Things to Do Before Arriving at RIT

- **Find us on social media!**
  - Look for the School of IGM on Facebook: http://www.facebook.com/igmrit
  - Look for us on Twitter: @IGMRIT
- **Check out IGM's information on the web (igm.rit.edu), including:**
  - Game Design and Development MS worksheet: https://www.rit.edu/computing/sites/rit.edu.computing/files/docs/IGME-MSworksheetv5.1.pdf
- **Snap a Selfie for your Student ID**
  - Skip the line at New Student Orientation and take a selfie to create your personalized RIT ID.
  - Visit www.rit.edu/registrar/id-photo to upload your photo

Employment Opportunities at RIT

- **Student Employment Office (SEO):**
  - https://www.rit.edu/emcs/seo/
- **School of Interactive Games and Media Labbie or TA:** The school hires both lab workers and teaching assistants to work roughly 10-20 hours a week.
  - Contact Ann Warren to fill out an application for the next semester
- **Co-op / Internship:** students can work over the summer as part of their education (this counts as CPT for international students). This has to be registered at RIT through the Office of Career Services and Cooperative Education.
  - https://www.rit.edu/emcs/oce/

Courses for first year MS GDD Students

Required Courses

You will be automatically signed up for all core (required) MS courses that first year students take in their fall semester in July. The required courses are the following and will account for seven of the nine credits required for full time status as a graduate student:

IGME 601 Game Development Processes: This course examines the individual and group roles of the development process model within the game design and development industry. Students will transform design document specifications into software and hardware needs for developers, testers, and end users. Students will examine team dynamics and processes for technical development, content development, testing, deployment, and maintenance. Students will explore the design process through the deconstruction of the game industry's software lifecycle model.

IGME 602 Game Design: This course presents students with core theories of game design, informed by research results from media theory, narrative methods and models, theories of ideation, and the nature of games, play and fun. Specific emphasis is placed on the examination of historical successes and failures, along with presentation of ethical and cultural issues related to the design of interactive software. Students will engage in formal critique and analysis of media designs and their formal elements.

IGME 695 Colloquium in Game Design and Development: This required colloquium will introduce students to a range of emerging topics and themes in the field of game design and development. Students will attend lectures by and discussions with RIT faculty and visitors, complete related readings, and offer both oral and written responses to readings and presentations.

Electives

Students will be signed up for their first year elective after filling out an online survey to be done by JULY 2nd. You should have received a welcome letter from the department containing the survey link. These are the electives offered in the fall semester that do not required pre-requisites and can be taken by first semester MS students:

- **IGME 670 – Digital Audio Production**: Technologies and techniques for producing and manipulating digital audio are explored. Topics include digital representations of sound, digital audio recording and production, MIDI, synthesis techniques, real-time performance issues, and the application of digital audio to multimedia and Web production.
- **IGME-690 – Seminar in Data-Oriented Development**: This course emphasizes sustainable software implementation in terms of both efficiency and power usage for game developers through the data-oriented design paradigm. The purpose of all programs, and all parts of those programs, is to transform data from one form into another. Some ways of designing software are more efficient in terms of both speed and power usage. As games challenge the limits of modern hardware and new designs force higher framerates (e.g. VR and 100 fps), data-oriented design has become more important. A deep dive into the data-oriented design paradigm will be emphasized in terms of how hardware, compilers, algorithms, and the data layout of programs can be improved both in terms of speed as well as power usage. Software projects are required.
- **IGME 690 – Seminar in Game Physics**: This seminar offers an opportunity to focus on advanced topics in game physics. Students will explore modern physical modeling applied to game design and development with a focus deformable bodies. Topics include soft-body physics, fracture mechanics, and fluids. Students will apply mathematical and computational techniques to simulate these physics concepts and learn how to use common physics APIs. The seminar requires programming projects.
- **IGME 760 – AI for Gameplay**: This course explores artificial intelligence concepts and research through both a theoretical perspective and a practical application to game development. In particular the course focuses on AI concepts and paradigms such as search and representation, reasoning under uncertainty, intelligent agents, biologically inspired computing and machine learning to real-time situations and applications as relevant to the field of entertainment technology and simulation.
- **IGME 796 Topics in Game Design (Narrative – Online Course)**: Andrew Ervin www.andrewervin.com
  Students in this online and asynchronous course will revisit the basics of narrative in the context of interactive literary texts and video games. The purpose of doing so is threefold. Students will review the history of interactive digital media in order to: (a) reaffirm where your own work fits into these traditions and be better able to respond to and build upon them; (b) put names and concepts to techniques you've been doing intuitively; (c) help you better articulate your own intellectual vision as a game designer. Each week, you will spend several hours playing and studying one or more interactive narratives (these will often be computer and video games, beginning with some early text-based examples) and discussing them with your classmates in detail on our discussion board. Your homework will include many reading

assignments, the occasional film to watch, and a weekly assignment in which you respond to different techniques of interactive storytelling. Throughout the semester, you will also complete three essays meant to help you codify your own unique style and aesthetic. The written assignments will be both analytical and creative. In other words, you will spend the semester honing your unique creative voice.

- **IGME 790 Seminar in Computational Aesthetics**: Students will explore current research on the artistic affordances of the browser, while studying the history of computational creativity in the visual arts, music, games, and education. In addition to creating their own personal works and examining existing tools for creative production, students will be expected to make significant contributions to audiovisual libraries and to disseminate their work. Historical topics include foundational discussions of generative art, artificial life, microsound, participatory and process-based art, and creative approaches to computation. Note: Students should have experience programming in JavaScript or permission of the instructor.