

**ROCKFORD HIGH SCHOOL  
FRESHMAN CENTER  
COURSE DESCRIPTION GUIDE**

**2026-2027**





## **Rockford Freshman Center COURSE DESCRIPTION GUIDE**

**•2026-2027•**

### **ACCREDITATION AND ACADEMIC EXCELLENCE**

Rockford High School is proud to be recognized as a Michigan Blue Ribbon Exemplary School and is fully accredited by AdvanceED, formally known as NCA (North Central Association of Schools and Colleges), and has been since 1926. Rockford High School has been continuously accredited by the University of Michigan for many years. It is important to note that all Rockford Public Schools buildings are 100 percent Blue Ribbon certified! Rockford High School has also been recognized by the State of Michigan and is an Advanced Placement Achievement District. This means that Rockford meets the highest standards of accreditation, that our teachers have all been given specific training for their fields of teaching, and that administration and guidance personnel have been specifically trained for their positions. We are very proud of our long-standing commitment to excellence!

### **SCHOOLOGY**

Schoology is the web application teachers use to connect with students about their individual courses. It helps with assessment management to improve student performance, foster collaboration and personalize learning. It brings everyone together; students, teachers, coaches, parents and administrators with one communication platform.

### **POWER SCHOOL**

RPS plans to transition to a new student management system for the 2026-27 school year, PowerSchool. PowerSchool is a secure web application which allows a parent or guardian to view their student's personal information, class schedules, grades, attendance, discipline, and busing information. Details about accessing your student's account will be communicated by the district prior to the start of school in August, 2026.

### **MISSION STATEMENT**

The mission of the Rockford Public Schools is to provide a safe teaching and learning environment which will ensure, with the support of the students, parents and community, that all students, upon graduation, will have the academic and social skills to be successful, lifelong learners in a global society.

**Rockford High School is an equal opportunity institution. RHS does not discriminate on the basis of race, creed, color, national origin, age, sex or physical/mental disability in its educational programming, enrollment, employment or contracting.\***

# Rockford High School Graduation Requirements

Coursework Requirements	Credits Required	Qualifying Courses
Communications - R	0.5	<input type="checkbox"/> Choose from: Communications, Policy Debate, Theater, TV Studio 1, Yearbook for full year. AP Seminar will fulfill this requirement for all 10th grade students.
English	4.0	<input type="checkbox"/> <input type="checkbox"/> Pre-AP English 1 <input type="checkbox"/> <input type="checkbox"/> AP Seminar <input type="checkbox"/> <input type="checkbox"/> English 11 or AP English Language & Composition <input type="checkbox"/> <input type="checkbox"/> English in 12 <sup>th</sup> - two options: <u>Option 1</u> - Senior Composition or Technical Writing PLUS one of: Contemporary Lit, Shakespeare, Psychology through Lit, Multicultural Lit, Sports Lit <u>Option 2</u> - AP English Literature & Composition
Mathematics	4.0	Must include: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Algebra 1 <input type="checkbox"/> <input type="checkbox"/> Geometry <input type="checkbox"/> <input type="checkbox"/> Algebra 2 <input type="checkbox"/> Other Math <input type="checkbox"/> Math or Math-related in 12 <sup>th</sup> grade <ul style="list-style-type: none"> <li>Credit for Algebra 1, Geometry, and Algebra 2 may be earned in middle school.</li> <li>Math-related approved classes for 12th grade: Chemistry or Physics beyond the graduation requirements, Accounting, Business &amp; Personal Finance, Financial Management, and selected KCTC courses (see your counselor for details).</li> </ul> <u>Please note that "math-related" classes do not count as a math credit for college admissions.</u> <ul style="list-style-type: none"> <li>Math in 12<sup>th</sup> grade may be a repeat of Algebra 2</li> </ul>
Physical Education	1.5 or 1.0	<input type="checkbox"/> Health <input type="checkbox"/> Phys Ed 9 or Strength and Conditioning 9 <input type="checkbox"/> R - Additional 0.5 credit of Phys Ed – OR – <ul style="list-style-type: none"> <li>Participation in Marching Band or an RHS-sanctioned sport or club for two seasons. Approved clubs are Dance and Equestrian.</li> <li>A student may also apply for a waiver of this 0.5 credit for outside athletic activities; see your counselor for details.</li> </ul>
Science	3.0	<input type="checkbox"/> <input type="checkbox"/> Earth Science <input type="checkbox"/> <input type="checkbox"/> Biology <input type="checkbox"/> <input type="checkbox"/> Chemistry and/or Physics
Social Studies	3.0 or 3.5	<input type="checkbox"/> <input type="checkbox"/> World Studies or <input type="checkbox"/> <input type="checkbox"/> AP World History Modern <input type="checkbox"/> <input type="checkbox"/> American Studies or <input type="checkbox"/> <input type="checkbox"/> AP US History <input type="checkbox"/> Economics <input type="checkbox"/> Government
World Language	2.0	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 2.0 cr. of same language. May be earned in grades K-8; see counselor for details.
Visual, Performing, or Applied Arts	1.0	<input type="checkbox"/> <input type="checkbox"/> Choose from: Art (all classes), Marketing Communications, Graphic Design, TV Studio, Intro to Programming, Communications (all classes), Writing for the Print Media, Yearbook, Creative Writing, Parenting Psychology, Fashion Design, Music (all classes), Tech Ed (all classes), qualifying KCTC programs (see your counselor for details).
Business & Personal Finance	0.5	<input type="checkbox"/> This 0.5 credit can replace 0.5 credit of 4th year of math (not Algebra, Geometry or Algebra 2); Must be taken Senior year <b>Beginning with Class of 2028</b>

**Other Requirements**

Credits Earned - R	27.5	<input type="checkbox"/>
Online Experience		<input checked="" type="checkbox"/> Incorporated into RHS curriculum.
Competency Test - R		<input type="checkbox"/> Students must earn scores of 4 or higher on all three areas of the ACT WorkKeys test.
Junior Testing Requirement - R		<input type="checkbox"/> Good Faith Effort on junior year testing sequence.

R = Local RHS Graduation Requirement

A course may fulfill both a state and a local graduation requirement

## **PLANNING GRID FOR YOUR HIGH SCHOOL COURSES**

**9<sup>th</sup> Grade**


**10<sup>th</sup> Grade**


**11<sup>th</sup> Grade**


**12<sup>th</sup> Grade**


# LIST OF COURSE DESCRIPTIONS BY DEPARTMENT

*Grade Levels for courses are recommendations. Students may take a class that is not recommended for their grade level with written teacher permission.*

- **ENGLISH •**



**PRE-AP ENGLISH 1**- 2 Trimesters (grade 9)

Prepares students for the rigors of future English courses and gives them the language skills necessary to achieve their life goals, whether in college or a vocation. The work and the reading required will not be unreasonable, but it will be steady. We have developed the course to support our English 9 district priority standards and to focus on relevant reading, writing, and language skills. Texts take center stage, preparing students for close, critical reading and analytical writing. This format trains readers to observe intentional details in a text to understand the whole better. It also trains writers to create more complex sentences - building this foundational skill en route to sophisticated, longer-form analyses.

- **SCIENCE •**



**EARTH SCIENCE** – 2 Trimesters (grade 9)

Introduces the tools and techniques used in our high school science program. Subjects covered include plate tectonics, weather, climate, oceans, astronomy, and processes that change the earth's surface. Content is aligned with state standards and testing.

**EARTH SCIENCE - HONORS** – 2 Trimesters (grade 9)

**Prerequisite: Application required- considerations include middle school grades, NWEA and RIT scores.**  
This class is a fun and interesting introduction to honors level high school science courses. Freshmen who have demonstrated exceptional ability in their eighth-grade science classes and want the benefits and challenge of an honors level class should consider this course. The class will take content areas of Earth Science to a greater depth than the regular Earth Science course integrating foundational principles of chemistry, physics and specific concepts of biology that will provide a benefit to students as they move forward. Content is aligned with state standards and testing.

- **MATHEMATICS •**



### **ALGEBRA 1** – 3 Trimesters (grade 9)

This is the first course taken in Algebra. It introduces the student to the basic terms, symbols and concepts used in the study of Algebra. The focus is on equation solving, inequalities, systems of equations, linear and quadratic functions including solving quadratic equations by factoring and using the quadratic formula, and radicals. This course includes units in percent/percent change, proportion problems, and probability and statistics.

### **“FLIPPED” ALGEBRA 1** – 3 Trimesters (grade 9)

**Students must have internet access at home for this Flipped class.**

In the Flipped class, students watch and take notes on concept/tutorial videos at home. The next day class time is devoted to peer/group work on the “homework.” This allows for students to take notes and learn at their own pace (at home with videos) and then have the teacher (and peers) available for help during class while working through the homework problems. This course follows the same curriculum as Algebra.

### **GEOMETRY** – 2 Trimesters (grades 9-10)

**Prerequisite: Algebra 1 with grade of C or above recommended.**

This course is devoted to the study of geometric figures in which the ideas of congruence, similarity, area, volume constructions and transformations, are introduced and explained. Formal proof is extensively used. Geometry is required for college prep.

### **“FLIPPED” GEOMETRY** – 2 Trimesters (grades 9-10)

**Students must have internet access at home for this Flipped class.**

**Prerequisite: Algebra 1 with grade of C or above recommended.**

In the Flipped class, students watch and take notes on concept/tutorial videos at home. The next day class time is devoted to peer/group work on the “homework.” This allows for students to take notes and learn at their own pace (at home with videos) and then have the teacher (and peers) available for help during class while working through the homework problems. This course follows the same curriculum as Geometry.

### **GEOMETRY - HONORS** – 2 Trimesters (grades 9-10)

**Prerequisite: This is the accelerated Geometry class for those who complete Algebra in 8th grade with an A- or above.**

Course content includes area, volume, coordinate geometry, trigonometry, and applied Algebra concepts. Students will be assigned many of the more difficult problems from the book and occasionally will be asked to demonstrate their understanding of the material to the class.

### **ALGEBRA 2 - HONORS** – 2 Trimesters (grades 9-11)

**Prerequisite: Successful completion of Honors Geometry.**

This course covers the same topics as Algebra 2, but in greater detail. Students will be assigned many of the more difficult problems from the book and occasionally will be asked to demonstrate their understanding of the material to the class. Students enrolled in Algebra 2 Honors can participate in a variety of math contests and competitions, such as the Michigan Math Prize Competition test and the Michigan Math League. It is a very rigorous course.

- **SOCIAL STUDIES •**



**WORLD STUDIES A** – 1 Trimester (grade 9)

***Spanish version required for Immersion students.***

In World Studies A students will learn about Medieval Europe, New Ideas and Empires, Changes in European Society and Industrialization. Students will explore this history through map skills, multimedia, historical documents and the class text, World History: Human Legacy. This class is a prerequisite for World Studies B.

**WORLD STUDIES B** – 1 Trimester (grade 9)

***Spanish version required for Immersion students.***

In World Studies B students will learn about Nationalism, The World at War, and the Contemporary World. Students will explore this history through map skills, multimedia, historical documents and the class text, World History: Human Legacy.

**AP WORLD HISTORY: MODERN** - 3 Trimesters (grade 9)

**Prerequisite:** Students must possess literacy skills to read a college-level textbook and write grammatically correct, complete sentences. Application with essay required- considerations include middle school grades, NWEA , PSAT and essay scores.

This history course provides students with the opportunity to study the global evolution of human processes from c. 1200 CE to the present, with some additional content from earlier time periods. The focus of this course will be divided equally between the AP World History themes: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time.

*College Course Equivalent AP World History: Modern is designed to be the equivalent of an introductory college or university survey of modern world history*

- **WORLD LANGUAGES •**



**SPANISH 1** – 2 Trimesters (grades 9-12)

Language study is like building a house. Spanish 1 is where we dig the foundation. Students will acquire basic grammar structures, build vocabulary, experience Hispanic culture, as well as work on listening and reading comprehension. Students will begin to develop speaking skills.

**SPANISH 2** – 2 Trimesters (grades 9-12)

**Prerequisite:** C or higher in Spanish 1 is encouraged

In our analogy of house-building, Spanish 2 is where we build the structure of the house. Students will expand their use of grammar structures and vocabulary. They will solidify listening and reading comprehension and develop writing skills. Spanish 2 includes exposure to Hispanic culture. By the end of Spanish 2 students should be speaking at a basic level.

**FRENCH 1** – 2 Trimesters (grades 9-12)

Your first year of French welcomes you with useful everyday vocabulary, such as greetings and situations like ordering food at a cafe or going out with friends. You will learn the basics of the present tense and important everyday words like a, the, and my. You will read, write, listen to, and speak French! It will be very satisfying to see how much you understand after just a few months.

Don't forget about culture! Discover life in Paris and the many beautiful cities all around France.

**FRENCH 2** -2 Trimesters (grades 9-12)

**Prerequisite:** C or higher in French 1 is encouraged

Students learn more complex structures, building on what they learned in French 1. They will learn the future tense and past tenses. Their vocabulary base will continue to expand, which will enable them to converse about a broader range of daily activities. Students will continue to grow in their knowledge of French culture.

**GERMAN 1** – 2 Trimesters (grades 9-12)

The student communicates at a beginning proficiency level developing listening comprehension, speaking, reading, and writing skills as he/she works with course materials. The new vocabulary focuses on the student and his/her environment, and he/she begins to compare our culture to the cultures in countries where German is the predominant native language. This course will enable the student to become a more knowledgeable world citizen.

**GERMAN 2** - 2 Trimesters (grades 9-12)

**Prerequisite:** C or higher in German 1 is encouraged

German 2 reviews and builds upon the foundations laid in German 1. It presents more complex grammatical structures, expands functional vocabulary, and increases knowledge of German-speaking cultures with an emphasis on geography. Communicative activities, such as writing friendly letters, are the key to progress.

**CHINESE 1** – 2 Trimesters (grades 9-12)

This course will provide students with a basic introduction to Chinese language, society and culture. Particular attention will be paid to developing proper Mandarin pronunciation and basic reading and writing skills, and learning simple phrases and language/situational survival skills.

## • PHYSICAL EDUCATION/HEALTH •

Michigan Merit Curriculum Graduation Requirement for PE and Health:

**PE:** Choose **ONE** of the following two PE classes (for 9<sup>th</sup> grade)

**Health:** Required for graduation (9<sup>th</sup> grade)



### **PHYSICAL EDUCATION 9** – 1 Trimester (grade 9)

This is a beginning course in physical education. The emphasis is on lifetime activities including both fitness and sports. Fitness activities focus on strength, cardiovascular endurance, flexibility and agility. Sports activities such as badminton, basketball, disc golf, flag football, floor hockey, soccer, softball, and volleyball include the individual and team aspects. Specific course content will be dependent on the trimester due to weather and facility limitations. **Physical Education 9 counts towards the first of two Physical Education classes required for graduation and meets the Michigan Merit Curriculum guidelines.**

### **STRENGTH AND CONDITIONING 9** – 1 Trimester (grade 9)

This is an intense class designed to meet the needs of the serious participant. Strength and Conditioning 9 is a dynamic course that focuses on mastering the proper form and technique used for the basic lifts to prepare the student to safely and effectively lift weights. There is also a strong emphasis on core strength, speed and agility, conditioning, and flexibility and mobility. There will be competitive game play once a week. Pre and Post testing in the areas of strength, power, speed, and agility will be recorded and evaluated. This course suits those with a strong interest in improving their strength, speed and agility and preparing for advanced conditioning during their sophomore through senior years at the 10-12 building. **Strength and Conditioning 9 counts towards the first of two Physical Education classes required for graduation and meets the Michigan Merit Curriculum guidelines.** With a grade of a B or better the student will have met the prerequisites to enroll in Advanced Conditioning as a Sophomore.

### **HEALTH EDUCATION** – 1 Trimester (grade 9) ***Required for graduation.***

This class focuses on developing skills and acquiring knowledge to promote health and wellness. Students will explore units that meet the State of Michigan Health Standards. Course topics include: wellness, mental and emotional health, coping strategies, communicable and non-communicable diseases, healthy nutrition, substance abuse, first aid and safety, positive self-image, refusal skills, reproductive health (abstinence-based), and knowledge of laws. Students will be taught the latest techniques regarding hands only CPR and how to use an AED. Throughout these units, emphasis is placed on avoidance of risky behaviors to help students learn their decisions can promote their health and enjoyment of life now and in the future.

## • MUSIC •



### **BAND –(Marching/Concert)** – 3 Trimesters (grade 9)

#### **Prerequisite: Middle School Band**

An entry level study of music performance through band literature and applicable music theory. This course is for all freshman band students entering the high school instrumental music program. This includes Marching Band in the 1<sup>st</sup> trimester and Concert Band in trimesters 2 and 3. The course is a natural progression from middle school band and will prepare students for the level of musicianship required in the advanced high school ensembles. It is a prerequisite for Wind Symphony and Wind Ensemble.

### **CHOIR** – 3 Trimesters (grades 9-12)

The class will include vocal techniques, music theory, music literature, and performance of vocal music of all periods in large group and small ensembles. This class does not require an audition.

### **CONCERT ORCHESTRA** – 3 Trimesters (grades 9-12)

#### **Prerequisite: Middle School Orchestra or 3 years of string-playing experience.**

This course includes intermediate and advanced study of string technique, an introduction to music theory, and performance of string orchestra literature. This course is open to all high school string players with at least 3 years of playing experience. The focus of this ensemble is to continue developing string technique, and move toward more advanced levels of musicianship required in a high school orchestral ensemble.

### **MUSIC APPRECIATION** – 1 Trimester/Elective (grades 9-12)

This course, for musicians and non-musicians alike, explores the role music plays in our everyday lives. We use a wide variety of musical styles (from the early 1900's to current chart hits) to learn about musical concepts like song form, instrumentation, vocal type and lyric composition. We also discuss higher-level musical concepts like musical preference, the cultural roles of music and artistic integrity. In addition, students will spend time learning the basics of music literacy on guitar, piano or ukulele.

- **ELECTIVES •**



### **INTRODUCTION TO ART** – 1 Trimester/Elective (grade 9)

This class will introduce the basics of design as applied to different media such as pencil, clay and paint, etc. Use of art elements and principles are stressed, and students will learn and improve drawing techniques. Written components, quizzes, tests or critiques may accompany the projects. A multiple choice final exam is given.

### **PAINTING** – 1 Trimester/Elective (grade 9)

#### **Prerequisite: Introduction to Art**

This course will introduce students to a variety of painting mediums, such as acrylic, watercolor and mixed media. Theme-based unit projects will be paired with experiences to help students build their understanding of painting techniques. Written components and critiques may accompany the projects. A final exam project will be assigned.

### **DRAWING** – 1 Trimester/Elective (grade 9)

#### **Prerequisite: Introduction to Art**

This class involves the drawing of still life, landscapes, figures, and compositions. Material used will include pencil, charcoal, pastels, pen and ink, and colored pencils. Written components, quizzes, tests or critiques may accompany the projects.

### **TEXTILES / FIBER ARTS** – 1 Trimester/Elective (grades 9-12)

#### **Prerequisite: Introduction to Art**

Students will use fiber and textile media and techniques to create two and three dimensional artworks. Fiber and textile processes may include: weaving, felting, papermaking, crochet and mixed media.

### **INTRO TO PROGRAMMING** – 1 Trimester/Elective (grades 9-12)

This course uses the C# programming language to learn the basics of developing computer applications. At the end of this course students will be able to write programs that use user input to interact with their applications and decide what happens next. Students will show their proficiency with these topics by making two projects during the trimester, a Code.org project and a text based adventure.

### **3D VIDEO GAME DEVELOPMENT** – 1 Trimester/Elective (grades 9-12)

#### **Prerequisite: Successful completion of Intro to Programming with a C or better recommended.**

This course uses the C# programming language with Game Engine Unity to learn the basics of developing 3D Video Games. At the end of this course students will be able to write interactive video games in a 3D format. Students will show their proficiency with these topics by making two games during the trimester, a midterm project and a final project.



### **FOODS FOR HEALTHY LIVING** – 1 Trimester/Elective (grade 9)

Students will be introduced to various cooking methods while being able to practice those skills in the kitchen. This course will include the following units: Kitchen Safety, Kitchen Basics, Nutrient Basics, Healthy Eating Habits, Quick Breads, Fruits/Vegetables, Vegetarian Diets, Meats/Dairy and Eggs. The student will complete lab and research tasks in groups and individually throughout the trimester. This course is the prerequisite to Advanced Culinary Arts (grades 11-12).

**PERSONAL LIVING SKILLS** – 1 Trimester/Elective (grade 9)

This introductory course includes fast paced instruction with scenario based learning. Numerous hands-on activities allow students to immediately apply skills learned for numerous financial concepts including goal setting, career exploration and creating a spending plan. Whether working independently, in small groups or as a class, students will fully engage in classroom activities and remember knowledge learned.

**STUDENT COUNCIL** – 1 Trimester/Elective (grade 9)

This course will focus on developing student leaders at the high school level who will serve as representatives for the student body. Students will actively encourage and support individual and collective involvement of the student body in school-wide activities. Student Council members will establish and maintain a working relationship with faculty, administration, parents and community members on behalf of our building. The students will also have a working relationship with 10<sup>th</sup> – 12<sup>th</sup> grade Student Council members. This course requires an application and teacher recommendation.

**THEATER 1** – 1 Trimester/Elective (grades 9-12)

This course fulfills the Communications requirement for graduation.

Theater 1 is a course designed to encourage individuals of experience and talent at all levels to “get out of their comfort zones” in order to improve their confidence in front of an audience. Each student who participates fully in this course should expect to gain a deeper appreciation and understanding of the theater arts with a focus on basic acting and design elements.

\*Play attendance / out-of-class requirement: 5 hours are required\*

**NATIONAL AND GLOBAL ISSUES** – 1 Trimester/Elective (grade 9)

In National and Global Issues, students will take a National and Global look at current events and issues to gain a better understanding of the world around them. Topics that students will explore will include: Human Rights, Economic Development, Environmental Issues, and Political Discourse. Students will explore these areas through online media, television media, magazines, newspapers, and other materials provided in class. There is no prerequisite for this course. This course is not a prerequisite for any other course.

**INTRODUCTION TO WORLD CULTURES** - 1 Trimester/Elective (grade 9)

This 12-week introductory course provides students with an opportunity to learn about the cultures of countries from different regions of the world. The curriculum covers a variety of cultural aspects from each country such as languages, holidays, foods, art, music, geography, and daily life in general. Through participation in engaging daily activities, students develop a deep understanding of these diverse cultures and the importance of global citizenship.

**DESIGN INNOVATION** – 1 Trimester/Elective (grades 9-12)

There are problems that need to be solved everywhere and people need to solve them. Your ability to create and innovate puts you in a position to solve those problems. This course will help you develop the skills and tools to work through the processes of design-thinking and human-centered design to become that problem-solver who can see challenges that others do not and ideates toward solutions that others might miss. You will not only learn to see and design for solutions, but you will also create and build those solutions and pitch them to their end-users.

- **TECHNOLOGY EDUCATION •**



**PRODUCT DESIGN AND FABRICATION** – 1 Trimester/Elective (grade 9)

This course is designed to be a project-oriented introduction into the World Level courses offered at the high school. The hands-on projects will primarily focus on the areas of woodworking, manufacturing, robotics and energy & transportation. The emphasis for all projects will be centered on design, fabrication, testing and production phases. The purpose of this class is to let students explore new areas of technology while building on the foundations established at the middle school.

**WORLD OF WOODWORKING TECHNOLOGY** – 1 Trimester/Elective (grades 9-12)

**Prerequisite: Grade 9: Product Design and Fabrication. Grades 10-12: None.**

This is a hands-on course designed to introduce the students to various woodworking processes and techniques. The student will focus on building various required projects using hand and power tools and machinery. Students will gain an insight into designing and manufacturing wood based products.

**WORLD OF STRUCTURAL ENGINEERING TECHNOLOGY** – 1 Trimester/Elective (grades 9-12)

**Prerequisite: Grade 9: Product Design and Fabrication. Grades 10-12: None.**

Students will be introduced to basic concepts dealing with construction and structural engineering. Students will be exposed to various problem-solving situations in areas including: construction systems, planning and management, structural design and material testing. The class will include the production of prototype models and/or full-scale production of various construction styles.

**WORLD OF ENERGY/TRANSPORTATION TECHNOLOGY** – 1 Trimester/Elective (grades 9-12)

**Prerequisite: Grade 9: Product Design and Fabrication. Grades 10-12: None.**

In this area of physical technology, the student will be exposed to several concepts related to energy and transportation. In this course the student will convert energy from one form to another. In addition, the student will work with gear ratios and radio control systems. Energy and Transportation will combine physics, engineering and a hands-on problem solving approach to education. Emphasis will be placed on critical thinking and group work.

**WORLD OF COMPUTER-AIDED DRAFTING (CAD) TECHNOLOGY** – 1 Trimester/Elective (grades 9-12)

**Prerequisite: Grade 9: Product Design and Fabrication. Grades 10-12: None.**

This course will focus on technical drawing (*drafting techniques*) in both architectural and machine drawing design. Students will be utilizing different types of AutoCAD (*computer aided design*) software throughout the trimester. We will be drawing in both 2D and 3D environments giving the student insight into the 21<sup>st</sup> century industrial design field. Students will also be exposed to other software and hardware devices including: scanners, digital cameras, printers, plotters, and Microsoft Office products.

**WORLD OF MANUFACTURING ENGINEERING TECHNOLOGY** – 1 Trimester/Elective (grades 9-12)

**Prerequisite: Grade 9: Product Design and Fabrication. Grades 10-12: None.**

The students will be exposed to various aspects dealing with manufacturing, including product design, material handling, computer aided design and manufacturing. Students will develop manufacturing teams responsible for the designing and mass production of a product using computer controlled lathes and mills (*CAD CAM*).



# KENT CAREER & TECHNICAL CENTER (KCTC)

\*\*\*FOR STUDENTS IN GRADES 11 & 12\*\*\*

## Arts & Communications Pathway

Graphic Communications	1-2 years
Digital Animation & Game Programming	1-2 years



## Business, Management, Marketing & Technology Pathway

Entrepreneurship & Marketing	1-2 years
Networking & Cyber Security	1-2 years
Marketing & Design	1 year



## Engineering/Manufacturing & Industrial Technology Pathway

Applied Construction Technology	1-2 years
Auto Collision Repair	1-2 years
Automotive Technology	1-2 years
Aviation & Drone Technology	1-2 years
Diesel & Equipment Technology	1-2 years
Engineering	1-2 years
Heating, Ventilation, Air Conditioning & Refrigeration (HVACR)	1-2 years
Mechatronics	1 year
Precision Machining Technology	1-2 years
Welding	1-2 years

## Health Sciences Pathway

Health Careers	1-2 years
<i>Options: Health Careers Foundations, Pharmacy Technician, Medical Assistant, Phlebotomy Lab Tech, Emergency Medical Technician (EMT), Nurse Tech/Patient Care Tech</i>	



## Human Services Pathway

Criminal Justice	1-2 years
(Extra application, background check, interview required)	
Hospitality & Culinary	1-3 years
Teacher Academy	1-2 years



## Natural Resources & Agriscience Pathway

Agriscience for Plants & Animals	1-2 years
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## New Introductory Programs

Intro to Hospitality & Human Services	1 year each
Intro to Automotive, Intro to Marketing	

For specific information on these programs, visit [www.thetechcenter.org](http://www.thetechcenter.org) or see your counselor.