VISUAL EFFECTS COURSE MODULES

What if you could turn daydreams into reality? From breathtaking landscapes to life-like explosions, visual effects professionals constantly break creative and mental boundaries by bringing to life new worlds and exciting fantasies.

Want to be part of the action? The Diploma in Visual Effects (VFX) aims to equip aspiring visual effects artists with industry-based production techniques as well as key visual and creative skills. You will get a solid grounding in core principles of visual communication, special effects and advanced post-production services.

Create Exciting 3D Content

As a VFX student, you will learn the fundamentals of storytelling and storyboarding, camera and lighting as well as animation. You will also get to create dramatic settings and characters using the latest industry- standard software such as NUKE, a high-end software compositing tool used by top Hollywood effects studios on movies such as *Captain America: Civil War, X-Men: Apocalypse* and *Batman v Superman: Dawn of Justice*. VFX is also the first polytechnic diploma programme to pioneer training in Stereoscopic 3D (S3D) filmmaking equipment and software.

Build Your Creative Portfolio

As this is a portfolio-driven industry, you gain a head start by building your practical experience with industry-leading Maya and Zbrush software. Another big plus – you get to work with Ultra High Definition (Ultra HD) cameras in one of Singapore's largest green screen studios, and an online production suite.

In your final year, enhance your portfolio with a six-month internship, a final-year project or an industry-based project. You can intern at production and post-production houses where you will take on tasks such as shooting, compositing, modelling and animation for commercials, films, TV programmes and videos. Or choose to do a final-year project where you have creative freedom to conceptualise and put together your own short film built around eye-popping visual effects. You can even take on an industry-based project with m:idea, our in-house media conglomerate, and help produce cutting-edge titles, graphics and visual effects to enhance videos created by the production team for clients.

You will also have the chance to work with industry practitioners and showcase their projects to the world. In fact, six VFX interns worked on a local horror movie *Afterimages* by Mythopolis Pictures that won the "Best FX Award" in the 9th Edition of the Thriller! Chiller! Film Festival in Michigan, United States, in 2014 and another "Best FX Award" at the NYC Horror Film Festival in New York.

LEVEL 2.1

Camera & Lighting 2

For every student to enhance their understanding of the craft, methods, and aesthetics of camera and lighting works to be used in digital effects and stereoscopic productions. Students will continue learning from the video camera basics and advancing in the use of both two-dimension and stereoscopic equipment. However, they will have that knowledge supported by a broad understanding of how camera and lighting works create and enhance production. This course will stress developing a well-rounded cameraperson who will be able to excel in his/her craft while working well with the other members of the team.

Compositing 1

The student will be introduced to the basic foundation and underlying principles of compositing and image manipulation. Students will learn the concept of chroma keying, matte extraction, and CG compositing as well as other processes involved in compositing. This module would also expose students to work with Node Based compositing package.

Lighting & Rendering

This module explores look making and development for digital media design. In the techniques of lighting, shading and rendering for CGI, approaches of visual design will be conducted. The students will use different scheme of visualization method while lighting and shading CGI elements. For SFX and green screen filming, they will also do studio lighting for seamless visual effects.

Motion Graphics & Broadcast Design

This module is designed to introduce students the motion graphics in digital media and understand workflow to apply skills for broadcast project. Students will be equipped skills in media design such as visual design in motion, computer generated graphics and video production. Project based practice is planned to design project and create commercial video.

Visual Communication

This module aims to introduce students to the applications of colour theory in character and environment design. Through practical sessions in digital paintings, students can look forward to understanding principle of colour organization, additive and subtractive mixing systems. They will also develop complex colour sensitivity and become familiar with various colour strategies used by both traditional and digital artists.

LEVEL 2.2

Compositing 2

The student will advance their compositing skill sets to the next level. Students will also learn 3D stereoscopic compositing workflow. This module would also expose students to Nuke scripting and expressions, working intensively in Nuke 3D environment.

Effects Animation 1

Students are introduced to the techniques to work with Maya dynamics systems to create natural & supernatural phenomena. The principle focus is on using simulation with fluid, nParticle, rigid/soft body & nCloth systems.

Polysculpting

This module is designed to further build on student's 3D asset creation skills by introducing them to the 3D polysculpting process. Students will learn to sculpt digitally and add fine details on CG assets and utilize the workflow of creating texture maps and applying high resolution maps onto lower resolution geometry and apply rendering techniques for their CG portfolios.

Post-Production

This module builds on students' knowledge on editing from Location Production and seeks to develop students' creative and technical skills in the art of editing. Students having been primed in non-linear editing during the first year with Location Production will learn the finer details of narrative editing style. Through exercises, students will have many opportunities to be familiar with the various concepts of editing. This is expected to help them have a better knowledge of variety of editing styles while at the same time preparing them for the year three "Advanced Post Production" module.

Special Effects

Students focus on Hollywood-style special effects shooting with an emphasis on practical camera techniques & miniature set creation. Students will be involved in a semester long project forming groups to create a practical miniature set, using mixed media fabrication methods and 3D printed assets, shooting 4K footage with RED cameras and finishing off using digital techniques in compositing.

COURSE CURRICULUM

Module Name	Credit Units
YEAR 2	
Level 2.1 (20 hours per week)	
Camera & Lighting 2	4
Compositing 1	4
Motion Graphics & Broadcast Design	3
Lighting & Rendering	4
Visual Communication	3
Interdisciplinary Studies (IS) elective ^	2
Level 2.2 (22 hours per week)	

Compositing 2	4
Effects Animation 1	4
Polysculpting	4
Post-Production	3
Special Effects	3
Career & Professional Preparation II	2
World Issues: A Singapore Perspective^	2

Notes:
^ For more details on Interdisciplinary Studies (IS) electives, please log on to www.np.edu.sg/is/

IS Modules
The School of Interdisciplinary Studies (IS) delivers a broad-based curriculum, which nurtures a new generation of professionals with multidisciplinary skills and an innovative and entrepreneurial spirit to meet the challenges of a knowledge economy. IS offers both prescribed modules and electives to challenge boundaries. Prescribed modules develop students' competencies in core areas such as Communication, Innovation and Enterprise, Culture and Communication, and Personal Mastery and Development, while elective modules provide insights into Arts and Humanities, Business, Design, and Science and Technology.