MGDC 2019 has a variety of Tutorials and Bootcamps to choose from. Tutorials and Bootcamps take place over a full day, providing deep-dive focus on each topic. Come share with and learn from some of the best and brightest in the game development industry.

Tutorials and Bootcamps are seated on a first-come, first-served basis. All Access and Summits, Tutorials & Bootcamps Pass holders are welcome to attend.

**Game Design Workshops:**

**Monday:**

* **Advanced Graphics Techniques:** Brought to you as a collaboration of the industry's leading hardware and software vendors, this day-long tutorial provides professional insight on how to create cutting-edge game graphics on the PC platform. Special emphasis is placed on advanced graphics techniques that use modern low-level APIs to produce stunning visuals and achieve speed-of-light performance on contemporary GPUs. These will be delivered by NVIDIA's and AMD's demo and developer technology teams as well as some of the top game developers who ship major games into the marketplace. In addition to illustrating the details of rendering advanced real-time visual effects, this tutorial will cover a series of vendor-neutral optimizations that developers need to keep in mind when designing their engines and shaders.
* **Animation Bootcamp:** Skilled video game animators wield a unique blend of art, design and technical prowess to get the job done, and the Animation Bootcamp is at the forefront of sharing the relevant knowledge with developers everywhere. Bringing together a group of experienced and specialized animation experts across AAA and Indie, this tutorial is a day-long gathering to rally developers from all over the industry, with a focus on deeper discussions into the needs of strong character performances and player communication. The day will go through all facets of animation expertise: "traditional" focused talks on animation process, but also technical achievements, bite-sized tips and tricks, insight into animation culture, and how to best apply all that knowledge to game development. Through various tools and disciplines, this tutorial will show how the unique constraints and demands of game creation, are creating the need for not just great animators, but great game developers.
* **Art Direction Bootcamp**: The Art Direction Bootcamp is a day-long event in the vein of MGDC tutorials, completely dedicated to art direction and broader artistic vision. Come see the leading artistic forces of the industry share their experience and raise the most important issues of the day. Learn a ton about what really matters in art, and how to build or support a vision and make friends doing it.
* **Math for Game Programmers:** As gamers and gaming platforms continue to evolve and diversify, so has the complexity and variety of problems facing the modern game programmer. Creating the latest code for graphics, gameplay, animation, physical simulation, and artificial intelligence requires thorough knowledge of the necessary mathematical underpinnings. This tutorial continues the tradition of the Math for Programmers tutorial by presenting two talks on new ways to improve your math library, followed by an afternoon series of tutorial sessions relating to mathematical tips and tricks used in Procedural Content Generation (PCG).
* **Storytelling Fundamentals:** This dynamic, engaging presentation on the fundamentals of story development is designed for anyone and everyone interested in improving the narrative quality of their games. Hosted by Marvel and Telltale writing veteran Evan Skolnick, this comprehensive tutorial covers narrative structure, vibrant character development, storytelling best practices, and more.
* **Advanced Agile Game Development Practices**: Agile practices are no longer considered experimental, but mainstream, yet many still struggle with them. In this workshop you will learn and share the successful practices and techniques that agile studios have created over the past decade of it's application

**Tuesday:**

* Audio Bootcamp: MGDC Audio Bootcamp focuses on the technical, creative and logistical topics needed to successfully navigate the field of sound for games. A range of industry experts will speak on their own experiences and practical skills relating to music composition, sound design, implementation, audio mixing, the logistics of working in both large and small studio settings, career development, and more. The lunchtime surgeries offer a unique opportunity to sit and meet with many of the speakers in a small-scale setting to talk about the specific interactive audio topics that are at top of attendees' minds.
* **Level Design Workshop:** The Level Design Workshop returns for the eighth consecutive year bringing together another all-new docket of talks spanning a variety of topics that will interest working and aspiring level designers across the game industry.
* **Producer Bootcamp:** A producer's role often varies from team to team and differs across studios. Good (or bad) production practices and methodologies can make or break a game's overall quality, the team's health, and even define studio culture. The Producer Bootcamp brings together experts and colleagues for a day to discuss best practices in production and team management, as well as share their career experiences.
* **Technical Artist Bootcamp**: many studios, technical artists (TAs) play a key role in developing efficient tool pipelines, and ensuring art content is visually striking and optimized for performance. However, many studios have still not fully embraced the TA role. Learn skills and tools be more effective, learn how to demonstrate your value to get a key development role, and further integrate technical art into your studio's pipeline and culture. Seating is on a first-come, first-served basis.
* **eSports**: Learn how to attract and support professional players and teams, journalists, content creators, and grassroots player organizations in a day-long series of panels and presentations. Learn about growing your esports ecosystem alongside long-time developers, publishers, and esports community leaders. Seating is on a first-come, first served basis.
* **Visual Effects Bootcamp:** The discipline of visual effects has emerged as one of the driving forces in game development. Visual effects tie together game experiences, breathe life into real time rendered worlds, and provide an all-important final layer of visual polish. What started as a few simple "tools of the trade" like flipbooks and additively blended sprites, has grown into a full-fledged art all its own involving subtle and precise mixtures of shaders, lighting, particles, materials, models and animation.
* **Board Game Design**: The Board Game Design tutorial is a one-day deep dive into the art and science of designing non-electronic board (and card) games. Featuring multiple notable speakers from the world of board game design, this is an opportunity to get deep into the design mechanics behind innovative and popular board games, and hear about the design ethos that has shaped standouts in the resurgent world of board game development.