

ADVANCED DIPLOMA IN ANIMATION DESIGN

Awarded by : Raffles Singapore
Intakes : January, April, July, and October
Duration : 1 Year and 6 Months (Full-time)

Core Modules

3D Character Animation	<p>This module allows the students to further develop their knowledge and skills on their 3D character design modeling and animation and to bring the illusion of life to the animated characters. Students will learn high-level animation tools to gain insight into professional animators approach on character animation creating effective poses, conveying personality, emotion, expression and attitude. At the end of this module students are able to create character animation with professional staging and planning of the character animation within a scene.</p> <p>Credit Points: 10</p>
3D Character Modeling	<p>This module aims to build upon the students' principles of modeling 3D techniques acquired in the previous 3D techniques studies to model a 3D character from a base 3D geometry to high resolution sculpt. Students will learn the process of animation character development with conceptual drawings and sketches and how to project high resolutions detail on low resolutions geometry, create UV's and various textures effects such as diffuse, specular, ambient occlusion, skybox, image planes, props and normal mapping using 3D Max, Maya and Mudbox. On completion of the module students will be able to create a turntable demo of 3D character with professional lighting and textures.</p> <p>Credit Points: 10</p>
3D Rigging	<p>The module provides students with essential knowledge and skill sets in character rigging for mechanical and organic models in 3D animation. Using the industry standard 3D computer graphics software, students will be guided to explore both the technical and aesthetic aspects of bipedal rigging to create realistic and flexible movements for character animation. The guidance will take the form of lectures, tutorials, technical demonstrations, practicals, and critique sessions. The components of the module include</p>

	<p>techniques of forward and inverse kinematic, skeleton controls, realistic and cartoon motion studies, parenting and groups, curve controllers and weighting, etc.</p> <p>Credit Points: 15</p>
Academic Research & Communication Skills	<p>This unit covers key aspects of research and communication studies in academic contexts relevant to students of design and marketing. Students engage in collaborative learning activities throughout the term in order to develop their teamwork skills. Students learn to locate, understand and critically evaluate information from books, journals, the Internet and primary sources in order to do effective research. Using these sources of information, students then produce an extended piece of analytical writing and give oral presentations to their peers. Skills in doing primary research (i.e. conducting focus groups and surveys), accessing and evaluating information, paraphrasing, using established referencing systems, applying the principles of effective communication and the professional presentation of documents are all covered during the module.</p> <p>Credit Points: 10</p>
Concept Art 1	<p>The module provides students with essential knowledge and skill sets to build a solid foundation in concept art development for animation and game design. With emphasis on originality and visual appeal, students will be guided to explore both the technical and aesthetic aspects of character design in the form of concept art. The guidance will take the form of lectures, tutorials, technical demonstrations, practicals, and critique sessions. The components of the module include observation of human form and lighting; visualization in comprehensive sketches, model sheets, and illustrations; digital painting techniques, etc.</p> <p>Credit Points: 10</p>
Concept Art 2	<p>Building on the foundation of Concept Art 1, the module enables students to gain further familiarization with the industry standard process and practices of concept art generation in animation and game design. Through theoretical and practical guidances, students will acquire advanced knowledge to develop effective concept arts focusing on vehicles and environments. The guidance will take the form of lectures, tutorials, technical demonstrations, practicals, and critique sessions. The components of the module include advanced level of form and lighting studies; visualization in comprehensive sketches, model sheets, and illustrations; digital painting techniques, etc.</p> <p>Credit Points: 15</p>

<p>Design Studio 1</p>	<p>This module aims to provide students with a practical platform to experience the pace and demand of an actual animation design studio. Students will produce a comprehensive short animated film by strictly follow the standard professional practice that includes design process such as research, analysis, project planning, critical thinking, problem solving, concept development and post-production skills. The emphasis of the module is to apply all the animation knowledge and technical skills previously learned to fulfill the brief requirements as well as to develop a short animated film or video for the entertainment industries based on a given project specifications and each stage of the design approval by the lecturer within a projected timeline.</p> <p>Credit Points: 20</p>
<p>Design Studio 2</p>	<p>This module aims to provide students a practical platform to experience the pace and competitive demand of an actual animation design studio. Students are required to produce effective comprehensive design independently and to follow strictly the standard professional practice that includes design process such as research, analysis, project planning, brief generation, concept development, production execution and implementation with professional presentation. In such simulation of the real-world animation design environment, students will play the role as the designer while the lecturer will act as the client who will give the project specifications and approvals to each of the animation design project. The emphasis of this module is on fulfilling the animation project brief requirement professionally as well as developing an emotional response animation within a projected timeline independently.</p> <p>Credit Points: 20</p>
<p>Digital Matte Painting</p>	<p>The module provides students with essential knowledge and skill sets to create environments and backgrounds for animation production using digital matte painting techniques. In the module, students will be guided to explore both the technical and aesthetic aspects of digital matte creations. The guidance will take the form of lectures, tutorials, technical demonstrations, practicals, and critique sessions. The components of the module include composition principles and considerations such as lighting quality, atmosphere, spatial relations, perspective; 2D and 3D tracking in camera mapping; digital painting techniques involving incorporation of photographic and 3D graphic elements, etc.</p> <p>Credit Points: 10</p>
<p>Digital Videography</p>	<p>The module provides students with the essential knowledge and skill sets to gain fundamental understandings of capturing moving images through digital</p>

	<p>videography. In the module, students will be guided to explore both the technical and aesthetic aspects of videography as an contemporary medium of expression in visual communication. The guidance will take the form of lectures, tutorials, technical demonstrations, practicals, and critique sessions. The components of the module include video production workflow from storyboarding to audio integration, art directions in videography and cinematography, video editing and compositing with industry standard tools, effects treatment in post-production, etc.</p> <p>Credit Points: 15</p>
<p>History of Visual Communication</p>	<p>This unit will enable learners to recognise, and understand, the major historical developments of Visual Communication through research of the major fine art and design movements. The course integrates factual historical knowledge with an exploration of the interpretations and theories surrounding historical change. The main objective in studying past art and design languages and forms is to give students a solid grounding and context for contemporary Visual Communication in regard to their own design practise.</p>
<p>Major Project</p>	<p>Building on the prior design knowledge and skills, the module provides students with an opportunity to reflect upon their experiences in previous modules and extend their design development in areas of specialisation that they would like to pursue in greater depth. Within a self-directed problem based framework, students will be challenged in their usual understanding of design practices in order to formulate a comprehensive, well considered, and creative design solution. Throughout the module, students will be facilitated by the lecturer or tutor to complete their design projects of choice in adherence to industry standard process and workflow. The priorities of the module include advanced level of analytical and critical thinking, strategic planning and management, competency in creative conceptualisation and execution, etc.</p> <p>Credit Points: 40</p>
<p>Motion Graphics and Effects 1</p>	<p>The module provides students with the essential knowledge and skill sets to build a solid foundation in motion graphics and effects design. Using industry standard vector based animation and motion effects tools, students will be guided to explore various animated interactions between motion elements in screen media, ranging from simple shapes to complex forms; from pictorial marks to symbolic logos; from type to imagery. The guidance will take the form of lectures, tutorials, technical demonstrations, practical experimentations, and critique sessions. The components of the module include stop motion animation, animated web content, typography in motion, and comprehensive motion graphics design, etc.</p>

	Credit Points: 10
Motion Graphics and Effects 2	<p>Building on the foundation of Motion Graphics and Effects 1, the module enables students to gain proficiency in the advanced practice of motion design. Through theoretical and practical guidances, students will develop specialised skills in creating sophisticated motion designs with focus on creative application of animated visual effects to both the conventional and unconventional time based media. The guidances will take the form of lectures, tutorials, technical demonstrations, practical experimentations, and critique sessions. The components of the module include advanced masking with rotoscoping and motion tracking; simulation effects in various particle systems; motion effects in VR/360 environments, etc.</p> <p>Credit Points: 15</p>
Portfolio and Showreel	<p>The module provides students with the essential knowledge and skill sets to develop a personal portfolio, which can reflect their competency and positioning in their areas of specialization. Through theories and practicals, students will be guided to investigate and improve their representative design works in the portfolio design process. The guidance will take the form of lectures, tutorials, practical experimentation, and critique sessions. The components of the module includes self-assessment, review and revision of assignments, resume writing, presentation skills for job interview, etc.</p> <p>Credit Points: 15</p>
Screenplay and Storyboarding	<p>The module aims to provide students the knowledge and skills of storytelling and storyboarding, the process of visual planning the film before shooting. The emphasis will focus on the visualization skills, visual storytelling, narrative structure, rapid sketching by translating scripts into illustrated frames that detail each scene's composition, character development, acting, lighting, camera angles into a sequential visual story. Upon completion of the module, student will be able to develop storyboarding with digital animatics to illustrate sequential narrative story visuals.</p> <p>Credit Points: 10</p>
Special Effects	<p>This module provide students the knowledge and advanced techniques to apply realistic special visual effects used in the entertainment industries such as live productions, film, movies, television, animation and video games, etc. Students will learn how to maximize the Maya's tool such as particle emission, which includes point, particle/particle, curve, and surface emitters, particle motion, fluids and behavior through the use of fields and collisions to create a realistic special virtual environment and ambiances effects.</p>

	Credit Points: 10
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Industrial Attachment	<p>This module aims to provide students with the opportunity to gain real-world industry experiences and professional practices in their chosen discipline. It allows students to establish connections, develop useful contacts, and gain industrial skills and an overall perspective of the discipline. The industrial attachment is intended to enhance students' educational experience and prepare them for their careers.</p> <p>Credit Points: 20</p>
Industry and Community Engagement	<p>In this module, students are required to use their design knowledge and skills in industry-focused and/or community-based projects. These projects are facilitated by the lecturer or tutor, and there will be interactions with and feedback from key industry/community project mentors. The module is intended to prepare students for the expectations of the fast-paced real-world industry, and professional practices in careers in their chosen discipline.</p> <p>Credit Points: 20</p>