2015 -2016 Freshmen Course Overview

During the 15-16 school year, freshmen students will take seven courses (Math, Science, English, Human Geography, H.O.P.E., Technology, and Engineering) daily. Our yearlong Advisory Schedule will provide bi monthly opportunities to have extended time in each class and provide dedicated time to help develop student’s academic skills.

Human Geography with Ms. Walker

This is a yearlong course that uses a spatial approach to the understanding and analysis of the earth as home to humans. In it we will explore how humans utilize the world in terms of distribution of physical (natural features) and cultural phenomena (“stuff” humans make and use), interaction of phenomena in specific places, as well as the interaction between and within these places. This class will most importantly show the use of geography in our everyday life and its connections to other subject matter by analyzing the human population on earth, and creating a comprehensive view of settlement patterns and land uses for agriculture, industry, and services around the world. This course uses a variety of ways to look at these questions, including creating maps, field work, analyzing advertising and consumer patterns, independent and collaborative work, and lectures / discussions. Grades are assigned for Learning Tasks (chapter activities), 1st and 2nd semester projects, as well as end of chapter assessments. This is a reading and writing intensive course which will be pleasantly interrupted weekly by working in our garden!

H.O.P.E with Coach Farbotko

The purpose of this course is to develop and enhance healthy behaviors that influence lifestyle choices and student health and fitness.

There are three sections of content

1. Practical (50%) of the grade. Students will have moderate to vigorous activity.

2. Theory (40%) of the grade. Students will participate in classroom/health based portion of the class.

3. Life Skills (10%) of the grade. Students will participate in classroom discussions about some of life’s obstacles.
Algebra 1 Honors with Mr. Vitale

This course is designed to give students the requisite skills that provide a foundation for all future mathematics courses. Students will explore:

- writing and solving linear equations
- powers and exponents
- quadratic equations
- polynomials and factoring
- graphing and solving linear inequalities
- functions
- geometry

Throughout the course, mathematical concepts will be taught with an emphasis on real-world application, technology, and cross-curricular interaction. The skills encourage critical thinking and development of these skills can be used throughout other courses.

Grades in this course will be received through projects, homework, and assessments. Students will be encouraged to strive towards development of mastery learning with a focus on standards. They will be provided opportunities to demonstrate their learning and be motivated towards becoming independent learners.

Geometry Honors with Vitale

Geometry is present everywhere in the world around us. Students should always use their personal experiences to help make their learning experience more valuable. At FSWCHS, students will master setting up of equations in a wide range of situations and the use of a variety of methods to solve the equations. Geometry will focus on the use of problem solving, representation, reasoning and proof, language and communications, and connections both within and outside mathematics. While shapes and angles are the essence of the course, lessons will incorporate global, cultural, and historical context when appropriate. Introduction of advanced topics will allow the students to “see” where this all leads and enables them to understand that math is a continuum and topics do not exist in isolation. Projects will be based on relating the mathematical concepts to real world applications of their choosing. Algebra skills will be enhanced and a strong foundation will be laid for future mathematics courses.

English I Honors with Ms. Reilly

English I Honors provides rigorous instruction in all aspects of language skills, including reading, writing, speaking, listening, viewing, and thinking. Students are introduced to representative works of American and world literature and will engage in learning tasks that approach literature from both a literary and a cultural perspective. The course promotes the use of the writing process while addressing such forms as expository, analytical, reflective, and argumentative writing. Students will read complex texts with understanding and write prose using content, purpose, and audience as a focal point for organization. At the end of this course students will have the tools to continue to write in meaningful and purposeful ways addressing lifelong writing situations.
**Chemistry Honors with Ms. Clinton**

Chemistry is a course designed to provide students with a general overview of the study of matter and the changes it undergoes. Developing good problem solving skills, understanding concepts, laboratory techniques, and safety are skills emphasized throughout the course. Students will also have opportunities to conduct investigations using appropriate methods and tools, and communicate their findings using appropriate technology. Course information is obtained by the student from textbooks, laboratory activities, homework assignments, class discussions, and teacher lectures. Student grades are based on assessments, homework assignments, and lab reports. Student averages are determined by the weighted system shown below:

- All laboratory assignments and class work = 30%
- Homework = 20%
- All assessments (Tests or Quizzes) = 30%
- Semester Exam = 20%

**Research 1: Concepts in Engineering with Mr. Frye**

*Concepts in Engineering* is a course that combines the teaching of science, technology, engineering, and mathematics. The goal is to engage students in problem solving, discovery, exploratory learning, and innovation. Students will experience these STEM fields as living disciplines connected to the real world, enabling them to solve problems the way scientists and engineers do. With STEM lessons and activities, related disciplines are seamlessly integrated into a rich experience that becomes far more than the sum of its parts. Our philosophy of “Work to learn, learn to lead”, will be prevalent throughout the course with emphasis on physics and chemistry. Our hands on approach will allow students to collaborate cooperatively and solve problems in small group settings.

Students will live the engineering design process. Students will develop, create, and innovate as they engineer novel solutions to posed problems. They will communicate and collaborate as they engage higher-level thinking skills to help shape their inquiry experience. Students will assume ownership of the learning. From this emerges increased self-motivation and personal accountability. *21st Century Skills that are a foundation* of this course:

**Learning and Innovation Skills**
- Creativity and Innovation
- Critical Thinking and Problem solving
- Communication and Collaboration

**Life and Career Skills**
- Flexibility and Adaptability
- Initiative and Self-direction
- Productivity and Accountability
- Leadership and Responsibility
Helping emphasize the “T” in our STEM focus, we are proud to introduce our new freshman submersion into the world of technology. The course will encompass a myriad of topics beginning with the online learning management software, CANVAS, which will be critical in the transition to our high school curriculum as well as the progression into their future college courses. Continuing with the theme of technology as a ‘tool’, students will become proficient in the use of Office 365 to insure the ability to be successful in their other courses: writing essays, creating charts and graphs, preparing presentations, etc. Along the way, we will explore other software in various areas, including 2D and 3D design. An introduction to coding and an exploration of innovation with help stimulate the students’ minds in an environment where creativity, collaboration, and communication determine their success. Fun and cool projects should pop up along the way allowing students to experience everything from designing their own USB flash drives to learning the key components of how to design and pilot an unmanned aerial drone. The technology course will focus on their daily interactions with technology in the real world and take it a step further by integrating the tools available with everything else they may experience in their high school and college careers. Overlaps with their Engineering Research projects will drive home the importance of using technology as a tool for success.
Human Geography with Ms. Walker

- 1 Composition Book (for the Garden)
- blue and / or black pens
- 1 two pocket folder dedicated to the Hum Geo class
- paper
- laminated US and World map
- colored pencils
- flash drive

Hope with Coach Farbotko

- P.E. uniform can be purchased in the main office for $20.00.

Algebra I with Mr. Vitale

- 2 college ruled lined notebooks and pencils
- Three ring binder or folder for handouts
- Simple four function calculator like the TI - 30xII
  - If you already purchased a graphing calculator, you will be set for later years.

Geometry with Mr. Vitale

- 2 college ruled lined notebooks and pencils
- Three ring binder or folder for handouts
- Simple four function calculator like the TI - 30xII
  - If you already purchased a graphing calculator, you will be set for later years.

English I Honors with Ms. Reilly

- A section in your binder designated to “English”
- College-ruled lined paper and Pens (blue or black ink only)
- 1 composition notebook (college-ruled)

Chemistry Honors with Ms. Clinton

- Bound notebook (spiral or composition)
- Pencils
- Scientific calculator

Research 1: Concepts in Engineering with Mr. Frye

- Various household items based on specific projects
- Paper and pencil

Engineering Technology with Mr. Schreiber

- Composition Book or Research Journal (not a spiral notebook)
- USB Flash Drive (plain and inexpensive... the smaller the better!)
- Ear buds / Headphones (optional) - Students may be required to use those provided