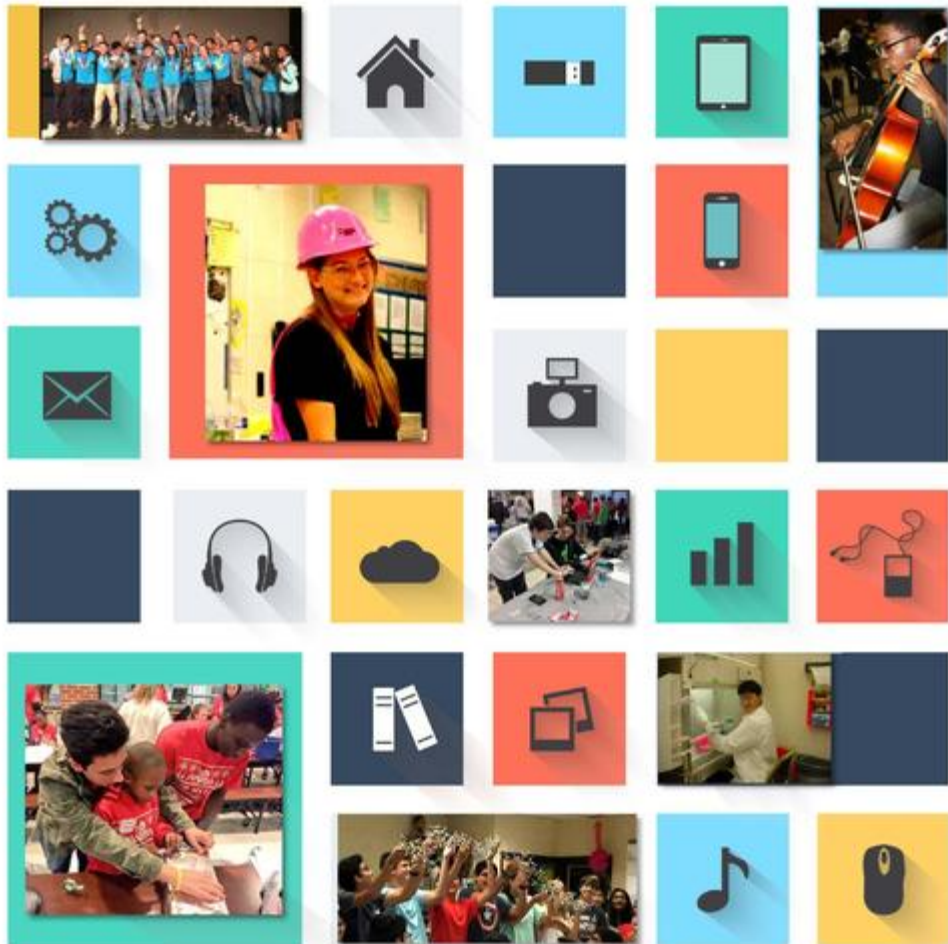




The Center for Advanced Studies

in Science, Math & Technology

Leading the Nation in STEM Education



STEM Certified

STEAM Inspired



The Center for Advanced Studies is a magnet program located on the campus of Wheeler High School in the Cobb County School District. The program offers accelerated Cobb County students the opportunity to participate in a rigorous four-year advanced science, math, and technology program of study, much of which is unavailable in a traditional high school curriculum.

An accelerated, advanced, and innovative STEM/STEAM curriculum differentiates the Center from other high school programs. Its emphasis on engineering, medical biotechnology, and advanced chemistry, along with a strong and accelerated math curriculum, makes it one of the most specialized high school programs in the nation.

By the end of their sophomore year, the typical Magnet students will have completed all required high school science courses. This enables the students in their upper-class years to choose from an array of highly specialized courses created specifically for the program. Students culminate their studies with our capstone Research and Internship courses.

All freshmen magnet students take Magnet Foundations/AP Computer Science

Academics

Magnet designated courses offer higher rigor and faster pace than Honors Courses. Post AP Courses offer students unique opportunities to conduct research and work on meaningful, real world projects. At Wheeler Magnet, we help you choose a course of study to fit your passion.

Magnet Required Courses

Magnet Foundations/AP Computer Science Principles	Algebra I
Magnet Chemistry	Algebra II
Magnet Biology	Geometry
AP Physics I	PreCalculus
Adv Scientific Research	H Calculus or AP Calculus
Adv Scientific Internship	

Science Options

Magnet Biochemistry	Adv Physics & Robotics
AP Biology	Adv Biotechnology Research
AP Chemistry	Adv Chemical Engineering
AP Physics 2	Adv Organic Chemistry
AP Physics C	Adv Aerospace Engineering
AP Environmental Science	

Math Options

AP Statistics	Multivariable Calculus
AP Calculus AB	GT Linear Algebra
AP Calculus BC	GT Multivariable Calculus

Other AP Course Options

AP Human Geography	AP English Lit/Composition
AP World History	AP Language/Composition
AP US History	AP Micro/Macro Econ
AP Government	AP Spanish Language
AP Psychology	AP French Language
AP European History	AP Latin: Vergil
AP Studio Art 2D, 3D & Drawing	AP Computer Science A
AP Music Theory	AP Computer Science Principles

Principles which gives them a foundation in engineering and computer science. Students are required to complete 3 additional Magnet approved Technology electives or 1 Technology and 2 Fine Art electives thus completing either a STEM or STEAM Track.

Wheeler High School also offers a full array of AP courses in English, Social Studies, Foreign Language, Art, and Music from which magnet students can choose. Completing a program consisting of AP and Post-AP courses, specialized math and science courses, high-level technology electives and heavy integration of technology into the traditional curriculum, Center students are well prepared for the challenges that await them in any field of interest at the post-secondary level and beyond.

The rigor and relevance of the magnet curriculum is recognized and valued among the top colleges and universities.

*STEM isn't about STEM;
it's about making a difference in the world.
It's about the ability to excel, even if you're an artist or
social worker, because the world has changed, and
technology and math are at the heart of everything.*

*- Barbara McAuliffe, Director of Strategic Initiatives and Planning
Intel Corporation*



Technology Options

Electronics Pathway
Foundations of Electronics
Advanced AC & DC Circuits
Digital Electronics
Telecommunications

Therapeutic Svcs - Emergency Medical Responder Pathway

Intro to Healthcare Science
H Essentials of Healthcare/H Human Anatomy
Emergency Medical Responder

Therapeutic Services - Allied Health Pathway

Intro to Healthcare Science
Honors Essentials of Healthcare/Honors Human Anatomy
Allied Health and Medicine

Audio & Video Technology & Film Pathway

Audio Video Technology Film I
Audio Video Technology Film II
Audio Video Technology Film III

Web & Digital Communications Pathway

Intro to Digital Technology
Digital Design
Web Design

Fine Arts Options

Music
Band
Chorus
Orchestra
AP Music Theory

Drama
Acting I, II, III
Adv Drama, Play Production
Technical Theatre I, II, III, IV
Musical Theatre

Visual Arts

Basic Visual Arts
Drawing & Painting I, II
Ceramics I, II
Graphic Arts I, II, III
Photography I, II
AP Studio Art, 2D, 3D, Drawing

Plant Systems Pathway

Basic Agriculture Science & Tech
General Horticulture & Plant Science
Nursery & Landscape

Architectural Drawing & Design Pathway

Intro to Drafting & Design
Architectural Drawing and Design I
Architectural Drawing and Design II
Structural Detailing
Civil Engineering Drawing

Engineering Graphics & Design Pathway

Intro to Drafting & Design
Survey of Engineering Graphics
3D Modeling Analysis
Technical Manufacturing & Concepts

Computer Science Pathway

Intro to Digital Technology
Computer Science Principles
AP Computer Science Principles
AP Computer Science

Engineering & Technology Pathway

Foundations of Engineering & Technology
Engineering Concepts
Engineering Applications
Engineering R&D

Explore

Magnet FAQ's

www.wheelermagnet.net/faq.html



Our Innovative STEAM curriculum has attracted visitors such as Mrs. Debi, Senator Tom Price, Superintendent Chris Ragsdale, as well as faculty, parents and students.

The Wheeler Center for Advanced Studies

in Science, Math & Technology

Academic Success

Class of 2016 Profile

90 Graduates
100% Enrolled in 4-year college

SAT Mean Scores

77 Students Tested

	Crit. Reading	Math	Writing	Total
Class	684	718	677	2078
National	496	514	488	1498

Note: Mean Scores of the Center for Advanced Studies' students are based on highest SAT scores. College Board's National Averages are computed based on the last SAT taken by students.

ACT Mean Scores

38 Students Tested

	Eng	Math	Read	Science	Composite
Class	32.7	32	32.2	32.7	32.2
National	20.3	20.9	21.3	20.8	21

Note: Mean scores of the Center for Advanced Studies' students are based on highest ACT scores.

2016 Wheeler AP Exams

431 Candidates

1023 Exams

19% scored 5

49% scored 4 or higher

77% scored 3 or higher

National Merit Scholars

45 students in the Class of 2016 have been awarded National Merit Recognition

Scholarships

The Class of 2016 had 98% of the students qualify for the HOPE Scholarship.

The Center has graduated approximately 1230 students in the last twelve years. Each year our students have received over \$2,000,000 in scholarships, grants, and awards to be applied toward their college expenses.

National Science Competitions

The research components of many of our courses afford our students the basis to enter national and international science competitions. Our students have received national recognition in many prestigious competitions including:

- 2 Siemens Westinghouse Science Competition Regional Finalists
- 6 Siemens Westinghouse Science Competition Semifinalists
- 6 Intel Science Talent Search Semifinalists
- 1 Member of the USA Today All-Star Academic Team
- 2 Young Epidemiology Scholars Competition Regional Finalists
- 3 Students won first place in the Conrad Innovation Challenge
- 1 F1 in Schools Team won 2nd Place Nationally

Matriculation

Georgia Tech Acceptance Rate: 80% (45 of 56)

University of Georgia Acceptance Rate: 98% (53 of 54)

The 90 graduates of the Magnet Class of 2016 were accepted to the following universities:

Appalachian State University	Southern Methodist University
Auburn University	Stanford University
Augusta University	Tennessee Technological University
Benedictine College	The Ohio State University
Boston University	The University of Alabama
Brown University	The University of Alabama at Birmingham
Case Western Reserve University	The University of Alabama in Huntsville
Clemson University	The University of Georgia
College of Charleston	The University of North Carolina at Chapel Hill
Columbia University	The University of Oklahoma
Cornell University	The University of Texas, Austin
Dartmouth College	The University of Texas, Dallas
Drexel University	Tulane University
Elon University	United States Naval Academy
Emory University	University of California, Berkeley
Florida Polytechnic University	University of California, Davis
Florida State University	University of California, Irvine
Fordham University	University of California, San Diego
Franciscan University of Steubenville	University of Delaware
Furman University	University of Florida
George Mason University	University of Illinois at Urbana-Champaign
Georgetown University	University of Louisiana
Georgia College	University of Maryland, College Park
Georgia Institute of Technology	University of Miami
Georgia Southern University	University of Michigan
Georgia State University	University of Minnesota, Twin Cities
Harvard University	University of Mississippi
Hope College	University of Missouri-Kansas City
Indiana University at Bloomington	University of North Georgia
Johns Hopkins University	University of Notre Dame
Kennesaw State University	University of Pittsburgh
Lehigh University	University of Richmond
Massachusetts Institute of Technology	University of Rochester
Mercer University	University of South Carolina
Middle Georgia College	University of Southern California
Middlebury College	University of the Sciences in Philadelphia
Mississippi State University	University of Washington
New York University	Vanderbilt University
North Carolina State University	Virginia Tech
Northeastern University	Wake Forest University
Pennsylvania State University	Washington University in St. Louis
Piedmont College	Western Carolina University
Purdue University	Worcester Polytechnic Institute
Rice University	Xavier University of Louisiana
Rutgers University	Yale University

Explore

Magnet Class Profiles

www.wheelermagnet.com/profile.html

Academic Competition Winners

www.wheelermagnet.com/science_competitions.html

History of Wheeler Magnet

www.wheelermagnet.com/history.html

SAT Scores

Four Magnet students have earned perfect scores on the overall SAT & 147 students have scored 800 on the Math, Critical Reading and/or Writing portion.

Seven Magnet students have scored a 36 Composite score on the ACT & 90 students have scored a 36 on one or more portions of the ACT.

Wheeler Magnet Admissions

Prospective eighth grade students must complete an application and request three teacher recommendations using the Cobb Magnet online Common Application.

Students will be evaluated based on middle school grades, ITBS (or other nationally normed tests), teacher recommendations, written communication skills, & the PSAT™ 8/9 or PSSS (depending on whether you attend a CCSD Middle School.)

The PSAT™ 8/9 test is administered to all 8th graders in the Cobb County School District during October at their middle school. The PSSS is administered in January to applicants who are not currently attending a school in the Cobb County School District. The application deadline is December 1. Final admissions decisions will be communicated in February.



Admissions Eligibility

- ✓ Must be an incoming Freshman
- ✓ Must reside in Cobb County School District at the time of registration
- ✓ Must complete & submit the online application by the deadline
- ✓ Must agree to the following program requirements:
 - Completion of magnet recognized STEM or STEAM track
 - Required Research & Internship in senior year
 - Minimum of 10 magnet math & science courses
 - Senior internship & research with STEM/STEAM focus

2016-2017 Demographic Profile

440 Students Presently Enrolled
from 54 Different Schools

37% Females
63% Males



Admissions Timeline

October 1
Online Application Available

October 27
6:00 pm
Wheeler Magnet
Prospective Student Night

December 1
Application Deadline

January 7
8:00-11:30 am
Magnet Testing
Campbell High School
For students not currently in CCSD

February 17
4:30 pm
Admissions Decisions posted
in Application Portal

March 9
6:00 pm
Wheeler Magnet
Showcase for Accepted Students

March 20
Commitment Deadline

March 28 & March 30
New Student Advisement & Registration

Sign up for Prospective Student Text Alerts

Text: @whsmagnet to 339-224-6373

Email Alerts

Email: whsmagnet@remind101.com
(You can leave the subject line blank)

Scan to start your Application!

<https://magnet.cobbk12.org>



The Center for Advanced Studies Wheeler High School

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Fax: 770-578-3287



Science Technology Engineering Art Math

Our Students



Synergy. You can feel it in the classrooms and in the hallways. When a diverse group of high achieving students from across the county comes to Wheeler Magnet, they expect an advanced curriculum and individualized attention, but what they get is so much more. Our students inspire and motivate each other in academics, community service, leadership, sports, and other extracurricular activities. The result is an enthusiasm for learning and a sense of belonging.

"It's great to be in a classroom full of students who want to learn"

We offer students **advanced curriculum opportunities in every academic area** and they are free to pursue whatever is of greatest interest to them; from STEM, to fine arts, to the social sciences, literature, and languages. Our students have the opportunity to **travel internationally** and view their experience from a STEAM perspective.

Wheeler's diversity is exceptional with well over 60 countries represented and dozens of languages spoken.

Colleges and Universities are looking for the strong STEM background and well rounded education that Wheeler Magnet provides.

To succeed in this new information-based and highly technological society, students need to develop their capabilities in STEM to levels much beyond what was considered acceptable in the past."

- National Science Foundation

Extracurricular

Magnet students are involved in all Wheeler extra curricular activities: community service and academic clubs, sports teams, and fine arts programs. They serve as leaders in clubs and organizations in and outside of school.

Community Service is at the heart of our program. The Community Service Honor Society awards Community Service Letters and Graduation Medallions to those who qualify.

Students have the opportunity to participate in **STEAM focused international trips** that provide a global perspective to the curriculum.

Our Faculty



Passion. Our staff consists of a Magnet Coordinator, Program Advisor, Magnet Clerk, and a Magnet Counselor.

"I plant a seed and they reward me with extraordinary effort and challenge me with their solutions."

Our **teachers** are invested in the courses they teach. They are uniquely qualified with extensive professional experience, advanced degrees, and gifted certification in their areas of expertise.

Our full-time **Internship Coordinator** is dedicated to supporting our students in preparing for their internship and throughout their intern experience. She visits every internship site and attends several conferences each year to seek out new mentors. Our **Research Coordinator** supports students in this Capstone Research course which is taught in conjunction with the internship class as well as supporting students in research competitions and publications.

Our full-time **Magnet Counselor** supports students academically, socially, and by preparing them for the college application process. Magnet students are advised individually every year to help guide them in pursuing their interests through the classes they select.

Our Parents



Dedication. In 2003, a group of devoted parents formed The Center for Advanced Studies Foundation, a nonprofit organization, that supports and advocates for the academic, social and emotional growth of students in Wheeler's Magnet Program through financial and volunteer efforts.

Because of their commitment, we have been able to acquire state-of-the-art STEM equipment and software that can be found in industry and research environments. This includes a Gas Chromatography/Mass Spectrometer, UV-Vis, Chemical Reactor, Organic Synthesis Lab, five 3D Printers, two CNC Mills, Multiple PCR (Polymer Chain Replication) Systems, a Gel Doc XR+, a Transilluminator, Centrifuges, and class sets of Chromebooks and Tablets.

"Wheeler Magnet is like sending my child to a private school in a public school setting."

Our parents work with us to create the best environment for our students. Through their support we are able to offer Magnet Socials, Student Luncheons & Parent Coffee's with the Counselor, Freshman Strategies for Success Workshops, Counseling events for parents and students for each grade level every year, and College Tours.



Explore

View all of the Wheeler Clubs & Organizations at <https://goo.gl/1j86Kz>



STEM Certified & STEAM Inspired

The Center for Advanced Studies received STEM Certification from the State of Georgia in October 2012, Re-Certification in April 2016 and is currently seeking STEAM Certification as well. Students have a choice of following a flexible STEM or STEAM track throughout their 4 years in the Magnet Program.

Magnet Capstone Experience

Every graduating senior is required to complete Post AP Advanced Scientific Internship and Research courses. Students secure an internship with a mentor at an off-site research center or business with the guidance of the Internship Coordinator. Students are encouraged to seek STEAM related internships where they are able to be creative, to think critically and to problem solve in a real world environment. With the guidance of the Research Coordinator, students frame and execute independent research related to what is learned at their internship.

While many students conduct research in lab settings at universities such as Georgia Tech, Emory and KSU, others create research correlated to their experience at their internship at local businesses, museums, schools, law firms, medical offices, theatres, nature centers, and government agencies. At the conclusion of their Capstone Experience, students present their professional portfolio and presentation to faculty, mentors, family and peers.

Curriculum by Grade Level

	9 th Grade	10 th Grade	11 th Grade	12 th Grade
Science	Magnet Biology & Magnet Chemistry	AP Physics 1 <i>(Optional)</i> AP Science Magnet Biochemistry Post AP Science	Choose 1 or 2: AP Science BioTechnology Adv Physics/Robotics Aerospace Engineering Chemical Engineering Organic Chemistry	Advanced Scientific Internship & Advanced Scientific Research <i>(Optional)</i> AP Science Post AP Science
Math	Acc Algebra II Geometry A & B or Acc Geometry B/ Algebra II or Honors Geometry & Honors Algebra II	Acc Pre-Calculus	AP Statistics or AP Calculus AB & BC or Honors Calculus	Math Options: AP Statistics Honors Calculus AP Calculus AB & BC Honors Multivariable Advanced Math Topics GT Linear Algebra GT Multivariable
Social Studies	<i>(Optional)</i> Honors World Geography or AP Human Geography	Honors or AP World History	Honors or AP U.S. History	Honors or AP Economics and Government
English	Honors 9 th Lit	Honors World Lit	AP Language/Honors American Lit or Honors American Lit	AP Lit or Honors Brit Lit
Foreign Language	Foreign Language I or Foreign Language II and/or Honors Foreign Language III	Honors or AP Foreign Language Electives <i>(Optional)</i>	Honors or AP Foreign Language Electives <i>(Optional)</i>	Honors or AP Foreign Language Electives <i>(Optional)</i>
Technology & Fine Arts	Magnet Foundational/AP Computer Science Principles	Approved Technology or Fine Arts Course 1 &/or 2	Approved Technology or Fine Arts Course 2 &/or 3	Approved Technology or Fine Arts Course 2 &/or 3
Physical Education			Health/BPE	
Electives	Fine Arts, PE, Career Technology, Social Studies, English, Math, Science, or Foreign Language	Fine Arts, PE, Career Technology, Social Studies, English, Math, Science, or Foreign Language	Fine Arts, PE, Career Technology, Social Studies, English, Math, Science, or Foreign Language	Fine Arts, PE, Career Technology, Social Studies, English, Math, Science, or Foreign Language

"Increasingly, one of our richest sources of employment and economic growth will be jobs that require skills in these areas, collectively known as STEM. The question is: Will we be able to educate enough young Americans to fill them?"

- John Engler, President of Business Roundtable & former governor of Michigan, US News & World Report



Contacts

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