2025-26

HIGH SCHOOL

COURSE CATALOG

KENOSHA UNIFIED SCHOOL DISTRICT

KUSD HIGH SCHOOLS

BRADFORD HIGH SCHOOL

HILLCREST SCHOOL

TREMPER HIGH SCHOOL

HARBORSIDE ACADEMY

REUTHER CENTRAL HIGH SCHOOL

LAKEVIEW TECHNOLOGY ACADEMY

INDIAN TRAIL HIGH SCHOOL AND ACADEMY

OFFICE OF TEACHING AND LEARNING

WENDY TINDALL
Chief Academic Officer

CHE KEARBY
Coordinator of Secondary English Language Arts and Social Studies

BRYAN MOGENSEN
Coordinator of Athletics/Physical Education

JENNIFER LAWLER
Coordinator of Secondary Mathematics and Science

SCOTT PLANK
Coordinator of Fine Arts

SARAH SMITH
Coordinator of Language Acquisition

AARON WILLIAMS
Coordinator of Career and Technical Education

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Note to Students

Students should refer to their specific schools to find out what courses are being offered at a particular school. All courses aren't offered at all schools.

Dropping Courses

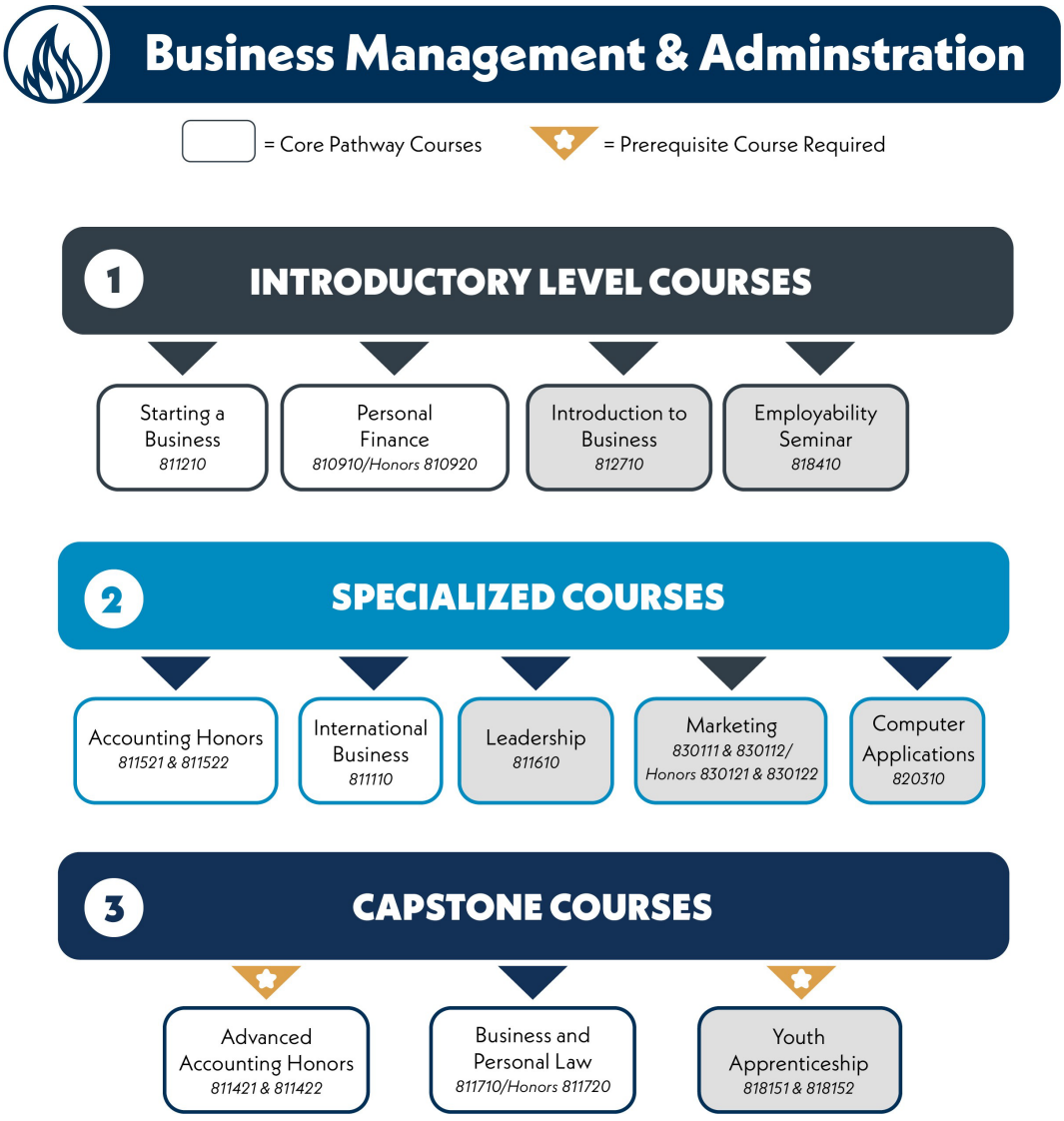
Students may withdraw from a course within 15 class days according to the school's guidelines provided that they have:

1. A recommendation of the teacher/counselor,
2. A written request from their parent/guardian, and
3. Administrative approval.

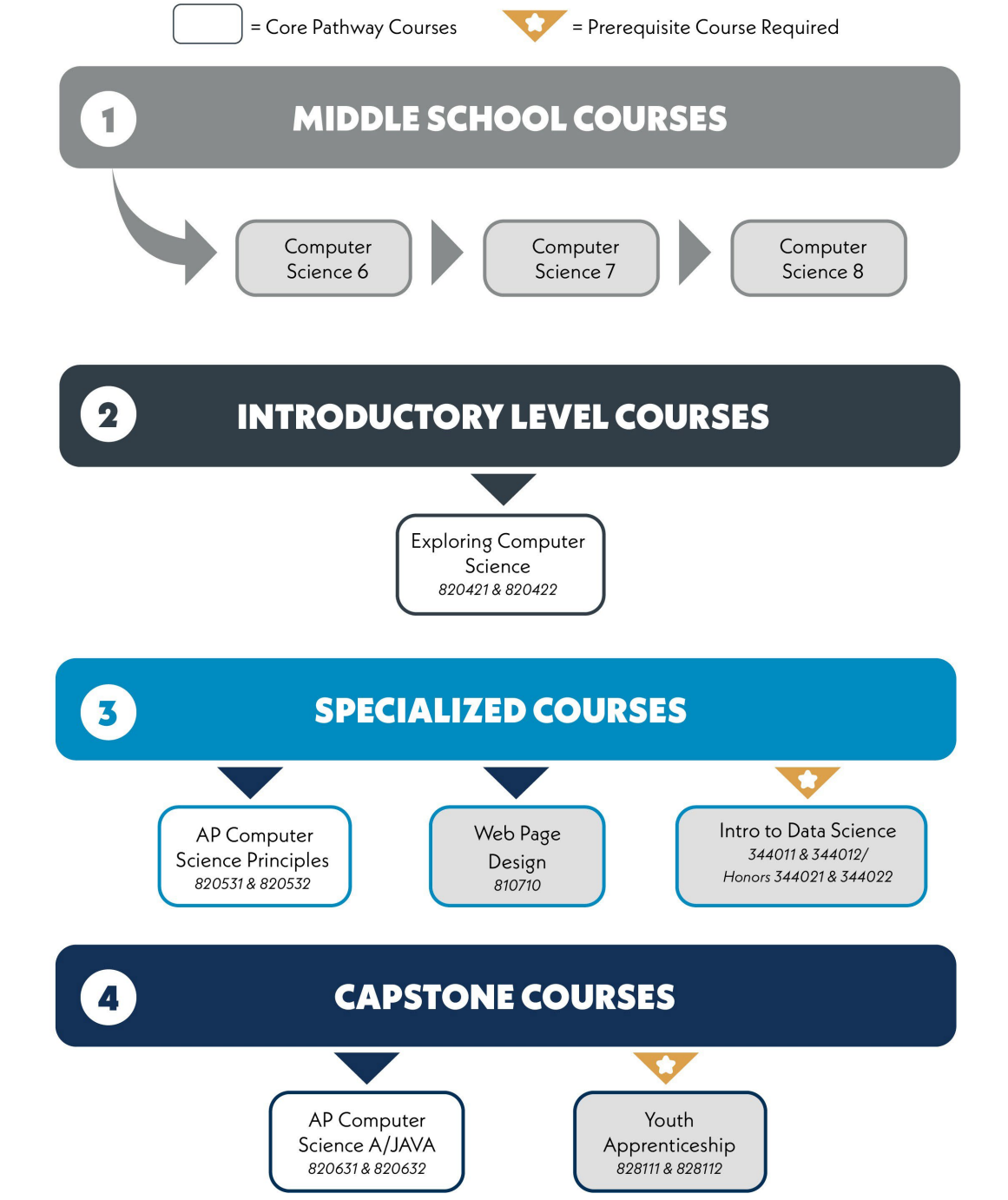
A failing grade will be given for courses dropped after the specified time. This failing grade will become part of the student's permanent record. A student who registers for a course and then fails to attend it is subject to disciplinary action and will receive a grade of F, which will become part of the student's permanent record

CAREER AND TECHNICAL EDUCATION

BUSINESS AND INFORMATION TECHNOLOGY



Computer Science



Digital Technology

= Core Pathway Courses = Prerequisite Course Required

1 MIDDLE SCHOOL COURSES

- Computer Science 6
- Computer Science 7
- Computer Science 8

2 INTRODUCTORY LEVEL COURSES

- Computer Applications *820310*
- Employability Seminar *818410*
- Introduction to Business *812710*

3 SPECIALIZED COURSES

- Desktop Publishing *810610*
- Leadership *811610*
- Exploring Computer Science *820421 & 820422*

4 CAPSTONE COURSES

- Web Page Design *810710*
- Youth Apprenticeship *828111 & 828112*

Marketing Sales & Service

= Core Pathway Courses = Prerequisite Course Required

1 INTRODUCTORY LEVEL COURSES

- Introduction to Business *812710*
- Employability Seminar *818410*
- Personal Finance *818410*

2 SPECIALIZED COURSES

- Marketing *830111 & 830112/ Honors 830121 & 830122*
  - Leadership *811610*
- Retail Merchandising/Management *830411 & 830412/ Honors (830421 & 830422)*
  - Desktop Publishing *810610*
- Retail Merchandising/ Management Internship *838411 & 838412*
  - Web Page Design *810710*

3 CAPSTONE COURSES

- Advanced Marketing *830311 & 830312)/ Honors 830321 & 830322*
- Youth Apprenticeship *830351 & 830352*

COURSES		
Desktop Publishing ½ credit	810610	*Prerequisites:* None *Description:* Learn design skills that are needed in promoting a business and personal life using Adobe InDesign. Projects include designing advertisements, newsletters, product labels, posters, business cards, and announcements using graphics, objects, fonts, etc.
Web Page Design ½ credit	810710	*Prerequisites:* None *Description:* In this course students will use a variety of design software to organize, create, publish, and manage a web site. Course content includes creating a variety of graphic elements, including video, animations, rollover effects, backgrounds, and page images.
Personal Finance ½ credit	810910	*Prerequisites:* Grades 10 through 12 only *Description:* Students will develop the skills needed to make sound financial decisions both now and in the future. Topics include money management, banking, budgeting, payroll, taxes, saving and investing, credit, and insurance. This course meets the Kenosha Unified School District requirement for **consumer education credit** and meets Wisconsin Financial Literacy Standards.
Personal Finance Honors ½ credit	810920	*Prerequisites:* Grades 10 through 12 only *Description:* Students will develop the skills needed to make sound financial decisions both now and in the future. Topics include money management, banking, budgeting, payroll taxes, saving and investing, credit and insurance. There are additional topics, assignments, and projects for honors credit. This course meets the requirement for **consumer education credit** and meets Wisconsin Financial Literacy Standards.

International Business ½ credit	811110	*Prerequisites:* None *Description:* This course provides a foundation for becoming informed about the global business environment. Students will be introduced to the basic principles of international business, including monetary exchange rates, exports and imports, and custom and immigration policies, and learn about the employee-employer relationship in a global economy.
Starting a Business ½ credit	811210	*Prerequisites:* None *Description:* In this business course, students will learn about different business models, their objectives, and ethical and social responsibilities related to employees, customers, and managing business risks. Students will learn business principles and skills required to operate a business.
Advanced Accounting Honors 1 credit	811421 811422	*Prerequisites:* Accounting (811411 and 811412) *Description:* Corporate and managerial accounting will be emphasized. After completing this course, students will have a major advantage when taking college accounting and possess the skills necessary for entry-level accounting and bookkeeping careers. This course is also recommended for students who want to own their own business.
Accounting Honors 1 credit	811521 811522	*Prerequisites:* None *Description:* Accounting is the language of business. During the course students will prepare financial records, develop financial reports, enhance general knowledge of business, and learn payroll and taxes. This course provides an excellent background and preparation for college business majors.
Leadership ½ credit	811610	*Prerequisites:* None *Description:* This class is designed to teach students leadership skills that will be important to their future, regardless of career goals. The course teaches several of the basic skills

		identified as crucial for success in the future, including problem solving and creative thinking, self-esteem, goal setting and motivation, interpersonal skills and teamwork, situational leadership, and communication. The class emphasizes small group work and hands-on experiences.
Business and Personal Law ½ credit	811710	*Prerequisites:* None *Description:* Laws are a part of everyday life. Learn your legal rights and responsibilities through speakers, debates, and mock trials. Gain knowledge of legal problems; and develop the ability to analyze, evaluate, and resolve legal disputes. Learn how the legal system impacts you.
Business and Personal Law Honors ½ credit	811720	*Prerequisites:* None *Description:* This course is for students who desire honors credit for Business and Personal Law. This honors credit option course is ideal for students that desire a more in-depth understanding of the law or are planning to pursue any type of business-based degree after high school. Students taking this honors credit option will focus more in depth on key concepts of the legal system, including criminal law, tort law, civil law, contract law, and ethics. Students will delve into law in the news, how court systems work, and key Supreme Court cases. Honors credit students will also take leadership roles in class debates and mock trials.
Introduction to Business ½ credit	812710	*Prerequisites:* None *Description:* This is an introductory business course designed to provide students with the skills needed to effectively live in our world. Students are introduced to leadership, computer applications, starting a business, accounting, desktop publishing, marketing, web page design, international business, business and personal law, personal finance, and career exploration.

Finance—YAP Level 1 2 credits	818151 818152	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Finance Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a certificate from the state upon successful completion of the program.
Finance—YAP Level 2 2 credits	818153 818154	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Finance Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a certificate from the state upon successful completion of the program.
Employability Seminar ½ credit	818410	*Prerequisites:* None *Description:* Students will learn about employability skills (e.g., job search, resume, application letter, interview skills, etc.) soft skills, business practices, and how to conduct themselves in a professional and ethical manner.
Computer Applications ½ credit	820310	*Prerequisites:* None *Description:* Students in this course will learn and use the core programs of the industry-leading Microsoft Office Suite. Students will learn and use these business-preferred programs to electronically communicate, share, organize, and problem solve in our information-intensive society. Learning Microsoft Office skills will prepare students for positions in any organization. Students will learn and apply Microsoft Office software applications, including Windows (features and apps), Word (word processing), Excel (spreadsheets), and PowerPoint (presentation software) to compose, organize, create, and communicate information.

		Students will integrate these programs with email and internet to prepare documents and complete projects.
Exploring Computer Science	820421 829422	*Prerequisites:* None *Description:* Exploring Computer Science teaches the creative, collaborative, interdisciplinary, and problem-solving nature of computing with instructional materials, which feature a fun, inquiry-based approach to learning and teaching. Exploring computer Science is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics: human-computer interaction, problem solving, web design, introduction to programming, computing/data analysis, and robotics. Rather than focusing the entire course on learning particular software tools or programming languages, the course is designed to focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. Students will also be introduced to topics such as interface design, limits of computers, and societal and ethical issues.
AP Computer Science Principles 1 credit	820531 820532	*Prerequisites:* Completion of Exploring Computer Science strongly recommended *Description:* AP Computer Science Principles is designed to be equivalent to a first-semester introductory college computing course. In this course students will develop computational thinking skills vital for success across all disciplines. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer soft-ware and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world.

		Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
AP Computer Science A 1 credit	820631 820632	*Prerequisites:* Completion of AP Computer Science Principles strongly recommended *Description:* The AP Computer Science A course is an introductory course in computer science. Because the design and implementation of computer programs to solve problems involve skills that are fundamental to the study of computer science, a large part of the course is built around the development of computer programs that correctly solve a given problem. These programs should be understandable; adaptable; and, when appropriate, reusable. At the same time, the design and implementation of computer programs is used as a context for introducing other important aspects of computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
Information Technology—YAP Level 2 2 credits	828111 828112	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Information Technology Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Information Technology—YAP Level 2 2 credits	828113 828114	*Prerequisites:* Corequisite—Student must be enrolled in a source within a related pathway. *Description:* The Information Technology Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from

		the Wisconsin Department of Workforce Development upon successful completion of the program.
Marketing 1 credit	830111 830112	*Prerequisites:* None *Description:* Students find out what it takes to market a product or service in today's fast-paced business environment. Students will learn the fundamentals of marketing using real-world business examples. In this course topics include buyer behavior, marketing re-search principles, distribution, financing, pricing, and product management. This course may be taken for consumer education graduation credit.
Marketing Honors 1 credit	830121 830122	*Prerequisites:* None *Description:* This course will instruct students in the foundations of marketing, the four Ps of marketing (1. product, 2. price, 3. place, and 4. promotion), human relations and communi-cations (people skills), and economic principles as they apply to marketing. Small group-oriented instruction and organization will allow the student to achieve a true "hands-on" experience. This course may be taken for **consumer education graduation credit**. Students have two options to earn honors credit: 1. exit interview or 2. compete with DECA.
Advanced Marketing 1 credit 1	830311 830312	*Prerequisites:* Marketing (830111 and 830112), application, and teacher permission required *Description:* Advanced Marketing is for the student who is seriously considering a career in the field of marketing. Students who take the course will study the functions of market- ing, including distribution, financing, marketing information management, selling, promotion, pricing, and product/service plan- ning. Students will also study the character traits necessary to become successful both personally and professionally as they apply to areas of management. Classroom instruction will include both large group and small group

		instruction with the emphasis on teamwork through small group projects. Students will learn time management skills through the completion of several long-term projects. Students combine this course with Marketing Internship and participate in the student organization.
Advanced Marketing Honors 1 credit	830321 830322	*Prerequisites:* Marketing (830111 and 830112) and application *Description:* Advanced Marketing is for the student who is seriously considering a career in the field of marketing. Students who take the course will study the functions of market- ing, including distribution, financing, marketing information management, selling, promotion, pricing, and product/service plan- ning. Students will also study the character traits necessary to become successful both personally and professionally as they apply to areas of management. Classroom instruction will include both large group and small group instruction with the emphasis on teamwork through small group projects. Students will learn time management skills through the completion of several long-term projects. Students combine this course with Marketing Internship and participate in the student organization. An additional project and a portfolio are required to earn honors credit.
Marketing—YAP Level 1 2 credits	830351 830352	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Marketing Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Stu- dents will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Marketing—YAP Level 2 2 credits	830353 830354	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. apprenticeship. Students earn credit and get paid for working for a local business. Students

		will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Retail Merchandising/ Management 1 credit	830411 830412	*Prerequisites:* Marketing (830111 and 830112) and application *Description:* This unique class has been developed for students with an interest in gaining an understanding of the multibillion dollar industry, retail and management. The students will spend class time learning about general retailing principles, management, merchandising, advertising, and promotional principles, customer service, and store operations. Class discussions and case studies will be presented on a variety of topics.
Retail Merchandising/ Management Honors 1 credit	830421 830422	*Prerequisites:* Marketing (830111 and 830112) and application *Description:* This unique class has been developed for students with an interest in gaining an understanding of the multibillion dollar industry, retail and management. The students will spend class time learning about general retailing principles, management, merchandising, advertising, and promotional principles, customer service, and store operations. Class discussions and case studies will be presented on a variety of topics. Students have three options to earn honors credit: 1. Exit interview, 2. SBE Paper, or 3. Compete with DECA
Retail Merchandising/ Management Internship 1 credit	838411 838412	*Prerequisites:* Marketing (830111 and 830112) and concurrent enrollment in Retail Merchandising/Management (830411 and 830412) *Description:* Retail Merchandising/ Management Internship works simultaneously with the classroom for the student's second course credit. While in internship students will rotate through a variety of positions from cashier to inventory control, from vendor

		selection to product placement, and from advertising to visual merchandising. A portion of the learning opportunities occurs outside of the classroom and traditional school day.
ComAc Studios 1 credit	861111 861112	Prerequisites: Junior or senior status, minimum GPA of 2.0, instructor consent Description: In an internship course where students can apply skills learned related to management of a design and production through a student-led business that will manufacture customized products and POS designs for clients and the public, students will work within design, marketing, manufacturing, and/or administrative departments. Focus will be in practicing a business plan that fosters growth and building a professional portfolio with work created for actual clients.

FAMILY AND CONSUMER SCIENCE

Culinary

= Core Pathway Courses

= Prerequisite Course Required

1 INTRODUCTORY LEVEL COURSES

- Culinary Basics *840310*

2 SPECIALIZED COURSES

- Culinary Skills *840410*
- Global Cuisine *840450*
- Life Skills and Relationships *840750*

3 CAPSTONE COURSES

- Career Foods *840510*
- Youth Apprenticeship *848311 & 848312*

Early Childhood and Education

= Core Pathway Courses = Prerequisite Course Required

1 INTRODUCTORY LEVEL COURSES

- Child Development 1 *841210*
- Life Skills and Relationships *840750*

2 SPECIALIZED COURSES

- Child Development 2 *841510*
- Early Childhood Education *841310*

3 CAPSTONE COURSES

- Foundations of Education *Honors 842120*
- Education Psychology and Assessment *Honors 842320*

Health Science

= Core Pathway Courses = Prerequisite Course Required

1 INTRODUCTORY LEVEL COURSES

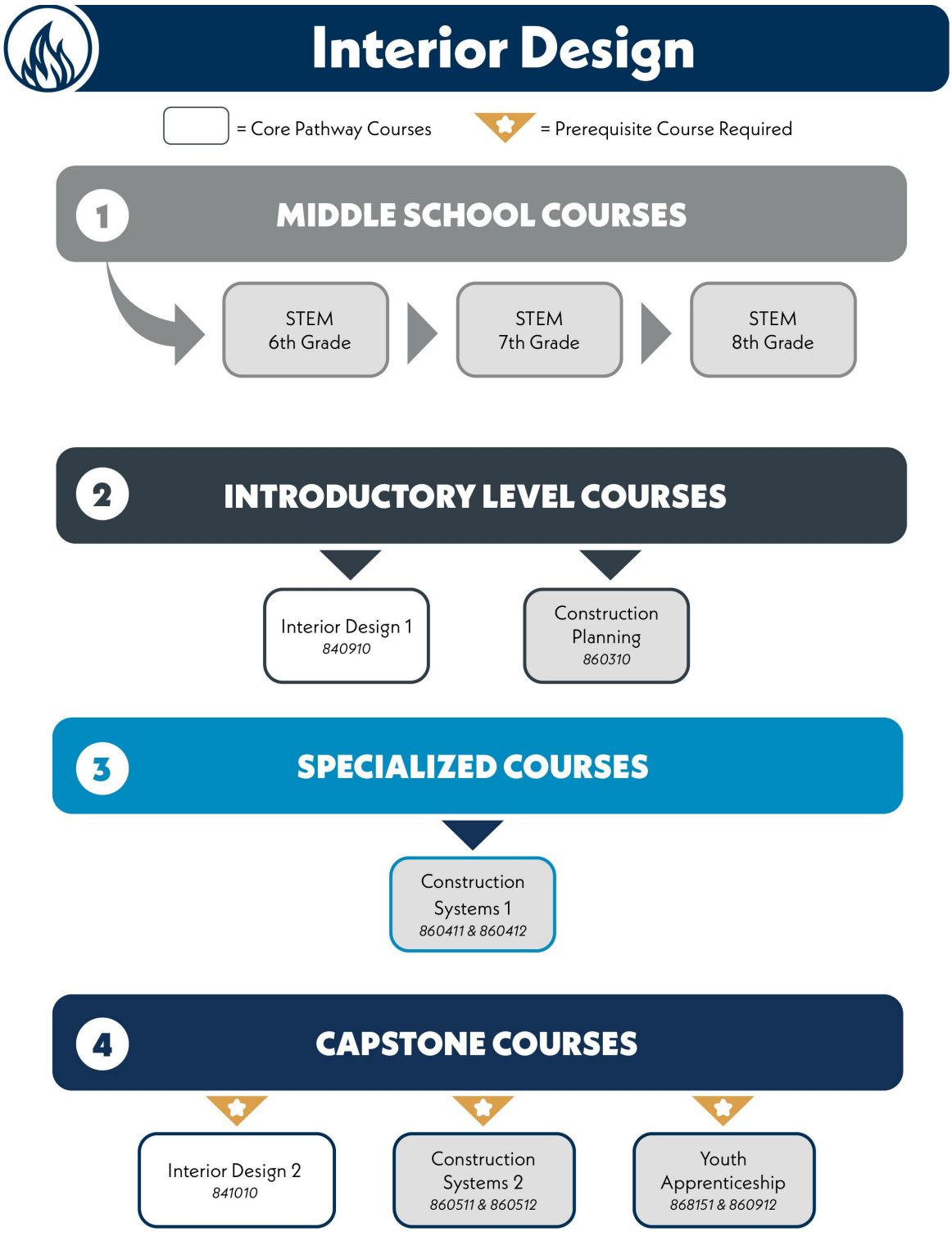
- Exploring Health Occupations *850110*

2 SPECIALIZED COURSES

- Introduction to Medical Terminology *850210*
- Life Skills and Relationships *840750*

3 CAPSTONE COURSES

- GTC - Nursing Assistant
- Youth Apprenticeship *858111 & 858112*


Interior Design
= Core Pathway Courses
= Prerequisite Course Required
1
MIDDLE SCHOOL COURSES
STEM 6th Grade
STEM 7th Grade
STEM 8th Grade
2
INTRODUCTORY LEVEL COURSES
Interior Design 1 840910
Construction Planning 860310
3
SPECIALIZED COURSES
Construction Systems 1 860411 & 860412
4
CAPSTONE COURSES
Interior Design 2 841010
Construction Systems 2 860511 & 860512
Youth Apprenticeship 868151 & 860912

COURSES		
Early Childhood Education and Services		
Child Development 1 ½ credit	841210	*Prerequisites:* None *Description:* This course is designed to help the student understand the developing child. Students will explore the effect of heredity and environment on the developing child. The physical, social, emotional, and intellectual well-being of children and their various growth and development patterns will also be studied. Students interested in a career involving children will find this course useful.
Child Development 2 ½ credit	841510	*Prerequisites:* Developing Child 1 (841210) *Description:* This course will examine the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include strategies that support diversity; planning a healthy early childhood environment; planning nutritionally sound meals; examining childhood abuse and neglect issues and mandates describing Sudden Infant Death Syndrome; describing Shaken Baby Syndrome; and incorporating health, safety, and nutrition concepts into the children's curriculum.
Early Childhood Education ½ credit	841310	*Prerequisites:* Developing Child 1 (841210) and Developing Child 2 (841510) *Description:* This course will prepare students to work as teacher caregivers in early childhood settings. It combines hands-on work with related academic work. Students will learn how to create a safe and healthy play environment, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.
Foundations of Education ½ credit	842120	*Prerequisites:* None *Description:* This course begins as an exploration of the teaching profession and the multiple roles of the teacher, where students will engage with peers, faculty, teachers, and stu- dents through authentic classroom experiences. Students will explore learning in and outside of formal schooling environments and examine how communities—including local, regional, and

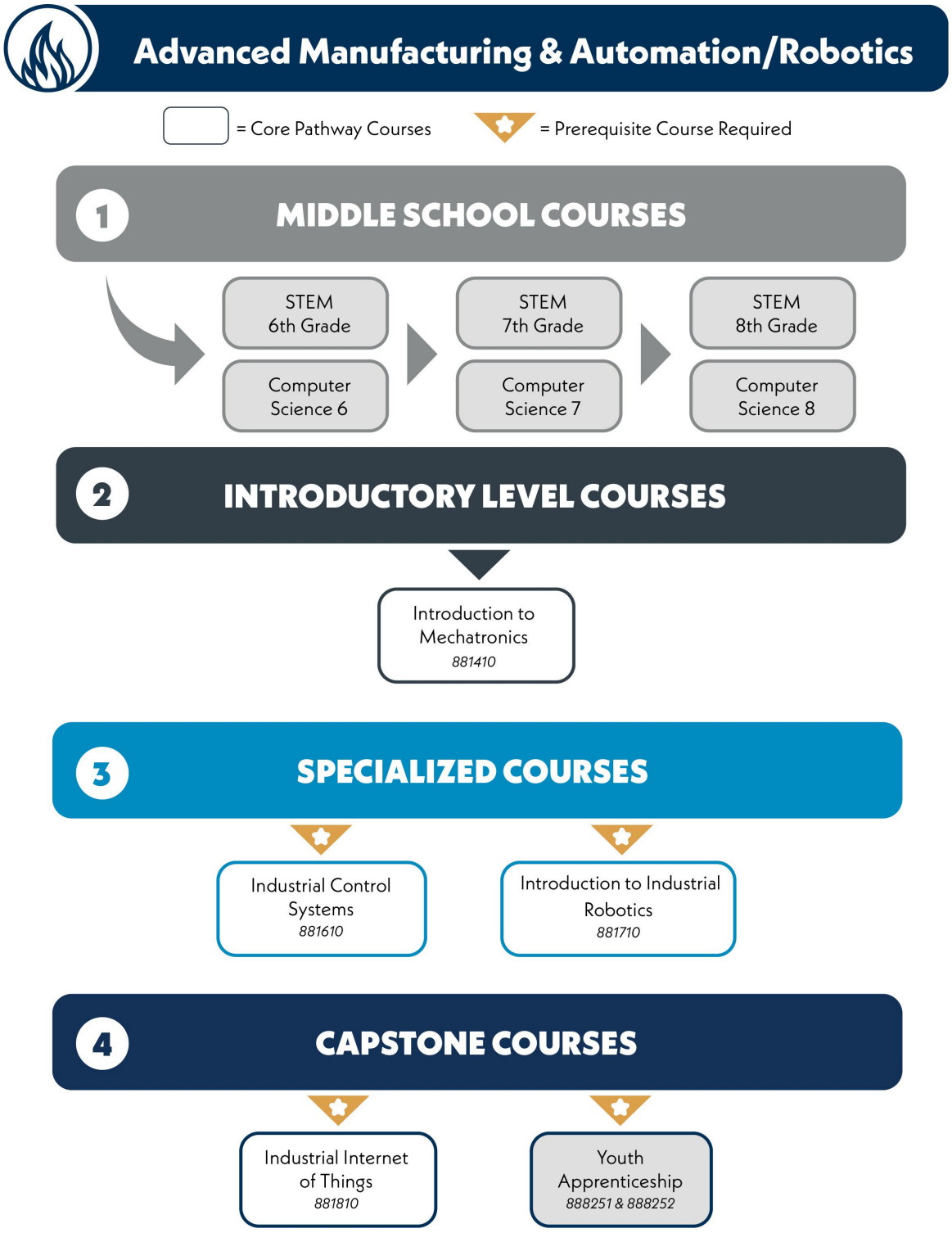
		national—can impact learning. Finally, students will discuss current topics in child and adolescent development with an emphasis on equity, culturally relevant pedagogy, and school environments and will clarify and analyze issues from diverse developmental contexts in conjunction with motivation, identify development, and educational achievement. Students enrolled in this course are eligible to enroll for dual credit via the Parkside Access to College Credit Program.
<u>Education Psychology and Assessment</u> ½ credit	842320	*Prerequisites:* Foundations of Education (842120) *Description:* How do people learn? Students in this course will learn about research on learning, major theories of learning and instruction, and instructional design tactics based on these theories. Different developmental ages and abilities are addressed. Students read research articles and learn how to analyze research studies. They will also learn about measuring learning and how these learning assessments are developed, interpreted, and scored. Students enrolled in this course are eligible to enroll for dual credit from Carthage College.

Family and Community Services		
Food Production and Services		
Culinary Basics ½ credit	840310	*Prerequisites:* None *Description:* Culinary Basics is a study of nutrition and food needs for all age groups. Students will study food, current health problems related to diet, and the social and cultural influence on food and resources. Preparation of food to meet dietary recommendations will be a part of this class.
Culinary Skills ½ credit	840410	*Prerequisites:* Culinary Basics (840310) *Description:* This course focuses on the principles of food preparation. Students will receive hands-on experience in the preparation of many foods, including entrees, sauces and soups, breads, fruits, vegetables, and desserts. They will also study food safety and sanitation, equipment, and recipe formats. This course will benefit students who are in the career field of food service.
Global Cuisine ½ credit	840450	*Prerequisites:* Culinary Basics (840310) *Description:* Discover the unique flavors and tastes from around the world. In Global Cuisine you will explore the traditional foods and flavors of Asia, Mediterranean countries, Italy, Mexico, and the U.S. You will be able to identify the differing cooking methods, equipment, ingredients, and influences from cultures across the globe. Expand your knowledge base, and take home some great new recipes to add to your collection.
Career Foods ½ credit	840510	*Prerequisites:* Culinary Skills (840410) *Description:* The food service industry is the third largest employer nationwide. This course is directed at the numerous opportunities that exist in the food service industry. This course builds on the information and skills learned in Culinary Basics and Culinary Skills. It focuses on the kinds of opportunities available in food service and helps students develop job skills necessary

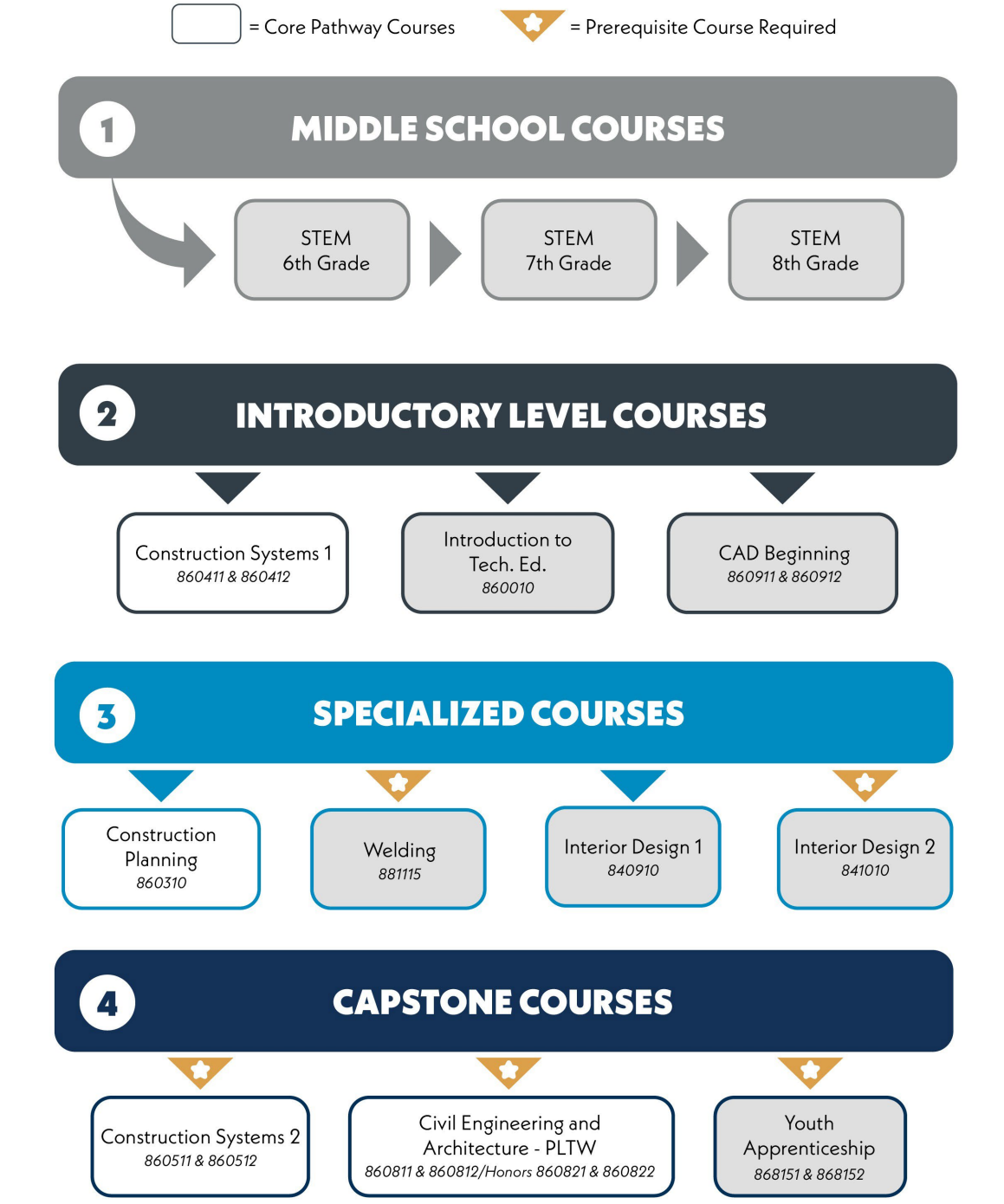
		for the growing industry. Preparation of food for a variety of services and restaurant simulations will be part of the course.
Life Skills and Relationships ½ credit	840750	*Prerequisites:* None *Description:* Life Skills and Relationships is a course designed to increase student knowledge and skills necessary for everyday living. The course emphasizes goal setting, decision making and problem solving, communication, nutrition, career exploration, citizenship, and consumer-ism. Skills learned in this class will be adaptable to students' lives after high school. This course is excellent for any student pursuing a career in the Human Service Career Pathway.
Textiles and Apparel		
Clothing, Textile, and Apparel ½ credit	840110	*Prerequisites:* None *Description:* Students will have an opportunity to improve their basic sewing skills and knowl- edge of clothing construction, including use of a pattern. Sewing machines are to complete individual clothing projects.
Advanced Clothing, Textile, and Apparel ½ credit	840210	*Prerequisites:* Clothing, Textile, and Apparel (840110) *Description:* The focus of this course is the world of fashion with an exploration of career options in the clothing industry. Students will further develop their sewing skills by constructing ad-vanced projects, including use of patterns and supplies purchased from a store. Students must provide supplies necessary to complete individual sewing projects.
Housing, Interiors, and Furnishings		
Interior Design 1 ½ credit	840910	*Prerequisites:* None *Description:* This course will provide the beginning college student with the fundamentals of interior design. Students will explore the ele-ments and principles of art and design as they are applied to interior environments. The learner will also gain knowledge of basic concepts in the design process, human ecology, space planning, selecting finishes and furnishings, and design communication techniques.

Interior Design 2 ½ credit	841010	*Prerequisites:* Interior Design 1 (840910) *Description:* This course is a continuation of Interior Design 1. Students will further their study of interior design with advanced projects. They will also explore the many career oppor- tunities in the housing industry. The course provides a study of architecture and construction basics. Other topics include furniture design; window, wall, and floor treatments; and room design. Those students interested in a career in interior design will find this course useful.
Hospitality, Logding & Tourism—YAP Level 1 2 credits	848351 848352	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Hospitality, Lodging & Tourism Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Hospitality, Lodging & Tourism—YAP Level 2 2 credits	848353 848354	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Hospitality, Lodging & Tourism Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a certificate from the state upon successful completion of the program.
Health Services		
Exploring Health Occupations ½ credit	850110	*Prerequisites:* None *Description:* Students will learn about career opportunities in the healthcare field. Education requirements for job entry, opportunities for ad- vancement, and career maintenance will also be explored. Exposure to the healthcare field will be provided through audio-visual materials, guest speakers, and research.
Introduction to Medical Terminology ½ credit	850210	*Prerequisites:* None *Description:* This course is available for grades 10, 11, and 12. This rigorous course will provide

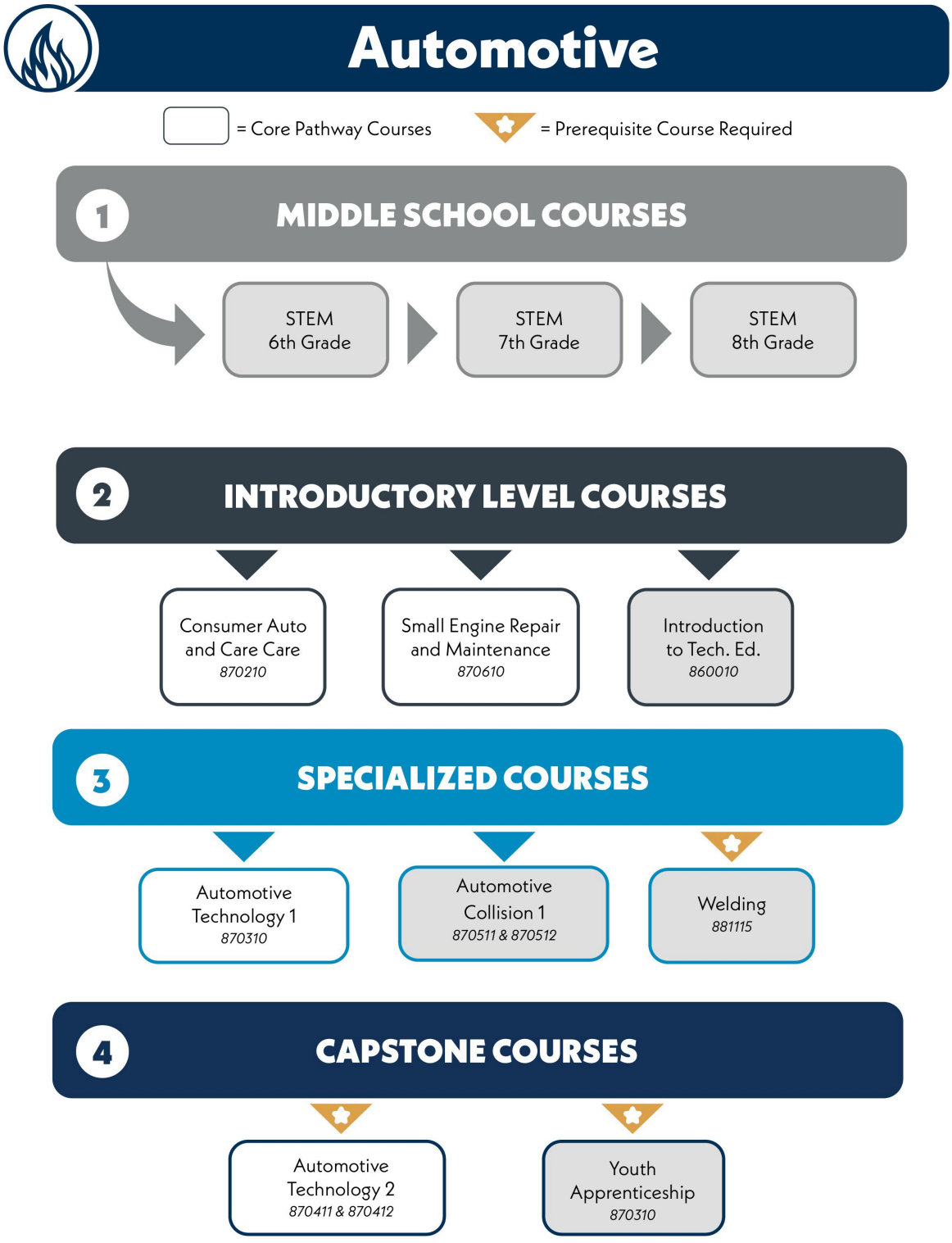
		students with a working knowledge of the language of medicine as it pertains to the body as a whole. Students acquire word-building skills by learning prefixes, suffixes, roots, and abbreviations. They will interpret, construct, pronounce, and analyze medical terms related to all of the body system. Students will identify terms used in diagnostic, therapeutic, symptomatic, and surgical terminology. Those students interested in taking Anatomy and Physiology or who are considering a career in the health field will find this course useful. Successful completion of this course fulfills the prerequisite for CNA.
Health Sciences—YAP Level 1 2 credits	858151 858152	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Health Sciences Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local healthcare business. Students will receive a certificate from the state upon successful completion of the program.
Health Sciences—YAP Level 2 2 credits	858153 858154	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Health Sciences Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local healthcare business. Students will receive a certificate from the state upon successful completion of the program.


Advanced Manufacturing & Automation/Robotics
= Core Pathway Courses
= Prerequisite Course Required
1
MIDDLE SCHOOL COURSES
STEM 6th Grade
Computer Science 6
STEM 7th Grade
Computer Science 7
STEM 8th Grade
Computer Science 8
2
INTRODUCTORY LEVEL COURSES
Introduction to Mechatronics
881410
3
SPECIALIZED COURSES
Industrial Control Systems
881610
Introduction to Industrial Robotics
881710
4
CAPSTONE COURSES
Industrial Internet of Things
881810
Youth Apprenticeship
888251 & 888252

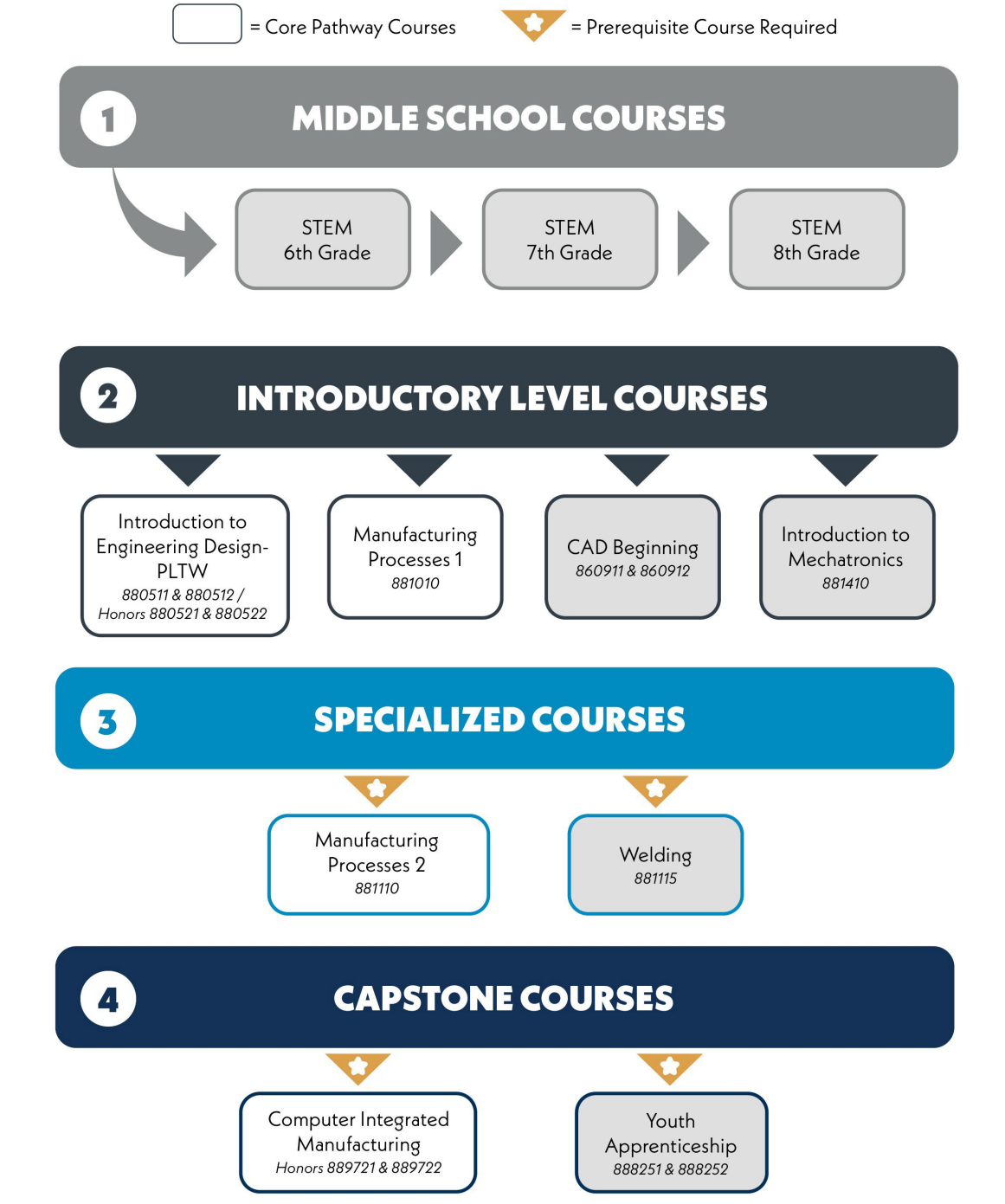
Architecture and Construction



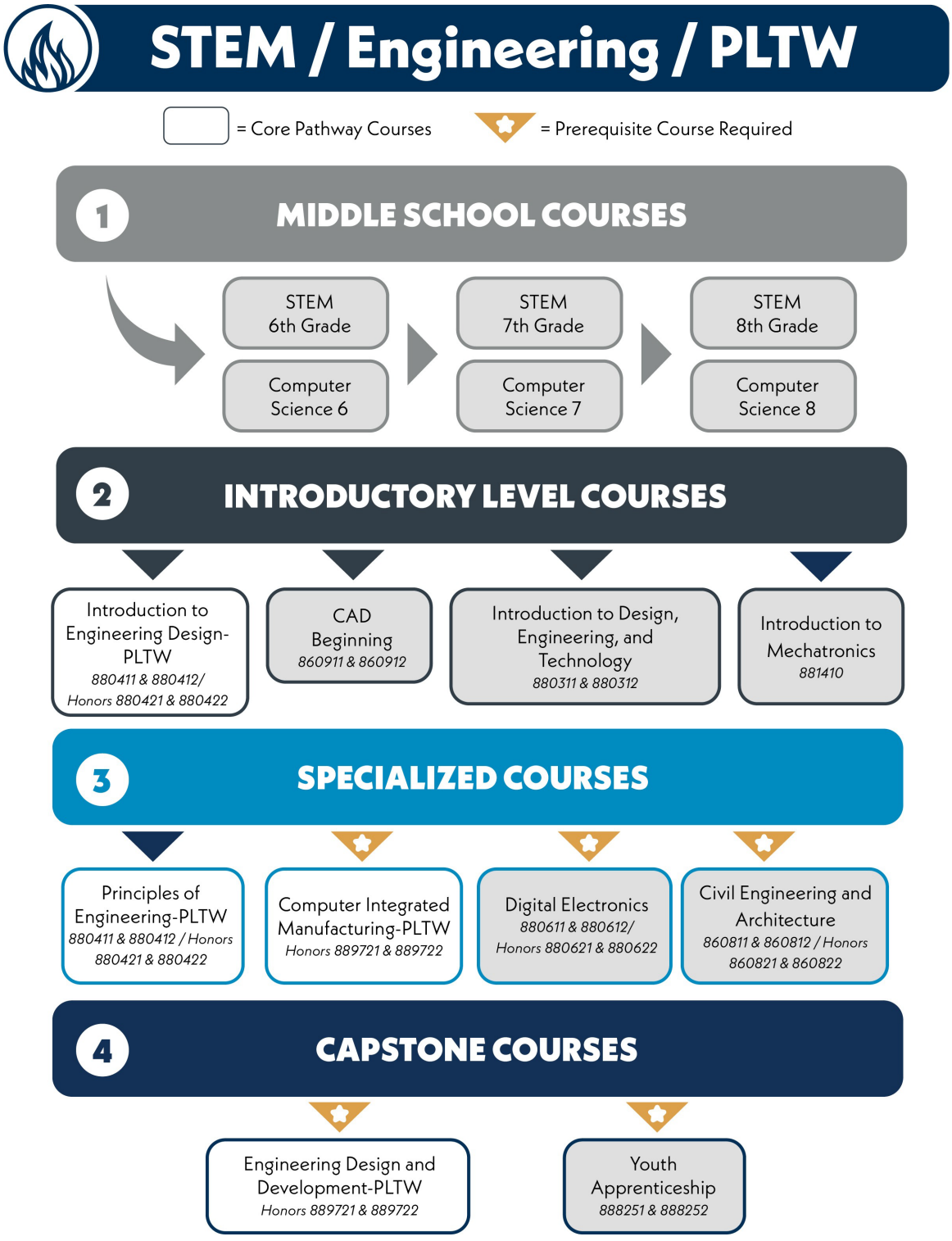
Automotive


= Core Pathway Courses
= Prerequisite Course Required
1
MIDDLE SCHOOL COURSES
STEM 6th Grade
STEM 7th Grade
STEM 8th Grade
2
INTRODUCTORY LEVEL COURSES
Consumer Auto and Care Care 870210
Small Engine Repair and Maintenance 870610
Introduction to Tech. Ed. 860010
3
SPECIALIZED COURSES
Automotive Technology 1 870310
Automotive Collision 1 870511 & 870512
Welding 881115
4
CAPSTONE COURSES
Automotive Technology 2 870411 & 870412
Youth Apprenticeship 870310

Manufacturing



STEM / Engineering / PLTW



COURSES		
Introduction to Tech Ed ½ credit	860010	*Prerequisites:* None *Description:* This course will provide students of all grade levels the opportunity to explore, develop knowledge, and build upon the skills of a variety of the technical education courses. Students will work individually and in groups while learning aspects of home maintenance, woodworking, manufacturing, automotive maintenance, small engines, collision repair, technical drawing, coding, and engineering design process. Students will use these base skills to define the course pathways which interest them.
Computer-Aided Design 2 ½ credit	860210	*Prerequisites:* Computer-Aided Design: Beginning (860911 and 860912) and concurrent enrollment in Geometry (321011 and 321012) *Description:* This course builds upon the skills gained in Computer-Aided Design—Beginning. Skills needed for architectural and mechanical design will be introduced, and students will gain competency by creating graphics using two-dimensional AutoCAD. Students will work through advanced orthographic projections; sections, threads, and fasteners; tolerancing and dimensioning; and an introduction to three-dimensional CAD drawings.
Construction Planning ½ credit	860310	*Prerequisites:* None *Description:* Students will develop knowledge, skills, and attitudes about designing a residential structure. Functions of a contractor and the services of an architect will be reviewed. Students will draft their designs via an industrial design software. This course will serve as an excellent introduction to architecture.
Construction Systems 1 1 credit	860411 860412	*Prerequisites:* None *Description:* This course is designed to introduce students to the fundamental skills and vocabulary used in the building trades. This introductory course provides the students with a hands-on opportunity to explore the construction field. This course uses building skills labs that introduce students to many phases of residential

		construction. Units on safety, construction math, and measurement expose students to some of the fundamental skills used in construction and woodworking. This course allows organized, self-motivated, responsible students to capitalize on the important skills of successful trades people while preparing for more advanced construction courses.
Construction Systems 2 1 credit	860511 860512	*Prerequisites:* Construction Systems 1 (860411 and 860412) *Description:* This course is designed to further develop the students' fundamentals of construction systems. It gives the students a hands-on opportunity to explore the construction field. The students will use their skills to design and build a custom project. As students are creating the project, they will delve deeper into the theory behind components. The final portion of the course will further the students' exposure by completing a prescribed project.
Civil Engineering and Architecture 1 credit	860811 860812	*Prerequisites:* Introduction to Engineering Design (880511 and 880512) or Construction Planning (860310) *Description:* This Project Lead the Way course provides an overview of the fields of civil engineering and architecture while emphasizing the inter-relationship and dependence of both fields on each other. Students use state-of-the-art software to solve real-world problems and communicate solutions to hands-on projects and activities. This course covers topics such as the roles of civil engineers and architects, project planning, site planning, building design, and project documentation and presentation.
Civil Engineering and Architecture Honors 1 credit	860821 860822	*Prerequisites:* Introduction to Engineering Design (880511 and 880512) or Construction Planning (860310) *Description:* This course provides an overview of the fields of civil engineering and architecture while emphasizing the inter-relationship and dependence of both fields on each other. Students use state-of-the-art soft-ware to solve real-world problems and communicate solutions to hands-on

		projects and activities. This course covers topics such as the roles of civil engineers and architects, project planning, site planning, building design, and project documentation and presentation. If the student maintains a grade of a B or higher and achieves a 70 percent competency on the Project Lead the Way National Assessment, honors credit will be applied to his/her transcript.
Computer-Aided Design: Beginning 1 credit	860911 860912	*Prerequisites:* None *Description:* Students will master the basics of the application of computer-aided design (CAD) for communications and creation of design solutions. This course is a prerequisite to CAD 2 and CAD Solids.
Engineering Essentials 1 credit	861011 861012	*Prerequisites:* None *Description:* This course will help students understand the field of engineering/engineering technology through various presentations and projects. Students will explore various types of engineering systems, careers, materials, and design processes that will help them learn how engineers and technicians use math, science, and technology in an engineering problem-solving process that helps them to become a responsible, involved citizen. Using projects as a learning vehicle, students are expected to work cooperatively on complex and open-ended tasks as well as follow directions in step-by-step learning.
Architecture & Construction—YAP Level 1 2 credits	868151 858152	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* Architecture & Construction—YAP—is a one-or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Architecture & Construction—YAP Level 2 2 credits	868153 868154	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway.

		Description: Architecture & Construction—YAP—is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Consumer Auto and Car Care ½ credit	870210	*Prerequisites:* None *Description:* This course gives students the necessary skills to care for and understand basic automotive systems. Students gain the ability to perform very basic maintenance on automotive lubrication, cooling, and electrical systems. Students also become proficient in the use and identification of hand tools in the auto shop environment as well as the proper technique for safely jacking a car and changing tires. This course introduces the student to situations that commonly occur in the day-to-day operation of motor vehicles as well as in the safe handling and disposal of chemicals found in today's automobile.
Automotive Technology 1 ½ credit	870310	*Prerequisites:* None *Description:* This course gives students the necessary skills to successfully compete for entry-level positions as a lube technician. Students that successfully complete this course will be able to read and understand Vehicle Identification Numbers (VIN) and understand and perform basic maintenance on automotive lubrication systems, cooling systems, starting systems, and fuel systems. Students also become competent in basic measurement and safety procedures and the use of and repair of fasteners
Automotive Technology 2 1 credit	870411 870412	*Prerequisites:* Automotive Technology 1 (870310) *Description:* Automotive Technology 2 will build on and polish skills learned in Automotive Technology 1. This course gives students the necessary skills to successfully compete for entry-level positions as a lube tech. Students that successfully complete this course will be able to read, understand, and perform basic maintenance

		on automotive lubrication systems, cooling systems, starting systems, and fuel systems. Students also become competent in basic measurement and safety procedures and the use of and repair of fasteners.
Automotive Collision 1 1 credit	870511 870512	*Prerequisites:* None *Description:* This course gives students the fundamental skills in auto collision repair, including safety and environmental practices, surface refinishing, painting preparation, and detailing. Students also learn about trim, alignment, glass installation, automotive finishes, corrosion protection, and body filler.
Small Engine Repair and Maintenance ½ credit	870610	*Prerequisites:* None *Description:* Students interested in small gasoline engines will, upon successful completion of this course, understand the operation and general maintenance of small gasoline engines as well as gain the knowledge to disassemble and reassemble a small gasoline engine.
Transportation, Distribution & Logistics—YAP Level 1 2 credits	878351 878352	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Transportation, Distribution & Logistics Youth Apprenticeship program is a one- or two-year apprenticeship. Students can earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Transportation, Distribution & Logistics—YAP Level 2 2 credits	878353 878354	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Transportation, Distribution & Logistics Youth Apprenticeship Program is a one- or two-year apprenticeship. Students can earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.

Principles of Engineering 1 credit	880411 880412	*Prerequisites:* Students should be currently enrolled in college preparatory math and science classes. *Description:* This Project Lead the Way course, taken concurrently with Geometry, will help students understand the field of engineering/engineering technology through various presentations and projects. Students will explore various types of engineering systems, careers, materials, and design processes that will help them learn how engineers and technicians use math, science, and technology in an engineering problem-solving process that helps them to become a responsible, involved citizen. Using projects as a learning vehicle, students are expected to work cooperatively on complex and open-ended tasks as well as follow directions in step-by-step learning.
Principles of Engineering Honors 1 credit	880421 880422	*Prerequisites:* Students should be currently enrolled in college preparatory math and science classes. *Description:* This Project Lead the Way course, taken concurrently with Geometry, will help students understand the field of engineering/engineering technology through various presentations and projects. Students will explore various types of engineering systems, careers, materials, and design processes that will help them learn how engineers and technicians use math, science, and technology in an engineering problem-solving process that helps them to become a responsible, involved citizen. Using projects as a learning vehicle, students are expected to work cooperatively on complex and open-ended tasks as well as to follow directions in step-by-step learning. If the student maintains a grade of a B or higher and achieves 70 percent competency of the Project Lead the Way National Assessment, honors credit will be applied to his/her transcript.

Introduction to Engineering Design 1 credit	880511 880512	*Prerequisites:* Algebra (312011 and 312012) *Description:* This Project Lead the Way course teaches problem-solving skills using a design development process. Using an industry-based solid modeling (3-D) computer program, students experience the design process involving problem identification, conceptualization, refinement of preliminary ideas, design analysis, development, and implementation, which are implemented through class projects.
Introduction to Engineering Design Honors 1 credit	880521 880522	*Prerequisites:* Algebra (312011 and 312012) *Description:* This Project Lead the Way course teaches problem-solving skills using a design development process. Using an industry-based solid modeling (3-D) computer program, students experience the design process involving problem identification, conceptualization, refinement of preliminary ideas, design analysis, development, and implementation, which are implemented through class projects. If the student maintains a grade of a B or higher and achieves a 70 percent competency on the Project Lead the Way National Assessment, honors credit will be applied to his/her transcript.
Digital Electronics 1 credit	880611 880612	*Prerequisites:* Algebra 1 (312011 and 312012) and concurrent enrollment in Geometry (321011 and 321012 or 322021 and 322022) *Description:* This Project Lead the Way course, taken concurrently with Geometry, provides the student with experiences and activities to understand, construct, and operate combinational logic circuits. The student is aided in understanding these concepts by using a computer logic simulator. Logic gates and the truth tables are explored along with applications of these gates in multiplexer, demultiplexer, decoder, and encoder circuits. TTL and CMOS families are explored. Digital troubleshooting practices and procedures are emphasized throughout the course.
Digital Electronics Honors 1 credit	880621 880622	*Prerequisites:* Algebra (312011 or 311012) and concurrent enrollment in Geometry (321011 and 322012 or 322021 and 322022)

		Description: This Project Lead the Way course provides the student with experiences and activities to understand, construct, and operate combination logic circuits using a computer logic simulator. Logic gates and the truth tables are explored along with applications of these gates in multiplexer, demultiplexer, decoder, and encoder circuits. TTL and CMOS families are explored. Digital troubleshooting practices and procedures are emphasized throughout the course. If the student maintains a grade of a B or higher and achieves a 70 percent competency on the Project Lead the Way National Assessment, honors credit will be applied to his/her transcript.
Manufacturing Process 1 ½ credit	881010	*Prerequisites:* None *Description:* This course allows students to learn how to use many tools and machines in the manufacturing of several products. Different manufacturing techniques will be covered, such as jigs, fixtures, and mass production. Students are exposed to several different types of manufacturing materials, including woods, plastics, and metals. Safety, precision measuring, and blueprint reading are important areas of emphasis in this course.
Manufacturing Process 2 ½ credit	881110	*Prerequisites:* Manufacturing Process 1 (881010) *Description:* This course is designed to allow students to delve deeper into the world of manufacturing. Students learn advanced techniques of manufacturing, such as milling, turning, and CNC applications. This course uses a project-oriented, hands-on approach to drive student learning. Students use a variety of materials and learn the properties unique to those materials. There is an emphasis on quality and pride on each project.
Welding 1 ½ credit	881115	*Prerequisites:* Manufacturing 1, teacher recommendation *Description:* This course will teach students gas metal arc welding, shielded metal arc welding, oxy-fuel welding and cutting, and gas tungsten

		arc welding. Safety, equipment set up, job assignments, and tests will be discussed throughout the semester.
Introduction to Mechatronics ½ credit	881410	*Prerequisites:* None *Description:* In this course students are introduced to microprocessor-controlled electro-mechanical systems. The student examines how individual components work and how they are integrated into simple systems. Upon completion of the course, students will understand what technicians do in the workplace and how industry utilizes mechatronics in advanced manufacturing.
Industrial Control Systems ½ credit	881610	*Prerequisites:* Intro to Mechatronics (881410) *Description:* In this course students are introduced to basic concepts of industrial computer-controlled systems. The student explores various types of programming using robots and programmable logic controllers and participates in lab experiments designed to introduce programming principles; electronic inputs and outputs (analog and digital); and communication between system components, including Ethernet protocols. Upon completion of the course, students will be able to explain how the control processes are utilized to automate manufacturing facilities.
Introduction to Industrial Robotics ½ credit	881710	*Prerequisites:* Introduction to Mechatronics (881410) and Introduction to Industrial Control Systems (881610) *Description:* In this course students are introduced to programming techniques for industrial robots. The student examines teach pendant programming, including input/output, routines, decision making, six frames of positional operation, and robot communication. Upon completion of the course, students will be able to operate and program industrial robots commonly used in Industry 4.0.
Industrial Internet of Things ½ credit	881810	*Prerequisites:* Introduction of Mechatronics (881410) and Introduction to Industrial Control Systems (881610)

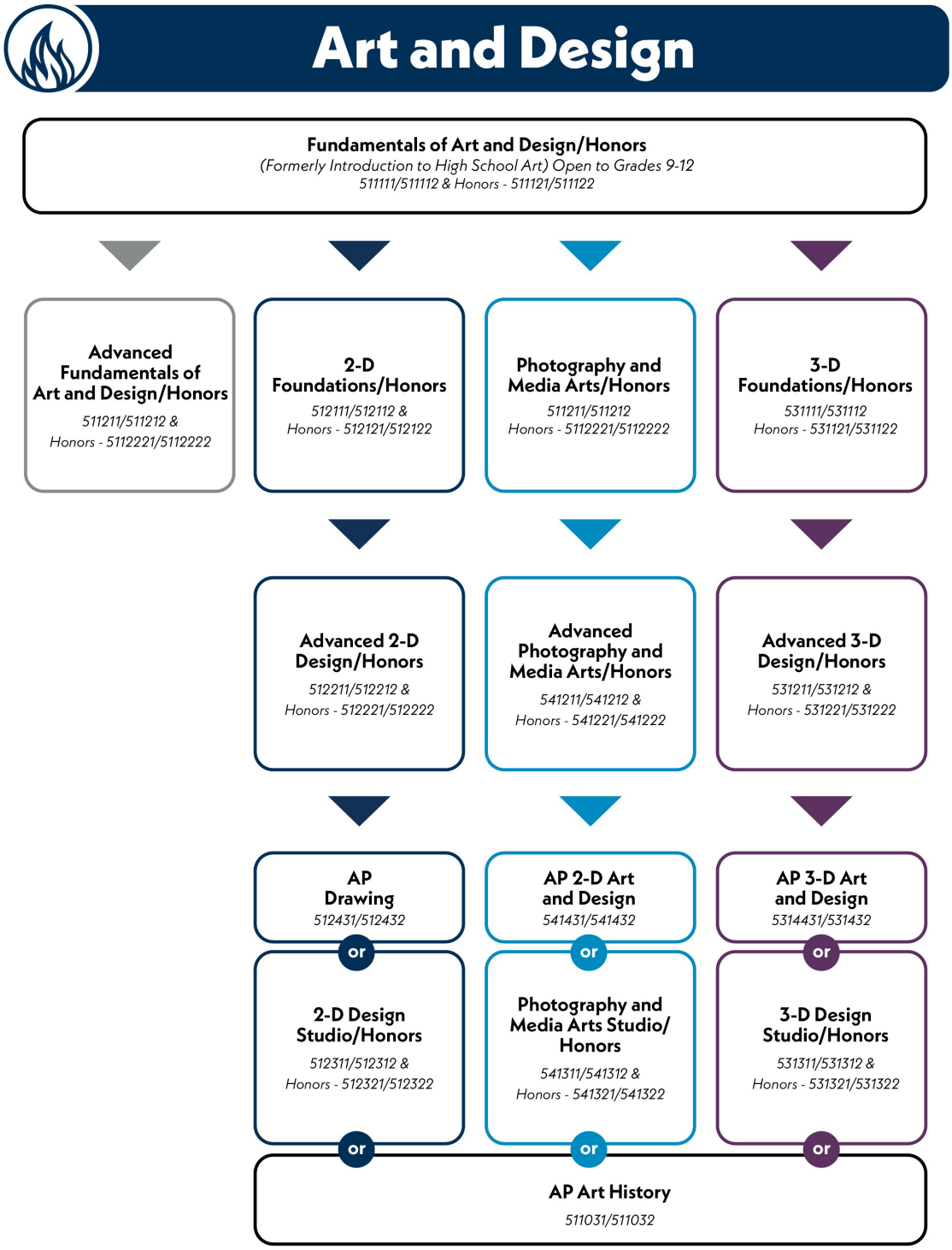
		Description: In this course students are introduced to theoretical and practical topics of the Industrial Internet of Things (IIoT). The student investigates the range of sensor and actuator devices available, ways in which they communicate and compute, methods of getting information to and from IIoT-enabled devices, and ways of visualizing and processing data acquired from the IIoT. Upon completion, students will utilize hardware and software to construct a sensor network within an existing system and utilize standards tools to visualize the data captured.
Manufacturing—YAP Level 1 2 credits	888251 888252	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Manufacturing Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Manufacturing—YAP Level 2 2 credits	888253 888254	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Manufacturing Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Science, Technology, Engineering & Math (STEM)—YAP Level 1 2 credits	888451 888452	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Science, Technology, Engineering & Math Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.

Science, Technology, Engineering & Math (STEM)—YAP Level 2 2 credits	888453 888454	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Science, Technology, Engineering & Math Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Computer Integrated Manufacturing 1 credit	889721 889722	*Prerequisites:* Successful completion of Introduction to Engineering Design (880511 and 880512 or 880521 and 880522) *Description:* Computer Integrated Manufacturing is a high school-level survey course of engineering. The course exposes student to some of the major concepts that they will encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and high-tech careers. Computer Integrated Manufacturing gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills based upon engineering concepts.
Engineering Design and Development Honors 1 credit	889921 889922	*Prerequisites:* None *Description:* This Project Lead the Way course has student teams, guided by mentors, work together to research, design, and construct solutions to engineering problems.
Communications ½ credit	890110	*Prerequisites:* None *Description:* This is the first in the graphic technologies course series and should be taken before taking other graphic technologies classes. Study includes technology vocabulary and communications theory supplemented with readings and videos based on current communication technologies, including the historical and social

		implications of communications technologies. Activities include a research paper, multimedia presentations to the class, podcasts, video shorts, digital storytelling, and stop-action animations. Some basic technical sketching and computer drawing are also included.
Graphic Communications ½ credit	890210	*Prerequisites:* Communications (890110) *Description:* This is the second in the series of graphic technologies courses. This course emphasizes image transfer technologies and the printed image. The study includes the technical vocabulary of graphic design and the print industry. This class emphasizes the role of the graphic designer and the soft skills needed in graphic communications management. A detailed investigation of the current state of the print industry is covered in this class as well as career opportunities in the industry. Activities include design, print, and finishing operations to projects including memo pads, business cards, flyers, comic books, and product packaging. Some drawing and basic design concepts are required.
Art, A/V Technology & Communications—YAP Level 1 2 credits	890351 890352	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Art, A/V Technology & Communications Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.
Art, A/V Technology & Communications—YAP Level 2 2 credits	890353 890354	*Prerequisites:* Corequisite—Student must be enrolled in a course within a related pathway. *Description:* The Art, A/V Technology & Communications Youth Apprenticeship Program is a one- or two-year apprenticeship. Students earn credit and get paid for working for a local business. Students will receive a skills certificate from the Wisconsin Department of Workforce Development upon successful completion of the program.

FINE ARTS

ART COURSES



COURSES		
AP Art History 1 credit	511031 511032	*Prerequisites:* Fundamentals of Art and Design and two of the following: 1. Photography and Media Arts 2. Advanced Photography and Media Arts 3. 2-D Foundations 4. Advanced 2-D Design 5. 3-D Foundations 6. Advanced 3-D Design *Description:* This course is designed to allow students to explore the history of art across the globe from prehistoric to the present by analyzing works of art through observation, discussion, reading, and research. Students will develop a theory about the meaning of a work of art by explaining and supporting their interpretation through visual connections to artistic traditions, styles, and practices.
Fundamentals of Art and Design 1 credit	511111 511112	*Prerequisites:* None *Description:* This course offers an exploration of the elements and principles of design by relating historical and contemporary art to structurally designed hands-on projects through experiences in 2D and 3D media. Key ideas and concepts using a variety of techniques and processes will be addressed with attention given to composition and aesthetics.
Fundamentals of Art and Design Honors 1 credit	511121 511122	*Prerequisites:* None *Description:* The framework for this course will be similar to that of Fundamentals of Art and Design but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of materials, ideas, and processes will allow students to seek a personal form of

		expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
Advanced Fundamentals of Art and Design 1 credit	511211 511212	*Prerequisites:* Fundamentals of Art and Design *Description:* This course offers an advanced exploration of the elements and principles of design through the use of 2D and 3D media. Course content will enable students to enhance their skills and knowledge in the areas of art history, art criticism, design concepts, and art production by using a variety of complex techniques and processes.
Advanced Fundamentals of Art and Design Honors 1 credit	511221 511222	*Prerequisites:* Fundamentals of Art and Design *Description:* The framework for this course will be similar to that of Advanced Fundamentals of Art and Design but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of materials, ideas, and processes will allow students to seek a personal form of expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
2-D Foundations 1 credit	512111 512112	*Prerequisites:* Fundamentals of Art and Design *Description:* This course will offer students an opportunity to use a variety of media through the study and exploration of contemporary and historical art and practices by building aesthetic judgment and developing personal vision. Abstract and representational topics will be explored through diverse processes within a variety of subject matter.
2-D Foundations Honors 1 credit	512121 512122	*Prerequisites:* Fundamentals of Art and Design *Description:* The framework for this course will be similar to that of 2-D Foundations but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
Advanced 2-D Design 1 credit	512211 512212	*Prerequisites:* Fundamentals of Art and Design and 2-D Foundations

		Description: This course offers students the opportunity to expand upon the basic techniques developed in 2-D Foundations by enhancing their skills through the production of more sophisticated forms. All areas of study will incorporate the elements and principles of design as well as thehistorical origins and contemporary practices.
Advanced 2-D Design Honors 1 credit	512221 512222	*Prerequisites:* Fundamentals of Art and Design and 2-D Foundations *Description:* The framework for this course will be similar to that of Advanced 2-D Foundations but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
2-D Design Studio 1 credit	512311 512312	*Prerequisites:* Fundamentals of Art and Design, 2-D Foundations, and Advanced 2-D design *Description:* This studio course is designed to facilitate the opportunity for exploration and/or development of a portfolio through an in-depth study of a field of interest. Students will work on assigned and teacher-approved independent projects by using inquiry, investigation, experimentation, and application.
2-D Design Studio Honors 1 credit	512321 512322	*Prerequisites:* Fundamentals of Art and Design, 2-D foundations, and Advanced 2-D Design *Description:* The framework for this course will be similar to that of Advanced 2-D Foundations but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
AP Drawing 1 credit	512431 512432	*Prerequisites:* Fundamentals of Art and Design, 2-D Foundations, and Advanced 2-D Design *Description:* The goal of this course is to create a portfolio of college-level work and submit it for evaluation. The course contains two sections. The Sustained Investigation section requires the student to conduct an inquiry-guided investigation through practice, experimentation, and revision. The Selected Works section allows the student to demonstrate skillful synthesis of

		materials, processes, and ideas. For both sections of the portfolio, the student will be expected to share information in writing about their work.
Digital Art Exploration 1 credit	521311 521312	*Prerequisites:* Fundamentals of Art and Design *Description:* This course is available for grades 10 through 12. In this course students will explore different digital processes by applying the use of various software applications (Adobe Suite) to create original works of art. This hands-on studio course will utilize the elements and principles of design. Students will investigate new approaches and explore traditional methods that enable them to design and develop innovative visual communication projects. A portfolio, which reflects personal achievements using a variety of digital tools and resources, will be created. Students may have the opportunity to earn industry-recognized credentials through this course.
Digital Art Exploration Honors 1 credit	521321 521322	*Prerequisites:* None *Description:* The framework for this course will be similar to that of Digital Art Explorations but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of digital programs, materials, ideas, and processes will allow students to seek a personal form of expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
3-D Foundations 1 credit	531111 531112	*Prerequisites:* Fundamentals of Art and Design *Description:* This course challenges students to create in three dimensions by emphasizing the historical origins, modern practices, and aesthetics of sculpture using a variety of media techniques and processes. Students will apply the elements and principles of design within their exploration of 3-D forms while using traditional and contemporary materials.
3-D Foundations Honors 1 credit	531121 531122	*Prerequisites:* Fundamentals of Art and Design

		Description: The framework for this course will be similar to that of 3-D Foundations but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of materials, ideas, and processes will allow students to seek a personal form of expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
Advanced 3-D Design 1 credit	531211 531212	*Prerequisites:* Fundamentals of Art and Design and 3-D foundations *Description:* This course offers students the opportunity to expand upon the basic techniques developed in 3-D Foundations by enhancing their skills through the production of more complex forms. All areas of study will incorporate the elements and principles of design as well as historical origins and contemporary practices.
Advanced 3-D Design Honors 1 credit	531221 531222	*Prerequisites:* Fundamentals of Art and Design and 3-D foundations *Description:* The framework for this course will be similar to that of Advanced 3-D Design but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of materials, ideas, and processes will allow students to seek a personal form of expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
3-D Design Studio 1 credit	531311 531312	*Prerequisites:* Fundamentals of Art and Design, 3-D Foundations, and Advanced 3-D design *Description:* This studio course is designed to facilitate the opportunity for exploration and/or development of a portfolio through an in-depth study of a field of interest. Students will work on assigned and teacher-approved independent projects by using inquiry, investigation, experimentation, and application.
3-D Design Studio Honors 1 credit	531321 531322	*Prerequisites:* Fundamentals of Art and Design, 3-D Foundations, and Advanced 3-D design

		Description: The framework for this course will be similar to that of 3-D Design Studio but with increased expectations in terms of development of technique, craftsmanship, and encouragement to take informed risks. The exploration of materials, ideas, and processes will allow students to seek a personal form of expression and artistic voice as they work towards more sophisticated concepts and aesthetic judgment.
AP 3-D Art and Design 1 credit	531431 531432	*Prerequisites:* Fundamentals of Art and Design, 3-D Foundations, and Advanced 3-D Foundations *Description:* The goal of this course is to create a portfolio of college-level work and submit it for evaluation. The course contains two sections. The Sustained Investigation section requires the student to conduct an inquiry-guided investigation through practice, experimentation, and revision. The Selected Works section allows the student to demonstrate skillful synthesis of materials, processes, and ideas. For both section of the portfolio, the student will be expected to share information in writing about their work.
Photography and Media Arts 1 credit	541111 541112	*Prerequisites:* Fundamentals of Art and Design *Description:* This course offers an introduction to the fundamentals of photography, digital media, and computer graphics by creating visual images through the formulation of concept, composition, and execution.
Photography and Media Arts Honors 1 credit	541121 541122	*Prerequisites:* Fundamentals of Art and Design *Description:* The framework for this course will be similar to that of Photography and Media Arts but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
Advanced Photography and Media Arts 1 credit	541211 541212	*Prerequisites:* Fundamentals of Art and Design and Photography and Media Arts *Description:* This course offers students the opportunity to expand upon the basic techniques developed in Photography and Media Arts by enhancing their skills through the production of

		more sophisticated forms. This course will incorporate the elements and principles of design as well as the historical origins and contemporary practices.
Advanced Photography and Media Arts Honors 1 credit	541221 541222	*Prerequisites:* Fundamentals of Art and Design and Photography and Media Arts *Description:* The framework for this course will be similar to that of Advanced Photography and Media Arts but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
Photography and Media Arts Studio 1 credit	541311 541312	*Prerequisites:* Fundamentals of Art and Design, Photography and Media Arts, and Advanced Photography and Media Arts *Description:* This studio course is designed to facilitate the opportunity for exploration and/or development of a portfolio through an in-depth study of a field of interest. Students will work on assigned and teacher-approved independent projects by using inquiry, investigation, experimentation, and application.
Arts Studio Honors 1 credit	541321 541322	Photography and Media Arts, and Advanced Photography and Media Arts *Description:* The framework for this course will be similar to that of Advanced Photography and Media Arts Studio but with increased expectations in terms of development of technique, craftsmanship, and intrinsic motivation as students work towards more sophisticated concepts and techniques.
AP 2-D Art and Design **1 credit**	541431 541432	*Prerequisites:* Fundamentals of Art and Design, Photography and Media Arts, and Advanced Photography and Media Arts *Description:* The goal of this course is to create a portfolio of college-level work and submit it for evaluation. The course contains two sections. The Sustained Investigation section requires the student to conduct an inquiry-guided investigation through practice, experimentation, and revision. The Selected Works section allows the

		student to demonstrate skillful synthesis of materials, processes, and ideas. For both sections of the portfolio, the student will be expected to share information in writing about their work.

MUSIC COURSES

COURSES		
Concert Band 1 credit	550311 550322	*Prerequisites:* Previous instrumental experience *Description:* The members of the Concert Band will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence, as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals, and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Concert Band Honors 1 credit	550421 550422	*Prerequisites:* Previous instrumental experience *Description:* The members of the Concert Band Honors will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence, as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals, and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Symphonic Band 1 credit	550511 550512	*Prerequisites:* Previous instrumental experience *Description:* This course is available for grades 10 through 12. The members of the Symphonic Band will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities

		include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Symphonic Band Honors 1 credit	550621 550622	*Prerequisites:* Previous instrumental experience *Description:* This course is available for grades 10 through 12. The members of the Symphonic Band Honors will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals, and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Wind Ensemble 1 credit	550911 550912	*Prerequisites:* Audition *Description:* This course is available for grades 10 through 12. This organization is made up of selected students with an expressed interest in wind ensemble performance as well as a high level of musical development and independence. Members of Wind Ensemble form many smaller instrumental groups of composer-specified instrumentation. Wind Ensemble experience emphasizes student participation in flexible instrumental combinations. Most repertoire, however, is one performer per part. Wind Ensemble provides the accomplished student musician with an alternative vehicle for musical participation that is unique to this smaller instrumental grouping. Performance responsibilities include participation at all concerts, rehearsals, and sectionals, and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.

Wind Ensemble Honors 1 credit	551021 551022	*Prerequisite:* Audition *Description:* This course is available for grades 10 through 12. This organization is made up of selected students with an expressed interest in wind ensemble performance as well as a high level of musical development and independence. Members of Wind Ensemble Honors form many smaller instrumental groups of composer-specified instrumentation. The Wind Ensemble Honors experience emphasizes student participation in flexible instrumental combinations. Most repertoire, however, is one performer per part. Wind Ensemble Honors provides the accomplished student musician with an alternative vehicle for musical participation that is unique to this smaller instrumental grouping. Performance responsibilities include participation at all concerts, rehearsals, and sectionals, and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Jazz Ensemble 0 credits	551111 551112	*Prerequisites:* Previous enrollment in music program *Description:* Students receive instruction on jazz style, phrasing, and improvisation. Several performances throughout the year enable students to demonstrate what they have learned in a variety of concert settings. Time outside the normal school day may be required. (This course may not be used to meet the graduation credit requirement and will not be considered in determining grade point average or class rank.) This course may be taken multiple times.
Treble Choir 1 credit	560111 560112	*Prerequisites:* Prior singing experience is helpful. Treble voices only *Description:* Treble Choir is an organization of treble voices which explores literature composed or arranged specifically for voice. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills;

		and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Treble Choir Honors 1 credit	560221 560222	*Prerequisites:* Prior singing experience is helpful. Treble voices only *Description:* Treble Choir Honors is an organization of treble voices which explores literature composed or arranged specifically for voice. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Concert Choir 1 credit	560311 560312	*Prerequisites:* None *Description:* Members of this choir will deal with four-part (SATB) literature. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Concert Choir Honors 1 credit	560421 560422	*Prerequisites:* None *Description:* Members of this choir will deal with four-part (SATB) literature. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Cantare 1 credit	560561 560562	*Prerequisites:* Director approval *Description:* Cantare is an organization of treble voices which explores literature composed or arranged specifically for voice. Performance responsibilities include participation at all concerts,

		rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Cantare Honors 1 credit	560721 560722	*Prerequisites:* Director approval *Description:* Cantare is an organization of treble voices which explores literature composed or arranged specifically for voice. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
A Cappella Choir 1 credit	560911 560912	*Prerequisites:* Audition *Description:* This choir is the most advanced of the choral music program. Students can expect to receive in-depth instruction in the development of their talent through the continuing process of vocal training, ear training, presentation of information regarding the historical periods of music compositions and composers, and through the preparation and performance of the most challenging and highest quality choral music. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
A Cappella Choir Honors 1 credit	561021 561022	*Prerequisites:* Audition *Description:* This course is the most advanced of the choral music program. Students can expect to receive in-depth instruction in the development of their talent through the continuing process of vocal training, ear training, presentation of information regarding the historical periods of music compositions and composers, and through the preparation and performance of the most challenging and highest quality choral music. Performance responsibilities include

		participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required. Time outside the normal school day may be required. This course may be taken multiple times.
Chorale 1 credit	561111 561112	*Prerequisites:* Audition *Description:* This course is available for grades 10 through 12. Chorale is the most advanced course of the choral music program. Students can expect to receive in-depth instruction in the development of their talent through the continuing process of vocal training, ear training, presentation of information regarding the historical periods of music compositions and composers, and through the preparation and performance of the most challenging and highest quality choral music. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Chorale Honors 1 credit	561221 561222	*Prerequisites:* Audition *Description:* Chorale Honors is the most advanced course of the choral music program. Students can expect to receive in-depth instruction in the development of their talent through the continuing process of vocal training, ear training, presentation of information regarding the historical periods of music compositions and composers, and through the preparation and performance of the most challenging and highest quality choral music. Performance responsibilities include participation at all concerts, rehearsals, and sectionals; a positive attitude toward development of talents and skills; and responsible preparation of the music. Additional honors requirements as assigned by the teacher

		are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Madrigal Singers 0 credits	561510	*Prerequisites:* Previous enrollment in music program and audition *Description:* Madrigal Singers meet as an evening music enrichment activity. Members of these ensembles will study and perform sacred and secular choral music of the sixteenth century through the twentieth century and Christmas music from that same time period. Time outside the normal school day may be required. (This course may not be used to meet the graduation credit requirement and will not be considered in determining grade point average or class rank.) This course may be taken multiple times.
Concert Orchestra 1 credit	570111 570112	*Prerequisites:* Experience on string instruments *Description:* This course is available for grades 9 and 10. The members of Concert Orchestra will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence, as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Concert Orchestra Honors 1 credit	570221 570222	*Prerequisites:* Previous experience on string instruments *Description:* The members of Concert Orchestra Honors will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the

		music. Additional honors requirements as assigned by the teacher are required for this course. Time outside the normal school day may be required. This course may be taken multiple times.
Symphony Orchestra 1 credit	570311 570312	*Prerequisites:* Audition *Description:* Symphony Orchestra membership includes select wind and percussion instrumentalists along with the string students who choose this as a continuation of their musical training. Activities include school concerts; district-wide Orchestra Festival; midwinter and spring concerts; WSMA contests; special performances at civic, state, and national conventions; and clinical presentations by invitation, convocation, and commencement. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. This course may be taken multiple times.
Symphony Orchestra Honors 1 credit	570421 570422	*Prerequisites:* Audition *Description:* Symphony Orchestra Honors membership includes select wind and percussion instrumentalists along with the string students who choose this as a continuation of their musical training. Activities include school concerts; district-wide Orchestra Festival; midwinter and spring concerts; WSMA contests; special performances at civic, state, and national conventions; and clinical presentations by invitation, convocation, and commencement. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Additional honors requirements as assigned by the teacher are required for this course. This course may be taken multiple times.
Chamber Orchestra 0 credits	570510	*Prerequisites:* None *Description:* Participation in Chamber Orchestra is only offered to students already enrolled in the music program. Performances at social civic, state, and out-of-state events provide the student with opportunities to develop musical as well as

		social skills through this experience. Student musicians wishing to improve their sight-reading ability and to develop an understanding of a variety of musical styles not frequently encountered in full orchestra activities are encouraged to enroll. These organizations expose students to music which is enjoyable to play yet includes master works of the great composers. Performance responsibilities include participation at all concerts, rehearsals, and sections and responsible preparation of the music. Time outside the normal school day may be required. (This course may not be used to meet the graduation credit requirement and will not be considered in determining grade point average or class rank.) This course may be taken multiple times.
Alternative Strings 0 credits	570610	*Prerequisites:* None *Description:* Participation in the Alternative Strings is only offered to students already enrolled in the music program. Students will be performing various styles of music including: jazz, fiddle, and popular music. Students will learn improvisational skills. Performances at social, civic, state, and out-of-state events provide the student with the opportunity to develop musical as well as social skills through these experiences. Time outside the normal school day may be required. (This course may not be used to meet the graduation credit requirement and will not be considered in determining grade point average or class rank.) This course may be taken multiple times.
Golden Strings 0 credits	570710	*Prerequisites:* Tremper *Description:* Participation in the Golden Strings is only offered to students already enrolled in the Tremper music program. Performances at social, civic, state, and out-of-state events provide the student with opportunities to develop musical as well as social skills throughout these experiences. Time outside the normal school day may be required. (This course may not be used to meet the graduation credit requirement and will not be

		considered in determining grade point average or class rank.) This course may be taken multiple times.
Music: A Listener's Survey ½ credit	570810	*Prerequisites:* None *Description:* This course is available for grades 10 through 12. Students will study many forms and styles of music by listening to a wide variety of musical compositions. Students should develop an understanding of the elements of music; knowledge of the vocabulary of music; the ability to evaluate music and musical performances qualitatively; knowledge of representative master works of various types; an understanding of the origin, evolution, and cultural significance of twentieth century music; and receptivity to music of different types, styles, and mediums.
Music Theory Honors 1 credit	570921 570922	*Prerequisites:* None *Description:* This course is available for grades 10 through 12. Music Theory is an academic music course which is designed to develop student comprehension of harmony, ear training, sight singing, music history, notation, arranging, keyboard composition, and counterpoint. Students will write music and gain a working knowledge of the elements and theory of music. Emphasis will be placed on individual musical growth and preparation for advance study of music at the college level.
Advanced Placement Music Theory 1 credit	570931 570932	*Prerequisites:* Music Theory *Description:* This course is available for grades 10 through 12. Advanced Placement Music Theory is designed to follow the College Board guidelines and is comparable to college-level music theory courses. Any student who has successfully completed the Music Theory Honors course may register for Advanced Placement Music Theory. Students entering Advanced Placement Music Theory have a solid understanding of essential rudimentary elements of music theory: scales, key signatures, circle of fifths, intervals, triads, and inversions—to name a few. Musical composition, sequencing, and

		use of MIDI digital formats are some of the many applications employed to further student understanding of music theory. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.
Roots/Blues Guitar 1 credit	571011 571012	*Prerequisites:* None *Description:* Roots/Blues Guitar initiates students into the art of playing basic acoustic blues guitar along with providing them with significant glimpses into the historical, geographical, and sociological factors that shaped this genre. Each student will spend time learning essential scales, chords, and blues patterns while absorbing the cultural background that caused this music to travel upstream from the deep Delta Region north to Chicago and beyond.
Intro to Digital Composition ½ credit	571210	*Prerequisites:* None *Description:* The composition section of the course explores four key elements of music: melody, harmony, form, and style. This will be accomplished by using modern production software, which is a key element in the music industry. This portion of the course will allow the students to take samples of music and arrange them in a way to express their creative side.
Digital Composition ½ credit	571211 571212	*Prerequisites:* Intro to Digital Composition (571210) *Description:* The intermediate composition section of the course deepens understanding of the four key elements of music: melody, harmony, form, and style. This will be accomplished by using modern production software, which is a key element in the music industry. This portion of the course will allow the students to create and arrange their own original music.
Intro to Recording Technology ½ credit	571410	*Prerequisites:* Intro to Digital Composition (571210) and Digital Composition (571211 and 571212) *Description:* Students build on skills learned in the previous two courses to develop expertise in live recording situations and mixing.

Recording Technology ½ credit	571511 571512	*Prerequisites:* Intro to Recording Technology (571410), Introduction to Digital Composition (571210), and Digital Composition (571211 and 571212) *Description:* Students build on the live recording and mixing learned in the previous course to create a final refined product.
Intro to Guitar Studies ½ credit	571610	*Prerequisites:* None *Description:* This course is designed for the beginning guitarist to introduce the instrument and emphasize exercises concerning note reading, value, and placement on the guitar. Course objectives will include basic melody and chord playing in both solo and ensemble performance.
Guitar Studies 1 ½ credit	571711 571712	*Prerequisites:* Intro to Guitar Studies (571610) *Description:* For the intermediate guitarist, this course emphasizes exercises concerning major and minor scales, common chord progressions, and improvisational techniques. Students may repeat this course.
Guitar Studies 2 ½ credit	571811 571812	*Prerequisites:* Guitar Studies 1 (571711 and 571712) *Description:* This advanced level course continues to develop skills around major and minor scales, more difficult chord progressions, and further improvisational techniques. This course will also further develop the students' capacity to play to an authentic audience.
Intro to World Drumming ½ credit	571910	*Prerequisites:* None *Description:* This course introduces the history and methods of playing the drums and of the instrument itself. This beginner level course will focus on technique, reading basic rhythms, and learning how and what to listen for while participating in a drum circle. Experience in drumming is not necessary to take this course. Most of all, the content will focus on students finding their own way to express their inner rhythms while making musical connections.
World Drumming 1 ½ credit	572011 572012	*Prerequisites:* Intro to World Drumming (571910)

		Description: For the intermediate drumming student, this course continues to build more advanced techniques while extending the learning about drum circles. Students will continue to learn about the history of drum circles and their connection to local history.
World Drumming 2 ½ credit	572111 572112	*Prerequisites:* World Drumming 2 (572111 and 572112) *Description:* For the advanced drumming student, this course deepens skills used during drum circles. Students will be pushed to develop their own drum circle and its unique story. The course will also further develop the student's capacity to play to an authentic audience.
Introduction to High School Orchestra 1 credit	473111 573112	*Prerequisites:* No music experience needed *Description:* This course is available for grades 9 through 12. The members of Introduction to High School Orchestra will find the opportunity in this organization to develop individual musical skills and beginning string technique on violin, viola, cello, and double bass. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
Introduction to High School Orchestra Honors 1 credit	573121 573122	*Prerequisites:* No music experience needed *Description:* This course is available for grades 9 through 12. The members of Introduction to High School Orchestra will find the opportunity in this organization to develop individual musical skills and beginning string technique on violin, viola, cello, and double bass. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include participation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.

String Orchestra 1 credit	573211 573212	*Prerequisites:* Experience on string instruments *Description:* This course is available for grades 10 through 12. The members of String Orchestra will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include par-ticipation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.
String Orchestra Honors 1 credit	573221 573222	*Prerequisites:* Experience on string instruments *Description:* This course is available for grades 10 through 12. The members of String Orchestra will find the opportunity in this organization to continue the development of basic individual musical skills and ensemble performance concepts. Class work will emphasize the development of technical proficiency and musical independence as well as ensemble performance skills. Performance responsibilities include par-ticipation at all concerts, rehearsals, and sectionals and responsible preparation of the music. Time outside the normal school day may be required. This course may be taken multiple times.

THEATRE ARTS COURSES

COURSES		
Drama 1 ½ credit	580110	*Prerequisites:* None *Description:* This class focuses on the fundamentals of stage presentation with an emphasis on acting and drama through performance. Students will learn basic voice and body techniques, participate in theater games, activities, improvisation and play analysis.
Drama 2 ½ credit	580210	*Prerequisites:* Drama 1 (580110) *Description:* This class focuses more intensely on drama as a performance art. Students will study well-known theories and techniques of acting, learn various applications for stage makeup, use of lighting, costume, sound, and techniques of set design and construction. The history of the theater will be studied covering the major periods and playwrights from early Greek drama through modern. Emphasis is on drama through performance. Solo and group scenes will be prepared and presented.
Drama 3 ½ credit	580310	*Prerequisites:* Drama 2 (580210) *Description:* Drama 3 focuses on specific approaches to acting, covering the works of Stanislavski, Adler, and others. Theater history will continue from The Restoration to the present. An introduction to stage movement and dance will also be offered.
Acting 1 1 credit	580411 580412	*Prerequisites:* None *Description:* This course serves as a foundation for the four-year program in the theatre specialty. Students will study basic skills needed in performance with an emphasis on developing the body, voice, and various technical aspects of the theatre. The technical aspects covered include stage makeup, set design, set construction, costuming, business skills, designing, and performance resumes. The acting skills covered include improvisational skills and acting techniques. A four-year historical study beginning with the theory of the origins of theatre to Greek

		and Roman theatre will also be introduced. Throughout the four-year program, students will develop a portfolio revealing their progress made over the entire four years. Additional honors requirements as assigned by the teacher are required for this course.
Acting 1 Honors 1 credit	580521 580522	*Prerequisites:* None *Description:* Acting 1 Honors serves as a foundation for the four-year program in the theatre specialty. Students will study basic skills needed in performance with the emphasis on developing the body, voice, and various technical aspects of the theater. The technical aspects covered include stage makeup, set design, set construction, costuming, business skills, designing programs, and performance resumes. The acting stills covered include improvisational skills and acting techniques. A four-year historical study beginning with the theory of the origins of theatre to Greek and Roman theatre will also be introduced. Throughout the four-year program, students will develop a portfolio revealing their progress made over the entire four years. Additional honors requirements as assigned by the teacher are required for this course.
Acting 2 1 credit	580611 580612	*Prerequisites:* Acting 1 (580411 or 580412 or 580521 and 580522) *Description:* This course is available for grades 10 through 12. Students continue to study basic skills needed in performance with emphasis on developing the body and voice. Historical study will highlight the Renaissance period. Students will continue to develop a portfolio revealing their progress made over the entire four years.
Acting 2 Honors 1 credit	580721 580722	*Prerequisites:* Acting 1 (580411 and 580412 or 580521 and 580522) *Description:* This course is available for grades 10 through 12. Acting 2 Honors students will continue to study basic skills needed in performance with emphasis on developing the body and voice. Historical study will highlight

		the Renaissance period. Students will continue to develop a portfolio revealing their progress made over the entire four years. Additional honors requirements as assigned by the teacher are required for this course.
Theatre Practicum 0 credit	581011 581012	*Prerequisites:* All students will audition for placement. *Description:* Students will study a variety of theatre and musical theatre literature. The class culminates with a full performance of a complete work for the stage. This course may be taken multiple times.
Theatre Practicum Honors 0 credit	581121 581122	*Prerequisites:* All students will audition for placement. *Description:* Theater Practicum Honors students will study a variety of theater and musical theater literature. The class culminates with a full performance of a complete work for the stage. Additional honors requirements as assigned by the teacher are required for this course. This course may be taken multiple times.
Musical Theatre Vocal Techniques 1 credit	581211 581212	*Prerequisites:* None *Description:* Students will learn speech and singing techniques through the study of vocal anatomy, diction, breathing, and placement.
Musical Theatre Vocal Techniques Honors 1 credit	581321 581322	*Prerequisites:* None *Description:* Musical Theatre Vocal Techniques Honors students will learn speech and singing techniques through the study of vocal anatomy, diction, breathing, and placement. Additional honors requirements as assigned by the teacher are required for this course.
Stagecraft 1 1 credit	581411 581412	*Prerequisites:* None *Description:* This course provides an introduction to procedures and theories of theatrical production including stage equipment, scenic construction, scenic painting, technical personnel duties, practical applications, and work on current productions.

Stagecraft 2 1 credit	581511 581512	*Prerequisites:* Stagecraft 1 (581411 and 581412) *Description:* This course is available for grades 10 through 12. The course provides a continuation of the procedures and theories of theatrical production including stage equipment, scenic construction, scenic painting, technical duties, and practical applications through work on current productions. This course may be taken multiple times.
Stagecraft 2 Honors 1 credit	581621 581622	*Prerequisites:* Stagecraft 1 (581411 and 581412) *Description:* This course is available for grades 10 through 12. Stagecraft 2 Honors is a continuation of the procedures and theories of theatrical production including stage equipment, scenic construction, scenic painting, technical duties, and practical applications through work on current productions. Additional honors requirements as assigned by the teacher are required for this course. This course may be taken multiple times.
Scenic Design 1 credit	581711 581712	*Prerequisites:* Stagecraft 1 (581411 and 581412) *Description:* This course is available for grades 10 through 12. Students are introduced to basic theoretical and practical techniques of design. Instruction will include design theory, color theory, basics of hand drafting, stage layout, and spatial relationships. Class will be project based and include model building, artistic analysis, and script interpretation. This course may be taken multiple times.
Scenic Design Honors 1 credit	581821 581822	*Prerequisites:* Stagecraft 1 (581411 and 581412) *Description:* This course is available for grades 10 through 12. Scenic Design Honors students are introduced to basic theoretical and practical techniques of design. Instruction will include design theory, color theory, basics of hand drafting, stage layout, and spatial relationships. Class will be project based and include model building, artistic analysis, and script interpretation. Additional honors requirements as assigned by the teacher are required for this course. This course may be taken multiple times.

Stage Management Practicum 0 credit	581911 581912	*Prerequisites:* None *Description:* This is an introductory course in the skills and principles of theatrical production. Includes stage equipment, technical crew duties, and work on current productions. It provides the stage crew needed for Bradford's productions. This class meets outside of the school day. This course may be taken multiple times.

DANCE COURSES

COURSES		
Introduction to Dance 1 or 2 credits	590111 590112	*Prerequisites:* None *Description:* This dance level class focuses on developing the inexperienced dancer in several areas. The technical focus on: 1. Ballet A. Alignment, B. Verticality, and C. Basic ballet movements; 2. Modern A. Basic movement and B. Basic form; and 3. Jazz A. Basic percussive style and B. Basic lyrical jazz style. Students will gain a greater knowledge in the background of dance and experience firsthand the technical aspects and creativity that a dancer has to offer. This course does not meet physical education requirements.
Dance 2 1 or 2 credits	590211 590212	*Prerequisites:* Introduction to Dance (590111 and 590112) *Description:* This course is available for grades 10 through 12. This dance level class is a continuation of Introduction to Dance with technique training in the areas of ballet, modern, and jazz. Students will also be introduced to improvisation/composition. They will be responsible to create, choreograph, and perform the skills and techniques they are learning in class. Students will increase skills in turn out, balance, rhythm

		patterns, memorization, and choreography as well as performance presentation. This course does not meet physical education requirements.
Dance 3 1 or 2 credits	590311 590312	*Prerequisites:* Audition *Description:* This course is available for grades 10 through 12. This course seeks to improve your technical skills in dance through a combination of ballet, modern, and jazz techniques. It aims to develop your understanding of your body in motion using an experimental approach of self-discovery. It is targeted to students with considerable knowledge in all techniques and with the desire to find their uniqueness as artists. Important emphasis will be placed on physical strengthening, placement, memorization, execution of step combinations, and musicality. This class will focus more on composition and performance skills. Final exams will consist of both learning and creating repertoire for the yearly dance performance presented professsionally. This course does not meet physical education requirements.

HEALTH AND PHYSICAL EDUCATION

REGISTRATION GUIDELINES

Continuing from the 2011-12 school year, 1.5 credits of physical education must be earned in 3 separate school years per Wisconsin Department of Public Instruction High School Graduation Standards (PI 18.03 Wisconsin Administrative Code) and Wisconsin Education Instruction Physical Education Standards S121.02. Physical education and one-half credit of health may be taken in the same year. Additional physical education classes can be taken during one year for elective credit only.

Students shall be granted an exemption from physical education for medical reasons upon presentation of a physician's statement. Students shall be required to make up all exempt physical education credits by taking the same number of credits in another elective subject(s).

COURSES		
Physical Education Foundations ½ credit	611010	*Prerequisites:* None *Description:* Physical Education Foundations will introduce fitness to students through many different activities, including team sports, individual sports, and organized fitness activities. Implementation of the SPARK curriculum for high school will come from Physical Education Foundations. This course must be successfully completed before entering any of the other offered physical education courses.
Lifetime Fitness ½ credit	610210	*Prerequisites:* Physical Education Foundations (611010) *Description:* Lifetime Fitness class will teach students fitness and the importance of fitness through team sports and team building. Students will have opportunity to cooperatively learn the importance of staying fit and the healthy aspects of lifetime sports. SPARK curriculum will continue with emphasis on team lessons.
Lifetime Fitness Elective ½ elective credit	632010	*Prerequisites:* Graduation requirements in physical education must be completed to take this course. *Description:* Lifetime Fitness class will teach students fitness and the importance of fitness through team sports and team building. Students will have an opportunity to cooperatively learn

		the importance of staying fit and the healthy aspects of lifetime sports. SPARK curriculum will continue with emphasis on team lessons.
Active Lifestyles ½ credit	613010	*Prerequisite:* Physical Education Foundations (611010) *Description:* Active Lifestyles class emphasizes the importance of staying fit and healthy individually. Students will be able to learn different ways to take responsibility for their fitness and health through individual lifetime sports and individual fitness opportunities. SPARK curriculum will continue with emphasis on individual fitness building lessons.
Active Lifestyles Elective ½ elective credit	633010	*Prerequisites:* Graduation requirements in physical education must be completed to take this course. *Description:* Active Lifestyles class emphasizes the importance of staying fit and healthy individually. Students will be able to learn different ways to take responsibility for their fitness and health through individual lifetime sports and individual fitness opportunities. SPARK curriculum will continue with emphasis on individual fitness building lessons.
Personal Fitness ½ credit	614010	*Prerequisites:* Physical Education Foundations (611010) *Description:* Personal Fitness class is primarily held in the school's fitness center/weight room. The class will introduce and incorporate a fitness plan for students to follow and transition into each student developing and implementing his/her own personalized fitness plan. Where appropriate, SPARK curriculum will be incorporated into lessons.
Personal Fitness Elective ½ elective credit	634010	*Prerequisites:* Graduation requirements in physical education must be completed to take this course. *Description:* Personal Fitness class is primarily held in the school's fitness center/weight room. The class will introduce and incorporate a fitness plan for students to follow and transition into each student developing and implementing

		his/her own personalized fitness plan. Where appropriate, SPARK curriculum will be incorporated into lessons.
Health Education ½ credit	620110	*Prerequisites:* None *Description:* Health is a graduation requirement. This course deals with the critical health needs and problems of today. The course is based on scientific information that has as its purpose the development of knowledge and the cultivation of desirable attitudes, habits, and practices. Topics include cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), first aid, nutrition, tobacco, alcohol, other drugs, diseases, human growth and development, family life curriculum, mental health, and environmental health issues.
Physical Education: Specially Designed ½ credit	664119	*Prerequisites:* None *Description:* This co-ed course fulfills a half-credit graduation requirement. Registration for this course is IEP driven.

ENGLISH/LANGUAGE ARTS

COURSES		
Survey of Literature/ Composition 1 credit	121011 121012	*Prerequisites:* None *Description:* Survey of Literature/Composition builds on the knowledge acquired in middle school and sets a foundation for the students' literature and writing skills used in high school. This literature-based course draws from a variety of genres. Students gain an understanding of the writing process, including prewriting, drafting, and revision for persuasive and expository writing. Skills in the areas of reading, writing, study strategies, listening, speaking, and research will be developed.
Survey of Literature/ Composition Honors 1 credit	121021 121022	*Prerequisites:* None *Description:* Survey of Literature/Composition Honors is a literature-based course. Students will discuss and analyze literature from a variety of genres. Effective communication strategies will be practiced through both written and oral communication tasks. Each step of the writing process will be refined with particular focus on revision. Skills in the areas of reading, writing, study strategies, listening, speaking, and research in preparation for college will be developed.
World Literature/ Composition 1 credit	122011 122012	*Prerequisites:* None *Description:* World Literature/Composition is a literature-based composition course that will improve reading, writing, listening, viewing, and speaking skills. The primary focus will be world literature from ancient writings—both fiction and nonfiction—and current writings from non-American cultures. Students will develop reading strategies to interpret, analyze, and evaluate a variety of texts.
World Literature/ Composition Honors 1 credit	122021 122022	*Prerequisites:* None *Description:* World Literature/Composition Honors is a literature-based composition course that will improve reading, writing, listening, viewing, and speaking skills. The primary focus will be world literature from ancient

		writings—both fiction and nonfiction—and current writings from non-American cultures. Students will develop higher level thinking skills through critical reading and effective writing.
American Literature/ Composition 1 credit	123011 123012	*Prerequisites:* None *Description:* American Literature/Composition is a literature-based composition course that will improve reading, writing, listening, viewing, and speaking skills. The primary focus will be American literature from pre-Columbian American through the twenty-first century. Elements of composition will concentrate on the writing process, including expository and persuasive styles. Students will develop reading strategies to interpret, analyze, and evaluate a variety of texts.
American Literature/ Composition Honors 1 credit	123021 123022	*Prerequisites:* None *Description:* American Literature/ Composition Honors is a literature-based composition course that will improve reading, writing, listening, viewing, and speaking skills. The primary focus will be American literature from pre-Columbian American through the twenty-first century. Students will develop higher level thinking skills through critical reading and effective writing.
Advanced Placement English Literature and Composition 1 credit	124031 124032	*Prerequisites:* None *Description:* Advanced Placement Literature/Composition engages students in the careful reading and critical analysis of imaginative and discursive literature. Students will develop skills in writing expository, analytical, and argumentative essays about literature and related ideas. This is an introductory level college English course which focuses on writings by masters of the English language and includes works in translation, especially dramas and novels. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.

Advanced Placement English Language and Composition 1 credit	125031 125032	*Prerequisites:* None *Description:* Advanced Placement Language/Composition focuses on both effective writing and critical reading at the level of an introductory college English course. Through attentive and continued analysis of a variety of prose texts, students will become skilled readers. The course will also give students the practice and helpful criticism necessary to make them flexible writers who can compose in a variety of modes and for a variety of purposes. Students will also acquire some knowledge of the evolution of English prose style since the Middle Ages and, by doing so, understand and use the expressive potential of language. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.
Diverse Perspectives in Literature and Composition 1 credit	131011 131012	*Prerequisites:* None *Description:* This course examines short stories, novels, and plays. Students analyze common themes in a range of literature. Students will also develop several compositions in a variety of modes and for a variety of purposes. The course focuses on the development of reading, writing, listening, and speaking skills and strategies.
Diverse Perspectives in Literature and Composition Honors 1 credit	131021 131022	*Prerequisites:* None *Description:* This course develops critical thinking and effective writing skills and strategies. Students will analyze, critique, and evaluate complex text from a variety of genres. Students will write in response to literature as well as for a wide range of purposes and in a variety of modes.
Journalism 2 1 credit	162011 162012	*Prerequisites:* Journalism 1 (171010) *Description:* Students will experience all aspects of producing a school newspaper from assignment to circulation. Students will learn photo, art, and layout skills along with advertising. The paper is produced on a Macintosh, so computer skills will be enhanced.
Journalism 2 Honors 1 credit	162021 162022	*Prerequisites:* None

		Description: Students will experience all aspects of producing a school newspaper from assignments to circulation. Students will be responsible for meeting deadlines and editing student work in preparation for publication.
Journalism 1 ½ credit	171010	*Prerequisites:* None *Description:* This course is offered for elective credit only. This survey course will study various aspects of media, including the beginnings of modern press, electronic journalism, the influence of media on society, etc. Emphasis on student writing, editing, and proofreading will direct students toward publication quality.
School Newspaper 1 credit	172011 172012	*Prerequisites:* None *Description:* This course is offered for elective credit only. School Newspaper is a course focusing on the production of the school newspaper. Students will use the writing process, conduct interview, and refine research skills. Students will also develop skills in layout and design, production responsibilities, and cooperative learning.
School Newspaper Honors ½ credit	172020	*Prerequisites:* None *Description:* This course is offered for elective credit only. School Newspaper Honors is a course focusing on the production of the school newspaper. Students will use the writing process, conduct interviews, and refine research skills. Students will also develop skills in layout and design, production responsibilities, and cooperative learning.
Yearbook 1 credit	173011 173012	*Prerequisites:* None *Description:* This course is offered for elective credit only. Yearbook is a course focusing on the production of the school yearbook. Students will use the writing process, conduct interviews, and refine research skills. Students will also develop skills in layout and design, fundraising, business responsibilities, and cooperative learning.

Yearbook Honors 1 credit	173021 173022	*Prerequisites:* None *Description:* This course is offered for elective credit only. Yearbook Honors is a course not only focusing on the production of the school yearbook but also offering more rigorous challenges in this elective class through self-initiated and self-directed projects for students who have the interest and ability to work and achieve be- yond the basic course expectations. In addition to basic course expectations that students will use the writing process, conduct interviews, and refine research skills is that students will also develop skills in layout and design, fundraising, business responsibilities, and cooperative learning. Students will also meet with the instructor of this course to gain approval of a proposal for Honors Credit Option Plan. Students must submit a portfolio and a reflective evaluation for assessment and evaluation by the instructor to gain honors credit.
Digital Publication Design 1 credit	174011 174012	*Prerequisites:* None *Description:* This course is offered for elective credit only. The student will successfully learn to use Web-based software in the preparation of the high school yearbook. Basic design principles will be discussed, identified, and applied to each project. Although templates are created for a yearbook a year ahead of time, students will also be assigned pages in current year's book. The student will also learn to scan and manipulate images into each project.
Digital Publication Design Honors 1 credit	174021 174022	*Prerequisites:* None *Description:* This course is offered for elective credit only. The student will successfully learn to use Web-based software in the preparation of the high school yearbook. Basic design principles will be discussed, identified, and applied to each project. Although templates are created for a yearbook a year ahead of time, students will also be assigned pages in current year's book. The student will also learn to scan and manipulative images into each project.

Teen Leadership 1 credit	812811 812812	*Prerequisites:* None *Description:* Teen Leadership is a course in which students develop leadership, professional, and business skills. Personal and professional goal setting as well as principle-based decision making are included in the focus. Course competencies include: • Developing a healthy self-concept and healthy relationships; • Learning to understand the concept of personal responsibility; and • Understanding emotional intelligence, the effects of peer pressure, and problem-solving skills.

MATHEMATICS

REGISTRATION GUIDELINES

All courses are one credit unless specified otherwise. Three credits of mathematics are required for graduation.

GRADE	STANDARD PATHWAY	ACCELERATED PATHWAY*
9	Algebra 1	Geometry OR Geometry Honors
10	Geometry OR Geometry Honors	Choose from: Algebra 2/Trigonometry Algebra 2/Trigonometry Honors Algebra 2/Modeling & Statistics Algebra 2/Modeling & Statistics Honors
11	Choose from: Algebra 2/Trigonometry Algebra 2/Trigonometry Honors Algebra 2/Modeling & Statistics Algebra 2/Modeling & Statistics Honors	Choose from: Precalculus Advanced Placement Precalculus Advanced Placement Statistics Introduction to Data Science Quantitative Reasoning
12	Choose from: Precalculus Advanced Placement Precalculus Advanced Placement Statistics Introduction to Data Science Quantitative Reasoning	Choose from: Advanced Placement Calculus AB+ Advanced Placement Calculus BC+ (2 credits) Advanced Placement Statistics

*Students must have successfully completed Accelerated Eighth Grade Algebra 1 in order to enroll in Geometry or Geometry Honors as freshmen.

+Students must have successfully completed Precalculus or Advanced Placement Precalculus to enroll in AP Calculus AB/BC.

COURSES		
Algebra 1 1 credit	312011 312012	*Prerequisites:* None *Description:* Algebra 1 formalizes and extends the mathematics that students learned in the middle grades. Students will deepen and extend their understanding of linear, quadratic, and exponential relationships to analyze, solve, and use these functions in modeling situations. The Standards for Mathematical Practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Geometry 1 credit	321011 321012	*Prerequisites:* Algebra 1 (312011 and 312012) *Description:* This course is a study of plane and solid geometry. It includes precise definitions, theorems, and postulates relating to plane and solid figures. Students explore complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Standards for Mathematical Practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Geometry Honors 1 credit	322021 322022	*Prerequisites:* Algebra 1 (312011 and 312012) *Description:* This course is a rigorous study of plane and solid geometry. It includes precise definitions, theorems, and postulates relating to plane and solid figures. Students explore complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Standards for Mathematical Practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Algebra 2/Trigonometry 1 credit	331011 331012	*Prerequisites:* Geometry (321011 and 321012) or Geometry Honors (322021 and 322022) *Description:* Building on their work with linear, quadratic, and exponential functions in Algebra 1, students extend their repertoire of functions to include polynomial, rational, and

		radical functions. Students work closely with the expressions that define the functions and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. This course also extends students' understanding of the trigonometric functions and includes a study of probability and statistics. The Standards for Mathematical practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Algebra 2/Trigonometry Honors 1 credit	332021 332022	*Prerequisites:* Geometry (321011 and 321012) or Geometry Honors (321021 and 321022) *Description:* Building on their work with linear, quadratic, and exponential functions in Algebra 1, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. This course also includes an in-depth study of the trigonometric functions as well as a study of probability and statistics. The Standards for Mathematical Practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Algebra 2/Modeling & Statistics 1 credit	333011 333012	*Prerequisites:* Geometry (321011 and 321012) or Geometry Honors (321021 and 321022) *Description:* This course is designed to promote reasoning, problem solving, and modeling through thematic units focused on mathematical practices. The course builds upon previous knowledge and extends that knowledge to new situations to create a deeper understanding. This course would be especially appropriate for students who:

		• Anticipate a career in the arts or behavior sciences, • Anticipate a career that emphasizes utilizing measurements or units, • Will pursue a pathway that does not require calculus, and/or • Enjoy hands-on collaborative work within real-world contexts.
Algebra 2/Modeling & Statistics Honors 1 credit	333021 333022	*Prerequisites: Prerequisites:* Geometry (321011 and 321012) or Geometry Honors (321021 and 321022) *Description:* This course is designed to promote reasoning, problem solving, and modeling through thematic units focused on mathematical practices. The course builds upon previous knowledge and extends that knowledge to new situations to create a deeper understanding. This course would be especially appropriate for students who: • Anticipate a career in the arts or behavior sciences, • Anticipate a career that emphasizes utilizing measurements or units, • Will pursue a pathway that does not require calculus, and/or • Enjoy hands-on collaborative work within real-world contexts.
Quantitative Reasoning 1 credit	342021 342022	*Prerequisites:* Any Algebra 2 course *Description:* This course is designed to teach students mathematical skills needed for informed decision making. Its emphasis is on mathematical reasoning and its practical application in a variety of contexts. Quantitative Reasoning develops a habit of mind, competency, and comfort in working with numerical data.

		Students will learn to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations, develop the ability to reason mathematically, and make and evaluate logical arguments supported by quantitative evidence. Students enrolled in this course are eligible to enroll for dual credit via the Parkside Access to College Credit Program (PACC).
Advanced Placement Statistics 1 credit	343031 343032	*Prerequisites:* Any Algebra 2 course *Description:* Advanced Placement Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: 1) exploring data, 2) sampling and experimentation, 3) anticipating patters, and 4) statistical inference. Students work on projects involving the hands-on gathering and analysis of real-world data. Ideas and computations presented in this course have immediate links and connections with actual events. The use of computers and graphic calculators allow students to focus deeply on the concepts involved in statistics. Students are strongly encouraged to successfully complete this class and take an Advanced Placement examination to potentially earn college credit.
Introduction to Data Science 1 credit	344011 344012	*Prerequisites:* Any Algebra 2 course *Description:* This course introduces students to the main ideas in data science with real data, introducing statistical, computational, and graphical tools for reasoning about the world. Students will learn to be data explorers in project-based units through which they will develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, the power of data in society, and more!

Introduction to Data Science Honors 1 credit	344021 344022	*Prerequisites:* Any Algebra 2 course *Description:* This course introduces students to the main ideas in data science with real data, introducing statistical, computational, and graphical tools for reasoning about the world. Students will learn to be data explorers in project-based units through which they will develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, the power of data in society, and more!
Precalculus 1 credit	351011 351012	*Prerequisites:* Any Algebra 2 course *Description:* Precalculus extends the mathematical concepts and skills studied in Algebra 2. In addition to an in-depth study of functions and their inverses, this course includes the study of complex number systems, vector quantities, matrices, and sequences and series. The Standards for Mathematical Practice are applied throughout to provide students with a mathematical experience that makes use of their ability to make sense of problem situations.
Advanced Placement Precalculus 1 credit	352031 352032	*Prerequisites:* Any Algebra 2 course (Algebra 2/Trigonometry Honors strongly recommended) *Description:* Advanced Placement Precalculus fosters the development of a deep conceptual understanding of functions. In this course students study a broad spectrum of function types that are foundational for careers in mathematics, physics, biology, health science, social science, and data science. Students will apply mathematical tools in real-world modeling situations in preparation for using these tools in college-level calculus as well as the symbolic manipulation skills needed for future mathematics courses. This course prepares students for college-level calculus, including AP calculus and provides grounding for other mathematics and science courses.
Advanced Placement Calculus AB 1 credit	353031 353032	*Prerequisites:* Precalculus (351011 and 351012) or Advanced Placement Precalculus (352031 and 352032)

		Description: This course is equivalent to a first semester college calculus course. It follows the College Board Advanced Placement Calculus course outline. It includes: 1. Functions, 2. Use of graphs, 3. Derivatives and their applications, 4. Differentials, 5. Limits, 6. Integrals and their applications, and 7. Differential equations. The course prepares students for second semester college courses. It is strongly recommended that students who successfully complete this class take the Advanced Placement Calculus examination in the spring, which could result in earning college credit.
Advanced Placement Calculus BC 2 credits	354031 354032 354033 354034	*Prerequisites:* Precalculus (351011 and 351012) or Advanced Placement Precalculus (352031 and 352032) *Description:* Advanced Placement Calculus BC is a full-year course in the calculus of a single variable. It follows the College Board Advanced Placement Calculus course outline. It includes functions, use of graphs, derivatives and their applications, differentials, limits, integrals and their applications, and differential equations. It also includes parametric, polar, and vector functions; techniques of antidifferentiations and polynomial approximations; and series. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Exam to potentially earn college credit. Course content is designed to qualify the student for placement and credit in a course that is one course beyond that granted for Calculus AB at the college level.

SCIENCE

REGISTRATION GUIDELINES

Each student is required to complete three credits in science for high school graduation. Please follow the guidelines below.

Grade 9	One of the following is required: • Biology • Biology Honors • Equivalent course at choice and charter schools
Grade 10	One of the following is recommended: • Chemistry • Chemistry Honors • Matter and Energy • Equivalent course at choice and charter schools
Grade 11	One of the following is recommended: • Conceptual Physics • Advanced Placement Physics 1 • Earth Science • Equivalent course at choice and charter schools

A fourth credit in science is highly recommended for postsecondary career training or college readiness. There are many high-interest and advanced placement science courses offered for a fourth credit. Instruction in all science courses engages students in collaborative, inquiry-based investigations through questioning, modeling, analyzing data, and constructing explanations based on evidence.

OPTIONS FOR A FOURTH SCIENCE COURSE	
<u>One Credit</u> • Anatomy and Physiology Honors • Human Biology • Astronomy • Geology Honors • Ecology	**<u>One-Half Credit</u>** • Forensics

Two-Credit Advanced Placement Courses	**One-Credit Advanced Placement Courses**
• Advanced Placement Biology o College Board-recommended prerequisites: ▪ Biology ▪ Chemistry o Concurrent or previous enrollment in Advanced Placement Statistics enhances the Advanced Placement Biology experience.	• Advanced Placement Physics 1 o College Board-recommended prerequisites: ▪ Geometry and concurrent enrollment in Algebra 2 • Advanced Placement Physics 2 o College Board prerequisite: ▪ Advanced Placement Physics 1
• Advanced Placement Chemistry o College Board-recommended prerequisites: ▪ Chemistry ▪ Algebra 2	• Advanced Placement Physics C: Mechanics o College Board recommendation: ▪ Previous or concurrent enrollment in Advanced Placement Calculus BC • Advanced Placement Environmental Science o College Board-recommended prerequisites: ▪ Biology ▪ Chemistry ▪ Algebra 1

All courses are described below. Course offerings may vary by school.

COURSES		
Lab Tech for Biomedical Engineering 1 credit	411611 411612	*Prerequisites:* None *Description:* This course is designed to prepare students for laboratory and course work in the Project Lead the Way biomedical engineering series of courses offered at LakeView Technology Academy. Emphasis is placed on developing critical thinking skills, research skills,

		and laboratory techniques. Independent study projects and inquiry-based learning experiences are integral parts of the course requirements.
Biotechnology 1 credit	411811 411812	*Prerequisites:* None *Description:* Biotechnology is a required course for all LakeView Technology Academy grade 9 students. In Biotechnology students will develop understandings of key concepts related to the molecules of life, structures, and processes of organisms. They will use science and engineering practices to study the inheritance and variation of traits and develop explanations related to the unity and diversity of life. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored. Concepts of biology will be explored with a focus on the technology used to enhance biological investigations.
Biotechnology Honors 1 credit	411821 411822	*Prerequisites:* None *Description:* Biotechnology is a required course for all LakeView Technology Academy grade 9 students. Students with a particular interest in the subject can elect, with parent and teacher guidance, to enroll in Biotechnology Honors. In this course students will develop understandings of key concepts related to the molecules of life, structures, and processes of organisms. They will use science and engineering practices to study the inheritance and variation of traits and develop explanations related to the unity and diversity of life. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored. Concepts of biology will be studied with a focus on technology used to enhance biological investigations. While all Biotechnology students will be expected and encouraged to use higher-level thinking skills, Biotechnology Honors students will demonstrate these skills on a regular basis. When completing coursework, Biotechnology Honors students may be given a different set of tasks to complete while studying the same topics as all other Biotechnology students. Biotechnology Honors students are required to do supplementary projects, which may include a science fair project.

Biology 1 credit	421011 421012	*Prerequisites:* None *Description:* Biology is a required course for all Kenosha Unified School District grade 9 students. Students at choice and charter schools may take an equivalent course. In Biology students will develop understandings of key concepts related to the molecules of life, structures, and processes of organisms. They will use science and engineering practices to study the inheritance and variation of traits and develop explanations related to the unity and diversity of life. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored.
Biology Honors 1 credit	421021 421022	*Prerequisites:* None *Description:* Biology is a required course for all Kenosha Unified School District grade 9 students. Students at choice and charter schools may take an equivalent course. Students with a particular interest in the subject can elect, with parent and teacher guidance, to enroll in Biology Honors. In Biology Honors students will develop understandings of key concepts related to the molecules of life, structures, and processes of organisms. They will use science and engineering practices to study the inheritance and variation of traits and develop explanations related to the unity and diversity of life. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored. While all Biology students will be expected and encouraged to use higher-level thinking skills, Biology Honors students will demonstrate these skills on a regular basis. When completing coursework, Biology Honors students may be given a different set of tasks to complete while studying the same topics as all other Biology students.
Human Biology 1 credit	422011 422012	*Prerequisites:* Biology and Chemistry or Biology and Matter and Energy *Description:* In this course students will focus on the cell, reproduction, development, and the body

		as the basis for the transfer of biological information from one generation to the next. The impact of genetics on our society will be studied. Note: Not open to students who have earned credit in Human Anatomy and Physiology
Forensic Science ½ credit	422210	*Prerequisites:* Biology and Chemistry or Biology and Matter and Energy *Description:* In this course students will see science through the eyes of a crime scene investigator. Students will collect and interpret evidence while learning numerous scientific strategies and skills.
Human Anatomy and Physiology Honors 1 credit	423221 423222	*Prerequisites:* Biology and Chemistry *Description:* In Human Anatomy and Physiology Honors, students explore the systems comprising the human body by emphasizing physiological mechanisms and a thorough understanding of human anatomy. An emphasis is placed on the interrelatedness of such systems as the skeletal, muscular, nervous, and circulatory. This course is recommended for those pursuing a career in the health science field. This course has a substantial laboratory component, including a fetal pig dissection.
Advanced Placement Biology 2 credits	424531 424532 424533 424534	*Prerequisites:* A biology course and a chemistry course *Description:* Advanced Placement Biology is an introductory college-level biology course equivalent to two semesters of college-level biology for biology majors. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes, energy and communication, genetics, information transfer, ecology, and interactions. Advanced Placement Biology includes an extensive laboratory program and is scheduled for one double class period every day for the entire school year. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.

Chemistry 1 credit	431011 431012	*Prerequisites:* A biology course *Description:* In Chemistry, students will develop understandings of key concepts related to the structure of the atom, the periodic table, and chemical bonding. They will use science and engineering practices to study the states of matter, gas laws, acid and bases, and the energy of reactions. Students will be asked to apply their newly gained knowledge of chemical processes to their everyday lives and to Earth's systems.
Chemistry Honors 1 credit	431021 431022	*Prerequisites:* A biology course *Description:* Students with a particular interest in the topics of chemistry can elect, with parent and teacher guidance, to enroll in Chemistry Honors. Students will develop understandings of key concepts related to the structure of the atom, the periodic table, and chemical bonding. They will use science and engineering practices to study the states of matter, gas laws, acid and bases, and the energy of reactions. Students will be asked to apply their newly gained knowledge of chemical processes to their everyday lives and to Earth's systems. While all chemistry students will be encouraged to use higher-level thinking skills, students in Chemistry Honors will demonstrate these skills on a regular basis. When completing coursework, Chemistry Honors students may be given a different set of tasks to complete while studying the same topics as all other chemistry students.
Biotechnology 10 1 credit	431811 431812	*Prerequisites:* A biology course *Description:* Biotechnology 10 is offered at Harborside Academy. Students in this course will develop understandings of key concepts related to the molecules of life, structures, and processes of organisms. Specifically, students will use science and engineering practices to investigate case studies related to eugenics, the history of corn, cell structures and functions, DNA, pathogens, and bioethics. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored. Concepts of

		biology will be explored in more depth with a focus on the technology used to enhance biological investigations.
Matter and Energy 1 credit	432911 432912	*Prerequisites:* A biology course *Description:* In this course students will examine the relationships between energy and matter through investigation, experimentation, and application. Topics will include structure and properties of matter, force and motion, energy transformation, and science and engineering practices. This course is designed especially for students who need more experience with science concepts and core ideas before moving on to their third science courses. Note: Not open to students who have earned credit in Chemistry, Chemistry Honors, Conceptual Physics, or Advanced Placement Physics 1
Advanced Placement Chemistry 2 credits	434531 434532 434533 434534	*Prerequisites:* Chemistry course and Algebra 2 *Description:* Advanced Placement Chemistry provides students with a college-level foundation to support future advanced coursework in chemistry. The course is designed to enable students to view chemical phenomena through a variety of conceptual lenses and at various levels: macroscopic, microscopic, submicroscopic, and symbolic. Throughout the course students learn to apply a variety of science practices, such as describing, interpreting, and analyzing models; designing experiments and analyzing data; creating representations of data and chemical systems; using mathematical routines to solve problems; and providing evidence and reasoning to justify a scientific claim. Advanced Placement Chemistry includes an extensive laboratory program and is scheduled for one double class period every day for the entire school year. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
Conceptual Physics 1 credit	441011 441012	*Prerequisites:* A biology course and a chemistry course

		Description: In Conceptual Physics, students will focus on concepts and applications of physics. Students will gain an understanding of the laws of physics that surround them by studying the key concepts related to motion, force, energy, matter, sound, electricity, magnetism, light, and the atom. Coursework will include laboratory investigations and the use of basic algebra skills. Note: Not open to students who have earned credit in Advanced Placement Physics 1
Advanced Placement Physics 1 1 credit	444531 444532	*Prerequisites:* A biology course and a chemistry course *Description:* Advanced Placement Physics 1 is an algebra-based introductory college-level physics course. Students cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Students will practice reasoning skills used by physicists by discussing and debating with peers the physical phenomena investigated in class as well as by designing and conducting inquiry-based laboratory investigations to solve problems through first-hand observations, data collection, analysis, and interpretation. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
Advanced Placement Physics 2 1 credit	444533 444534	*Prerequisites:* Advanced Placement Physics 1 and concurrent or prior enrollment in Precalculus *Description:* Advanced Placement Physics 2 is equivalent to the second course in an introductory college course sequence in algebra-based physics. By confronting complex physical situations or scenarios, the course is designed to enable students to develop the ability to reason about physical phenomena using important science practices, such as explaining relationships, applying and justifying the use of mathematical routines, designing experiments, analyzing data, and making connections across multiple topics within the course. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.

Advanced Placement Physics C: Mechanics 1 credit	444631 444632	*Prerequisites:* A physics course and concurrent enrollment in Advanced Placement Calculus *Description:* Advanced Placement Physics C: Mechanics is a calculus-based introductory college-level physics course especially appropriate for students planning to specialize or major in one of the physical sciences or engineering. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on inquiry-based laboratory work as they explore concepts like change, force interactions, fields, and conservation. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
Geology Honors 1 credit	451021 451022	*Prerequisites:* A biology course, a chemistry course, and a physics course or concurrent enrollment in a physics course *Description:* Maps and models will aid students in understanding the evolution of the Earth. The study of minerals, processes of the rock cycle, geologic time and plate tectonics (which includes the study of volcanoes, earthquakes, and the formation of mountains), will provide a foundation for further study of geosciences. Various careers in geology will be investigated. Students with a particular interest in the topics of geology can elect, with parent and teacher guidance, to enroll in Geology Honors. While all Geology students will be encouraged to use higher-level thinking skills, Geology Honors students will demonstrate these skills on a regular basis. When completing coursework, Geology Honors students may be given a different set of tasks to complete while studying the same topics as all other Geology students.
Earth Science 1 credit	453511 453512	*Prerequisites:* Biology and Matter and Energy *Description:* Students will develop understandings of several key concepts related to Earth's place in the universe and Earth's systems. The key concepts are broken into units and lessons that cover the universe and its stars, Earth and the solar system, the history of planet Earth, Earth materials, plate tectonics, the roles of water

		on surface processes, weather and climate, biogeology, natural resources, natural hazards, global change, and the interaction of humans with Earth's systems. Students will be expected to demonstrate proficiency in science and engineering practices, such as developing and using models, planning and carrying out investigations, analyzing and interpreting data, and engaging in argument. Instruction also includes connections to other science content areas and students' lived experiences through the concepts of cause and effect, energy and matter, structure and function, stability and change, and systems. Note: Not open to students who have earned credit in a chemistry course or a physics course
Astronomy 1 credit	461011 461012	*Prerequisites:* A biology course, a chemistry course, and a physics course or concurrent enrollment in a physics course *Description:* Students will study the universe as they cover the following topics: history of astronomy, gravity and motion, planets, stars, galaxies, and the structure of the universe. This course places an emphasis on how astronomers gather information about distant objects without leaving the earth.
Ecology 1 credit	472111 472112	*Prerequisites:* A biology course, a chemistry course, and a physics course or concurrent enrollment in a physics course *Description:* In Ecology students study how living things interact with each other and their nonliving environment. Students will study the web of life and how each strand interacts with the other and how he/she fits into the web. The interactions of science, technology, and society with the environment will also be studied.
Advanced Placement Environmental Science 1 credit	474731 474732	*Prerequisites:* A biology course, a chemistry course, and a physics course or concurrent enrollment in a physics course *Description:* The Advanced Placement Environmental Science course is the equivalent of an introductory college course in environ-

		mental science. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography. Students will analyze environmental concepts and processes in order to propose and justify solutions to environmental problems. The course teaches students how to apply science to the solutions of important social problems. It also provides opportunities to practice applying scientific methods to practical real-life problems. Students are strongly encouraged to take the Advanced Placement Examination with the potential to earn college credit.
Principles of Biomedical Science Honors 1 credit	481021 481022	*Prerequisites:* Biotechnology and Algebra 2 *Description:* Students explore the concepts of human medicine and are introduced to research processes and to bioinformatics. Hands-on projects enable students to investigate human body systems and various health conditions, including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Over the length of the course, students work together to determine the factors that led to the death of a fictional person. After pinpointing those factors, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. The key biological concepts embedded in the curriculum include homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease. Where appropriate, engineering principles are also incorporated into the curriculum. These include the design process, feedback loops, fluid dynamics, and the relationship of structure to function.
Human Body Systems Honors 1 credit	482021 482022	*Prerequisites:* Principles of Biomedical Science Honors and Algebra 2 *Description:* Students examine the process, structures, and interactions of the human body systems to learn how they work together to maintain homeostasis (internal balance) and good health. Using real-world cases, students take the role of biomedical professionals and work together to solve medical mysteries. Hands-on

		projects include designing experiments; investigating the structures and function of body systems; and using data acquisition software to monitor body functions such as muscle movement, reflex, voluntary actions, and respiratory operation. Important concepts covered in the course are communication, transport of substances, locomotion, metabolic processes, defense, and protection.
Medical Interventions Honors 1 credit	483021 483022	*Prerequisites:* Human Body Systems Honors *Description:* Students investigate the variety of medical interventions involved in prevention, diagnosis, and treatment of disease as they follow the lives of a fictitious family. Students will be exposed to a wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Students explore how to prevent, diagnose, and treat infection; how to screen and evaluate the code in human DNA; diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Preventative measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.
Biomedical Innovation Honors 1 credit	484021 484022	*Prerequisites:* Medical Interventions Honors *Description:* Students design innovative solutions for the health challenges of the twenty-first century. They work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health.

SOCIAL STUDIES

REGISTRATION GUIDELINES

The student graduation requirement for social studies is to successfully complete three credits. Required within the three credits are one credit U.S. History, one credit World History, one-half credit Government and Politics, and one-half credit Behavioral Science.

Students selecting the Advanced Placement U.S. Government and Politics option will be required to satisfactorily complete the entire course. Failure to do so will require students to take either U.S. Government and Politics or U.S. Government and Politics Honors in order to satisfy the requirement.

Note: Students who complete one-half credit of Economics/Economics Honors or complete one credit of Advanced Placement Microeconomics or Macroeconomics may apply the credit to one-half credit Consumer Education requirement.

GRADE LEVEL	HISTORY	GOVERNMENT AND POLITICS	BEHAVIORAL SCIENCE	ECONOMICS	ELECTIVES
9			One-half credit of behavioral science requirement or . . . <u>Electives</u> • Ethnic Studies • Ethnic Studies Honors		<u>Electives</u> • AP Human Geography • Social Science Seminar
10	• World History or World History Honors • Advanced Placement World History		One-half credit of behavioral science requirement or . . . <u>Electives</u> • Ethnic Studies • Ethnic Studies Honors		<u>Electives</u> • Global Studies • Global Studies Honors • AP Human Geography
11/12	• U.S. History • Advanced Placement United States History • Advanced Placement World History	• U.S. Government and Politics or U.S. Government and Politics Honors • Advanced Placement United States Government and Politics	One-half credit behavioral science requirement or . . . <u>Elective</u> • Psychology or Psychology Honors • Advanced Placement Psychology	Elective or consumer education requirement • Economics or Economics Honors • Advanced Placement Macroeconomics • Advanced Placement Microeconomics	<u>Electives</u> • Global Studies • Global Studies Honors • AP Human Geography

GRADE LEVEL	HISTORY	GOVERNMENT AND POLITICS	BEHAVIORAL SCIENCE	ECONOMICS	ELECTIVES
			• Sociology or Sociology Honors • Ethnic Studies • Ethnic Studies Honors		

COURSES		
U.S. History 1 credit	220111 220112	*Prerequisites:* None *Description:* Students will survey the development of U.S. history as a country from Reconstruction through the present time. The highlights of the course are the studying of Reconstruction, Western Expansion, the Gilded Age, the Progressive Era, the Roaring '20s, and the Great Depression as well as surveying the world wars, Korean Conflict, and Vietnam. The turmoil of the 1960s will be studied as well as the remaining decades until the present time. This course contains panel discussions and seminars along with simulations. There is an outside reading requirement, and the writing skills of the students will be developed.
U.S. History Honors 1 credit	220121 220122	*Prerequisites:* None *Description:* U.S. History Honors is an accelerated examination of America from Reconstruction to the present. The course focuses on the geographical, intellectual, politi- cal, economic, and cultural development of the American people, its places, and U.S. events in the context of world politics. Students will be required to complete work in class as well as outside of class to be successful. Honors credit will be granted based on a student's ability to interpret primary sources, comprehend historical information, and analyze events of the past. Units of study will be chosen from the following list: • 1865-77—Reconstruction; • 1865-1900—The Gilded Age, Industrialism, Urbanization, and the End of the Frontier; • 1890-1914—Imperialism and the Progressive Era;

		• 1914-29—World War I and the Roaring Twenties; • 1929-45—The Great Depression and World War II; • 1945-60—The Cold War Era; • 1960-90—The Vietnam War, the Civil Rights Movement, Watergate, and the administrations or Ford; Carter; Reagan; and Bush.
Advanced Placement United States History 1 credit	220131 220132	*Prerequisites:* None *Description:* Advanced Placement U.S. History is a college-level history course that requires students to develop mastery over the assigned content while developing the ability to practice the skills of a historian. Students will learn to develop their critical thinking skills by analyzing and interpreting both primary documents and writings by respected historians. Through reading, writing, discussions, and document analysis, students in Advanced Placement U.S. History build an understanding of the economic, political, and social changes that have occurred in America since Columbus. Students learn how decisions and events of the past continue to have profound effects on the world today and how knowledge of the causes behind past events can influence future decisions. Students put their factual knowledge to work by weighing evidence and interpreting problems presented by historians. Extensive work outside of the classroom will be necessary for success. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.
World History 1 credit	230111 230112	*Prerequisites:* None *Description:* This course is a study of modern world history, including the foundation of world religions and beliefs, intellectual revolutions, violent revolutions, industrial revolution,

		nationalism/imperialism through the world wars, cold war, the quest of countries seeking independence, and changes in current global patterns.
World History Honors 1 credit	230121 230122	*Prerequisites:* None *Description:* This course is a study of modern world history, including the foundation of world religions and beliefs, intellectual revolutions, violent revolutions, industrial revolution, nationalism/imperialism through the world wars, cold war, the quest of countries seeking independence, and changes in current global patterns. World History Honors includes an emphasis on writing, research, and presentations.
Advanced Placement World History 1 credit	230131 230132	*Prerequisites:* None *Description:* The purpose of the Advanced Placement World History course is to develop greater understanding of the evolution of global processes and contacts in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences as well as comparisons among major societies. It emphasizes relevant factual knowledge used in conjunction with leading interpretive issues and types of historical evidence. The course builds on an understanding of cultural, institutional, and technological precedents that—along with geography—set the human stage. Periodization, primarily, the past thousand years of global experience to the present day, forms an organizing principle for dealing with change and continuity throughout the course. Specific themes provide further organization to the course along with consistent attention to contacts among societies that form the core of world history as a field of study. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.

U.S. Government and Politics ½ credit	240110	*Prerequisites:* None *Description:* This course is a survey of the U.S. Government structure, systems, and political processes focusing on constitutional structures and foundations. Content will include factors that influence U.S. Government. This course prepares students to become responsible/aware members of American society.
Government and Politics Honors ½ credit	240120	*Prerequisites:* None *Description:* This course is a study of the U.S. Government system and political processes focusing on constitutional structures and foundations. Content will include factors that influence U.S. Government. Honors will emphasize reading, writing, research, and presentations. Students will use critical thinking skills to explain trends, identify and question different points of view, and assess major ideas and how such ideas have worked in practice.
Advanced Placement United States Government and Politics 1 credit	240131 240132	*Prerequisites:* None *Description:* This one-credit Advanced Placement course in U.S. Government and politics will give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. politics. Students completing this course will know important facts, concepts, and theories pertaining to U.S. Government and politics; understand typical patterns of political processes and behavior and their consequences; and be able to analyze and interpret data relevant to U.S. Government and politics. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.

Sociology ½ credit	250110	*Prerequisites:* None *Description:* During this course of study, students will develop an understanding and be able to apply sociological concepts and perspectives concerning human groups that include attention to socialization, culture, organization, stratification, and societies. Consideration of fundamental concepts and research methodology will also be given.
Sociology Honors ½ credit	250120	*Prerequisites:* None *Description:* This Sociology Honors course will emphasize in-depth, independent reading, writing, and research as students develop an understanding and apply sociological concepts and perspectives concerning human groups that include attention to socialization, culture, organization, stratification, and societies.
Ethnic Studies ½ credit	250510	*Prerequisites:* None *Description:* This course is offered to students interested in studying American ethnic history and contemporary social issues about Native Americans, African Americans, Hispanic Americans, Asian Americans, and Muslim and Arab Americans. The role of gender will be considered in the study of these groups. Stu- dents will become familiar with the background, culture, contributions, and achievements of these groups. Students will investigate the prejudice, discrimination, and oppression that each group has endured and efforts to address this treatment. Students will discuss and debate current topics, including, but not limited to, ethnic stereotypes, affirmative action, immigration, racial profiling, hate crimes, and sexism. Students will gain a new perspective of themselves and others and discuss issues that are relevant to the ever-changing world today.
Ethnic Studies Honors ½ credit	250520	*Prerequisites:* None *Description:* This course is offered to students interested in studying American ethnic history and contemporary social issues about Native

		Americans, African Americans, Hispanic Americans, Asian Americans, and Muslim and Arab Americans. The role of gender will be considered in the study of these groups. Students will become familiar with the background, culture, contributions, and achievements of these groups. Students will investigate the prejudice, discrimination, and oppression that each group has endured and efforts to address this treatment. Students will discuss and debate current topics, including, but not limited to, ethnic stereotypes, affirmative action, immigration, racial profiling, hate crimes, and sexism. Students will gain a new perspective of themselves and others and discuss issues that are relevant to the ever-changing world today. Honors includes an emphasis on writing, researching, and presentations.
Psychology ½ credit	260110	*Prerequisites:* None *Description:* This course introduces students to the scientific study of behavior and mental processes of humans and other animals. Topics that may be explored include research methods, biological basis of behavior, psychological disorders and their treatments, sensation and perception, states of consciousness, memory, thinking, language, learning, intelligence, motivation, emotion, personality, human development, and social psychology.
Psychology Honors ½ credit	260120	*Prerequisites:* None *Description:* The Psychology Honors course will emphasize in-depth, independent reading, writing, and research as students are introduced to the scientific study of behavior and mental processes of humans and other animals. Topics that may be explored include research methods, biological basis of behavior, psychological disorders and their treatments, sensation and perception, states of consciousness, memory, thinking, language, learning, intelligence, motivation and emotion, personality, human development, and social psychology.

Advanced Placement Psychology 1 credit	260131 260132	*Prerequisites:* None *Description:* Advanced Placement Psychology is a college-level course that introduces students to the scientific study of behavior and mental processes of humans and other animals. Topics that may be explored include research methods, biological basis of behavior, psychological disorders and their treatments, sensation and perception, states of consciousness, memory, cognition, language, learning, intelligence, motivation and emotion, personality, human development, and social psychology. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit.
Economics ½ credit	270110	*Prerequisites:* None *Description:* This course emphasizes the principles and theories of micro and macroeconomics. Students will obtain an understanding of the basic concepts of economics, analyze the determinants involving supply and demand, assess the nation's economic growth and performance and the impact the business cycle has on growth and performance. This course also compares economic theories relating to fiscal monetary policy and identifies the factors leading to globalization and the need for international trade. This course may be taken for consumer education graduation credit.
Economics Honors ½ credit	270120	*Prerequisites:* None *Description:* The Economics Honors course emphasizes the principles and theories of micro and macroeconomics. Students will obtain an understanding of the basic concepts of economics, analyze the determinants involving supply and demand, assess the nation's economic growth and performance and the impact the business cycle has on growth and performance. This course also compares economic theories relating to fiscal monetary policy and identifies the factors leading to globalization and the need for international trade. Honors includes an emphasis on writing,

		researching, and presentations. This course may be taken for consumer education graduation credit.
Advanced Placement Macroeconomics 1 credit	270131 270132	*Prerequisites:* None *Description:* The purpose of the Advanced Placement macroeconomics college-level course is to give students a thorough understanding of macroeconomics. Students should consider selecting this course when taking Advanced Placement Government and Politics. In addition to an introduction in basic economic concepts, the following units will be included: • Measurement of economic performance; • National income and price determination; • Financial sectors; • Inflation, unemployment, and stabilization policies; • Economic growth and productivity; and • International trade and finance. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit. It is suggested that students not take both Advanced Placement macroeconomics and microeconomics courses in the same year.
Advanced Placement Microeconomics 1 credit	270231 270232	*Prerequisites:* None *Description:* The purpose of the Advanced Placement microeconomics college-level course is to give students a thorough understanding of microeconomics. In addition to an introduction, are basic economic concepts. The following units will be included:

		1. Nature and function of markets, 2. Factor markets, 3. Market failure and the role of government. Students are strongly encouraged to successfully complete this class and take the Advanced Placement Examination to potentially earn college credit. It is suggested that students not take both Advanced Placement macroeconomics and microeconomics courses in the same year.
Advanced Placement Human Geography ½ credit	280231 280232	*Prerequisites:* None *Description:* The purpose of the Advanced Placement Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.
Global Studies ½ credit	280410	*Prerequisites:* None *Description:* This course will give students a greater understanding of those who live as our neighbors near and far. There will be an emphasis on human and physical geography to the extent that students will have a greater understanding of people, places, and environments past and present. From a regional and topical approach, students will explore contemporary global issues and world events. Students will develop their skills in comprehending written materials, debating/defending a position, and analyzing and interpreting various forms of data (maps, charts, graphs, photos, etc.).
Global Studies—Honors ½ credit	280420	*Prerequisites:* None

		Description: This course will give students a greater understanding of those who live as our neighbors near and far. There will be an emphasis on human and physical geography to the extent that students will have a greater understanding of people, places, and environments past and present. From a regional and topical approach, students will explore contemporary global issues and world events. Students will develop their skills in comprehending written materials, debating/defending a position, and analyzing and interpreting various forms of data (maps, charts, graphs, photos, etc.). Honors includes an emphasis on writing, researching, and presentations.

WORLD LANGUAGE

COURSES		
Introductory French 1 1 credit	711112 711114	*Prerequisites:* None *Description:* This is an introductory course in the target language and culture. This course stresses basic communication skills through daily conversation and vocabulary building. Students learn to ask and answer questions and describe people, places, and things in the target language. Students are exposed to the culture of related countries. This course provides a solid background for any student wanting to advance to the next level.
Intermediate French 2 Honors 1 credit	712222 712224	*Prerequisites:* Introductory French 1 (711112 and 711114) *Description:* This course continues the development of communicative skills with an emphasis in developing reading, writing, listening, and speaking skills through an applied practical use of the target language. Students will broaden knowledge of products, perspectives, and practices of other cultures. This course provides a solid foundation for any student wanting to advance to the next level.
Advanced French 3 Honors 1 credit	713322 713324	*Prerequisites:* Intermediate French 2 Honors (712222 and 712224) *Description:* All aspects of effective communication are practiced at this level with a strong emphasis on using authentic materials from the target country to build literacy skills in the target language. Students demonstrate extemporaneous communication on complex topics. Students apply critical thinking skills during analysis and evaluation of current events from target countries. This course provides a solid foundation for any student wanting to advance to the next level.

Advanced Placement French Language and Culture 1 credit	714422 714424	*Prerequisites:* Advanced French 3 Honors (713322 or 713324) *Description:* Students continue to develop interpersonal, interpretive, and presentational modes of communication in the target language. Students acquire information through authentic sources in the target language. Students apply knowledge of cultural perspectives from target countries. This course is for students who plan to take advanced courses after high school and emphasizes the skills necessary for the Advanced Placement exam.
Introductory Spanish 1 1 credit	771112 771114	*Prerequisites:* None *Description:* This is an introductory course in the target language and culture. This course stresses basic communication skills by developing listening, speaking, reading, and writing skills through daily conversation and vocabulary building. Students learn to ask and answer questions and describe people, places, and things in the target language. Students are exposed to the culture of related countries. This course provides a solid background for any student wanting to advance to the next level.
Spanish 1 1 credit	771112E 771114E	*Prerequisites:* None *Description:* Spanish 1 gives students an introduction to the basics of the Spanish Language and the Spanish-speaking world. This two-semester course aligns with the national standards of the American Council on the Teaching of Foreign Languages (ACTFL), which dictate a pedagogical method that focuses on successful communication through speaking, listening, reading, and writing. Course unit topics include the alphabet and numbers; greetings; introductions; the calendar (days, months, and seasons); weather; time; colors; familiar objects and places; family; food; pastimes; and school objects and routine. Course strategies include warm-up activities, vocabulary study, reading threaded discussions, multimedia presentations, self-checks, practice activities and games, oral and written assignments, projects and quizzes.

Intermediate Spanish 2 1 credit	772212 772214	*Prerequisites:* Introductory Spanish 1 (771112 and 771114) *Description:* This course continues the development of communicative skills with an emphasis in developing reading, writing, listening, and speaking skills through an applied, practical use of the target language. Students will broaden knowledge of products, perspectives, and practices of other cultures. This course provides a solid foundation for any student wanting to advance to the next level.
Spanish 2 1 credit	772212E 772214E	*Prerequisites:* Spanish 1 *Description:* Students receive additional grounding in grammar and vocabulary in this two-semester course. Instructional material encourages students to build conversational and reading skills to cover many common situations in daily life. Like Spanish 1, this follow-up course adheres to the standards of the American Council of the Teaching of Foreign Languages (ACTFL). Learning activities in each unit are focused on a specific theme. The units for both semesters cover a broad range of useful everyday subjects, including daily routine, animals, entertainment, body parts, rooms, furniture, shopping, clothing, meals, sports and recreation, and transportation. Students must successfully complete Spanish 1 in order to enroll in this course.
Intermediate Spanish 2 Honors 1 credit	772222 772224	*Prerequisites:* Introductory Spanish 1 (771112 and 771114) *Description:* This course continues the development of communicative skills with an emphasis in developing reading, writing, listening, and speaking skills through an applied practical use of the target language. Students will broaden knowledge of products, perspectives, and practices of other cultures. This course provides a solid foundation for any student wanting to advance to the next level.

Spanish 2 Honors 1 credit	772222E 772224E	*Prerequisites:* Spanish 1 *Description:* Students receive additional grounding in grammar and vocabulary in this two-semester course. Instructional material encourages students to build conversational and reading skills to cover many common situations in daily life. Like Spanish 1, this follow-up course adheres to the standards of the American Council of the Teaching of Foreign Languages (ACTFL). Learning activities in each unit are focused on a specific theme. The units for both semesters cover a broad range of useful everyday subjects, including daily routine, animals, entertainment, body parts, rooms, furniture, shopping, clothing, meals, sports and recreation, and transportation. Students must successfully complete Spanish 1 in order to enroll in this course.
Advanced Spanish 3 1 credit	773312 773314	*Prerequisites:* Intermediate Spanish 2 (772212 and 772214) *Description:* All aspects of effective communication are practiced at this level with a strong emphasis on using authentic materials from the target country to build literacy skills in the target language. Students demonstrate extemporaneous communication on complex topics. Students apply critical thinking skills during analysis and evaluation of current events from target countries. This course provides a solid foundation for any student wanting to advance to the next level.
Spanish 3 1 credit	773312E 773314E	*Prerequisites:* Spanish 2 *Description:* This course builds on the grammatical concepts and vocabulary that students mastered while completing the Spanish I and 2 courses. Spanish 3 fully aligns with national ACTFL standards. Students learn increasingly complex grammatical constructions, such as present, imperfect, perfect, and future tenses; reflexive and modal verbs; prepositions; conjunctions; relative pronouns; and adjective endings. Unit themes in this two-semester course include chores, directions,

		feelings, future plans and travel, geography, countries and nationalities, health, household items, measurements, occupations, and personal history. Unit activities blend different forms of communication and culture.
Advanced Spanish 3 Honors 1 credit	773322 773324	*Prerequisites:* Intermediate Spanish 2 Honors (772212 and 772214) *Description:* All aspects of effective communication are practiced at this level with a strong emphasis on using authentic materials from the target country to build literacy skills in the target language. Students demonstrate extemporaneous communication on complex topics. Students apply critical thinking skills during analysis and evaluation of current events from target countries. This course provides a solid foundation for any student wanting to advance to the next level.
Spanish 3 Honors 1 credit	773322E 773324E	*Prerequisites:* Spanish 2 *Description:* This course builds on the grammatical concepts and vocabulary that students mastered while completing the Spanish I and 2 courses. Spanish 3 fully aligns with national ACTFL standards. Students learn increasingly complex grammatical constructions, such as present, imperfect, perfect, and future tenses; reflexive and modal verbs; prepositions; conjunctions; relative pronouns; and adjective endings. Unit themes in this two-semester course include chores, directions, feelings, future plans and travel, geography, countries and nationalities, health, household items, measurements, occupations, and personal history. Unit activities blend different forms of communication and culture.
Advanced Placement Spanish Language and Culture 1 credit	774422 774424	*Prerequisites:* Advanced Spanish 3 (773312 and 773314) *Description:* Students continue to develop interpersonal, interpretive, and presentational modes of communication in the target language. Students acquire information through authentic sources in the target language. Students apply knowledge of cultural perspectives from target countries. This course

		is for students who plan to take advanced courses after high school and emphasizes the skills necessary for the Advanced Placement exam.
Advanced Placement Spanish Language and Culture 1 credit	774422E 774424E	*Prerequisites:* Spanish 3 *Description:* Advanced Placement Spanish students practice perfecting their Spanish speaking, listening, reading, and writing skills. They study vocabulary, grammar, and cultural aspects of the language and then apply what they've learned in extensive written and spoken exercises. By the end of the course, students will have an expansive vocabulary and a solid, working knowledge of all verb forms and tenses. The equivalent of a college-level language course, Advanced Placement Spanish prepares students for the Advanced Placement Exam and for further study of Spanish Language, culture, or literature.
Advanced Placement Spanish Literature ½ credit	774426 774428	*Prerequisites:* Advanced Placement Spanish Language and Culture or Spanish 3 *Description:* Advanced Placement Spanish Literature is an advanced level survey course of literature written in Spanish. Students continue to develop their interpretive, interpersonal, and presentational skills in Spanish language as well as critical reading and analytical writing as they explore short stories, novels, plays, essays, and poetry from Spain, Latin America, and U.S. Hispanic authors along with other nonrequired texts. Bradford High School only
Culture and Civilization Honors 1 credit	776622 776624	*Prerequisites:* None *Description:* Although all aspects of effective communication are practiced at this level, the emphasis is on speaking and reading. Using current magazines, newspapers, films, and literature, students refine and review skills learned in previous courses while studying high interest materials which employ an authentic, contemporary vocabulary. To further develop skills this course reviews grammar points deemed the most troublesome.

		The course enhances those skills necessary in upper level classes. The techniques learned in this class enable students to take advanced courses after high school and increase their fluency in daily and job-related settings.
Spanish for Spanish Speakers I 1 credit	781112 781114	*Prerequisites:* Oral fluency in Spanish *Description:* This course is designed for students who speak Spanish as a home or heritage language. Students will broaden their linguistic repertoire of Spanish by focusing on reading and writing skills and developing an awareness and understanding of Hispanic linguistic repertoire of Spanish by focusing on reading and writing skills and developing an awareness and understanding of Hispanic cultures.
Spanish for Spanish Speakers II 1 credit	782112 782114	*Prerequisites:* A student planning on taking this course should either be a native Spanish speaker at an advanced level or have completed Spanish for Spanish Speakers I. The course will be available for students in ninth through twelfth grade. *Description:* This course is designed for students who speak Spanish as a home or heritage language at an advanced level. Students will continue to broaden their linguistic repertoire of Spanish by focusing on reading and writing skills and developing awareness and understanding of Hispanic linguistic repertoire of Spanish by focusing on reading and advanced writing skills and developing awareness and understanding of Hispanic cultures.

INDIAN TRAIL ACADEMY ONLY COURSES

CAREER AND TECHNICAL EDUCATION

BUSINESS AND INFORMATION TECHNOLOGY

COURSES		
The Millionaire's Club ½ credit	811010	*Prerequisites:* World of Business *Description:* This course allows students to engage in an examination of securities, markets, investment opportunities, and techniques for individuals. Topics include stocks, bonds, options, mutual funds, insurance, real estate, and portfolio management. This course will use online trading software to emphasize real-world investment situations for student analysis and decision-making strategies. Indian Trail Business Academy only
Law & Order in Business ½ credit	811750	*Prerequisites:* World of Business *Description:* This course will provide an in-depth view into the legal aspects of the business field. Students will gain in-depth understanding of the law that will elevate knowledge for students planning to pursue a career in business after high school. This course will focus on key concepts of the legal system as it relates to business, including: tort law, contract law, agency and employment, law, cyber law, and e-commerce. Students will delve into law in the news, how court systems work, and key court cases. Indian Trail Academy only
Financial Literacy 1 credit	812111 812112	*Prerequisites:* None *Description:* Gain in-depth knowledge and understanding of key financial literacy topics, including savings, investing, payroll, financial statements, banking, and more. Protect yourself and your financial future by learning about credit, taxes, insurance, loans, budgeting, and much more. **This course meets the consumer education requirement.** Indian Trail Academy only

Entrepreneurship ½ credit	812210	*Prerequisites:* None *Description:* Entrepreneurship recognizes the importance of a business opportunity. From the initial idea to operating and maintaining a business, this course explores every aspect of business ownership. Entrepreneurship is necessary not only for students who will become entrepreneurs but also for individuals working in the increasingly competitive corporate world. In the United States, small businesses make up close to 90 percent of all businesses. Students will be challenged to conduct research, make decisions, and be creative while they learn how to write and present a business plan. Indian Trail Academy only
Computer Applications for Business ½ credit	812610	*Prerequisites:* None *Description:* In the business world, Microsoft Office Suite is utilized by more employers than all other office suites combined. Potential employees who have these skills are highly sought after. Students in this course will learn and use the core programs of the Microsoft Office Suite that will prepare them for positions in any organization. This includes: Windows 10, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. An integrated business simulation project incorporating all of the software will be completed. Indian Trail Academy only
World of Business ½ credit	812810	*Prerequisites:* None *Description:* Business is the core of our economic system, and every responsible citizen should have basic business knowledge. In this course students will gain the basic understanding of the different types of businesses, business management and

		ownership, and our government's role in business as well as learn what it takes to start their own business. Indian Trail Academy only
Business Management ½ credit	813010	*Prerequisites:* World of Business *Description:* This course is designed to provide a fundamental understanding of business management. Students will be taught core content applicable to all aspects of business, including: 1. The role of a manger and the importance of good leadership, 2. Typical business organizational structure, 3. Human relations skills required in dealing with employees, and 4. Effective management strategies used in modern businesses. Indian Trail Academy Only
Innovation Lab 1 credit	813111 813112	*Prerequisites:* World of Business; Computer Apps for Business, Marketing, or Accounting; and Financial Literacy *Description:* This full-year capstone course provides a simulated business environment in which students create and manage a virtual company and conduct business with other student firms nationally and internationally. Students are involved in every aspect of the business, including human resources, accounting, product development, production, distribution, marketing, and sales. Leadership opportunities within the firm provide further relevant experience. The program enables participants to experience careers, acquire

		global economic knowledge, develop interpersonal and organizational skill, utilize technology as applied in business, and gain a clear understanding of how employees work together to meet the needs of the company while conveying the professional expectations of the workplace. Indian Trail Academy only
Hawk Shop Internship 1 credit	838311 838312	*Prerequisites:* Marketing (830111 and 830112) or active DECA member and application *Description:* The Hawk Shop serves the Indian Trail High School and Academy com- munity by promoting civic consciousness in its support of school events and programs. The Hawk Shop (school store) is a unique business lab where students learn hands-on employment skills in an actual retail operation. Students will be responsible for the daily operation of the business, including merchandising and management functions. Indian Trail Academy only
Marketing Gets Digital ½ credit	830210	*Prerequisites:* World of Business *Description:* In this course students will learn the what, the how, and they whys of social media marketing. Social media has become a central component of marketing, one that the next generation of business leaders will need to be adept at in order to survive in the business world. Students will gain an understanding of the ins and outs of social media platforms, such as Facebook, Twitter, Pinterest, Snap Chat, Instagram, Blogs, LinkedIn, YouTube, Google+, and more. Indian Trail Academy only
Introduction to Broadcasting 1 credit	890811 890812	*Prerequisites:* None *Description:* Introduction to Broadcasting is a year-long course that will focus on learning the ancient art of oral storytelling combined with the twenty-first century skills of using technology-based platforms and understanding

		the production of student productions. Students will learn how to choose a topic based on audience interest; prepare and execute community interviews; and research, write, and produce a podcast using learned knowledge of law and ethics, technology, research, and English skills.
Databases ¾ credit	G-152-080	*Prerequisites:* G-152-081 or G-152-184 *Description:* In this course students explore concepts, design, documentation, and implementation of various database systems, including proprietary and open source technologies. Students implement Structured Query Language to store, retrieve, and manipulate data. Students create queries, normalize database structures, and create stored procedures. Upon completion of this course, students will be prepared to develop and maintain databases used in application development Indian Trail Academy only
Programming in Python ¾ credit	G-152-081	*Prerequisites:* None *Description:* In this course students investigate the fundamentals of computer programming using the Python programming language. Students examine data types, variables, conditional statements, looping, array structures, and structured programming techniques. Upon completion of the course, students will be able to use Python to apply problem-solving skills to create applications for delivery to various platforms. Indian Trail Academy only

COMMUNICATIONS ACADEMY

COURSES		
Advanced Digital Graphics ½ credit	520915	*Prerequisites:* None *Description:* This course will build on the freshman foundation of the Intro to Digital Media curriculum. Students will continue using the visual language of art as a form of communication found in personal art expression, advertising, typography, and graphic arts. Students will learn to be proficient in multi-media materials while applying the graphic design elements and principles with technology literacy tools. This course is the second step in the communications program to build competency in the seven essentials of graphic design and visual presentation. Advanced drawing techniques will be practiced to create realistic images with advanced color theory. Adobe Illustrator will be used to manipulate text and imagery with vector quality in contrast to the Photoshop raster program imagery. Integrated projects with core classes will provide a broad understanding of how design can be used as a vehicle to demonstrate understanding. Art exhibits and portfolio development will continue in this course and be building blocks for the students' Senior Showcase community event when it applies. Indian Trail Communications Academy only
ComAC Studios 1 credit	861111 861112	*Prerequisites:* None *Description:* In an internship course where students can apply skills learned related to management of a design and production through a student-led business that will manufacture customized products and point of sale designs for clients and the public, students will work within design, marketing, manufacturing, and/or administrative departments. Focus will be in practicing a business plan that fosters growth and building a professional portfolio with work created for actual clients.

		Indian Trail Communications Academy only
Multimedia Production 1 1 credit	890411 890412	*Prerequisites:* None *Description:* This is an introductory course designed to teach students the basic principles of video production. Students explore the media of film, television, radio, commercials, and animation. Indian Trail Academy only
Multimedia Production 2 1 credit	890511 890512	*Prerequisites:* Multimedia Production 1 *Description:* This course builds upon the knowledge and experience gained from Multimedia 1 and extends the integration to other applications and uses. This class allows for a greater understanding of the world of multimedia and its different forms in use today. The programs used will relate to website production, computer animation, video editing, audio editing, and publishing. Indian Trail Academy only
Photojournalism 1 credit	890911 890912	*Prerequisites:* Introduction to Broadcasting *Description:* Photojournalism is a course that will focus on the skills, law and ethics, history, and storytelling process of photojournalism. Students will use digital cameras, conduct interviews, and use the caption-writing process and storytelling skills. Students will develop skills in photography and writing to tell complete visual stories accompanied by the written word.
Photojournalism ½ credit	890915	*Prerequisites:* None *Description:* Photojournalism is a course that will focus on the skills, law and ethics, history, and storytelling process of photojournalism. Students will use digital cameras, conduct interviews, and use the caption-writing process and storytelling skills. Students will develop skills in photography and writing to tell complete visual stories accompanied by the written word. Indian Trail Communications Academy only

Podcasting 1 credit	891011 891012	*Prerequisite:* Introduction to Broadcasting *Description:* Combining the words iPod and broadcasting, podcasting is a journalistic tool used to join the historic spoken word story-telling with twenty-first century technology. This course will require students to hone in on their English language art skills including scripting structural story arcs, implementing investigative research, and synthesizing information. Students will explore the community they live in through the process of searching for stories, interviewing, and inviting guest speakers. Students will develop valuable skills, such as working as a team, meeting deadlines, and problem solving to prepare them for postsecondary college-and-career opportunities. Indian Trial Academy only

FINE ARTS

ART COURSES

COURSES		
Foundations of Design/Drawing 1 credit	510511 510512	*Prerequisites:* None *Description:* This course is available for grades 9 and 10. This course introduces the student to the visual language of art as a form of communication found in personal art expression, advertising, and graphic arts. Students will learn to be proficient in multimedia materials while applying art elements and principles. Indian Trail Academy only
Graphic Design and Illustration 1 1 credit	520911 520912	*Prerequisites:* Foundations of Design/Drawing (510511 and 510512) *Description:* This course is available for grades 11 and 12. This course is designed to build on skills and knowledge learned in the Fundamentals of Design/Drawing class. Students will begin learning the Adobe Photoshop and Illustrator programs by creating a variety of exercises and projects. Indian Trail Academy only
Graphic Design and Illustration 2 1 credit	521011 521012	*Prerequisites:* Foundations of Design/Drawing (520911 and 520912) *Description:* This is available for grades 11 and 12. This course will connect skills learned from Graphic Design and Illustration 1. The program combines artistic creative expression with computer graphic skills to produce art work that communicates to the world audience. Programs of focus will be in Photoshop, Illustrator, and In Design. Along with digital photography and traditional art media, this course will concen-trate on the skills and processes commonly used within the printing and graphic design industries. Indian Trail Academy only

Correlations of Design and Graphics 1 credit	521111 521112	*Prerequisites:* Indian Trail Academy—Communications Academy student and Graphic Design and Illustration 2 *Description:* This course is available for grade 12. Correlations of Design and Graphics is a full-year capstone course for students preparing for real-world employment or university study in publication design, package design, and product prototyping. Graduates will be able to understand and solve a wide variety of communication problems between clients and their target audience. Indian Trail Academy only
Illustration Media Concepts 1 credit	521210	*Prerequisites:* None *Description:* This course guides students through an organized experimentation of traditional art media to create images that convey specific messages to viewers. A variety of media is used including: watercolor, acrylic, oil pastel, inks, dyes, collage, and computers. Good composition, visual organization, development of creative thinking, and visual problem solving will be emphasized. This course will include a study of perspective, light, shade, and color theory. Current design and color trends will be explored. Indian Trail Academy only

ENGLISH/LANGUAGE ARTS

COURSES		
The Pulse Honors ½ credit	172012	*Prerequisites:* None *Description:* The focus of the course is on supervising the design and production of the school newspaper. Students will be responsible for controlling deadlines, editing student work prior to publication, and managing all other aspects of *The Pulse*. Indian Trail Academy only
Capstone in Journalism 1 credit	176111 176112	*Prerequisites:* Introduction to Broadcasting, Photojournalism, publications course (Yearbook, Newspaper, Video Announcements, or Podcasting) *Description:* This course is available for Indian Trail Communications Academy students in grade 12. Capstone in Journalism is a full-year course for students preparing for real-world employment or postsecondary education in journalism. Indian Trail Academy only
The Pulse Online Newspaper Internship 1 credit	898111 898112	*Prerequisites:* None *Description:* This course is offered for elective credit at Indian Trail Academy. The course focuses on the production of the school newspaper. Students will enhance their technical writing skills, conduct interviews, and refine research skills. Layout, design, and production will be studied and applied as students are responsible for writing and delivering *The Pulse*. Indian Trail Academy only

SCIENCE

COURSES		
Lab Tech and Equipment 1 credit	411511 411512	*Prerequisites:* None *Description:* This course teaches students basic laboratory skills and provides practice in the use of lab equipment in preparation for future coursework in the medical science academy. Indian Trail Academy only
Accelerated Biology 1 credit	421111 421112	*Prerequisites:* None *Description:* Accelerated Biology is taught in the Indian Trail academies. Course content is similar to Biology Honors. Students will develop under-standings of key concepts related to the molecules of life, structures, and processes of organisms. They will use science and engineering practices to study the inheri-tance and variation of traits and develop explanations related to the unity and diversity of life. The interactions, energy, and dynamics of ecosystems and the role of humans in ecosystems will also be explored. Instruction in Accelerated Biology emphasizes in-depth critical thinking and independent work. Indian Trail Academy only
Animal Survey 1 credit	422111 422112	*Prerequisites:* Biology *Description:* In this class students will concentrate on how animals behave, why animals behave the way they do, and how scientists design experiments to study their behavior. Students will learn about the biology behind animal communication, feeding behav-ior, mating, predator-prey relationships, aggression, territorial behavior, social behav-ior, and parental care. For the lab portion of this course, the live animal studio, videos, and out-of-doors will be utilized to supplement lecture and textbook notes. Indian Trail Academy only

Genetics ½ credit	423110	*Prerequisites:* Biology, Ecology, and Animal Behavior *Description:* This is a branch of biology that deals with heredity and the variation of organisms. Areas of study will include: • Cell division, • Mitosis, • Meiosis, • Dominant and recessive genes, • Hybridization, • Mutation, • Inherited diseases, • DNA molecular patterns, • RNA, Protein synthesis, • Expression of traits, and • Methods of analysis. Indian Trail Academy only
Human Anatomy and Physiology 1 credit	423211 423212	*Prerequisites:* Biology and Chemistry *Description:* This class highlights the systems that make up the human body: circulatory, respiratory, digestive, reproductive, muscular, skeletal, and nervous. The interdependence of the systems and the breakdown of these systems are studied. A substantial amount of laboratory experience will be involved either through actual lab work or computerized simulations. Indian Trail Academy only

Microbiology ½ credit	423310	*Prerequisites:* None *Description:* This course is designed to build upon student investigations that began in kindergarten through eighth grade and high school biology and chemistry and will be performance and laboratory based. It integrates the study of microbial physiology, ecology, and genetics with instruction focusing on the impact micro-organisms have on health, agriculture, biotechnology, and the environment. Areas of study include classification of micro-organisms; cellular structure and function; metabolic diversity; microbial genetics; control of microbial growth; microbial ecology, biotechnology, and applied microbiology; and host-microbe interactions. Careers related to medicine, health care, research, food science, and biotechnology should be emphasized throughout the curriculum. Real-life applications should be emphasized through case studies concerning diseases; epidemiology; food preparation and safety; and use of microbes in industry, agriculture, biotechnology, and the environment. Indian Trail Academy only
Accelerated Chemistry 1 credit	431111 431112	*Prerequisites:* A biology course *Description:* Accelerated Chemistry is taught in the Indian Trail academies. Course content is similar to Chemistry Honors. Students will develop understandings of key concepts related to the structure of the atom, the periodic table, and chemical bonding. They will use science and engineering practices to study the states of matter, gas laws, acid and bases, and the energy of reactions. Students will be asked to apply their newly gained knowledge of chemical processes to their everyday lives and to Earth's systems. While all chemistry students will be encouraged to use higher-level thinking skills, students in Accelerated Chemistry will demonstrate these skills on a regular basis. Indian Trail Academy only

Accelerated Physics 1 credit	441111 441112	*Prerequisites:* A biology course, a chemistry course, and Algebra 2 *Description:* In this course instructors use a math-based approach to provide students with an introduction to the field of physics. Topics include: 1. A mathematics review; 2. Motion, forces, work, and energy; 3. Properties of solids, liquids, and gases; 4. Elasticity; 6. Thermodynamics; 7. Acoustics (sound); 8. Optics (light); 9. Electricity and magnetism; and 10. Modern physics. This course is highly recommended for students considering science and engineering careers. Indian Trail Academy only
Geoscience and Astronomy 1 credit	454011 454012	*Prerequisites:* A biology course, a chemistry course, and a physics course *Description:* This course consists of one semester of geology and one semester of astronomy. The geology portion is an introduction to Earth's dynamic systems, including plate tectonics, mineral and rock formation, Earth's origins, geologic time, and a variety of geologic hazards. The astronomy portion includes a study of our solar system, planets, stars, galaxies, and the universe at large. All students have learned in the areas of biology,

		chemistry, and physics will be used to advance their understanding of Earth and its place in the Cosmos. Indian Trail Academy only
Medical Terminology ½ credit	484110	*Prerequisites:* None *Description:* This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction terms with an emphasis on spelling, definition, and pronunciation. They are introduced to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems as well as systemic and surgical terminology. Indian Trail Academy only

LAKEVIEW TECHNOLOGY ACADEMY ONLY COURSES

CAREER AND TECHNICAL EDUCATION

BUSINESS AND INFORMATION TECHNOLOGY

COURSES		
Drafting, Electronics, and Machining 1 credit	880111 880112	*Prerequisites:* None *Description:* This course is a comprehensive introduction to the materials and products used to design, develop, and engineer manufactured products. Board drafting experience will provide the basis for the introduction of AutoCAD in the sophomore-level classes. Materials science will be emphasized during the application of industrial materials and processes to a project-oriented curriculum. Students will solve problems, make decisions related to manufacturing materials and processses, test materials, and transform standard stock into finished products. Students will complete lab reports and maintain project control documentation, which highlights the course's competencies. LakeView Technology Academy only
Javascript ¾ credit	G-152-097	*Prerequisites:* G-152-182 *Description:* This course will introduce students to adding intuitive, dynamic, and animated interaction between their web pages and visitors. Using HTML.5 as a base, JavaScript, Ajax, and jQuery library will be used to react to user actions and change web page structure, content, and appearance. Through this course, students will learn how to dynamically refine, design appearance,control and manipulate HTML elements via the DOM API, and create content within a medium that is used for both desktop and mobile device computing. LakeView Technology Academy only
Computer Programming C ¾ credit	G-152-124	*Prerequisites:* G-152-126

		Description: Learn the principles of object-oriented programming using C++. Topics include: formatted 1/10 streams, variables, constants, references, functions, decisions, loops, classes, objects, inheritance, memory management, libraries, and error handlers. LakeView Technology Academy only
Introduction to Programming and Database Concepts 1 credit	G-152-126	*Prerequisites:* IT in Business (829110) *Description:* This class will introduce students to the structures, logic, and controls of programming techniques and database applications. Students will be able to develop a program that will utilize a database. This class will be delivered in a blended format. Four hours will be delivered in a traditional format, and one hour will be delivered via the Internet. A computer with access to the Internet, a browser, software, and an e-mail account will be required for this class. Details will be provided on the first day of class. Taught as a contracted service class by Gateway Technical College instructors, students earn four Gateway credits. LakeView Technology Academy only
Web Programming 1 ¾ credit	G152-182	*Prerequisites:* None *Description:* This course teaches essential web page development. Students will learn how to manage the Application Life Cycle, build the user interface, format the user interface, code with JavaScript, as well as recognize the importance of marketing and implementing fundamental design concepts. Taught as a contract for service course by a Gateway Technical College instructor, students earn three Gateway credits. LakeView Technology Academy only
Web Programming 2 ¾ credit	G-152-150	*Prerequisites:* Web Programming 1 *Description:* This course provides an introduction to HTML, CSS, and JavaScript.

		The course focuses on using HTML, CSS, and JavaScript to apply programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications. This course will help prepare students for Exam 70-480. Taught as a contracted service class by Gateway Technical College instructors, students earn three Gateway credits. LakeView Technology Academy only
Advanced Microcomputer Programming ¾ credit	G-152-151	*Prerequisites:* G-152-126 *Description:* This class examines trends in microcomputer program development including: use of objects, database access, receiving use input, displaying output, error handling, application controls, and online assistance. Taught as a contract for service course by a Gateway Technical College instructor, students earn three credits. LakeView Technology Academy only
Game Programming ¾ credit	G-152-157	*Prerequisites:* G-152-126 *Description:* This course is an introduction to computer game programming. Students will create their own computer games utilizing development tools. Through hands-on work students will learn how to develop a typical game. Topics include graphics, game design, bitmaps, sprites, and backgrounds. Students will design, implement, and test interactive computer games. This course requires prior computer programming skills. Taught as a contracted services class by Gateway Technical College instructors, students earn three Gateway credits upon successful completion. LakeView Technology Academy only
Mobile Device Application Programming ¾ credit	G-152-164	*Prerequisites:* G-152-126 or G-152-184 *Description:* This course teaches students to develop applications for mobile platforms.

		Students will utilize a software development kit to develop working applications. Taught as a contracted service class by Gateway Technical College instructors, students earn three Gateway credits. LakeView Technology Academy only

TECHNOLOGY AND ENGINEERING

COURSES		
Supermileage Vehicle ½ credit	870710Q	*Prerequisites:* Introduction Design Engineer—Tech, Drafting/Electronics/Machining *Description:* Supermileage Vehicle is an engineering course that challenges students to design, fabricate, and test an energy-efficient vehicle. The course exposes students to digital design, metal fabrication, welding, and electronics. Throughout the duration of the class, students will be learning about vehicle efficiency design systems. Students will design a chassis, drive train, and steering and braking systems. At the completion of the class, students will test their vehicles at various challenges across the state. LakeView Technology Academy only
Fundamentals of Engineering 1 credit	881311 881312	*Prerequisites:* None *Description:* This course presents an in-depth focus on the classification, application, and evaluation of industrial processes. Students study the characteristics, advantages, and disadvantages of various industrial processes. Speakers from local industries will provide students examples of the application and logistics of these industrial processes, which cannot be reproduced in a laboratory. The safe application of the tools and equipment used to perform the industrial processes are studied and emphasized through hands-on activities and projects. This course provides students an opportunity to study the processes used to design, develop, and engineer products to meet human needs and wants. Students in this course solve problems and make decisions related to the tasks of designing, engineering, and testing products for manufacture. LakeView Technology Academy only
Computer-Aided Design Solids Honors ½ credit	889320	*Prerequisites:* Computer-Aided Design 2 (860210)

		Description: Students use the computer and computer-aided design system to create solid models of various machine components. They also convert solid parts into conventional orthographic drawings, which include sections, auxiliary views, and dimensions. Taught as a contracted services class by Gateway Technical College instructors, students earn two Gateway credits upon successful completion. LakeView Technology Academy only
Front-End Development with Angular ¾ credit	G-152-084	*Prerequisites:* JavaScript (G-152-182) *Description:* This course introduces students to the Angular framework. Students will use TypeScript for developing Angular applications. Students learn the architecture of Angular applications, including components, directives, services, and dependency injection framework. Students will create single-page applications (SPAs) that utilize data binding, the Angular router, and services and dependency injection that are based on template-driven and reactive forms. Upon completion students will be able to create modern SPAs utilizing the Angular framework to solve a specific development need.
Game Programming Technologies ½ credit	G-152-161	*Prerequisites:* None *Description:* Students will learn essential mobile game programming skills and develop skills to enhance their success in Gateway Technical College and their career. Students will gain a foundation for writing games on mobile devices. The class will utilize Android Studios to implement different parts of a game, such as graphics, user input, audio, animated objects, and physics. Putting these together students will work towards a finished product and working mobile game by the end of the course.
Mobile Game Programming ¾ credit	G-152-186	*Prerequisites:* None *Description:* This course teaches students essential mobile game programming skills and develops skills to enhance their success in Gateway Technical College and their career. Students will gain a foundation for writing games

		on mobile devices. The class will utilize Android Studios to implement different parts of a game, such as graphics, user input, audio, animated objects, and physics. Putting these together students will work towards a finished product and working mobile game by the end of the course.
Gauging and Quality Control ¾ credit	G-444-330	*Prerequisites:* None *Description:* No matter what technical field you are interested in, you need to know how to measure. Countless professionals—from auto mechanics to design engineers—need to accurately measure every day. This course starts out giving you hands-on experience in measuring with calipers, micrometers, bore gauges, depth micrometers, and rulers. It also gives a look into how drawings are toleranced; and quality programs, including statistical process control and six sigma, are introduced along with an introduction to the concepts of automated gauging. Taught as a contracted services class by Gateway Technical College instructors, students earn three Gateway credits upon successful completion. LakeView Technology Academy only
CNC Machine Technology ¾ credit	G-444-331	*Prerequisites:* None *Description:* This course provides an introduction to CNC machining processes and the technology that supports them. Some of the processes to be covered are spot drilling, drilling, reaming, tapping, counter boring, countersinking, defining and calculating speed and feed rates, screw thread identification, and drill sharpening. Students will perform these processes on manual equipment prior to observing them on CNC equipment. Occupational computer skills are also covered in this course. Taught as a contracted service class by Gateway Technical College instructors, students earn 3 credits. LakeView Technology Academy only
Fundamentals of CNC Machine Application 1 credit	G-444-338	*Prerequisites:* None *Description:* This course is designed to give students a familiarization with the necessary

		practices and techniques used to operate computer numerical controlled (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, basic CNC machine operator maintenance, and production support equipment use and operations. Topics such as homing of machine, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine will also be covered. Actual run time in the lab will be provided for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run, applying theories learned to the production process. Taught as a contracted service class by Gateway Technical College instructors, students earn four credits. LakeView Technology Academy only
Introduction to Hydraulics and Pneumatics ¾ credit	G-612-102	*Prerequisites:* None *Description:* Uncountable machines, from robots to air tools to tires, rely on compressed air. Pressurized fluid is one of the strongest ways to transfer power. Hydraulics is the force behind the great lifting strength of forklifts and front-end loaders. The Introduction to Hydraulics and Pneumatics course gives you an introduction into how these systems work. This course is a combination of theory and practical lab exercise that introduce the student to basic pneumatic principles, compression of air, word devices, control devices, and circuit diagrams. Taught as a contracted services class by Gateway Technical College instructors, students earn three Gateway credits upon successful completion. LakeView Technology Academy only
Electrical Principles and Industrial Controls ¾ credit	G-620-302	*Prerequisites:* None *Description:* This class will cover motors used in industrial applications, including both single- and three-phase motors. Industrial electrical will also be covered, such as motor control circuits, timing circuits, and counter circuits using ladder logic

		and electrical drawings. This course will cover electrical safety, including lockout tag out, Ohm's Law, and use of a multimeter and oscilloscope, along with reading, writing, building, and troubleshooting ladder diagrams with relays, timers, and counters. The concepts of relays, timers, and counters will be covered, built, and troubleshot. This course is taught as a contracted services class by Gateway Technical College instructors. Students earn three Gateway credits upon successful completion. LakeView Technology Academy only
Mechanical Skills for Technicians ¾ credit	G-628-109	*Prerequisites:* None *Description:* This lab-based course consists of one lecture per week. Students are working hands on in the lab putting together systems that transfer power and other mechanical devices. In the labs students learn about and correctly build belt drives, chain drives, gear drives, bearings, lubrication, and much more. Taught as a contracted services class by Gateway Technical College instructors, students earn three Gateway credits upon successful completion. LakeView Technology Academy only
Industrial Robotics and Programming ¾ credit	G-628-115	*Prerequisites:* None *Description:* Industrial Robotics and Programming is a study in industrial robotics and programming. Students will learn to program a FANUC industrial robot and earn FANUC CERT certification. Students will develop frames, learn file manipulation, program the robot to manipulate products and perform different tasks based on I/O conditions, and utilize variables. Students will also study robotic power supplies, end-of-arm tooling, and control systems. This course is taught as a contracted services class by Gateway Technical College instructors. Students earn three Gateway credits upon successful completion. LakeView Technology Academy only

Industrial Control Systems ½ credit	G-664-100	*Prerequisites:* Intro to Mechatronics (881410) *Description:* In this course students are introduced to basic concepts of industrial computer-controlled systems. The student explores various types of programming using robots and programmable logic controllers and participates in lab experiments designed to introduce programming principles; electronic inputs and outputs (analog and digital); and communication between system components, including Ethernet protocols. Upon completion of the course, students will be able to explain how the control processes are utilized to automate manufacturing facilities. LakeView Technology Academy only
Introduction to Industrial Robotics ½ credit	G-664-105	*Prerequisites:* Introduction to Mechatronics (881410) and Introduction to Industrial Control Systems (881610) *Description:* In this course students are introduced to programming techniques for industrial robots. The student examines teach pendant programming, including input/output, routines, decision making, six frames of positional operation, and robot communication. Upon completion of the course, students will be able to operate and program industrial robots commonly used in Industry 4.0. LakeView Technology Academy only
Introduction to Mechatronics ½ credit	G-644-110	*Prerequisites:* None *Description:* In this course students are introduced to microprocessor-controlled electro-mechanical systems. The student examines how individual components work and how they are integrated into simple systems. Upon completion of the course, students will understand what technicians do in the workplace and how industry utilizes mechatronics in advanced manufacturing. LakeView Technology Academy only

Industrial Internet of Things ½ credit	G-664-120	*Prerequisites:* Introduction of Mechatronics (881410) and Introduction to Industrial Control Systems (881610) *Description:* In this course students are introduced to theoretical and practical topics of the Industrial Internet of Things (IIoT). The student investigates the range of sensor and actuator devices available, ways in which they communicate and compute, methods of getting information to and from IIoT-enabled devices, and ways of visualizing and processing data acquired from the IIoT. Upon completion, students will utilize hardware and software to construct a sensor network within an existing system and utilize standards tools to visualize the data captured. LakeView Technology Academy only

SOCIAL STUDIES

COURSES		
Social Science Seminar 1 credit	210111 210112	*Prerequisites:* None *Description:* This course is designed as an overview of contemporary themes in the social sciences (geography, political science, economics, psychology, sociology, anthropology, and history). Much of the focus will be on themes that support academy goals. Topics will be addressed in an interdisciplinary project-based style and thematically integrated with activities. This course will offer an introduction and general overview of the social science disciplines and will focus on topics that are current and relevant to the twenty-first century student. Through their examination of these behavioral sciences, students will gain a great deal of insight into who they are and, equally as important, where they see themselves in the future. LakeView Technology Academy only