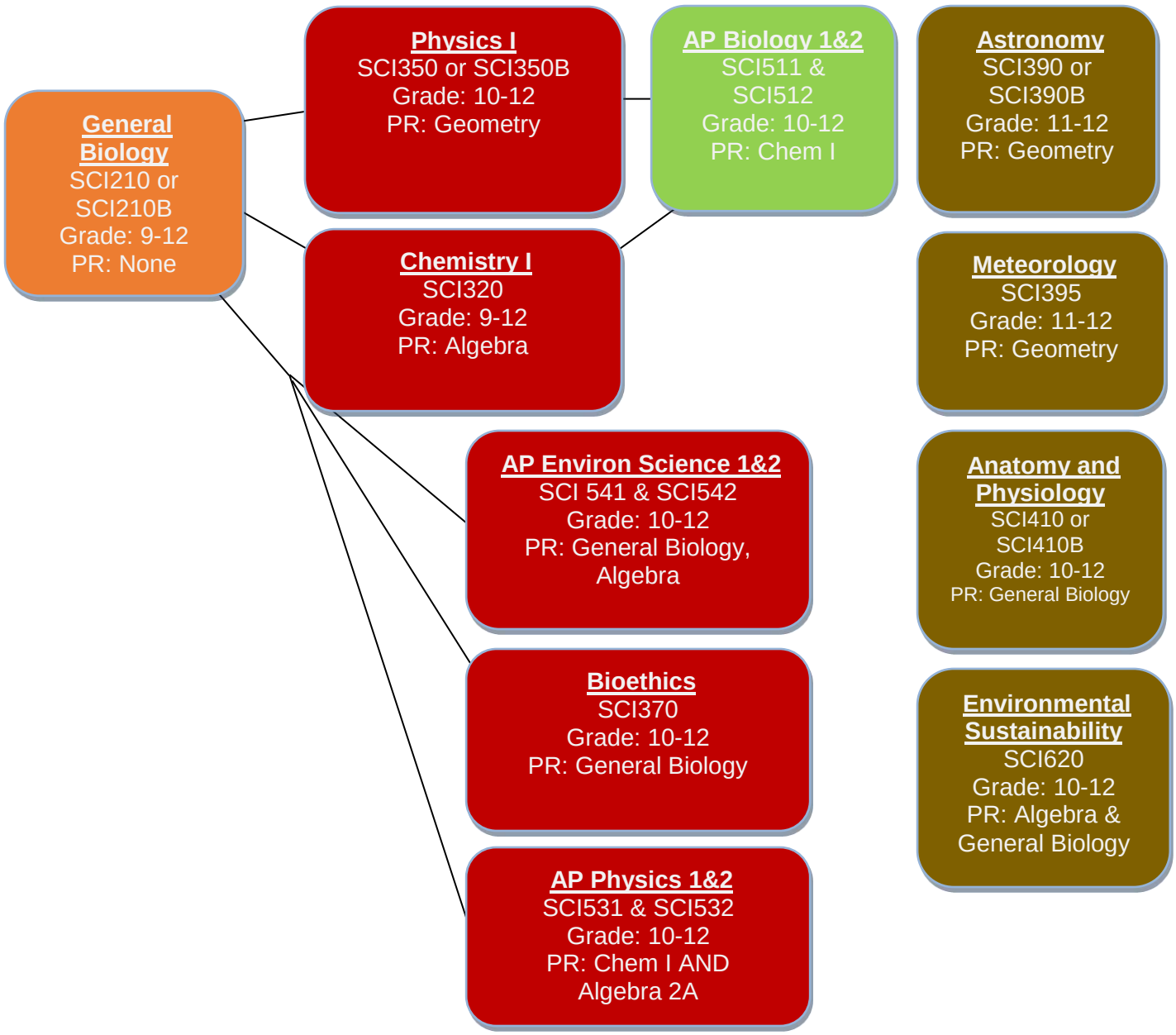
## Graduation Requirements

- 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

**Requirements through the Class of 2021**




## Electives

- **Astronomy** SCI390 or SCI390B, Grade: 11-12, PR: Geometry
- **Meteorology** SCI395, Grade: 11-12, PR: Geometry
- **Anatomy and Physiology** SCI410 or SCI410B, Grade: 10-12, PR: General Biology
- **Environmental Sustainability** SCI620, Grade: 10-12, PR: Algebra & General Biology

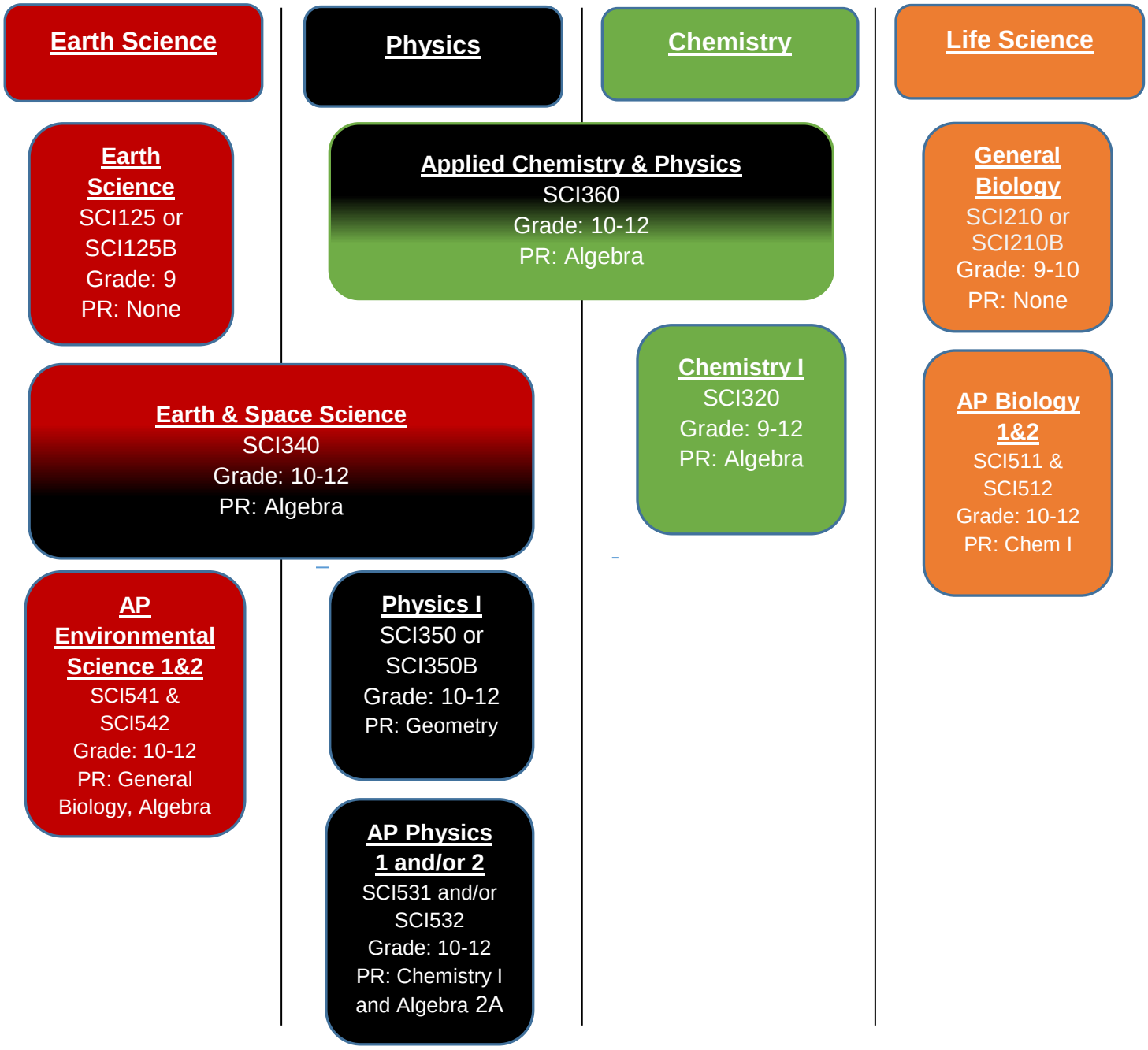
## Graduation Requirements

- 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.

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## 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.

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## 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.

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## 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.

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## 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.).

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## 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.

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## 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.

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## 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.

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## 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

**Requirements through the year 2021**

**Electives**

**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

**Class of 2022 and after.**

**Electives**

**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.

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## 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.

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## 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.

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## 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.

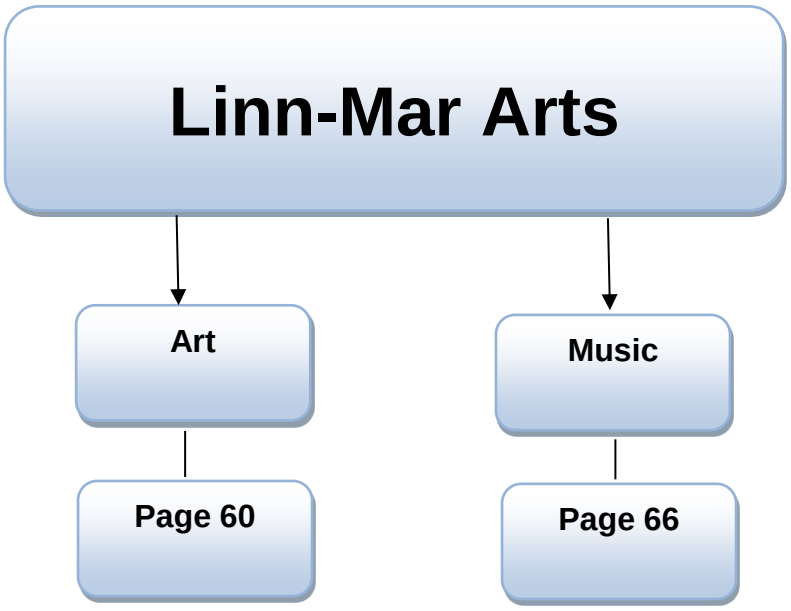
**Course Description:** Areas studied: history and approaches, states of consciousness, biological bases of behavior, cognition, testing and individual differences, sensation and perception, motivation and emotion, abnormal psychology and treatment, and social psychology. College level work is expected, 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.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# Visual Arts Program of Studies

## Entry Level

**Design Art Basics**
ART110
Grade: 9-12
PR: None

*Highly Recommended*

**Beginning Ceramics**
ART125
Grade: 9-12
PR: None

**Beginning Drawing**
ART115
Grade: 9-12
PR: None

**Beginning Painting**
ART135
Grade: 9-12
PR: None

## Intermediate Level

**Graphics One**
ART410
Grade: 10-12
PR: Design Art Basics

**3D Mixed Media**
ART145
Grade: 10-12
PR: Design Art Basics

**Construction in Clay**
ART225
Grade: 10-12
PR: Beg. Ceramics & Design Art Basics

**Expressive Drawing**
ART215
Grade: 10-12
PR: Beg. Drawing & Design Art Basics

**2D Mixed Media**
ART235
Grade: 10-12
PR: Beg. Painting & Design Art Basics

**AP Art History 1 & 2**
ART511 & ART512
Grade: 10-12
PR: None
*Design Art Basics Highly Recommended*

## Advanced Level

**Graphics Two**
ART420
Grade: 11-12
PR: Design Art Basics & 'C' or better in Graphics One

**Digital Photography**
ART400 or ART400B
Grade: 11-12
PR: None
Recommended: Design Art Basics

**Exploration in Ceramic Techniques** ART325
Grade: 11-12
PR: Beg. Ceramics & Design Art Basics
Recommended: Construction in Clay

**Drawing in Style**
ART 315
Grade: 11-12
PR: Beg. Drawing & Design Art Basics
Recommended: Expressive Drawing

**Advanced Art**
ART450
Grade: 11-12
PR: Design Art Basics, Drawing or Painting, and 3D Mixed or Ceramics

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.

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## 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.

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## 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.

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## 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.

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## 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

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|---|---|
| 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

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|---|---|
| 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.

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## Advanced Art

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|---|---|
| Course #: | ART450 |
| Grade Level: | 11-12 |
| Credits: | 5 |
| Length: | 1 Quarter |
| Format: | Block |
| Prerequisite: | 1) Design Art Basics<br>2) Painting or Drawing<br>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

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

**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**

**Fortis**
MUS120A
Grade: 9-12
PR: Instructor Approval

**Lux**
MUS120B
Grade: 9-12
PR: Instructor Approval

**Chamber Singers**
MUS210A
Grade: 10-12
PR: Instructor Approval

**Concert Chorale**
MUS210B
Grade: 10-12
PR: Instructor Approval

**Bella Voce**
MUS210D
Grade: 10-12
PR: Instructor Approval

**Cantemus**
MUS210E
Grade: 10-12
PR: Instructor Approval

**AP Music Theory**
MUS500
Grade: 10--12
PR: Instructor Approval

**Music Fundamentals**
KCC
Grade: 10--12
PR: None

# 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

**Symphony Strings**
MUS240
Grade: 9-12
PR: Instructor Placement

**AP Music Theory**
MUS500
Grade: 10--12
PR: Instructor Approval

**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.

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## 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.

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## 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

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|---|---|
| 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.

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## Lux

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|---|---|
| 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.

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## Concert Chorale

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|---|---|
| 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.

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## Cantemus

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|---|---|
| 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.

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## 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.

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## 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

W

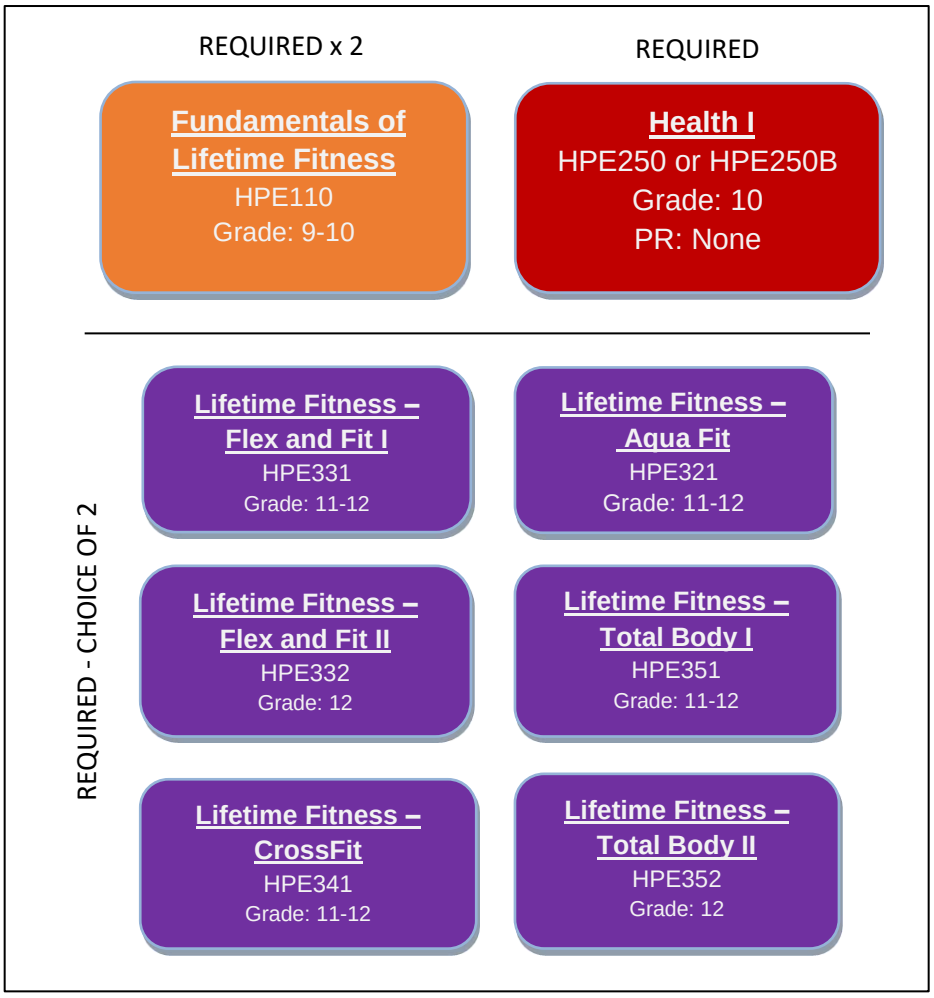
Course #: MUS500
Grade Level: 10-12
Credits: 10
Length: 2 Semesters
Format: Skinny
Prerequisite: Music Fundamentals or Instructor approval

**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

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|---|---|
| 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.

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## 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

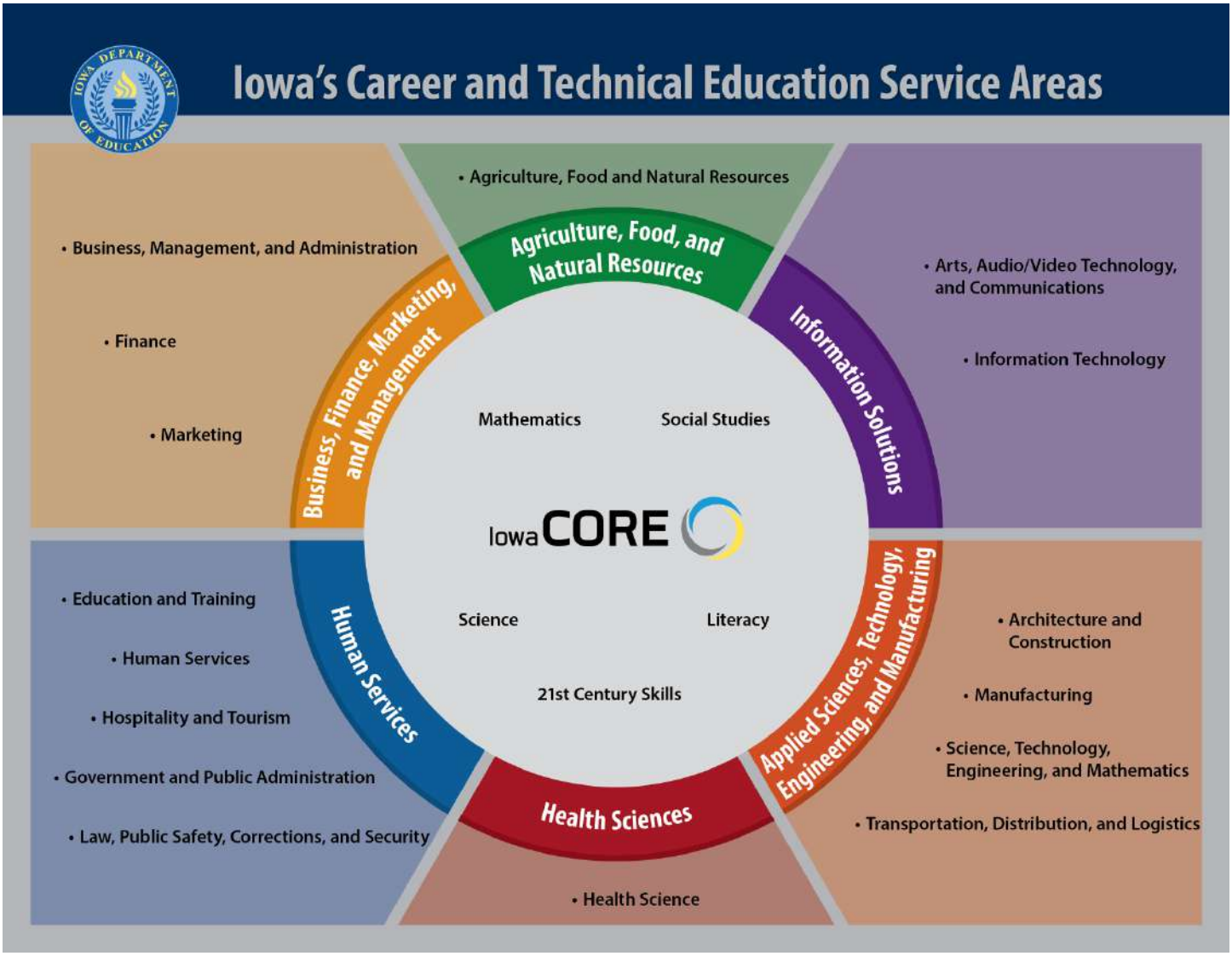
Course #: HPE450
Grade Level: 12
Credits: Up to 21 credits
Length: 2 Semesters
Format: Block
Prerequisite: None

**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.

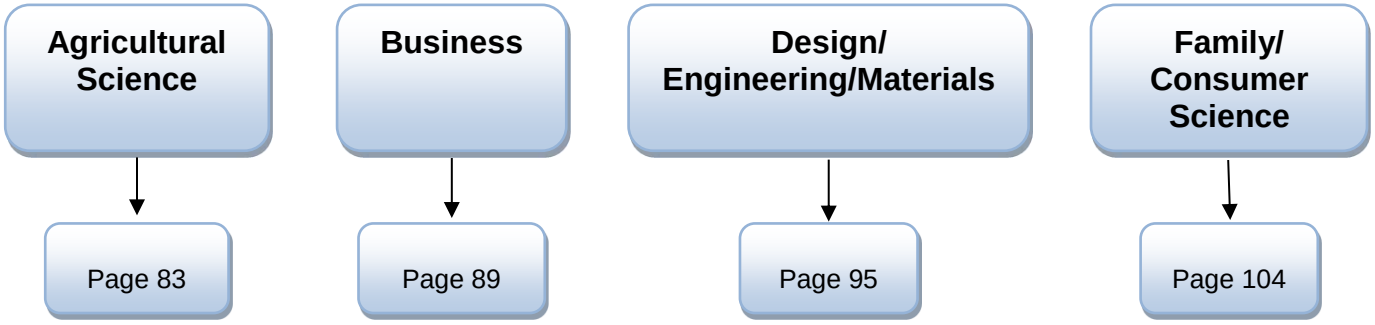
**Course Description:** The Health Sciences Academy includes hands-on patient care and meets for 85 minutes per day for the entire school year. Students will learn the basic expectations of a heath care professional through a combination of coursework, job shadows and assisting with patient care. When 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.

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## 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.

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## 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.

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## 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

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

**Principles of Engineering (POE)**
IND610
Grade: 10 -12
PR: Algebra

**Civil Engineering and Architecture Design (CEA)**
IND630
Grade: 10-12
PR: Algebra

**Digital Electronics**
IND620
Grade: 10-12
PR: Algebra

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

**Computer Science Essentials (CSE)**
IND645
Grade: 9-12
PR: None

**Computer Science Principles (CSP)**
IND650
Grade: 9-12
PR: Algebra

**Advanced Placement Computer Science A (CSA)**
IND660
Grade: 10-12
PR: IND645 or IND650

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

# Design/Engineering/Materials
## Construction/Carpentry

PR=Prerequisite Requirement

**Woods: Materials & Processes**
IND240
Grade: 9-10
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.

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## 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.

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## 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.

## 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.

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## 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.

## 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:** See prerequisites. Project Lead the Way (PLTW) engineering courses do not replace other science classes. Students taking PLTW courses should also take 3 or more semesters of traditional science courses. Students will earn credit for this course from Kirkwood Community College upon successful completion.

**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.

## Digital Electronics (DE)

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

**Considerations:** see prerequisites. This is the third course recommended in the **Project Lead the Way** engineering sequence. Students may be able to earn community college credit with successful completion of this course.

**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.

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## 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.

## 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 Aerspace 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 spce science, principles of aeronautics, structures and materials, and systems engineering.

## Engineering Design and Development (EDD)

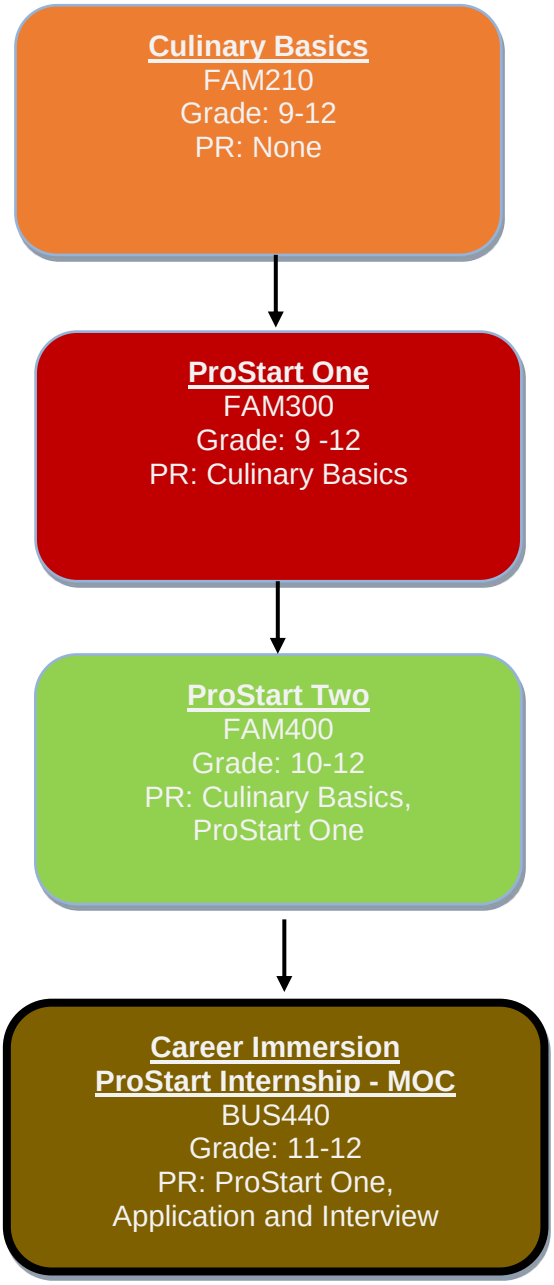
| | |
|---|---|
| Course #: | IND680 |
| Grade Level: | 12 |
| Credits | 10 |
| Length: | 2 Quarters |
| Format: | Block |
| Prerequisite: | Introduction to Engineering Design and one other PLTW Engineering course. |

**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: 9-12
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: 9-12
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.**

## Environmental Sustainability

(Previously was Biotechnical Engineering)

Course #: IND620
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.

## 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.

## 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.

## 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:** See prerequisites. Project Lead the Way (PLTW) engineering courses do not replace other science classes. Students taking PLTW courses should also take 3 or more semesters of traditional science courses. Students will earn credit for this course from Kirkwood Community College upon successful completion.

**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.

## Digital Electronics (DE)

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

**Considerations:** see prerequisites. This is the third course recommended in the **Project Lead the Way** engineering sequence. Students may be able to earn community college credit with successful completion of this course.

**Course Description:** This course is the foundation of all modern electronic devices such as mobile phones, MP3 players, laptop computers, digital cameras and high-definition televisions. Students are introduced to the process of combinational and sequential logic design, engineering standards and technical documentation.

## 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.

## 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 |

**Cosiderations:** 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.

## 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:** Students will learn object oriented programming in the Java language. After working extensively in Java, students will use Java to creating Android Apps. Android is a challenging platform to learn, but it is also interesting and rewarding. Students will extensively use Android Studio, which is a complex and powerful professional level programming tool. Unlike our other computer science courses, CSA focuses intensely on a single programming language (Java). In addition to Java programming, students will study user interfaces, connecting an app to a database, and a variety of general programming skills such as evaluating and troubleshooting code.

## Aerospace Engineering (AE)

| | |
|---|---|
| Course #: | IND670 |
| Grade Level: | 10-12 |
| Credits | 10 |
| Length: | 2 Quarters |
| Format: | Block |
| Prerequisite: | Introduction to Engineering Design |

**Considerations:** None

**Course Description:** The major focus of the Aerspace 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 spce 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.

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

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

| Site | Linn-Mar Course | Discipline | Iowa BIG Course |
|---|---|---|---|
| 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.

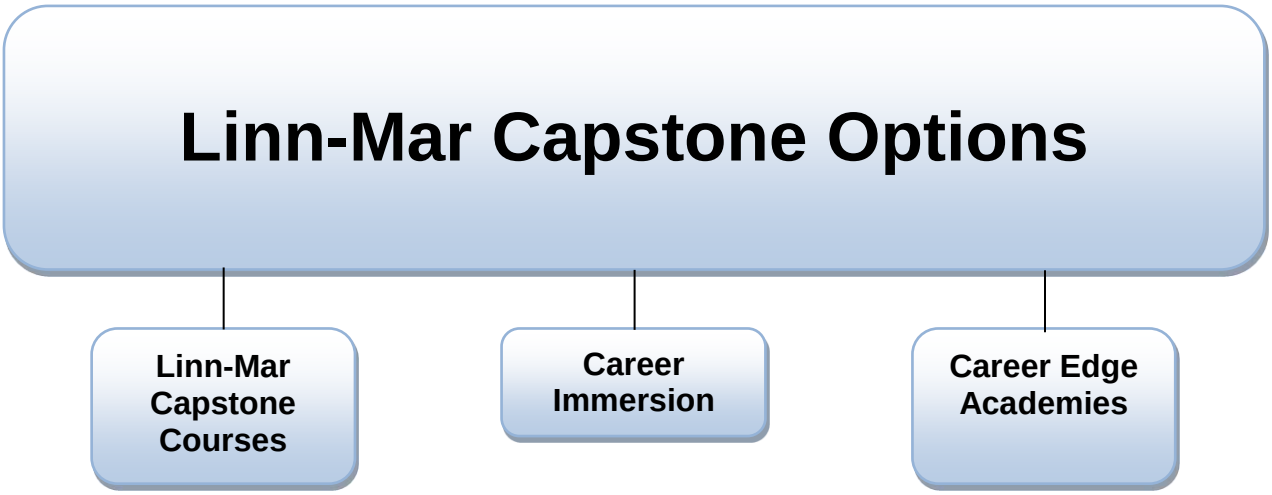
**Course Description:** This course is designed for students with demonstrated research skills who have a commitment to independent learning. Working with mentors from the community, students will plan and complete independent in-depth projects.

## 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)

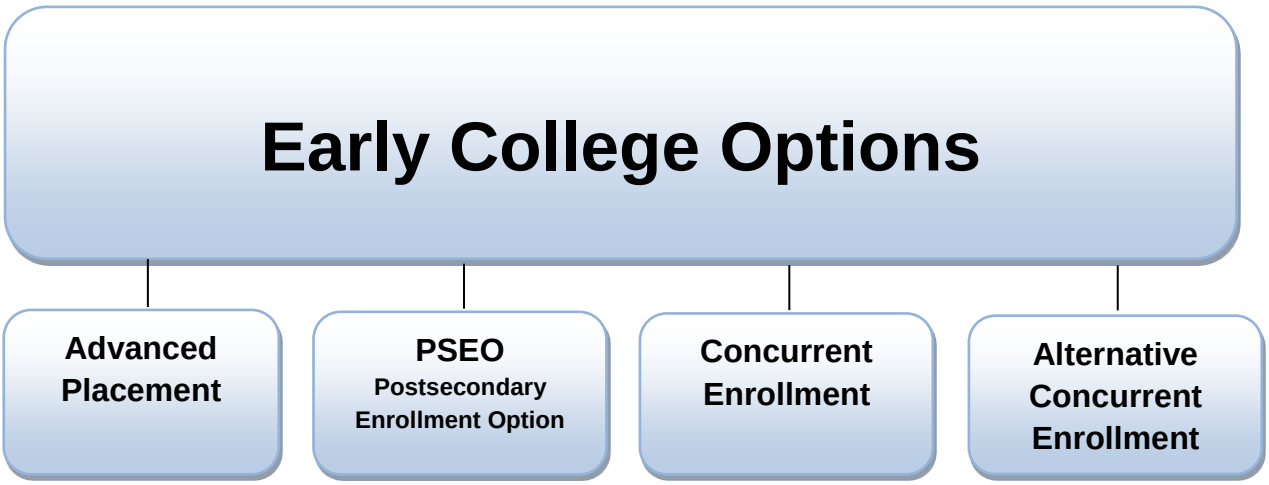
**Career Immersion**

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

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

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## 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



## Agricultural, Food, and Natural Resources



## Arts, Communication, and Information Systems



## Business, Finance, Marketing, and Management



## Health Science



## Human Services

2019-2020

# Career Pathway: *Agriculture*

LINN-MAR Community School District

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 |

### High School Clubs & Organizations

FFA

### 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 | |

Learn more & apply

## 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 Constrution & 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 Constrution & 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 Scienc

### Careers & Median Salary Information

| | |
|---|---|
| Food Scientist *$62,500* | Greenhouse Manager *$42,000* |
| Aquacultural Manager *$42,000* | Environmental Scientist *$68,000* |

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Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Architecture*

LINN-MAR Community School District

**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 | |

Learn more & apply

### High School Clubs & Organizations

| | |
|---|---|
| Robotics | Femineers |

## 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*

LINN-MAR Community School District

**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 |

### High School Clubs & Organizations

| | |
|---|---|
| Art Club | Student Newspaper |
| Anime Club | LMTV |
| Yearbook | |

### Job Shadows & Internships

| | |
|---|---|
| Graphic Designer | Photography |
| Events Assistant | News & Broadcast |
| Production Assistant | Radio |
| Marketing | Writing |
| Sports | Community Engagement |

Learn more & apply

## 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*

LINN-MAR Community School District

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
- Advanced Accounting
- theROARstore
- Introduction to Business
- Economics
- Marketing
- Business/Consumer Law
- Entrepreneurship
- Agriculture Business Foundations

### Job Shadows & Internships

- Business Management
- Clerical Assistant
- Hockey Operations
- Hospital Administration
- Human Resources
- Marketing
- Operations
- Publications
- Safety & Loss
- Administrative
- Business Development

Learn more & apply

### High School Clubs & Organizations

- FBLA (Future Business Leaders of America)
- Student Council

## Experience Pathways

### College CTE Courses in High School

- Introduction to Business
- Human Relations in Management

## Pursuit Pathways

### Certificates/Diplomas

- Office Assistant
- Medical Coding
- Medical Transcription
- Technical Accounting
- Global Perspectives in Business
- Entrepreneurship
- Human Resources
- Project Management
- Medical Transcription

**Careers & Median Salary Information**

- Admin. Assistant *$35,800*
- Data Entry *$32,500*
- Payroll Clerk *$42,100*
- Tax Preparer *$38,300*
- Bookkeeping *$37,800*

### Associate Degrees

- Business Admin.: Accounting
- Business Admin.: Financial Services
- Business Admin.: Management
- Administrative Management
- Health Information Technology
- Business Admin. w/ Transfer Option

**Careers & Median Salary Information**

- Executive Secretary *$50,000*
- Legal Secretary *$35,900*

### Bachelor Degrees

- Business
- Business Administration
- Business Information Systems
- Business Management
- Human Resources

**Careers & Median Salary Information**

- Marketing Manager *$91,600*
- Technical Writer *$57,300*
- Search Marketing Strategist *$71,300*
- Human Resources Manager *$95,700*

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2019-2020

# Career Pathway: *Education & Training*

LINN-MAR Community School District

**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
- Introductory Psychology
- AP Psychology
- KCC Child Growth and Development
- Exploring Teaching

### High School Clubs & Organizations

- LM Buddies
- Ok Without Drugs and Alcohol
- TRY (Teens Reaching Youth)
- Student Ambassadors

### Job Shadows & Internships

- Counselor
- Child Development Specialist
- High School Athletic Director
- Hockey Assistant Coaching
- Librarian
- Teacher & Classroom Assistant
- Youth Ministry
- Tutorial Admin. Assistant

Learn more & apply

## Experience Pathways

### College CTE Courses in High School

- KCC Child Growth and Development
- Exploring Teaching
- Behavior Management

## Pursuit Pathways

### Certificates/Diplomas

- Early Childhood Paraeducator
- Early Childhood Education

**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
- Exercise Science and Wellness
- Liberal Arts: Ed. w/ Transfer Option

**Careers & Median Salary Information**

- Education Administrator, Preschool & Childcare Center *$31,200*

### Bachelor Degrees

- Elementary Education
- Secondary Education
- Organizational Leadership
- 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*

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Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Finance*

LINN-MAR Community School District

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 | |

Learn more & apply

### 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 | Financial Counseling and Planning |
| Finance | |

**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*

LINN-MAR Community School District

A career in government and public adminstration requires certain skills and education depending on job requirements. Skills include planning and performing government functions at the local, state, and federal levels, including goverance, national security, foreign service, planning, revenue and taxation, and regulations.

## Exposure Pathways

### High School Courses

- Law and Constitution
- Government
- AP Government
- AP Comparative Government
- Business/Consumer Law

### Job Shadows & Internships

- City Clerk
- Congressional Campaign
- Presidential Campaign
- Civl Rights

Learn more & apply

### High School Clubs & Organizations

- Young Democrats
- Young Republicans
- Model UN

## Experience Pathways

### College CTE Courses in High School

- Introduction to Criminal Justice
- Social Problems

## Pursuit Pathways

### Certificates/Diplomas

- Office Assistant

**Careers & Median Salary Information**

- Administrative Service Manager *$83,900*
- Postal Service Mail Carrier *$50,000*
- Postmaster *$49,900*
- Meter Reader *$36,000*

### Associate Degrees

- Business Administration
- Business Administration: Management
- Administrative Management
- Water Environmental Technology

**Careers & Median Salary Information**

- Assessor *$73,200*

### Bachelor Degrees

- Urban Planning
- Public Administration
- Accounting

**Careers & Median Salary Information**

- Statistical Assistant *$51,100*
- Social and Community Service Manager *$54,300*
- Legislator *$22,100*
- Financial Examiner *$72,900*

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2019-2020

# Career Pathway: *Health Sciences*

LINN-MAR Community School District

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 |

Learn more & apply

## 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 *$42,100*
Dental Lab Tech *$41,200*
Dental Assistant *$40,300*
Ophthalmic Medical Tech *$41,500*

### 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 *$69,100*
Registered Nurse *$69,100*
Diagnostic Medical Sonographer *$62,800*
Histotechnologist *$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 *$111,800*
Natural Science Manager *$111,700*
Clinical Data Manager *$65,200*
Recreational Therapist *$52,200*

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Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Hospitality & Tourism*

LINN-MAR Community School District

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
- Foundations of Living
- ProStart One
- ProStart Two
- Food Science and Safety

### Job Shadows & Internships

- Cafe Line Cook
- Chef Assistant
- Cosmetology
- Special Events
- Travel Agent

Learn more & apply

## Experience Pathways

### College CTE Courses in High School

- ProStart One
- ProStart Two

## Pursuit Pathways

### Certificates/Diplomas

- Baking & Pastry Arts
- Hospitality Management

**Careers & Median Salary Information**

- Gaming Manager *$57,600*
- Animal Trainer *$31,500*
- Tour Guide *$28,800*
- Hotel, Motel, & Resort Desk Clerk *$21,400*

### Associate Degrees

- Culinary Arts
- Hospitality Management

**Careers & Median Salary Information**

- Travel Agent *$4,700*
- Chef & Head Cook *$37,000*

### Bachelor Degrees

- Hospitality Management
- Business Administration
- Event Management

**Careers & Median Salary Information**

- Lodging Manager *$36,000*
- Residential Advisor *$23,800*
- Interpreter & Translator *$35,000*
- Meeting, Convention & Event Planner *$42,000*

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2019-2020

# Career Pathway: *Human Services*

LINN-MAR Community School District

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 an 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 |

Learn more & apply

### 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 |

**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 |

**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*

LINN-MAR Community School District

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

### Job Shadows & Internships

- Quality Analyst
- Software Development
- Computer Technician
- Technology Support
- Information Tech
- Web Development
- IT/Help Desk

Learn more & apply

## 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 Manger *$123,600*
- Database Administrator *$80,000*
- Software Developer *$88,000*
- Computer Hardware Engineer *$85,600*

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Explore other Education & Training in the ICR Region

Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Law*

LINN-MAR Community School District

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

Learn more & apply

## 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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2019-2020

# Career Pathway: *Manufacturing*

LINN-MAR Community School District

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

## 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*

Elevator Installer *$57,200*

Industrial Machinery Mechanic *$53,300*

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*

Computer, Automated Teller, and Office Machine Repairer *$36,000*

Methane/Landfill Gas Generation System Technicians *$55,000*

### Bachelor Degrees

| | |
|---|---|
| Aerospace Engineering | Manufacturing Technology |
| Mechanical Engineering | |

### Careers & Median Salary Information

Industrial Production Manager *$91,000*

Quality Control Systems Managers *$91,000*

Industrial Engineers *$79,000*

Environmental Engineering Technicians *$41,000*

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Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Marketing*

LINN-MAR Community School District

**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

Learn more & apply

### 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*

Telemarketers *$28,600*

Real Estate Sales Agents *$48,000*

### Associate Degrees

| | |
|---|---|
| Business Administration: Marketing | Apparel Merchandising |
| Management | |

**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 Education & Training in the ICR Region

Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Transportation*

LINN-MAR Community School District

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

### High School Clubs & Organizations

Robotics

### Job Shadows & Internships

Auto Mechanic Assistant
Diesel Technician
Flight Operations

Learn more & apply

## 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*
Customs Brokers *$59,000*
Cargo and Freight Agents *$33,000*
Traffic Technicians *$31,000*

### Associate Degrees

Automotive Technology
Diesel Ag Technology
Diesel Truck Technology

**Careers & Median Salary Information**

Aviation Inspectors *$83,000*
Signal and Track Switch Repairers *$36,000*

### Bachelor Degrees

Finance
Business Administration
Supply Chain Management

**Careers & Median Salary Information**

Transportation Managers *$81,000*
Storage and Distribution Managers *$81,000*
Logistics Managers *$81,000*
Airline Pilots, Copilots, and Flight Engineers *$76,000*

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Explore other Careers in the ICR Region

2019-2020

# Career Pathway: *Science, Technology, Engineering & Math*

LINN-MAR Community School District

**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 1 | 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 & Maintenance |
| Civil & Electrical Engineering | |

Learn more & apply

### High School Clubs & Organizations

| | |
|---|---|
| Femineers | Science Club |
| Robotics | Math Club |

## 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* |

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 & Infomation 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*