### Middle School Course Guide

**Career/Technical Education**

#### Elective Courses

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**Prerequisite:** None

**Description:**

- **College and Career Readiness (R):** This course will provide the students with the opportunity to use decision-making and problem-solving skills for college and career planning. Students will explore valid, reliable educational and career information to learn more about themselves and their interests and abilities. Exploring Careers is designed to guide the students through the process of investigation and in the development of a college and career achievement plan. Students will use interest inventory software and other tools to explore areas of personal interest. Students will use this information to explore educational requirements for a variety of chosen career paths. This course is not offered for high school credit.

- **Investigating Careers - Architecture and Construction (R):** The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. This course provides an overview to the various fields of architecture, interior design, construction science, and construction technology. Students will explore college and career planning within the Architecture and Construction cluster. The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Career exploration knowledge and skills will be offered in a variety of instructional arrangements.

- **Investigating Careers - Arts, A/V Technology & Communication (R):** The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. This course provides an overview to the various fields of creative and computer technology applications. Students will explore college and career planning within the Arts, A/V Technology & Communications cluster. The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Career exploration knowledge and skills will be offered in a variety of instructional arrangements.

- **Investigating Careers - MST Arts, A/V Technology & Communications (H):** (Offered at Jackson Technology Center only) This Arts, A/V Technology & Communications class will provide an advanced Level II of instruction and activities beyond that of course #8887. Please see course description for #8887. Additional modular instruction will be provided in the areas of Desktop Publishing, Digital Photography, Digital Video Editing, Radio Broadcasting, Video Production, and Web Development.

- **Investigating Careers - Business, Finance and Marketing:** The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. Students explore college and career planning within specific career cluster(s). The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Districts have the flexibility of offering career exploration knowledge and skills in a variety of instructional arrangements.

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NOTE: All courses may not be offered on every campus.  
Update January 2018
8R120  Investigating Careers - Manufacturing (R)  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. This course provides an overview to the various fields of design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing applications and computer and technology applications. Specific areas of manufacturing to be explored include Conceptual and Applied Physics, Design and Construction, Engineering and Stress Analysis, Exploratory Electronics, and CNC Lathe/Mill. Students will explore college and career planning within the Manufacturing cluster. The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Career exploration knowledge and skills will be offered in a variety of instructional arrangements.

8R150  Investigating Careers – Applied Engineering (Robotics)  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: The goal of this course is to create a culture of high expectations and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. Students enrolled in this course will demonstrate basic knowledge and skills necessary for the robotic and automation industry. The students will focus on basic mechanisms and programming to complete various tasks from simple to more complex systems as the course progresses. Career exploration knowledge and skills will be offered in a variety of instructional arrangements.

8R155  Investigating Careers - Applied Engineering  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: The goal of this course is to create a culture of high expectations and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. Students enrolled in this course will demonstrate basic knowledge and skills necessary for the Engineering industry. The students will focus on basic engineering skills to complete various tasks from simple to more complex systems as the course progresses. Career exploration knowledge and skills will be offered in a variety of instructional arrangements.

8R040  GBL Investigating Careers - Business Administration & Management, Finance and Marketing  GBL  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: (Offered at Sellers only) The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. Students explore college and career planning within specific career cluster(s). The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Districts have the flexibility of offering career exploration knowledge and skills in a variety of instructional arrangements.

8R150  MST Investigating Careers Applied Engineering (R)  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: This course provides an overview of the various fields of science, technology, engineering, and mathematics and their interrelationships. Students will use a variety of computer hardware and software applications to complete assignments and projects. Students will work on a design team to develop a product or system. Students will use multiple software applications to prepare and present course assignments. Students will have the opportunity to experience activities in artificial intelligence, automation and robotics, environmental technology, fiber optics, and the VEX Robotics program.
### COURSES OFFERING HIGH SCHOOL CREDIT

**8C050  Professional Communication (R)**
- **Credit:** 0.5
- **Grade:** 8

**Prerequisite:** None
**Description:** Professional Communications blends written, oral, and graphic communication in a career-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communication. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research.

**8C051  Professional Communication + AVID (R)**
- **Credit:** 0.5
- **Grade:** 8

**Prerequisite:** Participation in the AVID Program
**Description:** The 8R110S Professional Communications course is one of the courses, which can be completed in middle school to meet the High School Speech requirement for graduation. This course embeds the TEKS for Professional Communications in to the AVID elective course allowing students to earn 0.5 credit and Regular Grade Points for Professional Communications as well as completing the AVID elective.

**8D050  Touch System Data Entry - Keyboarding (R)**
- **Credit:** 0.5
- **Grade:** 8

**Prerequisite:** None
**Description:** 0.5 credit High School Elective, Students apply technical skills to address business applications of emerging technologies. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students will need to apply touch system data entry for production of business documents.

**8D501  GBL Touch System Data Entry – Keyboarding (R)**
- **Credit:** 0.5
- **Grade:** 8

**GBL**
**Prerequisite:** None
**Description:** (Magnet Course offered at Sellers only): 0.5 credit High School Elective, The students will learn the alphabetic letters, numbers and symbols by touch, while achieving acceptable speed and accuracy level. This course emphasizes the mastery of touch control keyboarding and correct key stroking. Students will be provided opportunities for applying keyboarding skills in real-life situations. Skill development in proofreading, spelling, word division and punctuation are also included. Students will demonstrate the ability to compose personal and business letters and envelopes. They will also produce reports, memorandums and tabulations for both personal and business use.

**8R505  GBL Principles of Business, Marketing and Finance (H)**
- **Credit:** 1
- **Grade:** 8

**GBL**
**Prerequisite:** None
**Description:** GBL Students interested in pursuing a pathway in the School of Global Business, Language and Leadership at NFHS. Students will gain knowledge and skills in economics, personal finance, marketing of goods and services including advertising and product pricing and the impact of global business. This course allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities using challenged based learning problems and settings in business, marketing, and finance.

**8I050  Principles of Hospitality and Tourism (R)**
- **Credit:** 1
- **Grade:** 8

**Prerequisite:** None
**Description:** The hospitality and tourism industry encompasses lodging; travel and tourism; recreation, amusements, attractions, and resorts; and restaurants and food beverage service. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students gain exposure to various positions within this industry. This course prepares students for additional courses in the Hospitality and Tourism Cluster.

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**NOTE:** All courses may not be offered on every campus. **Update January 2018**
8J050  Principles of Human Services (R)  1 Credit  Gr: 8

Prerequisite: None
Description: This laboratory course will enable students to investigate careers in the human services cluster, including counseling and mental health, early childhood development, family and community, and personal care services. Each student will learn the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

8J051  Principles of Human Services (R) AVID  1 Credit  Gr: 8

Prerequisite: None
Description: This laboratory course will enable students to investigate careers in the human services cluster, including counseling and mental health, early childhood development, family and community, and personal care services. Each student will learn the knowledge and skills essential for success in high-skill, high-wage, or high-demand human services careers. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

8P053  Introduction to Transportation (R)  0.5 Credit  Gr: 8

Prerequisite: None
Description: The goal of this course is to create a culture of high expectation and continuous improvement that provides middle school students with a foundation for success in high school, future studies, and careers. This course is provides an overview of the design, production and assessment of products, services and systems used in the logistics of warehousing and transportation systems. Students will explore college and career planning within the Transportation, Distribution and Logistics cluster. The students research labor market information, learn job-seeking skills, and create documents required for employment. Students use self-knowledge to explore and set realistic goals. Career exploration knowledge and skills will be provided in a variety of instructional arrangements.

8O051  MST Project Lead the Way – Gateway to Technology - Design & Modeling and Automation & Robotics(R)  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: (Magnet Course offered only at Jackson Technology Center), (0.5 credit High School Elective) In the Design and Modeling unit, students discover the design process and develop an understanding of the influence of creativity and innovation in their lives. They are then challenged and empowered to use and apply what they've learned throughout the unit to design a therapeutic toy for a child who has cerebral palsy. In the Automation and Robotics portion of the course, students learn about the history and impact of automation and robotics as they explore mechanical systems, energy transfer, machine automation, and computer control systems. Using the VEX Robotics® platform, students apply what they know to design and program traffic lights, robotic arms, and more.

8O052  MST Project Lead the Way – Gateway to Technology – Science of Technology & Magic of Electrons (R)  0.5 Credit  Gr: 7-8

Prerequisite: None
Description: (Magnet Course offered only at Jackson Technology Center), (0.5 credit High School Elective) Science impacts the technology of yesterday, today, and the future. In the Science of Technology unit, students apply the concepts of physics, chemistry, and nanotechnology to activities and projects, including making ice cream, cleaning up an oil spill, and discovering the properties of nano-materials. In the Magic of Electrons unit, students examine the behavior and parts of atoms as well as the impact of electricity on the world around them. They learn skills in basic circuitry design and use what they know to propose designs such as a burglar alarm for an art museum.
80053 MST Project Lead the Way – Gateway to Technology – Energy and the Environment & Flight and Space (R)

MST 0.5 Credit Gr: 7-8

Prerequisite: None

Description: [Magnet Course offered only at Jackson Technology Center], (0.5 credit High School Elective) In the Energy and the Environment unit, Students are challenged to think big and toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. They use what they've learned to design and model alternative energy sources, as well as evaluate options for reducing energy consumption. In the Flight and Space unit, the exciting world of aerospace comes alive through Flight and Space. Students explore the science behind aeronautics and use their knowledge to design, build, and test an airfoil.

80054 MST Project Lead the Way – Gateway to Technology – Green Architecture & Medical Detectives (R)

MST 0.5 Credit Gr: 7-8

Prerequisite: None

Description: [Magnet Course offered only at Jackson Technology Center], (0.5 credit High School Elective) In Green Architecture, students learn how to apply green concepts to the fields of architecture and construction. They explore dimensioning, measuring, and architectural sustainability and apply what they have learned to design affordable housing units using Autodesk’s® 3D architectural design software. Medical Detectives allows students to play the role of real-life medical detectives as they analyze genetic testing results to diagnose disease and study DNA evidence found at a “crime scene.” They solve medical mysteries through hands-on projects and labs, investigate how to measure and interpret vital signs, and learn how the systems of the human body work together to maintain health.