

ENTERTAINMENT ARTS

Programs

- Diploma in Advanced 2D Digital Animation Production (<https://calendar.kpu.ca/programs-az/arts/entertainment-arts/entertainment-arts-2d-diploma/>)
- Diploma in Advanced 3D Animation and 3D Modelling (<https://calendar.kpu.ca/programs-az/arts/entertainment-arts/entertainment-arts-3d-diploma/>)
- Diploma in Advanced Game Development (<https://calendar.kpu.ca/programs-az/arts/entertainment-arts/entertainment-arts-game-dev-diploma/>)
- Diploma in Advanced VFX (Virtual Production) (<https://calendar.kpu.ca/programs-az/arts/entertainment-arts/entertainment-arts-vfx-diploma/>)
- Certificate in Foundation in Entertainment Arts (<https://calendar.kpu.ca/programs-az/arts/entertainment-arts/entertainment-arts-foundation-entertainment-arts-certificate/>)

Courses

Registration in some course sections is restricted to students in particular programs. See Timetables - [kpu.ca/registration/timetables](http://www.kpu.ca/registration/timetables/) (<http://www.kpu.ca/registration/timetables/>) - for current section information.

Visit the BC Transfer Guide - [bctransferguide.ca](https://www.bctransferguide.ca/) (<https://www.bctransferguide.ca/>) - for information about course transfer in B.C.

ENTA 1100 4 credits

Sketching for Communication in Entertainment Arts

In this course, students will learn how to draw from real life and from their imagination. They will start with some basic techniques, drawing simple shapes and understanding light and perspective, to effectively reproduce shaded objects in perspective using graphic pens of various sizes, and paper. They will sketch all types of objects: insects, vehicles, vegetation, bones, and animals. As the course progresses, they will apply more complex render techniques to reproduce complex shapes and textures, including fur, feathers, and foliage. By the end of the term, they will dive into digital drawing, redefining and colouring their previous sketches.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1101 4 credits

Digital Photography in Entertainment Arts

Students will learn how to create appealing images by applying photography concepts such as composition, lighting, and camera lenses. They will discuss and analyze the artwork of successful photographers and lighting artists. By the end of the term, they will be able to produce outstanding digital images using Adobe Dimension.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1102 4 credits

Figure Drawing in Entertainment Arts

In this course, students will learn how to draw human anatomy from real-life references. They will start with basic shapes, approaching the subject with simple, loose lines, paying attention to the flow to capture the pose. During the length of the course, they will build their drawings on top of these basic shapes, adding detail to each component. By the end of the course, students will be able to accurately represent the human figure and understanding the bone and muscle structure.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1103 4 credits

Figure Sculpting in Entertainment Arts

Students will learn how to create 3D representations of the human figure, first in clay and then in digital format. During the first weeks of the course, they will focus on constructing a clay model of a human body, building the skeleton, and adding the muscles on top until the completion of the human anatomy. Once they fully understand the anatomy they will replicate the same elements in Zbrush, learning the basic tools and commands of ZbrushCore.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1110 4 credits

Animation Principles for VFX

In this course, students will create basic animation using applied principles of animation and identify, recall and describe the fundamental use of the principles of animation. By the end of the course, students will understand the principles applied through timing to show the mass and energy of an object to communicate its mood and emotion as well as describe the purpose of the basic methods and critique.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1112 4 credits

Cinematography for VFX

Students will learn the fundamentals of cinematography and its related terminology, as well as the roles required to compile a film. Overall, film production fundamentals are explored to develop the students' eyes for good composition.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1113 4 credits

Photography for VFX

In this course, students will gain a basic understanding of traditional DSLR photography and live-action lighting. The students will then take the same principles and employ them in Maya with simple geometry, replicating still photography and live-action cinematography.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1120 4 credits

3D Animation Principles and Techniques

In this course, students will learn animation principles and techniques, such as the basics of the Maya interface, the graph editor, references, kinematic systems, overlapping animation, stepped blocking workflow, emotions, acting, the basics of human form and movements, polish and tweak the animation, walk cycles, and how to positively take notes and feedback from others. The final assignment for the term is completing a short animation from start to finish including sound design and editing.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1121 4 credits

Introduction to 3D in Entertainment Arts

In this course, students will gain a basic understanding of Maya and will become familiar with the 3D work environment. Students will start moving through the software by learning how the menus and tools are organized. They will start with modelling and will have an opportunity to explore various sections of Maya.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1122 4 credits

Perspective in Entertainment Arts

This course is an introduction to the essential principles of perspective used in the creation of artistic imagery. Students will apply basic perspective principles and develop skills in quick sketches, completed drawings, and storyboards. Students will learn how to integrate figures into scenes and plot light, shadows, and reflections to create believable environments.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1123 4 credits

Cinematics for Animation and VFX

Students will learn the core fundamentals of cinematics for feature film and television. These principles will be taken through their studies until the completion of the program. Students will complete this course by applying these principles to their own short films.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1130 4 credits

Game Design

Students will learn the fundamentals of game design and development by deep-diving into core game design theory and principles such as game feel, player psychology, choice, and more. They will produce design documents that familiarize them with the process of turning their creative ideas into tangible work.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1131 4 credits

Technical Design in Game Development

Students will learn advanced features of the Unreal Engine and apply their knowledge of programming, art and design to create more technically inclined content, such as advanced AI, gameplay objects, terrain, foliage, physics objects, particle effects, and more. Each will be a piece for their technical design and technical art portfolio.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1132 4 credits

Environment Art in Game Development

Students will learn the fundamentals of video game asset creation using industry-standard tools. In this course, students will create a game-ready environment and props in Maya and craft textures and materials in Photoshop and Substance Painter. These assets will then be brought forward to present in a portfolio.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1133 4 credits

Introduction to Game Programming

Students will learn the fundamental aspects of programming in C#. They will learn about variables, functions, loops, arrays, and object-oriented programming. Students will learn about physics, animation, and the handling of player input. Using Unity and C#, students will learn how to make a small game from scratch.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1140 4 credits

2D Animation Principles

This course will introduce the principles of animation. The exercises and assignments will replicate traditional paper-based 2D animation techniques using digital 2d software. Exercises like the bouncing ball, pendulum, and flour sack will provide students an opportunity to apply and gain mastery of animation principles with simpler objects and characters. The content of this course is a foundation that will be built upon in more advanced character animation courses.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1141 4 credits**Drawing for Animation**

This course explores the principles of perspective that serve as the foundation for understanding 3D space. Students will begin by applying these principles through quick sketches and illustrations (1, 2, and 3 point perspectives). They will then integrate elements into this space, such as props and characters, and will study how light, shadows and reflections act within the illustrated environments. Starting with drawing objects and still life, students will explore how to draw forms in space using the rules of perspective drawing. Later in the course, the students will begin drawing from live models.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1142 4 credits**Introduction to Figure Drawing in 2D Animation**

In this course, students practice drawing the human form from live models and learn the fundamentals of human anatomy as they apply to drawing. Students will practice gesture drawing to study the human figure in action, and progress to longer drawing studies to study anatomy and how to light and render their drawings.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1143 4 credits**History of Animation**

This course explores the right history of character animation, primarily focused on the evolution of the animated cartoon. With each class, students will learn the development of animation as a unique cinematic art form and industry. This course will take the students on a journey with the pioneers of the animated cartoon, into the eclectic early sound years, and through decades of development and refinement of animation principles, storytelling forms, artistic treatments, styles of humour and the radical changes through to recent years. Also covered are how social, economic, cultural, and historical conditions influenced the look and shape of the animated film. We explore the styles, sensibilities and characteristics of specific studios, directors, animators, designers, and other artists distinguished in animation history who continue to inspire new generations well into the 21st century.

Level: UG

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1200 4 credits**Introduction to Advanced Programs in Entertainment Arts**

Students will learn the basic concepts behind each stream of advanced study in entertainment arts, including game design, animation, game technology, and visual effects. At the end of the term, they will have a solid foundation upon which to decide which stream might be the more suitable for them.

Level: UG

Prerequisite(s): All of ENTA 1100, ENTA 1101, ENTA 1102 and ENTA 1103

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1201 4 credits**Colour and Design in Entertainment Arts**

This is a foundation course covering the language and principles of design in entertainment arts. The course will introduce colour theory and how to effectively use colour to compose impactful design. In addition, students will use analogous, contemporary, monochromatic, and compound palettes to explore colour harmony. Additional topics include muting and toning of colour, colour psychology, colour depth, colour proportion, the influence of light temperature on colour, and design unity.

Level: UG

Prerequisite(s): All of ENTA 1100, ENTA 1101, ENTA 1102 and ENTA 1103

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1202 4 credits**Head Drawing in Entertainment Arts**

Students will learn how to draw heads from real-life references. They will start applying basic drawing and painting techniques like silhouettes, grids, and shading techniques, to effectively build details on top of simple shapes accurately. They will review concepts like values and lighting. By the end of term, students will create a photorealistic self-portrait.

Level: UG

Prerequisite(s): All of ENTA 1100, ENTA 1101, ENTA 1102 and ENTA 1103

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1203 4 credits**Head Sculpting in Entertainment Arts**

This course is the second of three sculpting courses in the Foundation in Entertainment Arts program. In this class, students will be working on top of concepts previously developed in Figure Sculpting. After completing the human anatomy, they will focus on the head. They will continue to work on clay, analyzing features, skull structure, and the muscles and tissues that lay on top. Once they have fully studied the head using clay they will translate this knowledge to Zbrush, learning new tools and workflows.

Level: UG

Prerequisite(s): All of ENTA 1100, ENTA 1101, ENTA 1102 and ENTA 1103

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1211 4 credits**Introduction to Compositing for VFX**

In this course, students will learn the core fundamentals of compositing in Nuke and how to keep the correct order of operation for tools and procedures. The course will cover rotoscoping, 2d paint fix, 2d tracing, keying, and 3d Matchmove.

Level: UG

Prerequisite(s): All of ENTA 1110, ENTA 1121, ENTA 1112 and ENTA 1113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1212 4 credits

Data Acquisition for VFX

In this course, students will learn the fundamentals of gathering VFX data and being able to accurately identify and record relevant data for a specific visual effect shot.

Level: UG

Prerequisite(s): All of ENTA 1110, ENTA 1121, ENTA 1112 and ENTA 1113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1213 4 credits

Introduction to Preproduction and Production Principles for VFX

In this course, students will continue to explore ideas and techniques from their previous cinematography class. They will explore ideas and story pitches, storyboards, and visual development with the integration of VFX elements. On-set data acquisition will also be integrated. The stages of preproduction through to postproduction will be explored, along with the various production roles. Students will receive hands-on training by selecting and producing their own live-action projects with the basics in CG integration, filming CG integration in-camera, and editing.

Level: UG

Prerequisite(s): All of ENTA 1110, ENTA 1121, ENTA 1112 and ENTA 1113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1220 4 credits

Introduction to 3D Animation

In this course, students will learn character animation in subjects such as pose thumbnailing prior to filming references, and how to build constraints. They will also learn how to determine the difference between COG and gravity-driven movements, and how to use smears to bridge wide spacing. Additional refinements to arcs while maintaining energy will be explored, in addition to picking great pivot points and the setup of scenes. The final assignment for the term is completing a short animation from start to finish - which must integrate great timing and spline movements.

Level: UG

Prerequisite(s): All of ENTA 1120, ENTA 1121, ENTA 1122 and ENTA 1123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1221 4 credits

Introduction to Modelling in Entertainment Arts

This course covers the basic concepts of 3D polygon modeling. The fundamentals of computer geometry are taught by looking at the basic elements that comprise computer models. Modeling, lighting, texture mapping, and rendering are introduced in a production setting.

Level: UG

Prerequisite(s): All of ENTA 1120, ENTA 1121, ENTA 1122 and ENTA 1123, or, All of ENTA 1110, ENTA 1121, ENTA 1112 and ENTA 1113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1222 4 credits

Introduction to Texturing and Surfacing

This course is an introduction to texturing. It provides the basic knowledge for students to understand what is texturing, how to create good UV, what are the main maps to create a material, what are the main texturing software that are commonly used in a studio, and basic understanding of how to use them.

Level: UG

Prerequisite(s): All of ENTA 1120, ENTA 1121, ENTA 1122 and ENTA 1123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1223 4 credits

Introduction to Computer Animation Production in Entertainment Arts

In this course, students will learn the fundamentals of MAYA in brief exercises to become familiar with the many tools and workflows the software provides. This will include modeling, shading, UVs and texturing, lighting, cameras, rendering, and animation. These techniques will open the door to further advancement in the understanding of 3d art creation.

Level: UG

Prerequisite(s): All of ENTA 1120, ENTA 1121, ENTA 1122 and ENTA 1123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1230 4 credits

Level Design

Students will learn and practice level design theory while building a level from concept to polish. They will go through the level design process, including such stages as: documentation, blocking layouts, implementing gameplay, asset placement, and polishing. By the end of the course, students will have a portfolio-ready and playable level for an action-adventure game.

Level: UG

Prerequisite(s): All of ENTA 1130, ENTA 1131, ENTA 1132 and ENTA 1133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1231 4 credits

Visual Scripting in Game Development

Students will deep dive into Unreal's blueprint visual scripting system to learn how to create gameplay within the engine. Programming concepts such as functions, variables, arrays, and loops will be taught to the students from a visual scripting perspective while also understanding and utilizing Unreal's Gameplay Framework.

Level: UG

Prerequisite(s): All of ENTA 1130, ENTA 1131, ENTA 1132 and ENTA 1133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1232 4 credits**Character Art in Game Development**

Students will focus on crafting game-ready characters in Zbrush and Maya and on producing textures and materials in Photoshop and Substance Painter. During the course, students will familiarize themselves with node-based materials production, and work with in-engine lighting, rendering, and post-processing.

Level: UG

Prerequisite(s): All of ENTA 1130, ENTA 1131, ENTA 1132 and ENTA 1133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1233 4 credits**Intermediate Game Programming**

Students continue to dive deeper into Unity and C#. Using singletons, coroutines, dictionaries, stacks, events, networking, and serializing, they will create small games in class and will customize them with their own features. Students will create custom systems for UI management, pathfinding, and object pooling.

Level: UG

Prerequisite(s): All of ENTA 1130, ENTA 1131, ENTA 1132 and ENTA 1133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1240 4 credits**Introduction to Character Animation**

This course builds upon the information introduced in Animation Principles. Students will engage in a series of character animation exercises designed to explore weight, force, and momentum and prepare them for future action and acting animations. The content of the course provides a foundation of skills that will be built upon in more advanced character animation courses.

Level: UG

Prerequisite(s): All of ENTA 1140, ENTA 1141, ENTA 1142 and ENTA 1143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1241 4 credits**Introduction to Layout and Background Design**

This course will introduce the fundamentals of layout and colour for backgrounds. The exercises and assignments will show industry standard techniques in Photoshop software for creating backgrounds. Students will learn the importance of the background department's contribution to the 2d animation pipeline and the skills necessary to become successful background artists. The content of this course is a foundation that will be further built upon in Layout and Background Design 2.

Level: UG

Prerequisite(s): All of ENTA 1140, ENTA 1141, ENTA 1142 and ENTA 1143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1242 4 credits**Introduction to Character and Props Builds**

This course introduces students to build-based or puppet animation. Students will slowly build toward master in the creation of simple builds for props and characters. This work will be built upon subsequently in Character and Props Builds 2.

Level: UG

Prerequisite(s): All of ENTA 1140, ENTA 1141, ENTA 1142 and ENTA 1143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1243 4 credits**Introduction to Character Design**

This course focuses on general techniques, knowledge, and approaches used by professional artists to create successful characters for animation. During the course, students will be introduced to a wide variety of exercises and skills. They will learn from observation and by studying the work of various 2d animation masters. By exploring different techniques and design principles students will learn to execute their own character designs for their stories. From early research and ideation to completion and polish, students will be initiated into the full creative process.

Level: UG

Prerequisite(s): All of ENTA 1140, ENTA 1141, ENTA 1142 and ENTA 1143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1300 4 credits**Introduction to Maya in Entertainment Arts**

In their introduction to Maya, students will go through all the basic, modelling, animation, and texturing tools inside Maya. By the end of the course, students will be comfortable using this software. They will be able to execute all kinds of models, including hard and organic 3d models. They will learn basic animation.

Level: UG

Prerequisite(s): All of ENTA 1200, ENTA 1201, ENTA 1202 and ENTA 1203

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1301 4 credits**Traditional Painting in Entertainment Arts**

Students will learn how to successfully create watercolour paintings. They will start with basic concepts like brush strokes and will review the basics of colour theory, talking about hues, tones, shades, and values. During the first weeks, they will practice creating simple colour palettes of analogous colours, and neutral mixtures using contemporary colours. They will learn about masking and brush techniques creating diverse types and textures and adding interesting backgrounds to their compositions. By the end of term, they will be able to create more complex paintings by adding more colours into the mix. They will conclude the term with a final watercolour artwork that shows what they have learned in the course.

Level: UG

Prerequisite(s): All of ENTA 1200, ENTA 1201, ENTA 1202 and ENTA 1203

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1302 4 credits

Digital Painting for Visual Development

Students will dive into Photoshop and learn new tools with which to successfully integrate images. They will discuss the artwork of artists currently working in the film industry, analyzing their errors and successes. Through a series of assignments, they will learn how to apply the principles of lighting, perspective, and composition to digital matte painting shots.

Level: UG

Prerequisite(s): All of ENTA 1200, ENTA 1201, ENTA 1202 and ENTA 1203
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1303 4 credits

Creature Sculpting in Entertainment Arts

Students will build on knowledge gained in anatomy and head sculpting classes to expand their knowledge of ZbrushCore. They will start with animal studies in clay and translate those sculptures to a digital format. They will review and employ sculpting tools and methods to design and model a mythological creature.

Level: UG

Prerequisite(s): All of ENTA 1200, ENTA 1201, ENTA 1202 and ENTA 1203
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1311 4 credits

Intermediate Compositing for VFX

In this course, students will gain basic to intermediate skills and techniques for use in compositing. Building upon previous courses they will complete complex paint and tracker removes and will expand on their green screen extraction and integration skill set. Through filming footage students will learn the difficulties this work entails and will practice avoiding common filming pitfalls.

Level: UG

Prerequisite(s): All of ENTA 1221, ENTA 1211, ENTA 1212 and ENTA 1213
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1312 4 credits

Introduction to Lighting for VFX

In this course, students will gain a basic understanding of lighting in Maya and explore the art of creating compelling images. Students will be introduced to the technical aspects of Vray and will create materials and light scenes.

Level: UG

Prerequisite(s): All of ENTA 1221, ENTA 1211, ENTA 1212 and ENTA 1213
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1320 4 credits

Intermediate 3D Animation

In this course, students will learn character animation, including why references are used; how to improve polishing skills; how to understand the proper workflow transition from blocking to splined; addressing feedback, and practicing solid body kinematics. The final assignment for the term is the completing of a short animation, from start to finish, including good physical acting and contacts. Each lab session will review the previous week's assignments.

Level: UG

Prerequisite(s): All of ENTA 1220, ENTA 1221, ENTA 1222 and ENTA 1223
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1321 4 credits

Intermediate Modelling in Entertainment Arts

This course provides a comprehensive survey of digital sculpting. Students will learn the methodologies to properly model and texture a creature asset fit for production in a VFX pipeline; MAYA and Mari/Substance Painter will also be taught as they compliment this workflow.

Level: UG

Prerequisite(s): All of ENTA 1220, ENTA 1221, ENTA 1222 and ENTA 1223, or all of ENTA 1221, ENTA 1211, ENTA 1212 and ENTA 1213
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1322 4 credits

Introduction to Sculpting in Entertainment Arts

In this course, students will start by studying anatomy with traditional drawing and sculpting mediums. As the course progresses students will transition this knowledge into digital sculpting in ZBrush.

Level: UG

Prerequisite(s): All of ENTA 1220, ENTA 1221, ENTA 1222 and ENTA 1223
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1323 4 credits

Industry Preparation in Entertainment Arts

In this course, students will examine their work from their first year in entertainment arts thus far. Each student will select at least 3 of their best-completed assignments or shorts to cut into their first demo reel edit. Each shot will be visually broken down in an industry-standard format. Students will also cater their resumes and supporting documents to their selected area(s) of specialization. Mock interviews will be explored to examine professionalism in an interview setting, and to learn how to react and respond to interview-like questions.

Level: UG

Prerequisite(s): All of ENTA 1220, ENTA 1221, ENTA 1222 and ENTA 1223, or all of ENTA 1221, ENTA 1211, ENTA 1212, and ENTA 1213, or all of ENTA 1240, ENTA 1241, ENTA 1242, and ENTA 1243
Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1330 4 credits**UI and UX Design in Game Development**

Students will learn and apply UI and UX best principles and practices while designing and building a UI system from concept to polish. Students will follow the full UX process from start to finish, including strategizing, defining, designing and prototyping, verifying and interacting, implementing, and documenting. By the end of the course, students will have a comprehensive understanding of the user and their needs and have a workable mobile game UI and case study for their portfolio.

Level: UG

Prerequisite(s): All of ENTA 1230, ENTA 1231, ENTA 1232 and ENTA 1233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1331 4 credits**Rapid Prototyping in Game Development**

Students will form multidisciplinary teams to design and create over 6 game prototypes. Students will learn to leverage constraints to bolster creativity, work productively under tight timelines by managing their time effectively and learn to effectively communicate in a demanding production environment.

Level: UG

Prerequisite(s): All of ENTA 1230, ENTA 1231, ENTA 1232 and ENTA 1233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1332 4 credits**Character Animation in Game Development**

Students will build a new skill set that includes rigging and animating for game characters. They will create a set of game-ready animations while applying animation principles. They will incorporate industry-standard motion capture data, plan a production, and be prepared for iteration during game development.

Level: UG

Prerequisite(s): All of ENTA 1230, ENTA 1231, ENTA 1232 and ENTA 1233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1333 4 credits**Advanced Game Programming**

In this final programming course, students will be shown advanced features of Unity and C#, such as scriptable objects, dynamic asset loading, using MBAAS software, and the HDRP pipeline. By creating their own mobile strategy game they will learn how to create an asynchronous multiplayer game. They will also create a custom cinematic using Unity HDRP.

Level: UG

Prerequisite(s): All of ENTA 1230, ENTA 1231, ENTA 1232 and ENTA 1233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1340 4 credits**Intermediate Character Animation**

This course will provide students the opportunity to refine their skills and use of animation principles such as timing, spacing, force, dynamic posing, and weight. In addition to solid body mechanics, this course will introduce acting and performance. Students will be tasked with creating more complex work, such as multiple character interactions, shot sequences with multiple cuts, and facial performance including dialogue and lip-sync. With instructor approval, it is strongly recommended that students use character designs from Design for Animation 1 for this course.

Level: UG

Prerequisite(s): All of ENTA 1240, ENTA 1241, ENTA 1242 and ENTA 1243

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1341 4 credits**Advanced Layout and Background Design**

This course will build upon material from Introduction to Layout and Background Design to introduce advanced techniques. The course will explore more complex designs, more challenging perspectives, and more complex ways of using Photoshop.

Level: UG

Prerequisite(s): All of ENTA 1240, ENTA 1241, ENTA 1242 and ENTA 1243

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 1343 4 credits**Advanced Character Design**

Students will be asked to complete various character design tasks. Following multiple industry standards and practices, this class is meant to be an accurate representation of what to expect in a professional animation setting.

Level: UG

Prerequisite(s): All of ENTA 1240, ENTA 1241, ENTA 1242 and ENTA 1243

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2110 4 credits**Scripting for VFX**

In this course, students will gain an understanding of the technical aspects of VFX from the artist's perspective. This includes Nuke-based scripting in TCL for simple expressions as well as more advanced Python and code writing in both Nuke and the operating system. Students will create a gizmo tool and a custom Nuke menu to store it. The course also addresses colour science, and colour workflow from capture through VFX to the screen. Students will explore how image and data flow through VFX facilities and how technical pipelines help artists to achieve the goal of making exceptional and stunning shots.

Level: UG

Prerequisite(s): All of ENTA 1321, ENTA 1311, ENTA 1312 and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2111 4 credits**Matte Painting for VFX**

In this course, students will be introduced to the techniques and practices of digital matte painting through the use of 2d and 3d software. By the end of the course, students will understand the principles of 2d painting and how to apply those skills to 3d scenes to communicate each shot's mood, emotion, and story.

Level: UG

Prerequisite(s): All of ENTA 1321, ENTA 1311, ENTA 1312 and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2112 4 credits**Introduction to FX**

In this course, students will learn the basics of FX in Houdini. Through the use of optimization, students will be introduced to proceduralism, randomization, particle velocity and position, Houdini's scripting language VEX, RBD simulations, and basic output render attributes.

Level: UG

Prerequisite(s): All of ENTA 1321, ENTA 1311, ENTA 1312 and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2113 4 credits**Intermediate Lighting for VFX**

In this course, students will gain a basic understanding of Katana and the technical foundations of lighting a shot. They will be introduced to Katana tools and the node-based approach to scene lighting.

Level: UG

Prerequisite(s): All of ENTA 1321, ENTA 1311, ENTA 1312 and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2120 4 credits**Visual Storytelling in 3D Animation**

In this course, students will explore the storytelling process, starting with the foundations of cinematography. Elements such as cuts, camera angles, story beats, pacing, and layout will be explored. Students will use the skills gained throughout the course in developing their final demo reel concepts.

Level: UG

Prerequisite(s): All of ENTA 1320, ENTA 1321, ENTA 1322, and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2121 4 credits**Rigging in Entertainment Arts**

Students will learn character rigging such as IK and FK differences, how to create a facial rig, how to build advanced tweakers, and how to provide basic functionality in a rig. They will also learn how to rig a quadruped creature fast, how to utilize particle goals to add life to animated rigs, and will fine-tune their rig with basic Python. Throughout the course, students will complete inclass assignments.

Level: UG

Prerequisite(s): All of ENTA 1320, ENTA 1321, ENTA 1322, and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2122 4 credits**Advanced Modelling in Entertainment Arts**

This course is a continuation of Intermediate 3D Modelling in Entertainment Arts, where techniques and skills in hard surface 3D modelling will to continue to be refined in Maya. Students will also explore Marvelous Designer for cloth creation and design.

Level: UG

Prerequisite(s): All of ENTA 1320, ENTA 1321, ENTA 1322, and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2123 4 credits**Advanced Texturing and Surfacing**

This course is a continuation of Introduction to Texturing and Surfacing. In this course, students explore more complex material combinations and subjects. They will use a variety of maps to make photo-realistic material and will texture organic subjects such as skin.

Level: UG

Prerequisite(s): All of ENTA 1320, ENTA 1321, ENTA 1322, and ENTA 1323

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2130 4 credits**Systems Design in Game Development**

This course deep-dives into systems design and its various subsets, including multiplayer systems, social systems, world systems, AI, and core gameplay systems. Students will learn fundamental systems theory, including compulsion loops, input, output, economies, and more. They will design their own systems with design documentation such as briefs, spreadsheets, flowcharts, and wireframes. Students will also learn the fundamentals of combat design in fighting and action games, including frame data, animation principles, and more. Students will reinforce their learning by designing and prototyping their own fighting game character, combat system, enemy, and boss.

Level: UG

Prerequisite(s): All of ENTA 1330, ENTA 1331, ENTA 1332 and ENTA 1333

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2131 4 credits**Introduction to Rapid Game Development**

In this course, students will work together in collaborative teams to rapidly produce small, but focused, games made in either Unreal or Unity that can serve as portfolio pieces. Students will learn and apply both project management and quality assurance skills and processes to manage their game's production, reduce bugs and ensure quality.

Level: UG

Prerequisite(s): All of ENTA 1330, ENTA 1331, ENTA 1332 and ENTA 1333

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2132 4 credits**Technical Art in Game Development**

Using Unreal, students will learn the different facets of technical art, including advanced material functionality, creating particle effects, static and skeletal mesh, and animation features. Students will also build their own tools and scripts for asset pipelines and workflows.

Level: UG

Prerequisite(s): All of ENTA 1330, ENTA 1331, ENTA 1332 and ENTA 1333

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2133 4 credits**Shaders and Rendering in Game Development**

Students will be introduced to the full rendering pipeline, focusing on shaders, lighting techniques, and custom rendering methods. Using various engines, students will be introduced to the many concepts of how 3D objects can be rendered, and how to decide which approach to use in various situations.

Level: UG

Prerequisite(s): All of ENTA 1330, ENTA 1331, ENTA 1332 and ENTA 1333

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2140 4 credits**Advanced Character Animation**

This course will challenge students to create more ambitious and complex animations projects that mimic shots encountered in animation production. Emphasis will be placed on character performance, solid body mechanics, and sophisticated use of animation principles. It is strongly recommended that students use designs and storyboards from previous or current classes.

Level: UG

Prerequisite(s): All of ENTA 1340, ENTA 1341, ENTA 1323, and ENTA 1343

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2141 4 credits**Introduction to Visual Storytelling in 2D Animation**

This course explores the principles of visual narrative. Using examples from live-action and animation, students will learn the fundamental rules of cinematography and apply them to their own work. Colour theory, painting, photography, composition, storyboarding, film making, and animatics will be studied and used to help students apply storytelling principles to their own work. The students will be introduced to commercial storyboard and layout production.

Level: UG

Prerequisite(s): All of ENTA 1340, ENTA 1341, ENTA 1323, and ENTA 1343

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2142 4 credits**Introduction to 2D FX Animation**

This course will introduce the principles of FX animation. The exercises and assignments will give students an introductory and basic knowledge of the elemental FX most commonly used in industry. Students will complete the course with a strong basis for industry-level FX animation.

Level: UG

Prerequisite(s): All of ENTA 1340, ENTA 1341, ENTA 1323, and ENTA 1343

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2143 4 credits**Introduction to Compositing in 2D Animation**

Compositing in 2D animation is the "polish pass" for TV and film. The final look and feel of a show is determined by how well the compositing is done. This course will introduce compositing techniques to students. The assignments will replicate industry-standard tasks using Harmony software. The goal of the course is to provide an introduction to basic compositing in Harmony and build a foundation for the more advanced techniques taught in Compositing in 2D Animation.

Level: UG

Prerequisite(s): All of ENTA 1340, ENTA 1341, ENTA 1323, and ENTA 1343

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2210 4 credits**3D Matchmove**

In this course, students will learn how to create a 3D camera out of live-action footage to match the motion of their CGI to the plate using a 3D Equalizer.

Level: UG

Prerequisite(s): All of ENTA 2110, ENTA 2111, ENTA 2112 and ENTA 2113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2211 4 credits**Advanced Compositing for VFX**

In this course, students will delve more deeply into compositing, look development, smart vectors, beauty work, relighting, interactive lighting, and CG integration. They will also focus on the improvement of their teamwork.

Level: UG

Prerequisite(s): All of ENTA 2110, ENTA 2111, ENTA 2112 and ENTA 2113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2212 4 credits**Intermediate FX**

In this course, students will gain advanced experience in the realm of Houdini and FX. Exploring fluids, Vellum, and the basics in grooming, students will continue to learn to work from reference to create the most effective simulations possible.

Level: UG

Prerequisite(s): All of ENTA 2110, ENTA 2111, ENTA 2112 and ENTA 2113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2213 4 credits**Advanced Lighting for VFX**

In this course, students will expand on their knowledge of lighting and will be able to render interesting images. Students will explore lighting tools in more depth and will understand how to approach different types of lighting projects including full CG, integrations, and multi-shots.

Level: UG

Prerequisite(s): All of ENTA 2110, ENTA 2111, ENTA 2112 and ENTA 2113

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2220 4 credits**Advanced Character Animation in Entertainment Arts**

This course expands on previously taught principles and introduces new advanced animation techniques. Students will learn how to properly utilize facial controls, become masters at filming reference, and have a firm understanding of body mechanics.

Level: UG

Prerequisite(s): All of ENTA 2120, ENTA 2121, ENTA 2122, and ENTA 2123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2221 4 credits**LookDev and Lighting in Entertainment Arts**

Students will gain a strong understanding of how to use Substance, understand how to create clean renders in MAYA, and become more familiar with the concept of CG lighting. This class aims to improve each students' artistic eye, as well as demonstrate and navigate through helpful tools to push their art further.

Level: UG

Prerequisite(s): All of ENTA 2120, ENTA 2121, ENTA 2122, and ENTA 2123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2222 4 credits**Advanced Sculpting in Entertainment Arts**

In this course, students will explore characters and creatures and their topology in relation to being animation-ready. The course will build upon the previous sculpting and rigging courses. Techniques will be reviewed to enhance models and to speed up the modelling process.

Level: UG

Prerequisite(s): All of ENTA 2120, ENTA 2121, ENTA 2122, and ENTA 2123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2223 4 credits**Advanced Computer Animation Production in Entertainment Arts**

This course dives more deeply than previous courses into the animation production pipeline. Students are introduced to more advanced tools with MAYA such as XGEN and nCloth. Animation techniques such as animating with constraints and creating walk cycles are also explored.

Level: UG

Prerequisite(s): All of ENTA 2120, ENTA 2121, ENTA 2122, and ENTA 2123

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2230 4 credits**Storytelling and Narrative Design in Game Development**

Students will learn narrative design by planning, designing, writing, and implementing a quest for an open-world game, including writing characters, dialogues, and story structures. Students will be able to identify the difference between story writing and narrative design, and practice both by creating story bibles, barks, and narrative features.

Level: UG

Prerequisite(s): All of ENTA 2130, ENTA 2131, ENTA 2132, and ENTA 2133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2231 4 credits**Advanced Rapid Game Development**

Students will continue the process of rapidly producing focused games in collaborative teams, but with the increased project scope. Students will learn how to become effective producers on their projects, and how to properly market their games.

Level: UG

Prerequisite(s): All of ENTA 2130, ENTA 2131, ENTA 2132, and ENTA 2133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2232 4 credits**Procedural Art in Game Development**

Students will be introduced to the exploration of proceduralism as an avenue for the rapid creation of varied game assets. They will use various forms of node-based logic and scripting in order to apply concepts of proceduralism.

Level: UG

Prerequisite(s): All of ENTA 2130, ENTA 2131, ENTA 2132, and ENTA 2133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2233 4 credits**Developing for XR**

Using state-of-the-art hardware students will be introduced to virtual reality, augmented reality, and mixed reality. They will learn about best practices for creating games for these platforms and will be introduced to various platforms and solutions that support them.

Level: UG

Prerequisite(s): All of ENTA 2130, ENTA 2131, ENTA 2132, and ENTA 2133

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2240 4 credits**Project Planning in 2D Animation**

In this course, students will begin designing and planning their final projects. They will work collaboratively in teams to help develop their ideas and present them for review and feedback. At the end of the course, the students will have animatics that will serve as their template to begin production on their final projects next term.

Level: UG

Prerequisite(s): All of ENTA 2140, ENTA 2141, ENTA 2142 and ENTA 2143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2241 4 credits**Advanced Visual Storytelling in 2D Animation**

This course will explore the fundamental principles of storyboarding for animation and live-action. The first principle will be studying cinematography to understand how to stage the camera in their storyboards. The second principle will be focusing on story structure and screenwriting so the students can understand how to translate a script into storyboards that are emotionally engaging and interesting. Lastly, the students will study and break down film in live-action and animation in order to learn how to apply those principles to their own work: a short storyboard animatic of a scene they wrote and storyboarded.

Level: UG

Prerequisite(s): All of ENTA 2140, ENTA 2141, ENTA 2142 and ENTA 2143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2242 4 credits**Advanced 2D FX Animation**

Building upon the foundation of Introduction to 2D FX Animation, students will learn more advanced techniques to create more complex FX and learn more about the interplay between FX, compositing, and character animation. This course will emphasize working clean, working in teams, and reusing FX.

Level: UG

Prerequisite(s): All of ENTA 2140, ENTA 2141, ENTA 2142 and ENTA 2143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2243 4 credits**Advanced Compositing in 2D Animation**

This course will continue work started in Introduction to Compositing in 2D Animation. Students will replicate advanced compositing techniques used in 2D animation pipelines.

Level: UG

Prerequisite(s): All of ENTA 2140, ENTA 2141, ENTA 2142 and ENTA 2143

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2311 4 credits**VFX Project: Preproduction**

In this first of three sequential final project courses, students will develop pitch, storyboard, and compile 3 to 4 visual effects shots for their final demo reel presentation. Working from these plans, students then complete the CG elements and, where needed, film their live-action plates or prepare CG elements in preparation for their final shots. Faculty and industry mentors guide and give feedback to each student based on their selected area of specialization.

Level: UG

Prerequisite(s): All of ENTA 2210, ENTA 2211, ENTA 2212 and ENTA 2213

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2312 4 credits**VFX Project: Production**

In this second of three sequential final project courses, students will start production on their shot elements and projects to prepare them for their final industry presentation. Industry mentors will work closely with the students to provide meaningful feedback for them to implement to improve their work.

Level: UG

Prerequisite(s): ENTA 2311

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2313 4 credits**VFX Project: Production Finals**

In the third of three sequential final project courses, students will continue to produce their final portfolios. Students will focus on the final steps needed to deliver their projects while taking guidance and feedback, from faculty and industry mentors to hone their professional communication skills.

Level: UG

Prerequisite(s): ENTA 2312

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2314 4 credits**VFX Portfolio**

In this course, students will focus on fixing bugs, polishing, and presenting their final shot and reels. Students will have a chance to network with and showcase their portfolios to working professionals. Students may also develop marketing material (LinkedIn, resume, cover letter, thank-you letter, online demo reel, portfolio host site) to help promote their portfolios and resumes while seeking employment.

Level: UG

Prerequisite(s): All of ENTA 2210, ENTA 2211, ENTA 2212 and ENTA 2213

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2321 4 credits**3D Animation Project: Preproduction**

This is the first of three sequential final project courses. Students will develop, pitch, storyboard, and compile 3-4 visual effects shots for their final demo reel presentation. Working from these plans students then complete the CG elements and, where needed, film their live-action plates or prepare their CG elements in preparation for their final shots. Faculty and industry mentors will guide and give feedback to each student, based on their area of specialization.

Level: UG

Prerequisite(s): All of ENTA 2220, ENTA 2221, ENTA 2222, and ENTA 2223

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2322 4 credits**3D Animation Project: Production**

In the second of three sequential final project courses, students start production on their shot elements and projects to prepare them for their final industry presentation. Industry mentors will work closely with the students to provide meaningful feedback for them to implement to improve their work.

Level: UG

Prerequisite(s): ENTA 2321

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2323 4 credits**3D Animation Project: Production Finals**

In the third of three sequential final project courses, students will continue to produce their final portfolios. Students will focus on the final steps needed to deliver their projects while taking guidance and feedback, from faculty and industry mentors to hone their professional communication skills.

Level: UG

Prerequisite(s): ENTA 2322

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2324 4 credits**3D Animation Portfolio**

In this course, students will focus on fixing bugs, polishing, and presenting their final shot and reels. Students will have a chance to network with and showcase their portfolios to working professionals. Students may also develop marketing material (LinkedIn, resume, cover letter, thank-you letter, online demo reel, portfolio host site) to help promote their portfolios and resumes while seeking employment.

Level: UG

Prerequisite(s): All of ENTA 2220, ENTA 2221, ENTA 2222 and ENTA 2223

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2331 4 credits**Game Industry Project: Preproduction**

This is the first of three sequential final project courses in which students form teams to ideate, pitch, and draft documentation about a single game concept. Working from these documents the students then create a playable prototype proving out their main feature. This pre-production process allows students to be production-ready for their game moving forward. Faculty and industry mentors will guide and give feedback to the student teams.

Level: UG

Prerequisite(s): All of ENTA 2230, ENTA 2231, ENTA 2232 and ENTA 2233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2332 4 credits**Game Industry Project: First Production**

This is the second of three sequential final project courses. In this course, students start production on their final game to deliver a playable vertical slice and prove out the core gameplay loop. Industry mentors will work closely with the students to provide meaningful feedback for them to implement to improve their games.

Level: UG

Prerequisite(s): ENTA 2331

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2333 4 credits**Game Industry Project: Production**

This is the third of three sequential final project courses. In this course, students will continue to work in collaborative teams to produce a game. Students will focus on production to deliver two major game production milestones - alpha and beta - while taking guidance and feedback from staff and industry mentors and honing their professional communication skills.

Level: UG

Prerequisite(s): ENTA 2332

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2334 4 credits**Game Industry Portfolio**

In this course, students will focus on fixing bugs, polishing, and presenting their games. Students will have a chance to network with and showcase their games to working industry professionals. Students will also develop marketing material to help promote their games and create and resume and portfolio while seeking employment.

Level: UG

Prerequisite(s): All of ENTA 2230, ENTA 2231, ENTA 2232 and ENTA 2233

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2341 4 credits**2D Animation Project: Preproduction**

This is the first of three sequential final project courses in which students will develop, pitch, storyboard, and compile 3-4 2D animation shots for their final demo reel presentation. Working from these plans, students complete the CG elements and where needed film their live-action plates or prepare CG elements in preparation for their final shots. Faculty and industry mentors will guide and give feedback to each student based on their selected area of specialization.

Level: UG

Prerequisite(s): All of ENTA 2240, ENTA 2241, ENTA 2242 and ENTA 2243

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2342 4 credits**2D Animation Project: Production**

This is the second of three sequential final project courses. Students will start production on their shot elements and projects to prepare them for their final industry presentation. Industry mentors will work closely with the students to provide meaningful feedback for them to implement to improve their work.

Level: UG

Prerequisite(s): ENTA 2341

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2343 4 credits**2D Animation Project: Production Finals**

This is the third of three sequential final project courses. Students will focus on the final steps needed to deliver their projects while taking guidance and feedback from faculty and industry mentors to hone their professional communication skills.

Level: UG

Prerequisite(s): ENTA 2342

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

ENTA 2344 4 credits**2D Animation Portfolio**

While students are working on their final projects, they will have a chance to network with and showcase their portfolios to, working professionals. They may also develop marketing material (LinkedIn, resume, cover letter, thank-you letter, online demo reel, or portfolio host site) to help promote their portfolios and resume while seeking employment.

Level: UG

Prerequisite(s): All of ENTA 2240, ENTA 2241, ENTA 2242 and ENTA 2243

Attributes: ARTS (<https://calendar.kpu.ca/courses-az/#courseattributestext>), F2A9 (<https://calendar.kpu.ca/courses-az/#courseattributestext>)