Week 1: July 30 – August 3

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **CSI Richmond**: Have you ever wondered about the science behind CSI? This class will introduce you to the science used to analyze and interpret physical evidence in criminal investigations. Using biology and chemistry principles, you will engage in hands-on activities to explore fingerprints, tool marks, chromatography, soil analysis, chemiluminescence, DNA, hair, and more. For the culminating exercise, you will visit a mock crime scene where you will put your team’s knowledge to work to decide how to solve the crime.

- **Operation Health Care**: Doctors, nurses, pharmacists, physical therapists, clinical laboratory scientists, and nuclear medicine technologists...what do they do? Join us and learn about these exciting fields through team work and hands-on activities that take you across campus. Prepare to scrub in and start your journey towards exciting career opportunities in health care.

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Cinema Creations**: Turn your cinematic dreams into a reality! In this class you will get to write, design, produce, and star in your own cinema creation. You will gain a basic knowledge of filmmaking skills like screenwriting, storyboarding, digital design, multimedia production, and editing. At the end of the week, you will host a screening of your short films for friends and family!

- **Think Global, Act Local**: Go green and learn the basic principles of sustainability and environmental science. Plant food in the VCU Learning Garden that will be donated to a local nonprofit, practice bike maintenance with RamBikes to reduce greenhouse gas emissions, create recycled art, and so much more! You can always come back and explore since the VCU Learning Garden is open to the public.

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **3D Engineering**: Let your creativity run wild! Come learn engineering principles and how to create 3D mechanical engineering designs. For all engineering career paths, design, fabrication and testing are essential. As future engineers, you will tackle real-life scenarios in preparation for this field. Engage in activities related to catapults, projectile motion, and endurance of flight connected to rapid prototyping. To culminate the class, you will build your own 3D Avatar.

- **Speak Your Mind**: Want to become a YouTube sensation, or fight for Congress to ban homework nationwide? This class will teach you how to speak out and market yourself effectively! It doesn’t matter if you’re shy or a social butterfly; you will learn to perfect the art of public speaking. You may act as a critic on a cooking show, a sports newscaster for the Olympics, or an expert witness for a high-profile legal case. We will explore public speaking fluency through interactive group projects, solo exercises, class debates, impromptu “mystery box” speeches, and even a mock newsroom. Families and friends are invited to hear student speeches on the last day!
2018 Discovery Class Descriptions

Week 2: August 6-10

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Adventures in Engineering**: This summer, the School of Engineering will host a selection of activities that will lead budding engineers and scientists through the design process and teach them how to meet design challenges over a wide range of engineering themes. Explore computer science, electrical engineering and mechanical engineering to figure out solutions to everyday problems. This is your time to be an engineer!

- **Dig into the Past**: Do you like learning about other cultures, discovering new languages, and excavating history? You might be a future anthropologist! Discover what it means to be human through the four fields of anthropology: archeology, linguistics, biology, and culture. Excavate ancient cultures, learning new languages, and practicing keen skills of observation. The class will culminate in a celebration of different cultures, foods, clothing, festivals and traditions. Family and friends are welcome to attend!

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Photography**: Focus your eyes on the art of photography! Transform your snapshots into artistic masterpieces by exploring all genres such as portraiture, landscape, fashion, and street photography. Learn about key compositional and technical elements, such as the rule-of-thirds, leading lines, and perspective, and balancing the exposure triangle, while experimenting with cameras and your own shooting style. The class culminates in a gallery showcase designed by and for all students and their families!

- **Coding 101**: Ever wonder how the Alexa works? Do you have a great idea for a new smartphone app? Coding is like learning a foreign language for machines! You’ll learn the basics of coding like software design, engineering, bug resolution, coding environments, and device building. These skills are highly sought after in careers like game design, website and application development, robotics and more! You’ll even get the opportunity to create and publish an Amazon Alexa skill for the world to use! This class will culminate with a showcase of your coding projects at the end of the week for family and friends.

Full-Day Classes: 9:00 a.m. – 3:30 p.m.

- **Shakespeare’s Theatre**: Ever dream of taking center stage in your own theatre production? Do you love to write and perform your own stories? Shakespeare’s Theatre is the perfect class for you! This class will take theatrical approach to the works of the greatest playwright in the English language, William Shakespeare. You’ll learn the basics of theatre, improvisation, script analysis, rehearsal, and performance in this fun interactive class. You’ll even get to produce and perform your own version of a Shakespearean play for your friends and family at the end of the week!

- **Media Matters**: You’ve read newspapers, flipped through magazines and listened to the radio. Have you ever wanted to learn more about what goes on behind the scenes? This is your chance to try your hand at producing a variety of media at the VCU Student Media Center! Learn how to conduct interviews, shoot photos, record and produce audio news packages, design a front page, and more. This hands-on class will cover aspects of working in a digital-age converged media newsroom, and the end result will be a website where you can share your work with the world!
2018 Discovery Class Descriptions

Week 3: August 13-17

Morning Classes: 9:00 a.m. – 12:00 p.m.

- **Sports Stats:** Ever wonder if you could be as fast as your favorite athlete? Huddle up and prepare for a fun week of soccer, basketball, running and all kinds of physical activities while learning how to assess your skills through statistics. Test your physical and mental stamina, crunch the numbers and learn how statistical technology play an important role in sports. Join your teammates in exploring how math and science help us understand athletic performance, team ranking techniques and the entire sports industry.

- **Monkeying Around:** Do you like to MONKEY AROUND? Want a chance to learn about what makes us uniquely human? This class will start with a foundation in natural selection and the process of evolution. We will follow the evolutionary process of primates and the human lineage tree to find out what makes the modern humans different from all other species! This fun, hands-on class will use videos, games, and activities to understand the important processes of evolution.

- **Cooking Chemistry:** When you are cooking, you are chemist. Discover the chemistry of food while ‘making and tasting’! Every time you follow or change a recipe, you are experimenting with acids and bases, making and breaking chemical bonds, and forming solids, gases, emulsions, suspensions, and gels. You will learn basic chemistry concepts via a number of inquiry-based experiments involving ingredients and recipes. You will work in small teams to do laboratory activities while discussing the properties and chemical structures of food molecules, gathering data, calculating results, and recording your observations like a chemist!

Afternoon Classes: 12:30 p.m. – 3:30 p.m.

- **Fit 4 Life:** Are you interested in sports management, physical therapy or athletic training? This exciting, hands on class will cover exercise science, health and wellness and options for future careers. This interactive week of exploration includes best practices of human movement while performing FUNdamental exercises in the Kinesiology and Health Sciences Laboratory. This class also includes tours of VCU’s state of the art athletic and recreation facilities! You will create a health and wellness reference guide with nutrition concepts and tips. The week will culminate with partner presentations and families are encouraged to attend. Learn how to be healthy and fit for life!

- **Experimental Science:** Help solve world-wide problems, create your own experiments, and become a scientist! From ecologists to neurologists, explore different scientific careers and what it took to get there! Discover how science is used to find cures to human diseases, conduct experiments on Zebrafish, and start your own research to solve a critical issue happening in the world. At the end of the week, you will share your research with your friends and family!

- **Get in Gear:** Like to bike? Want to explore the natural world? Come explore the great outdoors as we build our bike handling skills, practice bike maintenance (e.g. fixing a flat tire), and investigate careers in the outdoor industry. Apply your new skills by hitting the road and trails together to discover Richmond by bike! Supported by the VCU Outdoor Adventure Program.

Full-Day Class: 9:00 a.m. – 3:30 p.m.

- **Digital Arts:** Love to post selfies or snapchat? Do you want to create your own YouTube channel? Take your skills to the next level during this summer course on all things digital! Learn how to take digital photos, edit in software, and create short films. This class will cover a cornucopia of photo and video arts. With your new skills in mind you’ll explore careers in visual arts, film making, marketing, writing, photography, and more! This class will culminate in a showcase of your work for family and friends.