

EARLY COLLEGE PROGRAMS

AT FORT HAYS STATE UNIVERSITY

**KANSAS ACADEMY OF
MATHEMATICS AND SCIENCE**

AND THE
**ACADEMY OF
MATHEMATICS AND SCIENCE**

F H S U





FOR YOU

FOR YOUR FUTURE

AT FHSU'S KANSAS ACADEMY OF MATHEMATICS AND SCIENCE, AND THE ACADEMY OF MATHEMATICS AND SCIENCE, our Kansas roots go deep, but our community—and our academic influence—spans the globe. From the heart of the Midwest, our dedicated faculty and supportive staff equip students to reach higher and achieve more as we build a better future together.

Since 1902, Fort Hays State has invested everything we have in our remarkable students, creating a culture of ongoing success and earning national recognition for our academic programs. More importantly, we have walked alongside generations of graduates, preparing them to excel throughout their lives and careers.

Whatever future you dream of, the first step happens right here.

Start your journey with us at fhsu.edu.

Early College Programs at Fort Hays State University Kansas Academy of Mathematics and Science and the Academy of Mathematics and Science

FOR YOU FROM THE DIRECTOR

Dear students and parents,

On behalf of the Early College Programs staff, I want to express our appreciation for your interest in our program. I hope that you will spend some time reading the material contained in this publication. You will find that we offer a challenging curriculum in a unique learning environment. The experience and knowledge gained from completing one of our academies clearly differentiates students from traditional high school graduates.

Currently, we are able to offer the Kansas Academy of Mathematics and Science experience to 40 Kansas students per class. We are also fortunate to host out-of-state and international students who are housed in our Academy of Mathematics and Science. Students in both academies spend their final two years of high school living and learning on the Fort Hays State University campus. The admissions process is selective and holistic. We are looking for students who are interested in the STEM (science, technology, engineering, mathematics) fields, have a strong work ethic, and are looking for a challenging curriculum. If you are still reading this, chances are we are looking for you!

One of the most exciting aspects of our program is the requirement to conduct academic research alongside Ph.D.-level faculty. Academy students are conducting research in an impressive amount of disciplines across the educational spectrum. For example, we have had students conduct research on biodiesel through the Chemistry Department, chaos theory through the Physics Department, media analysis through the Political Science Department, and precision agriculture through the Agriculture Department. Many of our students have worked with robots, 3-D printing, drones, rockets, lasers, high-altitude balloons, and other cool tools as part of their research.

Students also have the opportunity to participate in national and international research experiences to places like Mammoth Cave in Kentucky, the Bahamas, and Ireland, where they learn field techniques such as mapping, specimen collection, and data analysis. We have had several students submit their research and get selected to present at state, regional, and national professional conferences. Five of our students have even had their research published in peer-reviewed, scholarly journals!

I could fill this entire brochure with the awards and accomplishments that our students have achieved or the amazing opportunities available to Academy students, but I would rather have you visit and see it for yourself. Please contact us and we'll arrange a personalized campus visit so you can see what your life will be like as an Academy student. Visiting students and families will spend a day touring the FHSU campus and will have the opportunity to meet the entire Early College Programs family.



I look forward to seeing you on campus soon,

Dr. Jeanne Sumrall – Interim Director

WITH GROUNDBREAKING PROGRAMS AND AWARD-WINNING PROFESSORS, FORT HAYS STATE UNIVERSITY WILL TRANSFORM YOUR INTERESTS INTO ABILITIES, PREPARING YOU TO EXCEL – WHATEVER YOUR MAJOR AND WHEREVER THE FUTURE TAKES YOU.

Kansas Academy of Mathematics and Science (KAMS)

KAMS is the state of Kansas' premier early-entry-to-college program that allows academically talented and motivated high school juniors and seniors to live at Fort Hays State University and attend a residential academy. KAMS was established in 2006 by the Kansas Legislature with the enactment of Senate Bill 139. The first class of KAMS students enrolled in the fall of 2009. Students receive hands-on research opportunities, leadership development, civic engagement opportunities, and co-curricular activities to develop the whole student. FHSU offers students excellent academics, modern lab facilities, and small classes taught by Ph.D. faculty.

Academy of Mathematics and Science (AMS)

AMS was established in 2018 to accommodate the program's growing international and out-of-state student population. AMS students live on campus in the same residence hall and take the same courses as KAMS students. Students in this program receive their high school diploma from Nickerson High School (Nickerson, Kan.), as well as a completion certificate from the Academy. Students also have the opportunity to complete an Associate of General Studies in Science (A.G.S.) degree from FHSU. Students will receive hands-on research opportunities, leadership development, civic engagement opportunities, and co-curricular activities to develop the whole student. International students considering AMS are encouraged to work with an educational agency in their home country to help make the transition to the program easier for all parties involved.

Fort Hays State University

Fort Hays State University (FHSU), a liberal arts university established in 1902, is located in Hays, Kansas. FHSU recently became the third largest university in the state of Kansas, boasting a total enrollment of 15,100 students, though only 4,600 of those are on campus. This allows for reasonable class sizes, averaging a 17:1 student-to-faculty ratio and 20-25 students per class, and still provides options and opportunities through more than 70 degree programs.

The campus provides many activities, from over 100 student organizations to more than 200 intramural activities. The college also has music and theatre opportunities. FHSU offers many free services to students such as a fully equipped Wellness Center, admission to all FHSU athletic events, tutoring services, mental health counseling, and low cost student health services.

Hays, Kansas

Hays has a population of more than 20,000 and is located halfway between Kansas City and Denver on Interstate 70. The city has a rich history dating back to the Wild West era and includes a former United States Army fort, old Fort Hays.

Hays has many shopping and entertainment options, including unique boutiques in the downtown Chestnut Street District and a mall with an eight theatre movie complex. If you like to be outside, the town has hiking, biking, and fitness trails along with two golf courses and two disc golf courses. Additionally, Hays has a wide range of restaurants from sit-down to fast food with a variety of cuisines.

FOR YOUR HOME AWAY FROM HOME LIVING ON CAMPUS

Academy students are housed on FHSU's campus in Custer Hall. Custer Hall is a co-ed residential hall that is divided by wings and floors and is only occupied by Academy students. The hall has kitchenettes, a lounge area, study rooms, a media room, a recreation room, and laundry facilities.

The residential hall has been equipped with security measures to keep the students safe, including a card fob system which allows Academy students access to specific floors, lounge areas, and the recreation room. There is also a sign in/out system and building and floor curfews. A resident advisor lives on each floor to supervise students and help with the integration into college life. The Custer Hall director, a full-time university staff member, also lives in the building with the students.

There are two cafeterias on campus: McMinder Hall Dining, located across the street from Custer Hall, and the Memorial Union cafeteria, located in the Union on campus. The Memorial Union also offers a Starbucks and Union Station/Tiger Market, which includes Pizza Hut, Tiger Express, Sono, and a soup and salad bar.

STUDENT LIFE

Academy students are encouraged to get involved on campus! There are more than 100 clubs and organizations students can be a part of at FHSU. They can also participate in over 200 different intramural activities. The Academy also has its own clubs and organizations, student programming, and opportunities for national and international travel. These are just a few of the activities that Academy students have participated in:



Agronomy Club
Archery Club
Art Club
Astronomy Club
Big Brothers Big Sisters
Biology Club
Chemistry Club
Chess Club
Christian Challenge
Color Guard
Custer Hall Council
FHSU Chorus
Fort Hays Honor Society
FHSU Intramural Athletic Teams
Fringe Theatre Company

Gay-Straight Alliance
Habitat for Humanity
KAMS/AMS Beta Club
KAMS/AMS Bowling League
KAMS/AMS Hackathon Team
KAMS/AMS Mathletes
KAMS/AMS Robotics Team
KAMS/AMS Rocket Club
Marching/Pep Band
Model United Nations
Nursing Club
Orchestra
Pre-Med Club
Quiz Bowl
Sternberg Geosciences Club
Student Government Association
The Big Event
Young Scholars Coalition



TRAVEL

Places our students and staff have visited for research and/or other academic initiatives:

USA

California
Colorado
Georgia
Kentucky
Louisiana
Michigan
Missouri
New York
Oklahoma
Texas
Washington

Bahamas

China

Ireland (May 2019)

London

Oxford University Summer
Research Experience

South Korea



FOR BEYOND



Runfan Yang

China (Class of 2018)

"My favorite thing about the Academy are the friendships I have made on campus. Everyone here has been so nice, understanding, and very supportive of me and my goals. I have also enjoyed the benefit of having control over my environment. I get to decide my own schedule, which helps me stay energetic and curious about classes and activities. I have even had the opportunity to travel to South Korea, England, and the Bahamas. Being an Academy student has proven to be the best two years of my life, so far!"

SAMPLE CLASS SCHEDULE

Depending on the student's area of interest, they will have the option to take second tier STEM electives as outlined on the next page. Students generally complete over 60 hours of college credit.

Students attending Early College Programs at FHSU have the opportunity to complete an Associate of General Studies (A.G.S.) in Science degree.

JUNIOR YEAR

Fall Semester

Pre-Calculus

University Chemistry I & lab

Earth, space, science research & writing

English Composition I

U.S. history before 1877

Research Seminar

Spring Semester

Calculus I

Principles of Biology & lab

English Composition II

U.S. history after 1877

SENIOR YEAR

Fall Semester

Calculus II

Physics for Scientists & Engineering I

Departmental research & writing

STEM elective

Elective course of interest

Spring Semester

American government

Departmental research & writing

Computer science elective

Social studies elective

STEM elective



Emily Thornton

Lawrence, KS (Class of 2018)

“One of the most amazing things about KAMS is the unique culture it provides. The students in the program challenge and support each other academically, while the university provides many social aspects to keep us all well-rounded. Before attending KAMS, I had a lingering feeling that I could be challenged in more ways than my sending high school could provide. Without a doubt, KAMS was the best solution and the program has proven to suit my academic and social needs.”

COURSE OFFERINGS

AGRICULTURE

- Animal science
- Agronomic crop sciences and lab

APPLIED TECHNOLOGY

- Introduction to computer aided drafting
- Introduction to STEM applications

BIOLOGY

- Botany
- Zoology
- Microbiology
- General microbiology

CHEMISTRY

- University chemistry II and lab
- Organic chemistry I and lab
- Organic chemistry II and lab
- Chemical analysis

COMPUTER SCIENCE

- Computer science II
- Foundations of computing
- Computer operating systems
- Systems architecture
- Java programming

GEOSCIENCE

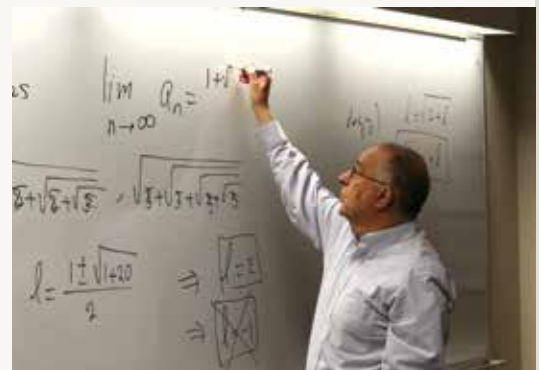
- Introduction to geology
- Historical geology
- Elements of physical geology
- Climatology
- Elementary meteorology
- Introduction to GIS
- Intermediate GIS
- Advanced GIS
- World geography

MATHEMATICS

- Elements of statistics
- Calculus III
- Advanced calculus
- Linear algebra
- Differential equations
- Discrete structure

PHYSICS

- Physics for scientists and engineers II and lab
- Analog and digital electronics
- Modern Physics



FOR YOUR SUCCESS

We know it takes hard work and commitment to achieve academic success. Our award-winning faculty are ready to guide you through our innovative, world-ready programs, and success is closer than you've ever imagined. Create the future as you get hands-on with industry-leading initiatives. Collaborate with professors and peers using the latest in-classroom technology. You will consistently put your classroom knowledge to use as you learn out in the world.



Dr. Paul Adams

Dean, College of Education

"One of the most exciting aspects for Academy students is the opportunity to engage in research with faculty and peers. I have worked with students on engineering projects for high altitude balloons, studying cosmic ray counts, and collecting bacteria from 15 miles up. Our faculty are excellent in mentoring students from a starting question to a final presentation at state, regional, or national meetings. Academy students not only gain a solid foundation in STEM, they get to apply what they are learning to discover more about the world."

RESEARCH

Research is a built-in component of the program's curriculum. This element gives students an important foundation that will enhance the learning experience. While conducting research, students will work with Ph.D. faculty that will mentor and foster a positive environment. Students will gain improved critical thinking and problem-solving skills.

Students have presented their research at the regional and state Intel International Science and Engineering Fair, the American Association of Cereal Chemists Annual Meeting, American Chemical Society meetings, the Kansas Gifted, Talented, and Creative Conference, and the Consortium of Computer Sciences in Colleges Conference, just to name a few.

Sample research topics from former students

- Mobile device application development
- NAO robot programming
- Solar panels
- Sea surface temperatures
- Shark attacks
- Solar flares and solar radiation
- Exoplanets
- Climate change
- Air pollution
- Animal behavior
- Earthquake frequency
- Rocket production and launches
- Drones



COSTS

Tuition, fees, textbooks, and a computer are provided for students currently attending a public school in Kansas. This is provided through state funding and appropriations.

Tuition and Fees (60+ hours)

Paid for by state base aid

Books and Supplies

Provided by state appropriations

Computer

Issued for use during school year

Room and Board

Approximately *\$7,994 per year

Student/family's responsibility

*Subject to change each year. Meal plan includes open access to the McMindes Dining Facility and \$900 in dining dollars to be used elsewhere on campus.

Additional Expenses

Transportation costs and incidentals are the responsibility of the student/family.

Private school, out-of-state, and international students are responsible for all program expenses. See FHSU tuition rates at www.fhsu.edu for additional information. International students are also required to pay for health insurance through FHSU.

SCHOLARSHIPS

As high school students, Academy students cannot qualify for federal financial aid. However, the program does provide a few options for domestic students to assist with the financial obligations of the program:

KAMS Scholarship

Need-based scholarship available to incoming and returning KAMS students. Applications are due by **May 1** of each year. To view and complete the application, please visit www.fhsu.edu/kams

Peter Werth KAMS Scholarship

Available to incoming and returning KAMS students. The scholarship recipient should have the intention to continue their education within the Werth College of Science, Technology, and Mathematics at FHSU. Applications are due by **February 15** of each year.

CURRENT PROGRAM STATISTICS

Average incoming sophomore ACT:

27 composite

Average outgoing senior ACT:

32 composite

Average incoming sophomore GPA:

3.95

Average college hours completed upon graduation:

70

Average college hours taken per semester:

17

Average number of hours studying per week:

35

Approximate total scholarship dollars received by graduating class:

\$1.3 million

AFTER COMPLETION

Upon successful completion of KAMS, students receive a completion certificate from the Academy and a high school diploma from their sending school. Upon successful completion of AMS, out-of-state students receive a completion certificate from the Academy and a high school diploma from their sending school. International students receive a completion certificate from the Academy and a high school diploma from Nickerson High School. Students will have the opportunity to continue their education at FHSU or anywhere in the world. Students will receive assistance with the college application process from the program's assistant director/academic advisor. Depending on where students attend after the program, credits may be transferable.

Colleges where students have been admitted after completing the program:

Adelphi University	Muhlenberg College	University of Colorado – Boulder
Boston University	Nova Southeastern University	University of Connecticut
California Polytechnic State University	Ohio State University	University of Denver
Carnegie Mellon University	Oklahoma State University	University of Detroit Mercy
Case Western Reserve University	Oregon State University	University of Illinois – Champaign, Urbana
Colorado School of Mines	Penn State University	University of Iowa
Cooper Union	Purdue University	University of Kansas
Friends University	Recording Connection	University of Kansas School of Medicine
Fort Hays State University	Reed College	University of Massachusetts – Amherst, Boston, Lowell
Georgia Tech University	Rhodes University	University of Maryland – College Park
Grinnell College	Rice University	University of Miami
Illinois Institute of Technology	Rochester Institute of Technology	University of Michigan
Indiana University	Rockhurst University	University of Missouri – K.C. School of Medicine
Iowa State University	Rose-Hulman Institute of Technology	University of Pennsylvania
Kansas State University	Rutgers University	University of Rochester
King's College – London	Seton Hall	University of Texas – Austin
Lawrence Institute of Technology	Stevens Institute of Technology	University of Washington – Seattle
Lewis and Clark College	St. Louis University	University of Wisconsin
Massachusetts College of Pharmacy & Health Sciences	Stony Brook University	Washburn University
Michigan State University	State University of New York (SUNY) – Albany, Buffalo, Geneseo	Washington University (St. Louis)
Milwaukee School of Engineering	Syracuse University	Wichita State University
Minerva	Texas A&M University	William Jewell College
Missouri S&T University	University of California – Davis, Irvine, L.A., Santa Barbara, Santa Cruz, San Diego	Virginia Tech
Moravian University	University of Chicago	

APPLICATION PROCESS

KANSAS ACADEMY OF MATHEMATICS & SCIENCE

Admission into the KAMS program is evaluated with a holistic view. There are many criteria that are taken into consideration when students are selected:

Cumulative GPA

GPA in relevant classes

ACT/SAT and subsection scores

Class rank

Student essay

Teacher, counselor, and mentor evaluations

Leadership qualities

Maturity and motivation

Requirements to attend KAMS

Must have completed the 10th grade of high school

Receive a score of a 23 ACT/1140 SAT

Successfully complete high school algebra II and geometry

Application Timeline:

Priority deadline for sophomore applications: December 15, rolling deadline thereafter until all KAMS spots are filled.

Early admission opportunity for high school freshmen is available anytime.

Preparing for KAMS:

To be considered for this opportunity, students can prepare ahead of time by doing the following:

Take ACT/SAT in fall of sophomore year or earlier

Complete pre-calculus and chemistry, if possible

Complete trigonometry, if possible

Complete all physical education and foreign language credits

Complete all high school specific credits

Apply for early admission as a freshman in high school

To view and download a copy of the application, visit www.fhsu.edu/kams

ACADEMY OF MATHEMATICS & SCIENCE

Admission into the AMS program is evaluated with a holistic view. There are many criteria that are taken into consideration when students are selected:

Must have completed the 10th grade of high school

Completion of algebra II and geometry

Minimum TOEFL scores (international students only):

Paper-based test score of 540 or

Computer-based test score of 220 or

Internet-based test score of 70 (out-of-state students follow KAMS admission requirements)

Application Timeline:

Priority deadline of February 1, rolling deadline thereafter until all AMS spots are filled.

To view and download a copy of the application, visit <https://fhsu.edu/ams>.

CHECKLIST

KANSAS ACADEMY OF MATHEMATICS AND SCIENCE

✓ Attend an information session

A session will be scheduled at a location near you. To find dates and locations visit: <http://www.fhsu.edu/kams/Information-Sessions/>

✓ Visit campus

A personalized campus visit may include a campus and facility tour, private meeting with staff members, and visitation of a class with current Academy students.

To schedule an individual campus visit, please call 785-628-4690.

✓ Take the ACT/SAT

A score of a 23 ACT/1140 SAT or above is a requirement for admission into the KAMS program.

✓ Preview Day

Attend KAMS Preview Day in late fall. This is a great opportunity to see what your life would be like as a KAMS student. Register online at www.fhsu.edu/kams/Preview-Day.

✓ Complete the Application Process

Complete Session 1 (online) at www.fhsu.edu/kams

Complete the short answer and personal essay

Complete extracurricular activities, awards and honors, and courses

Parent or guardian statement

Certification of accuracy page

Teacher/mentor evaluations

Send official high school transcript

Send ACT student report

✓ After you have been accepted to KAMS:

Apply to FHSU online

Attend KAMS Pre-Enrollment Day on campus (early spring)

Apply for KAMS Scholarship and other scholarships

Submit housing contract

✓ Fees associated with KAMS once admitted to the program:

\$30 application fee to FHSU

\$60 pre-enrollment registration fee

\$40 housing application deposit

CHECKLIST

ACADEMY OF MATHEMATICS AND SCIENCE

✓ After you have been accepted to AMS

Complete your application to FHSU

Complete international undergraduate and
ESL application at www.fhsu.edu

Submit housing contract

✓ Budget for fees associated with AMS once you have been admitted to the program (other than tuition and room & board):

\$50 international application fee to FHSU

\$60 pre-enrollment registration fee

\$40 housing application deposit

\$300 one-time matriculation fee

Health insurance (required)

Text books and laptop

✓ Additional items

Get transition support

Find an international student agency in your local
area to work with (not required, but suggested for an
easier transition). Suggestions for agencies can be
found at www.fhsu.edu/ams

Take the TOEFL Exam

Paper-based test score of 540 or

Computer-based test score of 220 or

Internet-based test score of 70

Complete VISA interview by May 31

Figure transportation costs to Hays



Brennan Wald

Newton, KS (Class of 2018)

“This program has allowed me to get a head start on my college career. I get to learn how to study for college, without technically being in college yet. The Academy has given me a great start on life, in general. I have succeeded in more ways than I ever thought I would, and much of that is to the credit of the great professors on campus, the program’s staff, and the friends I have made along the way; along with some diligent studying and hard work in the classroom.”

NOTABLE ALUMNI



Nyasha Maforo

Winfield, KS

KAMS Class of 2012

Fort Hays State University Class of 2015

Pursuing her Ph.D. in medical physics
at UCLA



Rachel Schmidt

Atchison, KS

KAMS Class of 2012

Fort Hays State University Class of 2014

Pursuing her M.D. at the University of Kansas
School of Medicine



Michael Cory

Wichita, KS

KAMS Class of 2015

University of Kansas Class of 2017

2015 KU Beckman Scholar

KU Scientific Journal Club Founder

Pursuing his Ph.D. in biochemistry
and molecular biophysics at
the University of Pennsylvania



Norelia Ordonez-Castillo

Goodland, KS

KAMS Class of 2017

Fort Hays State University Class of 2018

Attained early admission to the University of
Kansas School of Medicine at the age of 19.

CONTACT INFORMATION

EARLY COLLEGE PROGRAMS OFFICE

785-628-4690
www.fhsu.edu/kams
www.fhsu.edu/ams
kams@fhsu.edu
ams@fhsu.edu

FORT HAYS STATE UNIVERSITY
 EARLY COLLEGE PROGRAMS
 CUSTER HALL 241
 600 PARK STREET
 HAYS, KS 67601

HERE TO HELP YOU – KAMS/AMS STAFF



Interim Director

Dr. Jeanne Sumrall
jsumrall@fhsu.edu
 785-628-5973



Assistant Director (KAMS)

Will Burns
wlburns@fhsu.edu
 785-628-4709



Assistant Director (AMS)

Sherri Matlock
sdmatlock@fhsu.edu
 785-628-4573



Financial Administrator

Ann Noble
amnoble@fhsu.edu
 785-628-5449



Coordinator for Marketing & Recruitment

Abby Anderson
aeanderson2@fhsu.edu
 785-628-4719



Personal Counselor

Amanda Brown
albrown13@fhsu.edu
 785-628-4571



Administrative Assistant

Melissa Mayers
mjmayers@fhsu.edu
 785-628-4690

SCHEDULE A CAMPUS VISIT

785-628-4690

APPLY NOW

fhsu.edu/kams or fhsu.edu/ams



FHSUKAMS



fhsuKAMS



FORT HAYS STATE UNIVERSITY
 KANSAS ACADEMY OF MATHEMATICS
 AND SCIENCE

Forward thinking. World ready.



FORT HAYS STATE UNIVERSITY
 ACADEMY OF MATHEMATICS AND SCIENCE

Forward thinking. World ready.