

GLOW 2022

The Storyteller's Process: Creative Writing Seminar

Are you a good storyteller? What does it take to tell a good story? What makes a good story "work" when others don't? In this course, we will hone your skills as a storyteller, whether you're sharing a personal memory, telling a joke, or crafting an epic adventure. During week one, we will learn the major tools that good storytellers use to hook an audience's interest, weave together details of plot, character, and setting in an interesting way, and finish off with an ending that leaves people either laughing or pondering, or both. Week two we will dive deeper into specific writing tools and experiment with prompts and exercises designed to stretch creativity and develop each storyteller's process. We will play with the challenges and opportunities that structured and unstructured writing can create, and practice language precision. We will also introduce the element of review and meaningful revision, and use the college seminar-style community we have built as a tool to support and develop each story into its full potential. At the end of the course, each storyteller will have a portfolio of polished stories that represent the culmination of their process throughout the two weeks.

Touring the Solar System: Intro to Astrophysics

How do planets stay in motion? How do stars burn so brightly, and what happens when they burn out? How do we look at galaxies millions of light years away? In this course, we will build up a fundamental understanding of astronomical objects in order to learn about how those objects evolve, and the techniques we use to study those processes. Then, we will discover the properties of light and waves, and how those properties help us understand things like stars and galaxies - and even how a microwave can teach us something about the history of the universe. And since space is full of strange spectacles, we'll examine unique phenomena like black holes, nebulae, and pulsars. Week two, we will learn about thermodynamic and nuclear processes, and what happens when stars go supernova. We will build and expand our knowledge of mechanics and orbits to talk about more complicated multi-body systems. Finally, we will extend our knowledge of electromagnetic waves to explore optics and photometry, and learn about the tools that modern astronomers use to make precise observations. The course will culminate with students designing observational tools and spectral measurements by adding depth to their solar system in figuring out how we will actually observe this new world you have astronomically constructed!

MATERIALS: *You will need to bring your own laptop for sky exploration.*

Digital Photography: Editing the World

How do you take a good photo? What even counts as a "good" photo? What do professionals think about as they line up the shot they want to take? Together we'll explore the fundamentals of photography, such as framing, lighting, and how to include and exclude the elements you do and do not want in your final image. We'll also discuss the history of image-capturing, and how it differs but is related to image-making, looking at historical technologies such as the camera obscura, daguerreotype, and film photography. Once you've taken your photos, we'll bring them into the digital darkroom and learn how to edit them, giving them professional finishing touches such as correcting white-balance and lens-warp. In week two, we'll dive deeper into photography's place in the modern fine-arts world. Why take a photo instead of making a drawing or a painting? How do you tell a story with a single photo, or how would you tell that same story differently in five? We'll take the collaborating, creating, and editing even further, considering how to take different kinds of professional photos, and what you do differently when photographing people, objects, buildings, or events to put together a small sample professional photography portfolio to take home.

MATERIALS: *\$50 lab fee and you will need to bring a laptop to personally use with Darktable installed.*

Action! Developing Character Relationships on Stage

What goes into bringing a character to life on the stage or the screen? How do we go from an idea, to a set of characteristics and actions in a script, to finally a fully realized performance, with a personality and physical style recognizable by character? In this course, we'll explore what makes your favorite characters and portrayals tick, from page to stage. We'll approach the fundamental aspects of a character from the perspectives of both a writer and an actor, and consider traits both internal and external. We'll discuss background, personality, and setting, and how these can be used to create a motivation for our character. We'll then use these motivations to determine the actions our character takes, and how they are able (or unable) to deal with obstacles and conflict. Then, we'll study the physicality of people and animals, and figure out how to embody the traits which make up our characters. Finally, we'll put these characters together and perform a one-act show, with character qualities both improvised and defined by scripted choices, leading us to discover new interactions, relationships, and stories as we engage in performance.

MATERIALS: *\$30 lab fee.*

Do We Live in a Simulation? Philosophy of Science and Ethics

Today's science and technology brings up vital questions it is important for all of us to reflect on and try to answer: Is science telling us what reality is or are we all in a computer-generated simulation? Will I be able to get a brain transplant one day, and what are the ethical implications? Should everyone have access to the latest technology in healthcare? Is it fair that a few tech people are mega-wealthy? What should a self-driving car do if its brakes fail? This course will ask and examine these and other questions that have a long history but an important new relevance for our time. We will experiment with scenarios, investigate what others have thought about these questions, and hold debates to discuss each side of an argument. We will also devise questionnaires and programs we can use to poll those around us to see what people in general think. Students will come away with an understanding of ethical and philosophical questions that arise from today's world and today's technology together with their own thoughts on what answers to these questions may look like.

Launch, Learn, Repeat: Aerospace Engineering and Spacecraft Design

How do rockets put objects into space? How can we as humans safely travel to and stay in a place as unforgiving as the vacuum of space? Starting with how spacecraft achieve different orbits, we'll explore the challenges presented in engineering spacecraft, making them capable of supporting people, getting them to space, and going farther than ever before. We will do this through an engineering lens, diving into the engineering process and analyzing how to solve seemingly insurmountable problems through repeated designing, reviewing, refining, and testing. We will look at how this process has been applied in the real world, examining how technology has evolved from the Apollo program using the most powerful rocket to date with a Lunar Rendezvous to first put people on the moon to SpaceX using technology to propulsively and autonomously land two-story tall rocket boosters on barges in the middle of the ocean. We will then use this process to design, build, and test small-scale test articles of our own that can withstand a variety of harsh conditions, such as falls from great heights, substantial pressure differentials and extreme heat. The course will culminate with students designing and creating rockets capable of launching their own payloads!

MATERIALS: *\$75 lab fee.*