

The Gatton Academy
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THE GATTON ACADEMY

of Mathematics and Science in Kentucky



KENTUCKY'S RESIDENTIAL STEM ACADEMY

The Gatton Academy of Mathematics and Science in Kentucky is the Commonwealth's high school for students interested in pursuing advanced careers in science, technology, engineering, and mathematics. Instead of spending their junior and senior years in traditional schools, our 128 students take all their coursework through Western Kentucky University with regularly-enrolled college students. The Gatton Academy empowers Kentucky's exceptional young scientists and mathematicians to live and learn in an environment which offers advanced educational opportunities, preparing them for leadership roles.

STUDENT TRANSCRIPTS

Transcripts include grades earned from the home high school (during the student's freshman and sophomore years) and the grades earned from the Gatton Academy through Western Kentucky University (junior and senior years).

Unweighted GPAs are reported on a 4.0 scale.

- › To merge from the university system to a high school transcript, we assign the value of one high school credit for every 3 college hours.
- › After determining the quality points from both the home high school and WKU, a cumulative GPA is calculated on a 4.0 scale.

* Weighted GPAs are tabulated for colleges who consider them. A quality point is added for each course taken through WKU that is part of the core curriculum (math, science, social studies, English, or foreign language).

STUDENT SELECTION

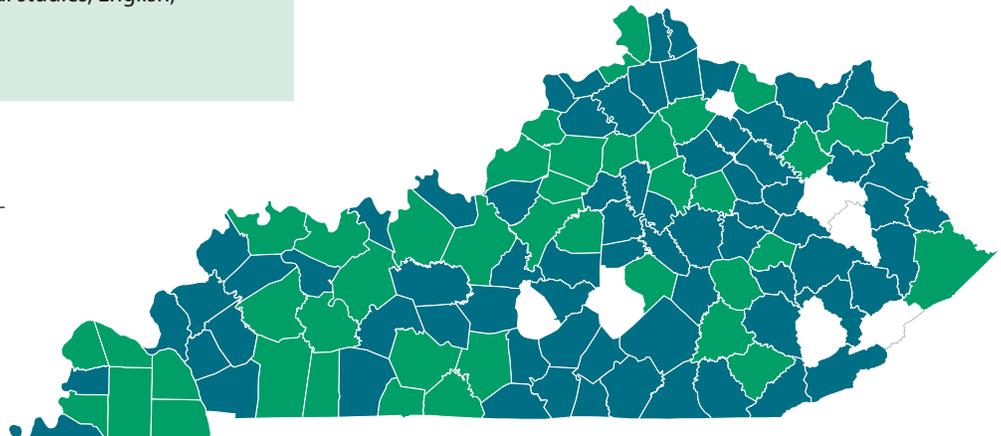
Applicants are high school sophomores who will have completed Geometry and Algebra II by the end of their sophomore year. Students are selected based on SAT or ACT scores; academic grades from ninth and tenth grades; interest in advanced careers in science, technology, engineering, and math; student responses to application essay questions; recommendation letters; and interviews. The application process is competitive with 20% of applicants being accepted into the program.

ACT RANGE
 High (75%): **34**
 Low (25%): **30**
 Average Composite: **31.7**

UNWEIGHTED GPA RANGE
 High (75%): **3.97**
 Low (25%): **3.67**
 Average: **3.82**

County Attendance

- Student from county has attended Gatton ■
- Class of 2015 student from county attends Gatton ■



In the school's first seven years, students from 113 of Kentucky's 120 counties have attended Gatton.

ACADEMICS

The academic rigor of the Gatton Academy is meant to challenge students to excel at the highest levels, while drawing connections between the classroom and real-world research options. All coursework is taught at the college level by university professors.

MATHEMATICS (3-4 Courses)

Students are assigned their introductory math course based on prior coursework and placement exam scores administered by the Western Kentucky University Department of Mathematics.

- MATH 117 Trigonometry (3 Hours)
- MATH 136 Calculus I (4 Hours)
- MATH 137 Calculus II (4 Hours)
- MATH 237 Multivariable Calculus (3 Hours)
- MATH 307 Introduction to Linear Algebra (3 Hours)
- MATH 371 Computational Problem Solving (3 Hours)

CORE SCIENCE (5 Courses)

Students must take at least one biology, chemistry, computer science, and physics class. Additionally, students must complete at least one two-course STEM sequence.

- BIOL 120/121 Biological Concepts: Cells, Metabolism, and Genetics/Lab (4 Hours)
- BIOL 122/123 Biological Concepts: Evolution, Diversity, and Ecology/Lab (4 Hours)
- CS 180 Computer Science I/Lab (4 Hours)
- CS 181 Computer Science II (4 Hours)
- CHEM 120/121 College Chemistry I/Lab (5 Hours)
- CHEM 222/223 College Chemistry II/Lab (5 Hours)
- PHYS 255/256 University Physics I/Lab (5 Hours)
- PHYS 265/266 University Physics II/Lab (5 Hours)

STEM ELECTIVES (3-4 Courses)

Students may complete their required STEM electives and associated labs in the following areas: agriculture, architecture, astronomy, biology, chemistry, computer science, engineering, geography, geology, health sciences, manufacturing, mathematics, meteorology, physics, and/or psychological science.

ENGLISH (2 Courses)

Students who score 29 or higher on the English portion of the ACT or a 650 or higher on the Critical Reading portion of the SAT receive credit for English 100 and begin with English 200.

- ENG 100 Introduction to College Writing (3 Hours)
- ENG 200 Introduction to Literature (3 Hours)
- ENG 300 Writing in the Disciplines (3 Hours)

ACADEMY OF MATH & SCIENCE SEMINAR (3 Courses)

- ACMS 175 Junior Seminar I (1 Hour)
- ACMS 175 Junior Seminar II (1 Hour)
- ACMS 175 Senior Seminar (1 Hour)

Student will complete additional pre-college requirements as mandated by the Commonwealth of Kentucky.

INSTITUTIONAL ACCOLADES

Named #1 public high school 3 years in a row

2012, 2013
Newsweek and The Daily Beast

2014
The Daily Beast

**Intel School
of Distinction
FINALIST**

6 straight years on
the *Washington
Post's* List of
Elite Schools

**College Matriculation
100%**

**Each student
completes
over 24 hours
of service**

**National Merit
Semifinalists
and National
Achievement
Scholars**



CLASS OF 2015 PROFILE



82% participated
in an independent
research project
during their
junior year.

40

presentations
given at
academic
conferences



88% of Class
of 2015 had an
international
travel experience.



15%
Appalachian
students

As of September 2014, our Class of 2015 size was 65 students.

SCHOLARLY RESEARCH

Learning from one-on-one mentorship by university faculty, students work on STEM research projects completely outside of the classroom, taking research on as an extracurricular interest. Students share their findings through presentations at local, state, and national conferences.

STEM + CRITICAL LANGUAGE

Eight students in our Class of 2015 study in our STEM + Critical Language curricular tracks. Three study in our STEM + Arabic cohort and five study in our STEM + Chinese cohort. These eight students supplement the school's STEM-based curriculum by taking intensive Arabic or Mandarin Chinese language courses of increasing rigor each semester. They achieve at least four levels of mastery by their graduation. Students in the STEM + Chinese track have the option to switch to more demanding National Security Education Program's WKU Chinese Flagship courses after their first year of study. The Gatton Academy considers study in the STEM + Arabic and the STEM + Chinese tracks equivalent to conducting independent, mentored research.