



STEM Division's 8th annual STEM Week connects students to opportunities, academic pathways, and careers in Science, Technology, Engineering, and Mathematics.

Explore STEM fields and careers through research talks, career panels, fun hands-on activities and demonstrations, and a field trip; prepare for your success in the skill-building workshops, information panels on scholarships and college resources; and get crucial tips for success and overall wellbeing.

Students—attend two or more sessions and receive a digital certificate!

There will be a **raffle** for a gift in every session.



MONDAY 3/6

10-11 a.m. Chesapeake Hall, Rm. 309 | [Click here](#)

STEM Week – Planting for Success!

Prof. Deborah Bowles (PGCC)

11 a.m.–12 p.m. Ctr. For Adv. Technology, Rm. 135

Attacker Tools & Techniques: A Hands-On Approach to Reconnaissance Using Open-Source Tools

Dr. Leveque T. Levec, Ph.D. (PGCC)

12-1 p.m. Chesapeake Hall, Rm. 309 | [Click here](#)

Building the Future of Science Together: Research and Paid Internships Opportunities for You

Ms. Tiffany Lukis and Team (AstraZeneca)

1-2 p.m. [Click here](#)

Panel: PGCC Resources for Your Success

Prof. Marcia Dowson-Moser (PGCC); Prof. Lisa Maranto (PGCC); Prof. Veronica Seward (PGCC)

2-3 p.m. Chesapeake Hall, Rm. 109

Student Posters

STEM Students; Dr. Paria Parto, DVM, Ph.D. (PGCC)

3-4 p.m. [Click here](#)

Reptile & Amphibian Conservation in the Southeastern United States

Dr. Christopher Schalk, Ph.D. (USFS)

4-5 p.m. Chesapeake Hall, Rm. 109

De-Colonizing Mathematics

Prof. James Gaines (PGCC)

5-6 p.m. [Click here](#)

Panel: Engineering Alumni

Mr. Chukwudubem Azih, AEROSPACE (NOAA); Ms. Martha David, BIOMEDICAL (JHU); Mr. Felix Forcho, CHEMICAL (Cognizant); Mr. Mike Sunderman, ELECTRICAL (UMD)

TUESDAY 3/7

10-11 a.m. [Click here](#)

Career Opportunities at the Naval Research Laboratory

Superintendent Michael Walder (NRL)

11 a.m.–12 p.m. [Click here](#)

Keeping You on the RISE at Morgan State University: Opportunities in Chemistry and Beyond

Dr. Pumptiwitt McCarthy, Ph.D. (MSU); Grace Nyambura (MSU)

12-1 p.m. [Click here](#)

Panel: We have SCHOLARSHIPS!

Prof. Lindsey Dodson, J.D. (PGCC); Ms. Stacey Holloway (PGCC); Ms. Kimberly Johnson (PGCC); Ms. Tara McNair (PGCC)

1-2 p.m. Ctr. For Adv. Technology, Rm. 135

Hunter or Farmer in the IT Work Environment

Prof. Luis Castellanos (PGCC)

2-3 p.m. Chesapeake Hall, Rm. 109

Fair Division: The Mathematics of Sharing

Prof. Andy Jones (PGCC)

3-4 p.m. Chesapeake Hall, Rm. 114 | [Click here](#)

Crafting a Personal Statement

Prof. Michelle Klein (PGCC); Prof. Paul Assanah (PGCC)

4-5 p.m. [Click here](#)

NASA - Big Challenges, Bold Solutions

Dr. Jonathan Ransom, Ph.D. (NASA LaRC)

5-6 p.m. [Click here](#)

Panel: Careers in Chemistry

Dr. Luigi Alvarado, Ph.D. (10xgenomics); Dr. Brittani Barber, Pharm.D. (MedStar); Dr. Leah Dodson, Ph.D. (UMD); Dr. Mark Wallace, Ph.D. (WRGC)

WEDNESDAY 3/8

10-11 a.m. [Click here](#)

Applying For Pharmacy Schools

Ms. JuliAna Brammer (UMB)

11 a.m.–12 p.m. [Click here](#)

Panel: Cybersecurity Alumni

Prof. Patricia Okorie (PGCC) and PGCC Alumni: Laique Alhassan (Lean-Agile); Lucy Samuel (Cisco)

12-1 p.m. [Click here](#)

Résumé, Interview, and Dressing for Success

Dr. Paul Van Cleef, Ed.D. (PGCC)

1-2 p.m. Chesapeake Hall, Rm. 309 | [Click here](#)

Engineering for Fire Safety

Dr. James Milke, Ph.D. (UMD)

2-3 p.m. [Click here](#)

Panel: Benefits of Student Organizations

Dr. Godson Chukwuma, Ph.D. (PGCC); Dr. Lorraine Clarke, Ph.D. (PGCC); Prof. Tracy Ring (PGCC); Prof. Bekki Zeigler (PGCC)

3-5 p.m. [Click here](#)

Panel: Careers in Science

Mr. Dale Allen, PharmD Candidate (UNC); Ms. Katerina Goffigan, MSN, RN (UMD); Mr. Brendan Little (WRA); Ms. Thien Kim Tran Trinh, PharmD Candidate (UMB); Arya Vakshori, RDMS (JHH); Dr. Alisha Williams, M.D. (WHH); Dr. Natalie Williams-Bouyer, Ph.D. (UTMB)

5-6 p.m. [Click here](#)

LSAMP@UMD

Ms. Migdalia Maldonado (UMD)

THURSDAY 3/9

10 a.m. – 5 p.m.
Chesapeake Hall Rm. 109 (Limited Seats) | [Click here](#)

STEM-On-The-Go Experience

Mr. Mike Harris (TIES)

Registration required.

10-11 a.m. Ctr. for Perf. Arts, Rm. 105-ACE | [Click here](#)

STEM Internship Application Process

Ms. Andrea Willey (PGCC)

11 a.m.–12 p.m. Chesapeake Hall, Rm. 309 | [Click here](#)

Interactive AWS

Prof. Brandon Middleton (PGCC)

12-1 p.m. [Click here](#)

The Doomsday Algorithm

Dr. David Simpson, Ph.D. (NASA GSFC)

1-2 p.m. Chesapeake Hall, Rm. 309 | [Click here](#)

Careers in Veterinary Sciences

Dr. Michelle Rudd, DVM (BRAH, ACH); Michelle Skinner, LVT, RVT, CVBL (CVC)

2-3 p.m. [Click here](#)

DoD STEM: What is it and What can it do for You?

Dr. Cassandra Moore-Crawford, Ph.D. (PGCC); Prof. Tracy Ring (PGCC); Prof. Veronica Seward (PGCC)

3-5 p.m. [Click here](#)

Panel: Careers in Engineering

Ms. Martha David (JHU, PGCC Alumna); Mr. Christopher Little (WRA); Prof. Rocco Mennella (PGCC); Dr. James Milke, Ph.D. (UMD); Dr. Jonathan Ransom, Ph.D. (NASA LaRC); Dr. Jessey Talley, Ph.D. (MSU); Mr. Michael Talley (MSU); Superintendent Michael Walder (NRL)

5-6 p.m. [Click here](#)

How To Become A Data Scientist

Dr. Anna Englesone, Ph.D. (BDT)

FRIDAY 3/10

10-11 a.m. [Click here](#)

Mobile Apps Simulation

Dr. Kolawole Ogunlana, Ph.D. (PGCC)

11 a.m.–12 p.m. [Click here](#)

STEM Security: What STEM Career means for Your Financial Security

Mr. Heath Carelock, MPS, PMP®, AFC® (PGCC); Ms. Victoria Saunders (PGCC)

11 a.m.–12 p.m.
Chesapeake Hall, Rm. 312 (Limited Seats) | [Click here](#)

Its STEM Chem Madness!

Dr. Noelle Vargas, Ph.D. (PGCC) and Dr. Nilanthi Yasapala, Ph.D. (PGCC). Registration required.

12-5 p.m. (Limited Seats) [Click here](#)

Field Trip: National Institute of Standards and Technology (NIST)

Dr. Christopher Sims, Ph.D. (NIST). Registration required.

12-1 p.m. [Click here](#)

I Love Hawaiian Pizza! The Science of Taste and Flavor

Dr. Cynthia Gossage, Ph.D. (PGCC)

1-2 p.m. [Click here](#)

Python: Let's Get Started!

Dr. Homer Sharafi, Ph.D. (PGCC)

2-3 p.m. Chesapeake Hall, Rm. 109

M^3: Making Math Magnetic

Prof. Julie Gordon (PGCC); Dr. Jaison Novick, Ph.D. (PGCC); Dr. Brenda Teal, Ph.D. (PGCC); Prof. Kameswari Tekumalla (PGCC);

3-4 p.m. [Click here](#)

The Importance of Safety

Lt. Barbara Smith (DPS)

4-5 p.m. [Click here](#)

How Resilience Leads to Success

Dr. Audrey Davis, Ed.D. (PGCC)

KEY FOR PRESENTER AFFILIATIONS

ACH	.....	Annapolis Cat Hospital
BDT	.....	Benefits Data Trust
BRAH	.....	Bay Ridge Animal Hospital
BSU	.....	Bowie State University
Cognizant	.....	Cognizant Technical Solutions
CVC	.....	Crofton Veterinary Center
DSEC	.....	Defense STEM Education Consortium
FEC	.....	Financial Empowerment Center
GSFC	.....	Goddard Space Flight Center
JHH	.....	Johns Hopkins Hospital
JHU	.....	Johns Hopkins University
LaRC	.....	Langley Research Center
Lean-Agile	.....	Lean-Agile Delivery
LSAMP	.....	Louis Stokes Alliances for Minority Participation
MedStar	.....	MedStar Health
MSU	.....	Morgan State University
NASA	.....	National Aeronautics and Space Administration
NIST	.....	National Institute of Standards and Technology
NOAA	.....	National Oceanic and Atmospheric Administration
NRL	.....	The Naval Research Laboratory
PGCC	.....	Prince George's Community College
TIES	.....	Teaching Institute for Excellence in STEM
UMB	.....	University of Maryland, School of Pharmacy, Baltimore
UMD	.....	University of Maryland, College Park
UNC	.....	University of North Carolina, Eshelman School of Pharmacy
USFS	.....	United States Forest Service
UTMB	.....	University of Texas Medical Branch
WHH	WakeMed Health and Hospital
WRA	Whitman Requaardt & Associates LLP
WRGC	WR Grace & Co

FOR MORE INFO

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 Dr. Calvin Stansbury, Dean of STEM Division (stansbce@pgcc.edu)

STEM WEEK 2023

March 6-10



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MONDAY 3/6

10-11 a.m. Chesapeake Hall, Rm. 309 | [Click here](#)

STEM Week – Planting for Success!

No, it's not a typo. Success involves more than planning, it involves planting. What are you planting for success? In this presentation, participants will think about what it means to be successful, their plan, and what needs to be planted. Participants will walk away with not only a plan, but things to plant to create a life of success.

11 a.m.–12 p.m. Ctr. For Adv. Technology, Rm. 135

Attacker Tools & Techniques: A Hands-On Approach to Reconnaissance Using Open-Source Tools

This presentation will use open-source tools available for free on the internet to challenge the contemporary understanding of reconnaissance and present a novel and simpler approach to the concept, that incorporates emerging technologies.

12-1 p.m. Chesapeake Hall, Rm. 309 | [Click here](#)

Building the Future of Science Together: Research and Paid Internships Opportunities for You

At AstraZeneca (Multi National Research-Based BioPharmaceutical Company), we know that our continued success depends on our ability to attract the best and brightest students and interns. That's why we've put so much time and effort into making our internship program the best it can possibly be for you. A panel of employees will discuss how you can prepare yourself to join such a popular pharmaceutical company.

1-2 p.m. [Click here](#)

Panel: PGCC Resources for Your Success

We are here to help you put the pieces of the puzzle together – join us, the members of the Math Learning, Tutoring, and Writing Centers to learn a little bit more about our services and how we can help you be more successful in your courses.

2-3 p.m. Chesapeake Hall, Rm. 109

Student Posters

Come see some class projects and research from STEM students!

3-4 p.m. [Click here](#)

Reptile & Amphibian Conservation in the Southeastern United States

Come learn about the human impact on ecological communities from an experienced research ecologist. This presentation will focus on reptile and amphibian community structure in the South Eastern United States.

4-5 p.m. Chesapeake Hall, Rm. 109

De-Colonizing Mathematics

When you're asked to think of the greatest mathematicians of all time, for many people, the first names would be Newton, Gauss, Euler, Euclid, Pythagoras, Archimedes, Poincare, Fermat, Leibniz, Descartes. And I'm sure we can name more. But what's curious is that they all have one thing in common: they are all white men. What about mathematicians from other cultures? African, Asian, South American, Latin American? Are we to believe that none of these cultures produced great mathematicians? What about female mathematicians? How can we begin to interact with mathematics in ways that are more inclusive?

5-6 p.m.

[Click here](#)

Panel: Engineering Alumni

Come meet some of our amazing engineering alumni. Get tips on how to prepare for the next steps, what worked and what we should be cautious about.

TUESDAY 3/7

10-11 a.m.

[Click here](#)

Career Opportunities at the Naval Research Laboratory

Our presenter is Mr. Michael Walder, the Superintendent of the U.S Naval Research Laboratory's (NRL) Radar Division in Washington, D.C. He directs a broadly based, multi-disciplinary program of scientific research, advanced technology development, and applied research in radar and related sensors in support of Navy and DoD operations. We will learn about the exciting and fulfilling STEM and other career opportunities at the Naval Research Laboratory.

11 a.m.–12 p.m.

[Click here](#)

Keeping You on the RISE at Morgan State University: Opportunities in Chemistry and Beyond

This session will describe the curriculum/STEM opportunities in Morgan State University's (MSU) chemistry department and give an overview of MSU's NIH-funded RISE program.

12-1 p.m.

[Click here](#)

Panel: We have SCHOLARSHIPS!

Come learn about the scholarships that are available to you and how to make the scholarship yours! All these scholarship experts at one place? This is a session you should not miss!

1-2 p.m.

Ctr. For Adv. Technology, Rm. 135

Hunter or Farmer in the IT Work Environment

Sometimes, you don't know what to do when you are almost finishing college. Should you work in a company, or should you work on your own? In this lecture, we will explore the options of whether you want to be a farmer or a hunter. With this analogy, a farmer has crops that will be harvested on a periodic basis, comparing it to a steady job. On the other hand, a hunter doesn't know what is going to be the outcome of the week, but is willing to take the risk, comparing it with working on your own. Are you a farmer? Or a hunter?

2-3 p.m.

Chesapeake Hall, Rm. 109

Fair Division: The Mathematics of Sharing

Problems of fair division among two or more individuals crop up all the time. This session explores how mathematics can be used to fairly divide assets and resources so the outcome is win-win for all involved. This session does not require sophisticated mathematics.

3-4 p.m.

Chesapeake Hall, Rm. 114 | [Click here](#)

Crafting a Personal Statement

Personal statements are often required elements of professional school applications. These essays are of great significance for applicants, and are used to help admissions departments choose or deny applications. In this presentation, Professors Assanah and Klein will discuss the elements to include in a personal statement, and lead participants through a mind mapping exercise.

STEM WEEK 2023

March 6-10



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4-5 p.m.

[Click here](#)

NASA - Big Challenges, Bold Solutions

NASA discovers solutions that solve complex mysteries, improve life for everyone, and inspire all to aim high. Come learn how you can help us make a difference for our nation and our world.

5-6 p.m.

[Click here](#)

LSAMP@ UMD

Learn about the Louis Stokes Alliance for Minority Participation at the University of Maryland, College Park and the programs they support to build community.

5-6 p.m.

[Click here](#)

Panel: Careers in Chemistry

Panelists from various fields will talk about a wide variety of careers in chemistry and discuss “what does the future look like for chemists”.

WEDNESDAY 3/8

10-11 a.m.

[Click here](#)

Applying For Pharmacy Schools

Come learn about how to plan and prepare for a career in pharmacy.

11 a.m.-12 p.m.

[Click here](#)

Panel: Cybersecurity Alumni

A Q&A Session with PGCC Cybersecurity alumni who have successful careers in the industry.

12-1 p.m.

[Click here](#)

Résumé, Interview, and Dressing for Success

You have an eye on an internship or a career opportunity? Come learn how to prepare, how to dress for success, and how to do “knock ‘em dead” interviews!

1-2 p.m.

Chesapeake Hall, Rm. 309 | [Click here](#)

Engineering for Fire Safety

This presentation will describe the application of science and technology by fire protection engineers (FPEs) to provide fire safety. The multidisciplinary nature of fire protection engineering will be reviewed to describe the role of FPEs to incorporate fire safety in a wide range of applications, including consumer products, transportation vehicles, buildings and communities. The presentation will include experiences of students and faculty conducting impactful research studies in a unique department at the University of Maryland.

2-3 p.m.

[Click here](#)

Panel: Benefits of Student Organizations

Getting involved with college organizations outside of the classroom can boost your chances for success in your studies and in life. Learn about a few STEM student opportunities at PGCC, and the benefits of being supported and connected as you continue along your STEM journey. Come to learn about the STEM Collegian Center, the Future Health Professionals Club, the IT Clubs, and the Student Research Club.

3-5 p.m.

[Click here](#)

Panel: Careers in Science

Come learn about a variety of careers in sciences. Get motivated by the journey of our panelists. Find role models. Get inspired by the success of PGCC alumni! Ask them what worked and what didn't!

THURSDAY 3/9

10 a.m.-5 p.m.

Chesapeake Hall Rm. 109 (Limited Seats)

[Click here](#)

STEM-On-The-Go Experience

This is a unique experience for all participants! During the van's visit to PGCC, the students will be engaged in solving real-world STEM challenges using the Engineering Design Process while learning how to use design software and the digital fabrication and machining equipment in the van. The Van is a Ford E450 box van equipped with Digital Fabrication and Machining equipment. Including a laser cutter, 3D printer, CNC router, band saw, MIG welder, lathe, grinder and other hand tool.

To quote Mr. Harris: “This space is a vehicle - for practical and critical thinking, imagination and innovation, designing and building, teamwork and collaboration, exposure and opportunity...”

Acknowledgment: The PGCC STEM Week team is thankful to Mr. Mike Harris, the Fab Lab Manager for the Teaching Institute for Excellence in STEM (TIES) for bringing this phenomenal experience to our college. The financial support for the day's event of the STEM-on-the-GO Experience is provided by Mr. Eric Davis of STEM Center of Excellence, Inc. through a DoD STEM Education Consortium (DSEC) grant. We thank Dr. Cassandra Moore-Crawford (PGCC) for being instrumental in setting up this session and connecting us with Mr. Harris and Mr. Davis.

Registration required.

10-11 a.m.

Ctr. for Perf. Arts, Rm. 105-ACE | [Click here](#)

STEM Internship Application Process

Yes, you want internships!

Join us to:

Comprehend the processes, deadlines, and steps for internships.

Recognize internship roles and responsibilities.

Identify internship research and placement sources.

Activate/create your College Central Network student account!

11 a.m.-12 p.m.

Chesapeake Hall, Rm. 309 | [Click here](#)

Interactive AWS

Amazon Web Services (AWS) has over 200 services, a wide range of customers, and industry-specific technologies. Fortune 500 companies, Educational Institutions, and Government Agencies leverage AWS services to empower innovation across computing, storage, data analytics, networking, module IoT, Artificial Intelligence, Security, and many more disciplines. This session, Innovating with AWS, will dive into the gamified aspects of AWS, powered by Artificial Intelligence, using Software Development and Problem Solving skills to train an AWS DeepRacer to navigate a pre-defined race course.

12-1 p.m.

[Click here](#)

The Doomsday Algorithm

Learn how to impress your friends by mentally calculating the day of the week of any date in just seconds. You may never need a calendar again!

STEM WEEK 2023

March 6–10



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1–2 p.m. Chesapeake Hall, Rm. 309| [Click here](#)

Careers in Veterinary Sciences

Explore the path to a career in veterinary sciences from college to the operating room. Meet with experienced professionals who will describe the diversity of work available in this field.

2–3 p.m. [Click here](#)

DoD STEM: What is it and What can it do for You?

This presentation will provide an overview of the Department of Defense (DoD) Science, Technology, Engineering, and Mathematics (STEM) programs and initiatives pertinent to PGCC students. We will delve into several DoD STEM programs, including internships and scholarships, and provide examples of how these programs benefit students. Some benefits include opportunities for hands-on experience, exposure to cutting-edge technologies, and access to a network of professionals in the STEM field. We will also discuss the potential career paths students can pursue through the DoD STEM programs and the impact participating in these programs can have on one's career trajectory.

3–5 p.m. [Click here](#)

Panel: Careers in Engineering

Come learn about a variety of careers in engineering. Get motivated by the journey of our panelists. Find role models. Get inspired by the success of PGCC alumni! Ask questions and “make it happen” for YOU.

5–6 p.m. [Click here](#)

How To Become A Data Scientist

Data scientist has been called the sexiest profession of the 21st century. It has grown incredibly in the last decade, and that growth shows no sign of slowing. So what is it exactly that a data scientist does? And what should you do if you want to become one?

FRIDAY 3/10

10–11 a.m. [Click here](#)

Mobile Apps Simulation

This session is designed to teach you about Mobile App Simulation and how to create a mobile app game. This presentation will include how to add interactive graphics, sound, and animation to get a student interested in creating a mobile app simulation.

11 a.m.–12 p.m. [Click here](#)

STEM Security: What STEM Career means for Your Financial Security

Come learn all about what STEM security means for your financial security. Start building a strong financial future.

11 a.m.–12 p.m. Chesapeake Hall, Rm. 312 (Limited Seats)

[Click here](#)

Its STEM Chem Madness!

Join us for chemistry madness with experiments and thrills!

12–5 p.m. [Click here](#)

Field Trip: National Institute of Standards and Technology (NIST) (Limited Seats)

NIST is one of the nation's oldest physical science laboratories. From the smart electric power grid and electronic health records to atomic clocks, advanced nanomaterials and computer chips, innumerable products and services rely in some way on technology, measurement and standards provided by the NIST. This field trip gives students a chance to connect classroom lessons to real-life experiences and tangible artifacts.

Registration required.

12–1 p.m. [Click here](#)

I Love Hawaiian Pizza! The Science of Taste and Flavor

Learn about the taste of science and flavor. Get tips on how to eat well on the go.

1–2 p.m. [Click here](#)

Python: Let's Get Started!

This session is an introduction to Python programming. Various features of Python will be presented and demonstrated. The audience will also be encouraged to participate by trying the various features on their computers, as those features are demonstrated.

2–3 p.m. Chesapeake Hall, Rm. 109

M³: Making Math Magnetic

Student presentations on mathematics: using research to engage the mind.

3–4 p.m. [Click here](#)

The Importance of Safety

Safety, anywhere, is of utmost importance. Come learn what steps help ensure safety.

4–5 p.m. [Click here](#)

How Resilience Leads to Success

When we hear the term resilience we automatically think of overcoming a setback, trial or negative experience. It is important to recognize that by planning in advance – before it happens – what you will need to achieve your desired outcome you have fired the engine of resilience. We will explore how you can make resilience part of your arsenal for achieving the goals you establish.