# eSTEM Academy @ Reynoldsburg High School

#### eSTEM Academy

As a demonstration STEM school for the State of Ohio, eSTEM Academy focuses the academic preparation of students on environmental science, technology, engineering, and mathematics.

### **Reynoldsburg City Schools**

Reynoldsburg is located just east of the city of Columbus, Ohio in Franklin County. The community is a growing suburb of about 32,000 with 6,500 students in the school district. Reynoldsburg City School District has four high schools on two campuses, four middle schools, and five elementary schools. Within the grade configuration is a K-12 STEM pipeline that serves 2,200 of the 6,500 students. Two of the STEM schools (eSTEM Academy and HS<sup>2</sup> Academy) have been specially designated as two of only 12 Demonstration Stem Schools by the Ohio Education. In Department of Reynoldsburg has been designated as an Excellent with Distinction District by the Ohio Department of Education.

# **Graduation Requirements**

Twenty-one Carnegie Units are required for graduation including:4 units English, 4 units Science, 4 units Mathematics, 4 units Social Studies, 1 unit Health and Physical Education, 4 Electives

#### Curriculum

Students experience enriched college preparatory curriculum that includes internship and capstone research experiences in one of the following STEM pathways: Design Engineering,

E3 (Environment, Energy and the Economy), and Logistics and Informatics.

88% of the Class of 2013 have completed one or more AP Courses or Post-Secondary Enrollment Options with Columbus State Community College, The Ohio State University, or Ohio University. Our AP offerings include: AP Calculus AB & BC, AP Statistics, AP Chemistry, AP Language & Composition, AP Microeconomics, and AP Government.

The delivery methodology is problem based and focuses on the development of critical thinking, creativity, and confidence in STEM.

Grading	Percentage	Quality	Enriched	AP
Scale		Points		
Α	90 - 100%	4.0	4.5	5.0
В	89 - 80%	3.0	3.5	4.0
С	79 - 70%	2.0	2.5	3.0
D	69 - 60%	1.0	1.5	2.0
F	< 60%	0.0	0.0	0.0

<sup>\*</sup> subscript (n) indicates student choose nonweighted pathway

# **Faculty**

eSTEM Aademy eSTEM Academyhas 22 regular faculty members, 1.7 teachers in special education, and 0.5 teacher in English Language Learners of which 80% have a Masters degree and three are qualified to teach with Columbus State Community College as adjunct faculty. Our student to teacher ratio is 28/1 in regular education classrooms.

# College Matriculation Class of 2013

Bowling Green State University
Brown University
Capital University
Case Western Reserve University
College for Creative Studies

Columbus State Community College Devry University Eastern Kentucky University Florida Institute of Technology

Franklin University

Ithaca College
Kent State University
Massachusetts Institute of Technology
Miami University
Mount Vernon Nazarene
Ohio Christian University

Mount Vernon Nazarene
Ohio Christian University
Ohio Northern University
Ohio University
Otterbein University

Roosevelt University

Seminole State College of Florida

The Ohio State University

The Ohio State University - Newark

University of Akron
University of Cincinnati
University of Evansville
University of Toledo

West Virginia University Institute of Technology

Wittenberg University

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# Capstone Pathways @ eSTEM Academy

Each of our students who have completed the eSTEM Core are eligible to participate in our Capstone Pathway Program.

Capstone Pathways are half day integrated programs where students earn a combination of high school and either PSEO or AP credits as they prepare to do undergraduate level research in STEM fields of study.

# 2013-2014 Capstone Pathways

**Design Engineering** – Students participate in an enriched engineering experience including the following coursework

 AP Calculus (AB or BC), Principles of Engineering, Technical Writing & Communications, Ethics & Service Learning, Internship in Design, Capstone Research in Design

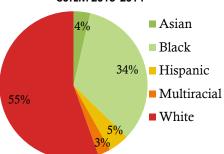
Energy, Environment, and the Economy (E3) – Students participate in an enriched environmental analysis experience including the following coursework

 AP Environmental Science, AP Micro Economics, Technical Writing & Communications, Internship in E3, Capstone Research in E3

Logistics and Informatics – Students participate in an enriched experience focused on logistics and Informatics management including the following coursework

 AP Statistics, Optimization Methods, Technical Writing & Communications, Ethics & Service Learning, Internship in Logistics, Capstone Research in Logistics

#### Demographic Survey eSTEM 2013-2014



The Class of 2014 is the first graduating class from eSTEM Academy. As an aggregate, the student population is rich with diversity, culture and interest.

# Scheduling, Grading and Ranking

Students are enrolled in three courses per term in a blocked format and one course in a blended format. This allows students to accelerate credit attainment or an opportunity to assist students over a longer period of time if they need it.

eSTEM incorporates a Mastery Grading System where students are required to perform against college and career ready standards articulated through the Common Core and the ACT Quality Core systems. Students are required to take either the ACT End of Course Exam or AP Exam where they are offered as a component of the grading system for Mastery.

Within each core course, students are able to decide whether they are interested in an "Enriched" or "College Prep" assessment system. This enables us to personalize the experience for every student. An Enriched Assessment Path is an honors path that includes a weighted grade. Students in the Enriched Assessment path are challenged beyond the normal college preparatory expectations in thinking, problem solving, and design.

The students choosing the College Prep Assessment path are assessed against the college ready standards from the Common Core or Quality Core but do not receive weighted credit.

Students at eSTEM are not ranked.

# Class of 2014 AP Coursework Summary 5% 1% Did Not Take an AP Course Completed One AP Course Completed Two AP Courses

34%

34%

Completed Two AP CoursesCompleted Three AP Courses

Completed Four AP CoursesCompleted Five AP Courses

Completed Six AP Courses



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#### Contact Us!

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