



Early College Information Session

Associate of Science, General Engineering

Associate of Arts in Teaching, Elementary Education/Elementary
Special Education

Globe Hall - High Technology and Science Center
Germantown Campus
November 13, 2019



EC



Additional Information

Program information, including a copy of presentation, can be found at:

www.montgomerycollege.edu/early-college

<https://montgomeryschoolsmd.org/curriculum/partnerships/dual-enrollment.aspx>

[From the MCPS Home Page, search “Dual Enrollment” and click on the first result. The Early College information is in the middle of the page.](#)

Career and Postsecondary Partnerships → Dual Enrollment



DUAL ENROLLMENT: MCPS AND MONTGOMERY COLLEGE (MC) PARTNERSHIP

Introduction and Overview

MCPS and MC have partnered to provide Dual Enrollment opportunities to college ready students at all high schools as well as Middle and Early College options.

Dual Enrollment opportunities allow MCPS college ready high school students to take college courses during the academic school year. High school students who enroll and take a college course at any Maryland public college or university are able to do so at a reduced cost.

If students select to take courses at MC, and meet qualifications for and separately apply for the MC High School Grant, they may be able to take college courses at no tuition cost. Students are able to take college courses offered on the high school campus (at select high schools), on a

Early College (EC) at Montgomery College

- MCPS and Montgomery College (MC) collaboration which provides the opportunity for students from multiple high schools to complete their high school graduation requirements on an MC campus and begin their college career.
- MCPS students will complete their Maryland State high school diploma requirements while simultaneously earning an Associate of Science or an Associate of Applied Science degree from Montgomery College.
- Early College students will take their first year of college classes together as a cohort. In the second year in the program, students will continue to take most of their classes with the Early College cohort, however, may also take elective courses with other MC students.
- The students will not take any classes at the high school. They will be fulltime college students taking all of the coursework for the 11th and 12 grade years on the MC campus.
- The MC A.A., A.S., A.A.S and A.A.T. degrees earned will transfer to a four-year institution within the state of Maryland and provide an opportunity for Montgomery County to support current students while building a future workforce. By creating a pathway from MCPS, to MC, to a bachelor's degree, and then back to the Montgomery County workforce.

Assumptions & Admission Requirements

Assumptions

- ✓ Students have met or are near completion of fulfilling their SSL hours.
- ✓ Students have successfully completed all 9th and 10th grade classes as outlined on the degree pathways including P.E.
- ✓ Students must earn grades of “C” or higher in their college classes in order to maintain eligibility to remain in the program. Grades of “C” or better are crucial as this may affect transferability of credits, students ability to receive future federal financial aid and satisfying prerequisites for future college classes.
- ✓ With the help of their Early College Coordinator, students will research transfer opportunities to determine appropriate admission application process and transferability of their credits.

Admission Requirements

- ✓ Students have taken their mathematics and English state assessments.
- ✓ Have an unweighted MCPS cumulative G.P.A. of 2.75 or higher at the end of 10th grade.
- ✓ Complete the MCPS Application, the MCPS Early College Application and the Montgomery College Admissions Application.
- ✓ Participate in the Summer Transition program: Monday-Friday, 9 a.m.-noon, **July 6 - July 31** on the Rockville Campus (General Engineering) or Germantown Campus (Elementary Educ/Elementary Special Educ).
- ✓ Meet assessments into individual Early College programs.

A.S. in General Engineering Early College Degree Program



Engineering Program @ Montgomery College

- ▶ Largest Engineering Transfer Program in the Country
- ▶ Encompasses Nine Tracks: Aerospace, Bioengineering, Chemical, Civil, Computer, Electrical, Fire Protection, Mechanical, and General
- ▶ Over 1000 students in the program
- ▶ All our courses transfer to four-year institutions

MC MONTGOMERY COLLEGE

**GENERAL ENGINEERING AREA OF
CONCENTRATION, ENGINEERING SCIENCE AS: 410**
Total Credits: 63
Catalog Edition: 2019-2020

Program Description
This curriculum is designed to provide the first two years of a four-year program leading to the award of a BS in engineering. A student planning to transfer to any baccalaureate degree granting institution should follow the appropriate area of concentration listed below in consultation with an engineering advisor. The student should also visit the Montgomery College Engineering Advising website <http://www.montgomerycollege.edu/engineeringadvising> for up-to-date comprehensive information on transfer requirements for all universities and colleges with which we have an articulated transfer program.

Completion of all requirements for any area of concentration in engineering science will lead to the award of the AS in engineering science.

This area of concentration will prepare students to transfer to a four-year university with a major in general engineering. Specific requirements in colleges vary, and the student preparing for a particular institution may, with approval, change the sequence listed below. A suggested course sequence for full-time students follows; all students should consult an engineering adviser. The student should also visit the Montgomery College Engineering Advising website at <http://www.montgomerycollege.edu/engineeringadvising> for up-to-date comprehensive information.

Program Outcomes
Upon completion of this program a student will be able to:

- Identify, formulate, and solve basic physics and engineering problems in the areas they choose their elective coursework
- Make basic designs of systems in their area of choice using analytical and numerical methods
- Use appropriate computer application software in engineering

Program Advisors

Germanstown

- Dr. Charles Kung, 240-567-7799, Charles.Kung@montgomerycollege.edu
- Prof. Monica Mallini, 240-567-1837, Monica.Mallini@montgomerycollege.edu

Rockville

- Prof. Craig Mogren, 240-567-5237, Craig.Mogren@montgomerycollege.edu
- Dr. Donald Day, 240-567-5235, Donald.Day@montgomerycollege.edu
- Dr. Allen Hou, 240-567-7808, Chienmales.Hou@montgomerycollege.edu

Takoma Park/Silver Spring

- Dr. Man Nam, 240-567-1433, Man.Nam@montgomerycollege.edu

For more information, please visit <https://www.montgomerycollege.edu/engineeringadvising>
To view the Advising Worksheet, please visit <https://www.montgomerycollege.edu/documents/consulting-and-advising/advising-worksheet/current-catalog-410.pdf>

2019-2020

Program Advising Guide

An Academic Reference Tool for Students

410

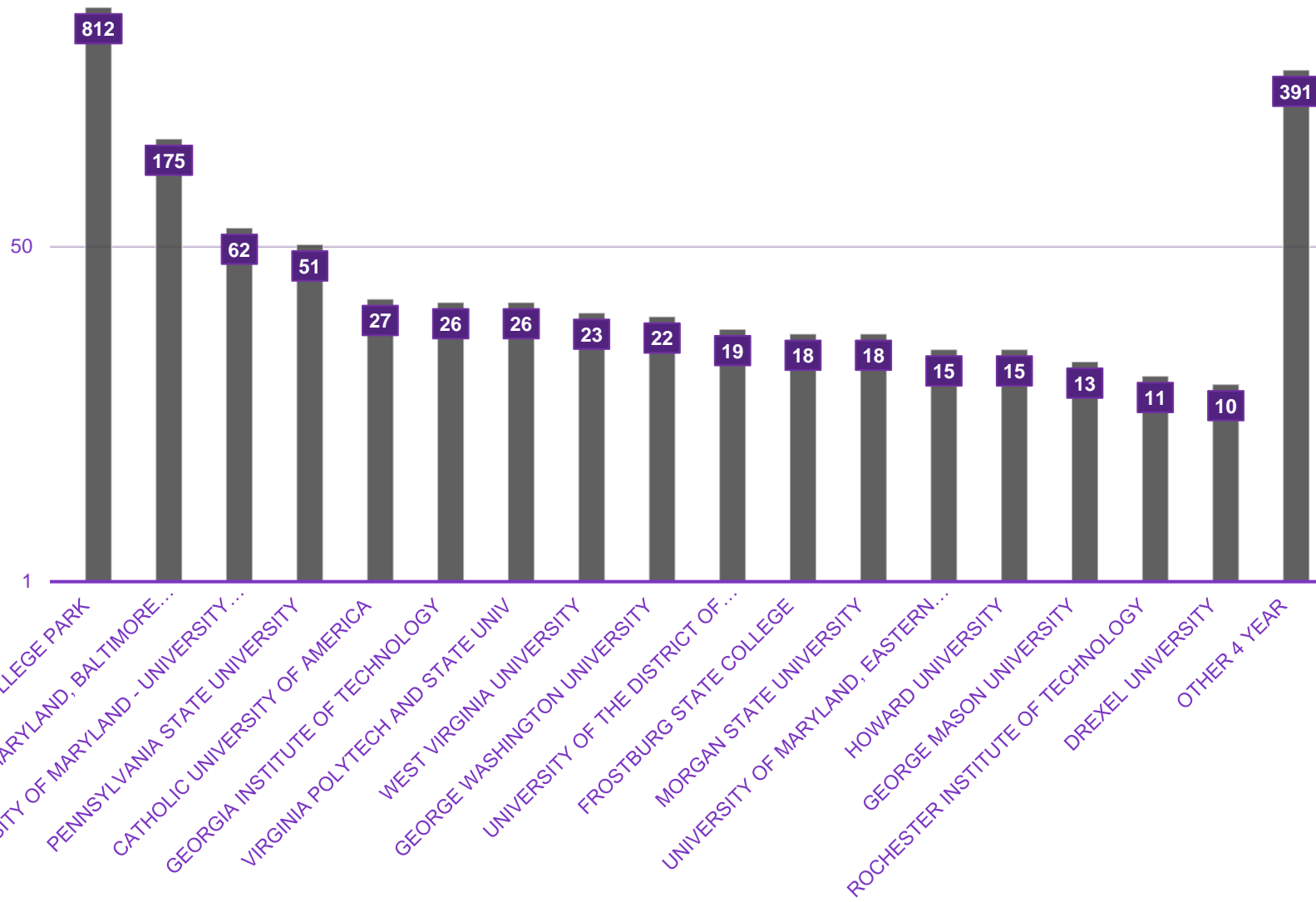
GENERAL ENGINEERING AREA OF CONCENTRATION, ENGINEERING SCIENCE
ASSOCIATE OF SCIENCE: 410

GENERAL ENGINEERING AREA OF CONCENTRATION, ENGINEERING SCIENCE AS: 410	
Suggested Course Sequence A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.	
First Semester <ul style="list-style-type: none"> • CHEM 151 - Principles of Chemistry I 4 semester hours (NSLD) • ENES 100 - Introduction to Engineering Design 3 semester hours (NSND/GEEL) • ENGL 101 - Introduction to College Writing 3 semester hours * • MATH 181 - Calculus I 4 semester hours (MATP) • Humanities distribution 3 semester hours (HUMD) 	Second Semester <ul style="list-style-type: none"> • ENGL 102 - Critical Reading, Writing, and Research 3 semester hours (ENGF) • MATH 182 - Calculus II 4 semester hours • PHYS 161 - General Physics I: Mechanics and Heat 3 semester hours (NSND) • ENES/ENEE elective 3 semester hours • Behavioral and social sciences distribution 3 semester hours (BSSD) **
Third Semester <ul style="list-style-type: none"> • MATH 280 - Multivariable Calculus 4 semester hours • PHYS 262 - General Physics II: Electricity and Magnetism 4 semester hours (NSLD) • ENES/ENEE elective 3 semester hours • Behavioral and social sciences distribution 3 semester hours (BSSD) ** 	Fourth Semester <ul style="list-style-type: none"> • MATH 282 - Differential Equations 3 semester hours • PHYS 263 - General Physics III: Waves, Optics, and Modern Physics 4 semester hours (NSLD) or elective • Program electives 6 semester hours † • Arts distribution 3 semester hours (ARTD)

Examples of A.S. in General Engineering Transfer Opportunities



Engineering Transfers to Four Year Schools 2013-2017



Career Opportunities

- Aerospace Engineer
- Agricultural Engineer
- Automotive Engineer
- Biomedical Engineer
- Chemical Engineer
- Civil Engineer
- Computer Engineer
- Drafting and Design Engineer
- Electrical Engineer
- Environmental Engineer
- Geological Engineer
- Marine Engineer
- Mechanical Engineer
- Petroleum Engineer

MC Engineering Alumni Workplaces in Montgomery County

Bethesda



GENERAL DYNAMICS
Mission Systems

Gaithersburg



Montgomery Village



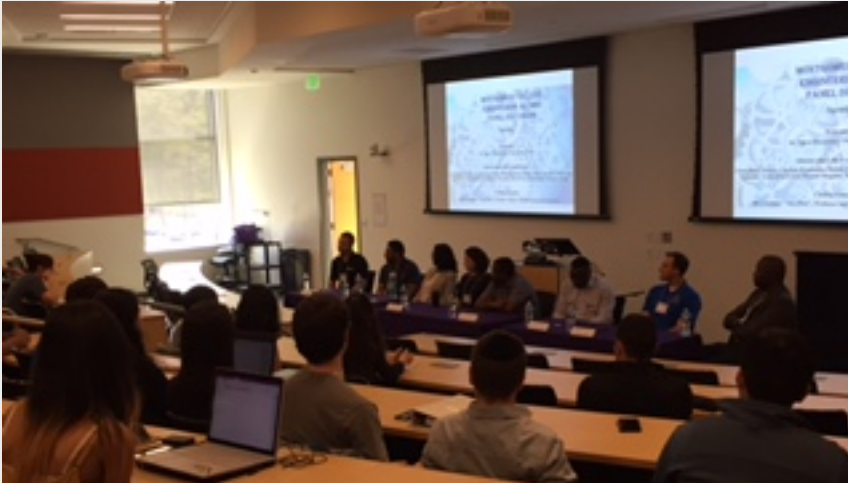
Silver Spring



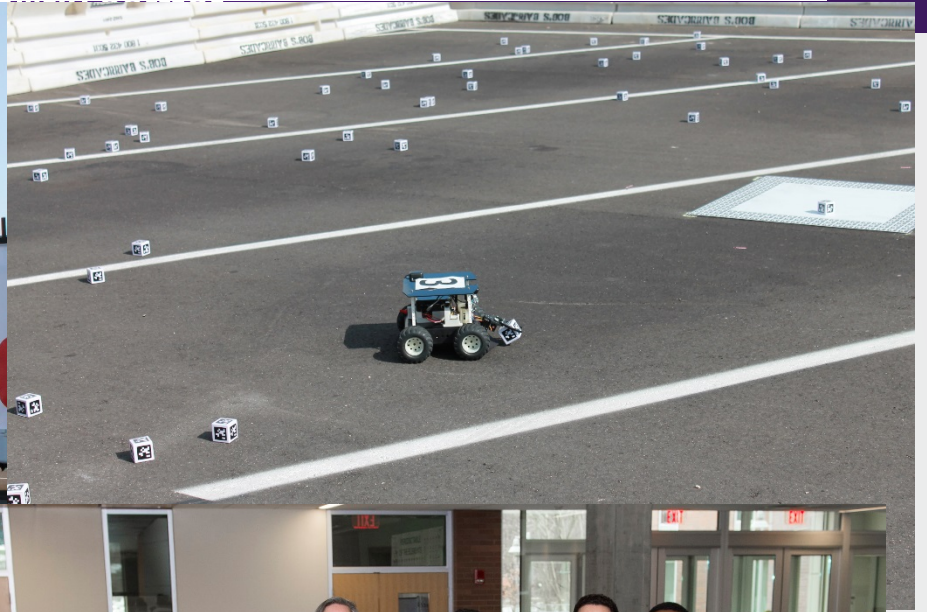
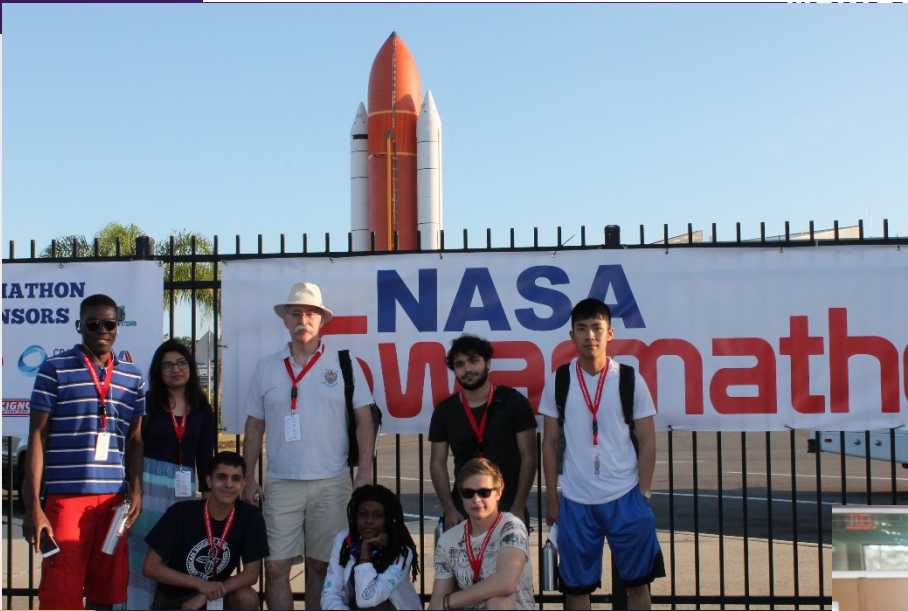
Rockville



Engineering Alumni Events



Montgomery College Student Team Wins National Competition at NASA Kennedy Space Center in 2017!





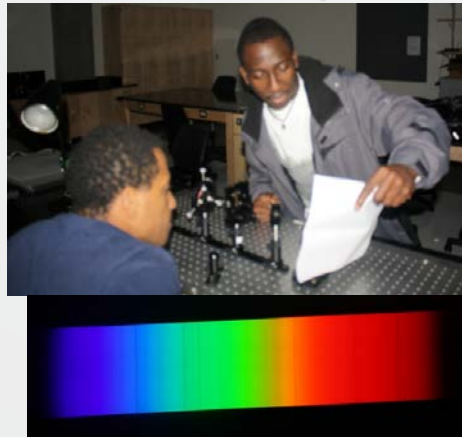
MONTGOMERY COLLEGE



MC Students Take Second Place @ Robotics Competition in Philadelphia



MC Students Win Science Observation Award @ National Student Solar Spectrograph Competition



A.A.T. in Elementary Education/Elementary Special Education Early College Degree Program



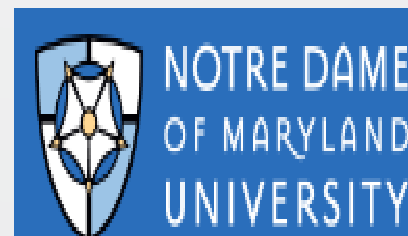
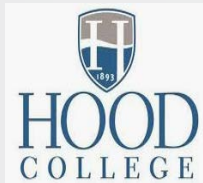
What is the Associate of Arts in Teaching (AAT)?

- An associate's degree which meets the first two years of a four year bachelor's degree in teacher education
- The degree can transfer to any Maryland four year state college or university
- This programs places you in the classroom early in your coursework (field experience) in Montgomery County Public School
- This program provides additional supports as part of the CREATE (Culturally Responsive Educators Aspiring for Teaching Excellence) Teacher Cohort Program

Culturally Responsive Educators Aspiring for Teaching Excellence (CREATE Cohort)

- Provide flexible, culturally-appropriate education
- Meet with a mentor for academic and Social Support
- Attend skill building sessions for testing requirements
- Embedded support and access to all Montgomery College services
- Collaborate with external partners and transfer institutions

Transfer Opportunities for A.A.T in Elementary Education/Elementary Special Education



Career Opportunities in Teaching Elementary Education/Elementary Special Education

- Substitute Teacher
- ParaEducator
- Lead Teacher in Child Development Centers

Mr. Safiullah Rifai

Year Two Early College
A.S. Mathematics Student

EC² Program Cost to Student

Cost of degree program including tuition, fees and instructional materials to a non-Early College program student	\$12,700
Approximate cost of program paid by MC & MCPS	\$ 9,920
Approximate cost of program to student (MC fees)	\$ 2,724 (average of \$681 per semester)
Approximate cost of program to student who is FARMS eligible	\$ 0

- Early College students are not eligible for federal financial aid. However, students may apply for Montgomery College High School Grant funds to cover portions of their fees as these funds are available. For more information on the MC High School Grant, go to the *Dual Enrollment Tuition, Fees and Financial Assistance* page at:
<http://cms.montgomerycollege.edu/EH DU/Department2.aspx?id=50732>
- **Transportation:** MC students can use Montgomery County Ride On bus service with their student photo ID and current term registration sticker as well as having access to the MC inter-campus shuttle system. MCPS does not provide bus service.

A.S. or A.A.T. Degree Approximate Tuition: Early College *versus Traditional Tuition*

Program	Required Years After High School	Total Tuition, Fees & Books for Degree
UMD College Park <i>Bachelor of Science degree</i>	4	\$47,116 (\$43,116 tuition & fees + \$4,000 instructional materials)
Montgomery College <i>A.S. or A.A.T. degree</i> plus UMD College Park <i>Bachelor of Science degree</i>	4	\$36,148 (MC: \$12,700 + UMD: \$23,558)
Early College at Montgomery College <i>A.S., or A.A.T. degree</i> and UMD College Park <i>Bachelor of Science degree</i>	2	\$26,282 <u>or a savings of \$20,834</u> (EC at MC: \$2724 + UMD 2yrs. at \$22,558)

Engineering and Teaching - Time to Completion

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Traditional Path								
	4 years to high school diploma				4 years to baccalaureate (bachelor) degree			

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Early College Path								
	2 years of high school		2 years to high school and 2 year degree		2 years to baccalaureate (bachelors) degree		2 years to post-baccalaureate (Masters) degree	

General Education Requirements

- Almost all colleges and universities require a set of general education or core courses. General Education courses are part of all Montgomery College associate degree programs.
- In these courses, students develop a foundation of skills, knowledge, and values, across a spectrum of topics, that prepare students for success in their future educational pursuits as well as in their personal and professional lives. These are courses that are taken in addition to those courses that are required for the major or degree program.
- Students will take classes in writing, humanities, science, and behavioral and social science as part of their general education requirements.
- The General Education coursework will transfer to University System of Maryland (USM) 4-year institutions as well as to most colleges and universities.



Early College Program Academic Support

Mandatory Summer Transition Program

All Early College programs with the exception of Health Science students:

July 6-July 31, 2020

Monday-Friday, 9 a.m.- noon

On the campus where the Early College degree program will be offered

Health Science students take BIOL 150 course: July 6-August 11, 2020

Monday-Thursday 9 a.m.-1:00 p.m.

On the Takoma Park/Silver Spring Campus

Early College Program Summer Academic Support

Purpose of the Mandatory Summer Transition Program

EC students will be prepared to meet the demands of college by bridging the gap between high school and college and facilitate student readiness for college. In addition to improving their math readiness, students will also:

- Prepare for specific degree college mathematics curriculum
- Health Science students will take their first required MC class; BIOL 150
- Learn how to access campus resources and services
- Discover new study and time management skills and improve team-building and problem-solving skills
- Become familiar with the campus and student organizations and clubs
- Understand graduation requirements
- Increase knowledge of MC policies/procedures

Additional Academic Support

Ongoing Services & Support:

- Students are highly encouraged to begin preparing for the college assessment testing right now by using the **Khan Academy** to increase English and Mathematics skills.
- Embedded coaches working with specific Early College courses.
- Early College Academic Coordinator located on each campus will be available to assist students with advising, course registration, connect students to services, transfer questions, etc.

Germantown and Rockville Campus Academic Support

- Rockville Campus Ackerman Learning Center: Math & Science support center with services including tutoring, current textbooks, calculators, review sessions, and a computer lab.
- The Math, Accounting, Physics, and Engineering Learning Center (MAPEL) at the Germantown Campus is a friendly learning environment. Services provided include tutoring, calculator rentals, a computer lab, text books/solution manuals, and other study materials.
- Embedded coaches work to support specific English, mathematics and science Early College courses.
- Early College Academic Coordinator is available on each campus to assist students with advising, course registration, connect students to services, transfer questions, etc.
- Campus Writing Center: Services include in-person and online one-to-one tutoring, specialized workshops, PC and MAC computers, Microsoft Office suite and various resources assigned by faculty.

Disability Support Services

- **DSS provides accommodations and supports for qualified students with documented disabilities college-wide.**
 - **Services that students received through an IEP or 504 plan at MCPS do not convey to college.**
 - **Students should apply for college services at least one month prior to the start of their classes.**
- ✓ **Contact the Rockville Campus DSS office on 240-567-5058 or the Germantown Campus DSS office on 240-567- 7770.**

Next Steps

- A link was sent via Connect Ed to all initially qualified Grade 10 students who must complete the **MCPS Interest Application** (*google doc*) by **December 2, 2019 deadline**. The Interest Application link is also on the Dual Enrollment/Early College webpage.
- Eligible and Non-Eligible students will be informed of status by MCPS by **mid-December, 2019**.
 - Eligible students will receive an email with further instructions.
 - They will be asked to complete the **MCPS Early College Application Form** and **Montgomery College Admissions Application**.
 - Both of these applications must be submitted by **Friday, January 3, 2020**.
- Eligible students will be contacted by their high school and scheduled to take the College Board ACCUPLACER assessment by **February**.
- All Eligible students who meet the program requirements will be provisionally accepted to the summer transition program pending final grades and MCAP and state assessment scores and will be notified by **mid-April**.
 - NOTE: If there are more eligible students than seats, a lottery will be held and students will be informed of their status.
- Attend and satisfy requirements of the Early College Summer Transition program, July 6-July 31, and assess into appropriate math course for degree option.
- Mandatory new student meeting will be held the **week of August 24th** with the **fall 2020 semester courses beginning on Monday, August 31, 2020**.

Contact Information

General questions about the Early College experience, contact Amy Crowley at: amy.crowley@montgomerycollege.edu

Questions on the **application process**, contact Mike Sullivan at:
Michael_P_Sullivan@mcpsmd.org

For questions on the A.S. degree in General Engineering, please contact Nawal Benmouna at: nawal.benmouna@montgomerycollege.edu

If you have questions on the A.A.T. in Elementary Education/Elementary Special Education degree program, please contact Zeporia Smith at: zeporia.smith@montgomerycollege.edu

Questions about **Disability Support Services**, contact Sue Haddad at: sue.haddad@montgomerycollege.edu