CIM - INTERACTIVE MULTIM TECH (CIM)

CIM 2003 Graphic Design for Multimedia (2-2-3)
Introducing the fundamental elements and principles of graphic design in both print-based and digital applications. Developing an understanding of the design process from the development of concepts and visual to the production of Web/print-ready images. Demonstrating an understanding of typeface selection. Discussing aspects of colour theory systems. Compositing, rendering and production techniques are demonstrated using visualisation, abstraction methods and industry-standard image processing software.
Prerequisites: CIS 1203

CIM 2103 Storyboarding for Multimedia (3-1-3)
Build a visualisation to present an idea or plan prior to developing a linear or interactive multimedia application. Employ aspects of storyboard production including interpretation of concepts and scripts, layout and design and drawing for user interfaces. Implement interaction design using software skills for the production of digital visualisation techniques, movie and animation storyboarding including animatics and designing layout and interaction for game levels.
Prerequisites: CIS 1203

CIM 3003 2D Animation (3-1-3)
Discuss the history and types of 2D animation, and the theory behind the concept of animation, namely, the persistence of vision. Identify the basic principles of 2D animation. Create 2D animation in linear and interactive applications. Describe the concepts and mechanics of sound synchronisation, lip-synching and integration of sound to 2D animated sequences. Utilise professional animation tools and applications to develop 2D digital animation sequences that incorporate contemporary animation principles and techniques.

CIM 3113 Motion Graphics (3-1-3)
This course builds a technical proficiency in the field of motion graphics by further developing skills in vector graphics, animation and video effects, and applying these skills to three well-established applications of Motion Graphics: Music Videos, Animated Info-graphics and Animated 3D Logos. Students will study Motion Graphics production pipelines from concept to execution and learn to work with shot descriptions, storyboards, 2D vector graphics video stock footage, 3D Graphics and video effects software.
Prerequisites: CIM 2003

CIM 3203 Programming for Multimedia (3-1-3)
Introduce programming as a creative tool for digital image and audio processes. Develop an understanding of object-based constructions and multimedia delivery requirements. Examine the concept of event-driven programming, and identify how it can be utilized to introduce interactivity and animation into a multimedia application. Discuss the use of GUI elements to enhance the interactivity of multimedia application and implement user interaction using various input devices. Develop multimedia programs with animation features for games or educational applications.
Prerequisites: CIS 1403

CIM 3403 3D Modelling and Animation (2-2-3)
Explain 3D modelling for 3D animation and develop an understanding of the basic structure of 3D modelling and virtual environment creation. Create scenes with 3D models of objects and characters, using different materials, surfaces, textures and shadings. Apply proper timing by using key-frames and the principles of animation to develop 3D animations. Animate complex objects utilising skeletons, rigging, constraints and kinematics. Apply appropriate lighting and proper camera type and attributes to render 3D animation.

CIM 3503 Computer Game Design and Development (2-2-3)
Examine the basic concepts and techniques of electronic game design and development. Explore the history of games and genres, level and model design, theory of Funativity, and game design and processes. Develop the skills required to build a basic computer game using scripting and programming including computer graphics, animation, and artificial intelligence.
Prerequisites: CIM 2003

CIM 4003 Multimedia Scripting (2-2-3)
The course reviews advanced concepts of scripting for multimedia, learn how to design and develop sophisticated multimedia products for education, entertainment and business through the use of advanced scripting and development tools. Apply the design process and various design components engaged in a typical interactive multimedia application or game. Develop an interactive multimedia application or game that uses scripting techniques for player interaction with other characters and objects in the game environment.
Prerequisites: CIM 3203

CIM 4103 Web Authoring and Administration (3-1-3)
Examine advanced knowledge and technologies needed to create, publish and manage professional-quality websites that meet the web guidelines and standards for HTML 5, CSS 3 and accessibility. Design and develop functional and a professional-level website for a given small business organisation. Integrate multimedia elements using HTML5, animation and industry accepted multimedia software packages. Employ graphics, audio, video, interactivity element for a web-based presentation using JavaScript, CSS styling, API and Custom Controls.
Prerequisites: CIS 1203

CIM 4203 Virtual Reality and Simulation (3-1-3)
Examine emerging electronic technology of Virtual Reality (VR). Learn key concepts needed to understand and evaluate VR systems, applications, simulators, and their impact on future digital systems and user interfaces. Discuss key simulation topics including stochastic modeling, random number generators, discrete-event simulation approaches, simulated data analysis, and simulation variance reduction techniques. Evaluate current VR technology systems. Produce an interactive simulation for a system that requires the use of prediction methods.
Prerequisites: CIM 3403

CIM 4303 VFX, Audio, Editing and Composition (3-1-3)
Discuss the entire production process including key production and post-production, digital film-making, compositing, editing, motion graphics, effects and computer graphics interface (CGI). Develop a critical understanding of the techniques and technology used to create high quality digital visual effects. Build the necessary skills required to work in post-production. create a rich portfolio of work that showcases student technical, artistic and team-working abilities.
Prerequisites: CIM 2103