

Saint Francis University
STEAM Day 2025 Presentations

Tuesday, November 25, 2025

Sessions begin at 9:30 am, 10:30 am, 11:30 am, and 12:30pm

STEAM Day Featured Presentations – JFK Auditorium			
9:30	10:30	11:30	12:30
Feature #1 Preparing for an Augmented Future: Careers in the AI Age (and Beyond)	Feature #2 Space, Science, and Service: The Army as a Pathway to Possibilities	Feature #3 Day in the Life: STEAM Student Panel	Feature #4 The Spark Within: Unlocking the Power and Purpose of Creativity
<i>Mark DiMauro, Ph.D.</i> <i>Assistant Professor of Digital Humanities</i> <i>University of Pittsburgh-Johnstown</i>	<i>Dr. Michael Knapp, LTC, U.S. Army (Retired), Former Director of Developments, Army Space Program Office</i>	<i>Moderator: Mr. Joel Godissart, Aquarium and Zoo Science (2026);</i> <i>Panelists: Ms. Ava Cioffari, Biology (2029); Mr. Nick Marcino, Biology (2026);</i> <i>Mr. Gavin Ross, Chemistry (2027)</i>	<i>Mr. Brian Dumm, Artist, Author/Illustrator, Graphic Designer</i>
This session will examine both the inevitability and the cultural and vocational ramifications of our nascent age of GenAI. We'll look at future job prospects, employment transformation, new careers and areas of study, and skills that will be needed for an augmented future. Finally, we'll discuss what will likely be required learning for future careers, like information literacy, spotting AI content, AI messaging, and the automation task scale.	A career in the Army can open the door to a wide variety of opportunities. For Dr. Michael Knapp, this meant flying helicopters, instructing flight crews, working with NASA on space shuttle simulations, and advancing technologies in drones, satellites, and defense systems. Holding a PhD in chemistry and teaching as a professor at West Point, he later moved into senior leadership in both the military and private industry, including serving as Vice President and Chief Scientist at Concurrent Technologies Corporation in Johnstown. His story demonstrates how the Army can be a powerful launchpad for careers in STEM, aviation, research, and national security—pathways that many students may never have considered.	What is it like to be a college student in a STEAM major? What are classes like, the workload, the schedule, the challenges? What clubs and activities are available? How do I prepare for a job, med school, or graduate school? What do you do for fun? Hear answers to these questions and more from current STEAM students and ask your own questions.	Creativity is more than just art—it's the ability to see possibilities where others see limitations. In this presentation, we'll explore what creativity is, where it originates in the mind and environment, and how it fuels innovation across every aspect of life. Understanding creativity isn't just inspiring—it's essential for problem-solving, progress, and personal fulfillment.

Saint Francis University

STEAM Day 2025 Presentations

Tuesday, November 25, 2025

Sessions begin at 9:30am, 10:30am, 11:30am, and 12:30pm

1. A Hands-on Intro in Therapeutic Gardening

Dr. Timothy Bintrim, Professor of English, and Coordinator of Sustainability Minor

When extended care residents and other institutionalized persons have access to gardens, biophilia elevates their mood, reduces their need for medication, and encourages social interactions, flexibility, and fine motor skills. For the past five years, students at SFU have been using our high-hoop greenhouse to maintain a therapeutic garden at Maple Heights, a skilled nursing facility that is our community partner. This session, held in the SFU Hoophouse near Torvian Dining Hall, offers a hands-on introduction to sensory plants, winter gardening, and vegetative propagation. Participants will clone ice plant, tradescantia, and geranium to take with them. They will also forage for edible flowers and various mints and learn how therapeutic gardening can enhance careers in occupational or physical therapy, gerontology, psychology, nursing and physician assistant science, as well as botany, ecology, and teaching.

2. Army ROTC and Your Future

Christopher Chivera, Sr. Director of Enrollment and Scholarships; LTC Erich Steffens, Professor of Military Science; CPT Brian Vissepo, Assistant Professor of Military Science; Warrior Battalion Cadet Commander Connor Flaig; SFU Army ROTC

Students will learn about exciting career opportunities in fields like engineering, nursing, cyber security, and technology, while also gaining insight into scholarships, leadership training, and the personal growth that Army ROTC provides. Whether you're interested in a STEAM career, military service, or simply learning how to become a stronger leader, this session will show you how ROTC can open doors to a successful future.

3. Art Meets Function: Fabricating Orthotics with Flair

Dr. Andrew Miller, OTR/L, CHT, CFE, ATC/L, Clinical Associate Professor of Occupational Therapy, SFU

This session aims to convey a dynamic and engaging workshop experience focused on creativity and innovation in orthotic fabrication.

4. Aviation Maintenance

Mr. Justin Grant, Instructor of Aviation Maintenance, SFU

Learn about the exciting career of Aviation Maintenance, there will be hands-on projects and demonstrations.

5. A Walk Through War

Ms. Carol Stoltz, Director of the Keirn Family World War II Museum; History students: Emma Deckard and Mason Hoff, SFU

Explore history up close with a guided tour of the Keirn Family World War II Museum. Led by SFU history majors, this tour features artifacts, photographs, and memorabilia that tell the stories of soldiers and civilians from World War II. Discover rare military equipment and gain a deeper understanding of the global impact of the war through this interactive experience, perfect for high school students interested in history.

6. Beyond the Clinic: The Invisible Forces of Public Health

Dr. Lisa Wisniewski, Assistant Professor of Public Health; Senior Public Health students, SFU

Public health extends far beyond medical institutions, vaccines, and emergency response. Do you have a desire to improve the health of individuals? Then come and explore how public health prevents disease, promotes wellness, and works behind the scenes to build a healthier society. Public Health is a network of invisible systems that shape the conditions in which we live, work, and play. Public Health intersects every aspect of human well-being through policy, programs and education, infrastructure, environmental design, and research.

7. Chemistry ROCKs! How to Have Fun with Regular Chemistry

Dr. Edward Zovinka, Professor of Chemistry, SFU

Chemistry can be a lot of fun - maybe surprising to some but come to our session and see how learning chemistry can be delightful!

8. Cryptography: Making and Breaking Secret Codes

Dr. Kevin Slonka, Associate Professor of Computer Science/Cyber Security, SFU

What if you could send a message that everybody could see but only a few could read? Find out how to encrypt and decrypt basic messages in this session. Coded messages are used by spies, diplomats, and the intelligence community, but also used on almost all Internet transactions. Make and break some simple codes in this session and learn some of the theory behind codes.

9. CSI Loretto: Help Forensic Chemists Solve a Crime

Dr. Ashley Smith-Diemler, Associate Professor of Chemistry, and R.O.C.K student leaders, SFU

Work together with the CSI Loretto team to solve a crime. You will review the evidence collected from the crime scene to identify the suspect who committed the crime. This analysis will require creativity, attention to detail, and collaboration with your peers and the CSI team. Bring your curiosity to compare fiber, hair, and blood (simulated) evidence to help us catch the perpetrator!

10. Disastrous Floods and the Demise of Steel in Johnstown

Dr. Patrick Farabaugh, Professor of Communications, SFU

Learn more about the history of the steel and coal industry in the Johnstown region, as well as the causes and the science behind the three major floods that have hit this city. In this session, author Pat Farabaugh will talk about his latest book - "Disastrous Floods and the Demise of Steel in Johnstown" - and the process of writing and publishing a book.

11. Engineering a Clean Glass of Water

Dr. Travis Tasker, Associate Professor of Engineering, SFU

Where does the water come from that you drink? How is water treated to remove pollutants? In this interactive session, students will learn about water treatment and will create their own filter for transforming dirty water into clean drinkable water.

12. Engineering the Perfect Wave

Dr. Joel Bandstra, Professor of Environmental Engineering, SFU

Environmental and civil engineers are responsible for managing water resources. Projects in the area of water resources engineering often involve controlling hydraulic jumps that are more commonly known as waves. In this session, you will learn the basic science behind wave formation, and you will have the opportunity to build your own wave in SFU's experimental flume.

13. Exploring a Future in Pharmacy?

Dr. Rose Clark, Professor of Chemistry, SFU

We will discuss how to get to pharmacy school with a 2-year, 3-year, and 4-year plan at SFU. After SFU you move into your PharmD program at the Duquesne, LECOM, or other school of your choosing. We will also do some fun chemistry experiments to liven things up and do a quiz game to win some prizes. Look forward to having fun and learning about our chemistry program!

14. Hands-On Nursing Olympics: Think, Act, Compete!

Dr. Jessica Gregg, DNP, MSN, RN, CNE, Assistant Professor of Nursing, SFU

During your visit, you'll get the chance to step into the role of a nurse through our Olympic-Style Nursing Activity Session! This fun, hands-on event will let you test your skills in a series of quick challenges designed to showcase teamwork, problem-solving, and basic healthcare techniques. From relay-style activities to interactive stations, you'll experience what it's like to think on your feet just like a nurse—all while competing in a lighthearted, engaging atmosphere.

15. Insights and Advice from Premedicine Students

Dr. Kate Criswell, Assistant Professor of Biology and Premedicine Advisor, and Dr. Sue Reimer, Professor of Biology, and Premedicine students, SFU

Interested in medicine, optometry, dentistry, veterinary medicine, or pharmacy? Join us as we have a panel discussion featuring Saint Francis University Premedicine students. Learn how they chose a school, what courses they are taking, and how they are planning their path to medical school.

16. It's the Power of the Wind

Mr. Michael Sell, Director of the Institute for Energy, SFU

How much electricity can one wind turbine produce? Why are they built on the tops of mountains? Attend this session to discover one of the world's fastest-growing energy resources. Learn about the advantages and challenges of wind energy then experiment with model wind turbines to test different blade designs and see how much electricity you can generate from the power of the wind.

17. Join the Red Flash Family: An Introduction to SFU Admission and Financial Aid

Ms. Nikki Frederick, Director of Enrollment Management, SFU

Saint Francis University is one of the premier institutions in the Northeast, touting 1) nationally recognized academic programs, 2) amazing opportunities in internships, study abroad, research, and more, 3) NCAA Varsity Athletics, and 4) exceptional outcomes for graduates including very impressive graduate school and career success! Getting into SFU is easier than you think, and the financial aid is very generous...let us show you how you can "Become that Someone" you always believed you could be...at Saint Francis University!

18. Light of a Different Color: Physics of Theatrical Lighting

Ms. April Beiswenger, Director of Theatre, SFU

Everyday we move through color and it affects not only what we see but how we feel. In theatre, we take that color and use it to enhance the story being told on stage. In this session, we will be demonstrating how the physics of light and color is used in theatre.

19. Luke Trotz Esports Arena Open Play

Mr. Ethan Wingard, Esports Coordinator, SFU

Students can visit the state-of-the-art Luke Trotz Esports Arena and play a variety of games including Super Smash Bros. Ultimate, Rocket League, Valorant, and more! In addition, staff and students will be present and available to discuss the Collegiate Esports experience (including possible scholarships) and steps to join the team.

20. Making Sense of Our Sensory Systems

Dr. Julie Nagle OTR/L, Associate Professor of Occupational Therapy, and Dr. Erin Long OTR/L, Assistant Professor of Occupational Therapy, SFU

This session will include a brief overview of the 8 sensory systems, what happens when our body's sensory needs are not met, and what we can do about it. This session is filled with hands-on learning experiences with several SENSEsational take-aways! You might consider a career in occupational therapy after attending.

21. Medieval Engineering

Br. Marius Strom, T.O.R., Instructor of Engineering; Mr. James Eckenrode, Engineering Laboratory Manager, SFU

Explore the engineering behind trebuchets as we hurl payloads downrange! Join us as we investigate the physical concepts leveraged by this deceptively simple machine dating back to the middle ages. In this hands-on experience, we will see the sophistication of medieval engineers and what we can learn from them in the modern day. Come and set loose your inner engineer as we examine the fundamentals of engineering and physics at work!

22. Meet the Animals of the Biology Department

Dr. Justin Merry, Professor of Biology; Brandon Dick and the SFU animal care student team, SFU

Join SFU Biology students as they showcase the charming denizens of our aquatics lab. You'll meet our resident turtle, gecko, snakes, and more. Bio students will provide background on their origins, ecology, care needs, and unique personalities!

23. Neurographic Art

Ms. Jessica Campbell, Assistant Professor of Visual Arts; Lucia Cicalese, SFU

Neurographic art is a meditative drawing method developed in 2014 by Pavel Piskarev to transform stress into works of art by connecting the conscious and subconscious mind. The process involves drawing freeform, non-objective lines and then rounding off all the sharp intersections to create a more organic, neuron-like appearance. It serves as a mindful exercise for stress reduction, emotional release, and fostering a calm, focused mind by creating new neural connections and allowing for self-exploration through visual expression.

24. Printing and Book Binding for Beginners

Dr. Lisa Beiswenger, Assistant Professor of English, SFU

In this session, participants will learn about the origins of the printing industry in Europe, learn the fundamentals of bookbinding by making a simple sewn pamphlet, and try their hand at setting print and printing.

25. Relishing the Pickling Process: Making and Trying Pickles

Dr. Benjamin Smith, Associate Professor of Chemistry, SFU

Pickles are a big dill across the world. In this session, we will examine what it means to be a pickle as we compare vinegared vegetables to lactofermented ones. We'll taste test, discuss health benefits, talk fermentation, and then make our own pickles to take home.

26. STEAM Careers and You!

Ms. Beth McGregor, Director of Career Services; Ms. Becky Cacciotti, Assistant Director of Career Services; Mr. Andrew Stopko, Assistant Director of Employer Relations/Internships, SFU

Today's STEAM professionals create virtual worlds, design amazing machines, invent new materials, construct earth-friendly buildings, and engineer cutting-edge air vehicles. Over the next 20 years, the science, technology, engineering, arts, and math (STEAM) field is projected to grow significantly. You have the chance to be the innovators, educators, and researchers who will change the world. In this session we'll explore careers and majors in the STEAM field and how your personality, interests, skills, and values might fit in a STEAM career. Get started on exploring and preparing for a STEAM career of the future!

27. Stump a Professor: Debate about God, Politics, and Morality

Dr. Tyler McNabb, Associate Professor of Theology; Dr. Gregory Stacey, Assistant Professor of Theology, SFU

In this event, students will sit around with two professors. There will be one chair directly facing the professors. The first person sitting in the chair can cross-examine the professors on a subject matter of the student's choice. Once the student leaves the chair another student can take his/her place.

28. Switch Up Learning: How Therapists and Teachers Engineer Inclusive Fun

Dr. Jen Misiura, OTD, MOT, OTR/L, Clinical Assistant Professor of Occupational Therapy; Dr. Cassie Grassmyer, Ed.D., Field Experience Coordinator, Assistant Professor, Education Department, SFU

Join our interdisciplinary adventure, where you will learn how future therapists and teachers adapt mainstream toys using accessible switches, making play more inclusive and engaging for all children. This hands-on session may help you discover a career path that blends technical innovation, creativity, and heart - leaving you inspired to help all children learn through play!

29. The Science of Exercise and Human Movement

Dr. Kristofer S. Wisniewski, Associate Professor of Exercise Physiology; Dr. Michelle Stehman, Assistant Professor of Exercise Physiology; Mr. Tyke Steiner, Instructor of Exercise Physiology; Ms. Brianna Toth, Clinical Instructor of Exercise Physiology and Dr. Mark Boland, Clinical Associate Professor of Physical Therapy; Exercise Physiology students, SFU

During exercise, proper training and technique is essential for muscular development. Imbalances can lead to poor performance and musculoskeletal injuries. How do we adapt and improve our movement mechanics to avoid injury or increase our athleticism? See all of this live in the Human Performance Laboratory and learn how to properly move your body. Let us show you the science of exercise and movement!

30. Think Before You Click: A Crash Course in Cybersecurity

Mr. Michael Zambotti, Assistant Professor of Computer Science, SFU

Everything from your phone to hospitals to power grids are online, making cybersecurity one of the fastest-growing and most important fields in STEAM. This session will explore how hackers target people, what real-world cyber threats look like and actionable steps you can take to protect yourself. Students will also investigate the wide range of careers in cybersecurity: From ethical hacking to digital forensics and learn how to get started in the field.

31. Think Fast! Tap into Your Creative Mind

Dr. Brennan Thomas, Professor of English, SFU

Can you "think outside the box" to resolve seemingly impossible tasks? Can you use ordinary household items in new ways? Can you solve challenging puzzles in just a few minutes or create your own puzzles for others to solve? Take our critical thinking challenge to see how you rate as a critical thinker and learn tricks to think even faster and smarter!

32. Tour of the Saint Francis University Campus

Ms. Victoria Ivock, Associate Director of Admissions, and Bell Tower Student Ambassadors, SFU

SFU students will lead a walking tour of the Saint Francis University Campus including classrooms, Library and Learning Commons, DiSepio Institute for Rural Health and Wellness, Science Center, residence hall, and other key locations on campus. During the tour, they will talk about college experience and life on campus.

33. We Hold These Truths: A Work In Progress

Dr. Larissa Clachar, Associate Professor of Spanish, SFU

Consider the benefits of pairing Spanish with other areas of interest like teaching, law enforcement, social work, business, or healthcare. Over 40 million people in the United States speak Spanish, making it the most spoken foreign language in our society. Imagine the doors learning Spanish could open! Learn about opportunities for service and employment and the benefits of bilingualism for our brains and longevity.

34. “Why Not Add a Language to That?”

Dr. Larissa Clachar, Associate Professor of Spanish, SFU

Consider the benefits of pairing Spanish with other areas of interest like teaching, law enforcement, social work, business, or healthcare. Over 40 million people in the United States speak Spanish, making it the most spoken foreign language in our society. Imagine the doors learning Spanish could open! Learn about opportunities for service and employment and the benefits of bilingualism for our brains and longevity.