

# SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) CAPSTONE

**Mission:** *The S.T.E.M. Capstone Program provides students with the knowledge and skills necessary to be successful problem-solvers in careers and post-secondary learning. Students in this capstone will have opportunities to work collaboratively in cross-curricular activities as they are prepared to study, analyze, and apply scientific principles, theories, and methods to potential future careers and post-secondary learning involving science, technology, engineering, and mathematics.*

**ENGINEERING AND TECHNOLOGY: Construction Technology and Management, Engineering Science** These capstones prepare students for a career in engineering, manufacturing, construction management, or the aerospace industry.

**SCIENCE AND MATHEMATICS: Environmental Science, Geophysics, Medical Science, and Mathematics** these capstones prepare students for further study toward careers in the healthcare industry, bioscience, biomedical technology or related science careers.

## What is your passion?

agriculturist	anthropologist	air-traffic controller	architect
biologist or ecologist	doctor	broadband technician	chemist
toxic material technician	nurse	lobbyist	construction manager
forensic specialist	environmental designer	estimator	forestry technician
geologist	astronomer	laboratory technician	zoologist
land surveyor	landscape architect	park ranger	meteorologist
marine biologist	engineer	physician's assistant	paleontologist
physical therapist	sound technician	urban planner	teacher
sports trainer	physicist	statistician	mathematician

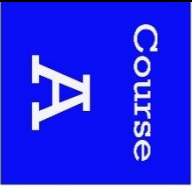



## We Have a CAP for That!

*The following charts explains the process for identifying and completing a Capstone Certification in the S.T.E.M. Capstone Program . Use this guide as an example to complete the form on page 39.*



Science, Technology, Engineering & Mathematics Capstone Process			Sample
1. Identify your passion:			medicine
2. Create your pathway: Choose <b>three</b> classes from any of the lists STEM courses below that relate to your passion and future career goals. Some Capstones may have specific course sequences. Courses from other capstone programs can be used as well. Your Capstone teacher can assist you with this process.			
<b>Environmental Science</b> Environmental Science Honors Chemistry AP Environmental Science  <b>Medical Science</b> Honors Physics Honors Chemistry AP Chemistry AP Biology Anatomy and Physiology  <b>Mathematics</b> Precalculus Honors Precalculus Statistics and Math Modeling AP Statistics AP Calculus Multivariable Calculus / Differential Equations	<b>Geophysics</b> Honors Chemistry Honors Physics AP Environmental Science Astronomy  <b>Computer Science</b>  Computer Programming 1 AP Computer Science 2 JAVA Computer Programming 3 Foundations of Computer Science	<b>Construction Technology</b> Advanced Technological Applications Advanced Design Applications Edison Center Courses  <b>Engineering Science</b> Foundations of Technology	a. Honors Physics
			b. Honors Chemistry
			c. Anatomy & Physiology
			Alt: AP Biology
3. Choose a STEM Capstone Class: Computer Programming 3 Internship (Single Period) Internship (Double Period) Internship (Triple Period)			Internship
---- OR ---- Identify an independent Capstone Experience and a Blake staff member who will mentor you. Complete a Capstone Experience such as, but not limited to:			-----OR-----
Capstone Research Project Intel Talent Search Mathletes Environmental Club Internships	Chesapeake Bay Foundation Chesapeake Audubon Maryland Sea Grant National Institute Of Environmental Health	Construction Management and Materials Plan  Coursework at Montgomery College  College and Career Research  Edison Center courses	Intel Talent Search

# BLAKE CAPSTONE PLANNING CHART

Identify your chosen Capstone:	
<b>1. Identify your passion:</b>	
<b>2. Construct your pathway:</b> Choose <b>three</b> courses from your chosen Capstone. Be sure to follow the guidelines for choosing your courses. Some Capstones may have specific course sequences. Your Capstone teacher can assist you with this process.	
	<p style="text-align: center;">+</p> 
	<p style="text-align: center;">+</p> 
	<b>Alternate</b>
<b>3. Choose a Capstone Class:</b>	
<b>OR</b> <b>Identify an independent Capstone experience and a Blake staff member who will mentor you and complete a Capstone experience.</b>	<p style="text-align: center;">or</p> <p style="text-align: center;">=</p> 