# Instructive Cultivation Plan for the Program of Digital Media Technology

## (Grade 2020)

**Course code: 080906**

## 1. Orientation

This program is based in Shanghai, facing the Yangtze River Delta region and the whole country, and aims at cultivating senior technical application-oriented talents with good technical capabilities and certain artistic literacy, who can work in the fields of film and television animation, virtual reality and game development in the digital media industry.

## 2. Cultivation objective

1. General objective

This program cultivates senior technical application-oriented talents who are comprehensively developed on the aspects of moral, intellectual, physical, aesthetic and labor, meet the needs of Shanghai and even the country's economic and social development, have high overall quality and strong practical ability, systematically masters the basic theories, knowledge, skills and methods of digital media technology, have good technical ability and certain artistic literacy, and can work in the fields of film and television animation, virtual reality and game development in the digital media industry.

2. Cultivation Value

Digital media technology engineering program: Take the spirit of model workers and craftsmanship as the value orientation, cultivate ingenuity and educate craftsmen. In the process of education and teaching implementation, through the spirit of craftsmanship, the engineer values and engineering ethics education are incorporated in the teaching process, and students are cultivated to develop a rigorous, meticulous, dedicated and responsible work attitude to the project, the work concept of meticulously crafting and striving for excellence, and master the superb skills and superb artistic expression of media technology, thus promoting the development of China's digital media technology, especially in the fields of digital film and television, virtual reality and games by improving quality, speed, quality and efficiency.

3. Five-Year Goal after Graduation:

(1) Comprehensive development of morality, intelligence, physique, beauty and labor;

(2) Master the basic knowledge of natural sciences, humanities and social sciences and basic theories of computer science and technology related to digital media technology;

(3) Familiar with the basic knowledge and application knowledge of digital media technology, including:

a) Basic knowledge of art

b) Basic knowledge of digital media technology

(4) Possess digital media design thinking and use advanced engineering methods, technologies and tools to engage in the design, collection, production and development of digital media technology applications, including:

a) Main line of film and television animation: film and television pre-design, film and television

production, post-production, animation design and production

b) Virtual reality and game main line: game animation movement rules, game art, scene optimization, multi-platform game design, program development technology

(5) Possess experience in digital media technology practice and project organization;

(6) Have good foreign language skills;

(7) Have teamwork ability, innovation and entrepreneurial awareness.

(8) Become talents in the field of digital media technology with international competitiveness who can adapt to technological progress and changes in social needs.

## 3. Requirements for graduation

Students in this program will mainly learn basic knowledge of natural sciences and humanities and social sciences, learn basic theories and basic knowledge of digital media technology, receive basic training in digital media technology practice and project organization, and obtain the advanced technology application capabilities in the design, collection, production and development of animation, virtual reality and games.

Graduates shall acquire knowledge and abilities in the following areas:

1. Engineering knowledge: Master the ability of engineering technology knowledge, and be able to use mathematics, natural sciences, engineering foundations and other professional knowledge for design, collection, production and development.

(1)-1: Be able to use the mathematics, natural science, engineering fundamentals and professional knowledge necessary for the program of digital media technology to design digital media technology projects.

(1)-2: Be able to apply relevant scientific and artistic design thinking to digital media technology to analyze and optimize digital media project solutions.

2. Problem analysis: Be able to apply principles, tools, and methods for problem analysis, be able to apply the basic principles of mathematics, natural sciences and engineering sciences to identify, express, and analyze digital media technology projects through literature research and obtain effective design solutions.

(2)-1: Be able to use the basic principles of mathematics, natural sciences, and engineering mathematics to identify and judge the key issues that need to be solved in digital media technology projects.

(2)-2: Be able to seek solutions for digital media technology projects from the perspective of mathematical science and engineering science and combined with literature research, and can analyze the influencing factors of the process, and obtain effective conclusions.

3. Design/development of solutions: Be able to use digital media technology equipment, software, and materials to carry out the design, collection, material collection, production and development of digital media technology projects; be able to design solutions for digital media technology projects, design technical routes or production processes for platforms that meet specific needs, and be able to reflect the sense of innovation in the design process; have the experience of participating in actual digital media technology projects, be able to use appropriate digital media technology equipment, software and materials to design and develop film and television animation, virtual reality and game development applications; have the professional capabilities required to engage in digital media technology project engineering practice.

(3)-1: Be able to conduct research on digital media technology projects and complete demand analysis based on actual background. Be able to conduct design, collection, material collection, production and development for specific needs, and conduct testing and verification.

(3)-2: Understand the impact of digital media technology on society, health, safety, law, culture and environment, and can complete the design, collection, material collection, production and development of digital media technology projects.

4. Research: Understand the core concepts, knowledge structure and typical technical routes of digital media technology, master basic digital media technology problem research capabilities, be able to research and design digital media technology projects based on scientific principles and can adopt scientific methods, and be able to get reasonable results through synthesis effective design plan and technical route to complete collection, material collection, production and development.

 (4)-1: Be able to analyze the design scheme and technical route of complex projects in the field of digital media technology based on scientific principles and by using scientific methods.

(4)-2: For complex engineering problems of digital media technology, be able to use relevant principles and knowledge to design experimental programs and implement them reasonably. Meanwhile, be able to get the design plan and technical route for the specific situation.

5. Ability to use modern tools: Be able to use modern digital media technology equipment, software, and materials, to develop, select, and use appropriate equipment, software, and material resources for digital media technical issues, and can understand their limitations.

(5)-1: Be able to select and use appropriate equipment, software, and material resources, and be able to use software to complete production and development according to the design plan and technical route of the digital media technology project.

(5)-2: Be able to select appropriate platforms and development tools for development according to the needs of digital media technology project development.

6. Engineering and society: Be able to use digital media technology projects to serve the society, and be able to conduct reasonable analysis based on the background knowledge of digital media technology, and evaluate the impact of professional digital media technology practices and design plans and technical routes on society, health, safety, law and culture; understand the responsibilities that should be undertaken, master basic humanities and social science knowledge, have good humanities and social science literacy, professional ethics and psychological quality, and understand the important laws, regulations and policies of occupations and industries related to digital media technology.

 (6)-1: Be able to reasonably analyze technical standards, intellectual property rights, industrial policies, laws and regulations in the field of digital media technology.

(6)-2: Be able to analyze and evaluate the impact of digital media technology practices on society, health, safety, law, and culture, and meet the above-mentioned relevant requirements in practices.

7. Environment and sustainable development: Be able to adapt to the field of digital media technology and the environment and sustainable development, be able to understand and evaluate the impact of professional engineering practices for digital media technology projects on the sustainable development of the environment and society.

 (7)-1: Be able to understand and evaluate the dialectical relationship between digital media technology project design plan, technical route and sustainable development of the environment and society.

(7)-2: Be able to fully consider the harmonious and sustainable development of the environment and society in the digital media technology project solution.

8. Professional standards: be able to be in line with the professional standards of digital media technology, have humanities and social science literacy and a sense of social responsibility, and be able to understand and abide by engineering professional ethics and standards in the practice of digital media technology, and always perform responsibilities.

(8)-1: Have humanities and social sciences, and in the process of engineering practices in the field of digital media technology, be able to consider various constraints such as economy, environment, law and ethics.

(8)-2: Have a sense of social responsibility, understand the relevant professional ethics and norms in the field of digital media technology, and consciously abide by and perform responsibilities in engineering practice.

9. Individuals and teams: cultivate the ability to cooperate with individuals and teams, and be able to assume the roles of individuals, team members, and leaders in a multidisciplinary team.

(9)-1: Have teamwork spirit and be able to communicate actively and effectively with other team members.

 (9)-2: Be able to be competent in the roles of individuals, team members and leaders in a team under a multidisciplinary background.

10. Communication: Develop communication skills and be able to effectively communicate and exchange with industry colleagues and the public on complex digital media technologies, including writing reports and design manuscripts, presentations, clear expressions or responses; have a certain international perspective, be able to communicate and exchange in a cross-cultural context; have a basic foreign language application ability, be able to read the foreign literature of the program, have a certain international vision and cross-cultural communication, competition and cooperation capabilities; fully understand the importance of teamwork, have the ability of personal work and teamwork, interpersonal and communication skills, and certain organizational and management skills.

 (10)-1: Be able to write reports and design manuscripts, correctly express, clearly describe or respond to instructions on digital media technology projects; be able to effectively communicate and exchange with industry colleagues and the public on digital media technology projects.

 (10)-2: Have at least one foreign language application ability, have a preliminary understanding of the international research frontiers of digital media technology, and be able to communicate and exchange under a cross-cultural context.

11. Project management: have basic digital media technology project management capabilities, understand and master engineering management principles and economic decision-making methods, and be able to apply them in a multi-disciplinary environment; fully understand and master engineering management principles and economic decision-making methods, and be able to apply them in a multidisciplinary environment.

(11)-1: Be able to understand and master project management principles and economic decision-making methods.

(11)-2: Be able to use engineering management and economic decision-making methods in the process of designing and developing information technology solutions in a multidisciplinary environment.

12. Lifelong learning: lifelong learning ability, have the consciousness of independent learning

and lifelong learning, and the ability to continuously learn and adapt to development.

(12)-1: Have positive values, have the consciousness of independent learning and lifelong learning.

(12)-2: Master good learning methods, have the ability to explore knowledge and adapt to development.

**4. Schooling system**

Four-year undergraduate education

**5. Length of study**

Generally four years. The length of schooling can be flexible from no less than three years to no longer than six years.

**6. Requirements for Graduation and Degree Conferring**

Students of this program must complete the minimum credits required for each category of courses and complete all the content specified in extracurricular class according to the requirements of the instructional training plan, and the total credits must reach 151 credits for graduation; those who meet the requirements for bachelor's degree can be conferred bachelor degree in engineering.

**7. Discipline**

Computer Science and Technology, Software Engineering

**8. Core Courses**

1. Foundation of Programming Design

This course focuses on the ideas and methods of programming design. The main content is procedural programming and also involves object-oriented programming. This course mainly describe basic programming ideas, concepts, techniques, good programming styles, and procedural programming, including data types, control structures, arrays, and various commonly used algorithms. This course aims to enable students to master the method of programming and have a good programming style through learning and undergoing certain training. The curriculum adopts a teaching method that combines theory and practice, and combines both inside and outside classes. Classroom teaching emphasizes ideas and methods, and practical teaching aims to improve students' ability in program design and debugging.

2. Data structure and algorithm

This course mainly teaches data construction methods and algorithms for operating these data structures. The focus of this course is on various typical data structures and their storage structures, related algorithms and basic spatiotemporal analysis, including linear tables and their derived structures (stacks, queues, strings and multidimensional arrays), trees and graphs, and typical algorithms for search and internal sorting. The focus is to enable students to further master more standardized algorithm design skills and improve their logic thinking skills on the basis of the existing programming capabilities.

3. Form Construction

This course is the most important basic education content of art design (visual communication, multimedia design, film and television art), including graphic composition, color composition,

space composition, texture composition, light composition, movement composition, etc. Form construction mainly teaches the new techniques and methods of form composition design through the combination of form composition design theory and computer design application. Through the study of this course, students will master the key application methods and technical processes of plane software in the design of form composition; the basic theory of form composition and the creation and change of form, the scale of form, and the time and space combination of form, etc.

4. Digital Image Processing

This course will help students understand the principles and concepts of digital images, their storage, color modes and other related knowledge, master image processing skills, master the use of image processing software, and obtain certain digital image design capabilities. Digital image processing course mainly teaches basic theories including digital image modes and formats, etc.; digital image processing skills including digital image selection, editing, and text addition, text production and other basic processing techniques; and the production of comprehensive works such as posters, products packaging, web art, etc.

5. Three-dimensional animation design

Through the study of this course, students will master the overall idea of        3D animation design, understand the processing standards of each link in the production process, be able to skillfully use the production technology of each link, and develop a good learning method. This course mainly teaches the techniques and skills of model design, UV splitting, texture drawing, animation modulation, and lighting design and rendering, etc. in the 3D animation design process, as well as the main points of coordination and cooperation with the early and late stages.

6. Film Editing and Synthesis

This course will make students familiar with the basic ideas of film editing and synthesis, and master the basic content and usage of film editing and synthesis software, including: masking, text animation, three-dimensional synthesis, color correction, keying, tracking, and particle effects. Through detailed explanations and vivid case exercises, students can quickly master theoretical knowledge and application skills, so as to master the ideas and techniques of film and television editing and synthesis.

7. Virtual Reality

The virtual reality course is the main support course for training talents in virtual realization production technology. This course is based on the characteristics of virtual reality, and on the basis of introducing the theoretical knowledge of virtual reality technology, focuses on the practical application of the current popular virtual reality tool software. The contents of this course include: model import, particle effects, collision detection, virtual roaming, and camera settings. Through the study of this course, students can carry out applications such as 3D virtual realization development, product display design, and architectural roaming design on the basis of understanding, recognizing and mastering the basic knowledge of virtual reality technology.

8. Game Design and Development

This course mainly teaches the process of game design and development and the related theories. Taking 3D game development as an example, this course introduces how to import the game model into the engine from the planning stage to the design and production of the game, write a script language in the engine, and finally make a complete game. The purpose of this course is to make students master the key knowledge points and technical details of game development, and deepen their understanding on the organization and implementation process and development process of game development.

**9. Practical training**

The main practical links include practical courses and graduation design, specifically including: program design and practice, 3D animation design practice, film and television production course practice, virtual reality course practice, game development course practice, film and television animation course design, etc., digital media technology program graduation practice and graduation project (thesis)

**10. Course structure and course hours (excluding extracurricular class)**

| Category | Total Credit | % | Total Course Hours | Theory Learning | Practical Training |
|---|---|---|---|---|---|
| Public course | 50.5 | 34 | 960 | 896 | 64 |
| Basic professional courses | 27 | 18 | 432 | 280 | 152 |
| Professional courses | 26 | 17 | 416 | 206 | 210 |
| Vocational practice | 36.5 | 24 | 880 | 0 | 880 |
| General course | 10 | 7 | 160 | 160 | 0 |
| Total | 150 | 100 | 2848 | 1542 | 1306 |
| Theory : Practice(%) | 54：46 | | | | |

**11. Teaching schedule (1)**

| Category | Type | Provided by | Course Code | Course Name | Assessment | Credit | Course Hour | Theory Learning | Practical Training | Semester |
|---|---|---|---|---|---|---|---|---|---|---|
| General Education | Required | School of Marxism | b1080001 | Basic principles of Marxism | test | 3 | 48 | 42 | 6 | spring 1 |
| | Required | School of Marxism | b1080003 | Ideological and moral cultivation and legal foundation | non-test | 3 | 48 | 42 | 6 | spring 1 |
| | Required | School of Marxism | b1080006 | Outline of Chinese Modern History | non-test | 3 | 48 | 42 | 6 | autumn 1 |
| | Required | School of Marxism | b1080004 | Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics I | test | 3 | 48 | 42 | 6 | autumn 2 |
| | Required | School of Marxism | b1080007 | Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics II | test | 2 | 32 | 28 | 4 | spring 2 |
| | Required | School of Marxism | ----- | Situation and Policy (Module 1~4) | non-test | 2 | 32 | 28 | 4 | autumn 1~spring 2 |
| | Required | School of Marxism | b1080008 | Labor Education A | non-test | 0.5 | 16 | 16 | | autumn 2 |
| | Required | College of Arts and Sciences | b1020080 | Advanced Mathematics A1 | test | 4 | 64 | 64 | | autumn 1 |
| | Required | College of Arts and Sciences | b1020081 | Advanced Mathematics A2 | test | 4 | 64 | 64 | | spring 1 |
| | Required | College of Arts and Sciences | b1020012 | Linear algebra | test | 2 | 32 | 32 | | autumn 2 |
| | Required | College of Arts and Sciences | b1020013 | Probability Theory and Mathematical Statistics | test | 2 | 32 | 32 | | autumn 2 |
| | Required | College of Arts and Sciences | b1020018 | College Chinese | non-test | 2 | 32 | 32 | | spring 1 |
| | Required | College of Arts and Sciences | b1020063 | College Physics A(Module 2) | test | 3 | 48 | 48 | | spring 1 |
| | Required | College of Arts and Sciences | b1020065 | College Physics B | test | 2 | 32 | 32 | | autumn 2 |
| | Required | College of Arts and Sciences | b1020066 | College Physics C | non-test | 1 | 32 | | 32 | autumn 2 |
| | Required | Department of Physical Education | ----- | Physical Education I~VI | non-test | 3 | 160 | 160 | | autumn 1~autumn 4 |
| | Required | Others | b1110003 | Military skills | non-test | 0.5 | 2W | | | autumn 1 |
| | Required | College of Arts and Sciences | b1110002 | Military theory | non-test | 0.5 | 32 | 32 | | autumn 2 |
| | ★English (Selective 1 Module 10 credits) | Module A | b1020003 | General English III | test | 3 | 48 | 48 | | autumn 1 |
| | | | b1020004 | General English IV | test | 3 | 48 | 48 | | spring 1 |
| | | | b1020005 | General Academic English A | test | 2 | 32 | 32 | | autumn 2 |
| | | | --- | English development | non-test | 2 | 32 | 32 | | spring 2 |
| | | Module B | b1020002 | General English II | test | 3 | 48 | 48 | | autumn 1 |
| | | | b1020003 | General English III | test | 3 | 48 | 48 | | spring 1 |
| | | | b1020006 | General Academic English B | test | 2 | 32 | 32 | | autumn 2 |

| Category | Type | Provided by | Course Code | Course Name | Assessment | Credit | Course Hour | Theory Learning | Practical Training | Semester |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Module C | --- | English development | non-test | 2 | 32 | 32 | | spring 2 |
| | | | b1020001 | General English I | test | 4 | 64 | 64 | | autumn 1 |
| | | | b1020002 | General English II | test | 3 | 48 | 48 | | spring 1 |
| | | | b1020003 | General English III | test | 3 | 48 | 48 | | autumn 2 |
| | ★ German | College of Arts and Sciences | b1020040 | German I | test | 3 | 48 | 48 | | autumn 1 |
| | | College of Arts and Sciences | b1020041 | German II | test | 3 | 48 | 48 | | spring 1 |
| | | College of Arts and Sciences | b1020042 | German III | test | 4 | 64 | 64 | | autumn 2 |
| | ★ Japanese | College of Arts and Sciences | b1020077 | Japanese I | test | 3 | 48 | 48 | | autumn 1 |
| | | College of Arts and Sciences | b1020078 | Japanese II | test | 3 | 48 | 48 | | spring 1 |
| | | College of Arts and Sciences | b1020079 | Japanese III | test | 4 | 64 | 64 | | autumn 2 |
| **Total (General Education)** | | | | | | **50.5** | **960** | **896** | **64** | |
| General Course | Required | College of Engineering | b2012297 | Scientific paper writing and document retrieval | non-test | 2 | 32 | 32 | | spring 1 |
| | Selective | Others | b0----- | Social Science and Humanities Literacy(4 credits) Natural Science and Technological Innovation (2 credits) Public Art (2 credits) | non-test | 8 | 128 | 128 | | autumn, spring |
| **Sub-total (General course)** | | | | | | **10** | **160** | **160** | **0** | |

(★Note: The first foreign language has a total of 10 credits, including College English, German, and Japanese. Choose the appropriate language according to your needs; among them, if you choose College English, please choose the appropriate module in module ABC)

**11. Teaching schedule (2)**

| Category | Type | Provided by | Course Code | Course Name | Assessment | Credit | Course Hour | Theory Learning | Practical Training | Semester |
|---|---|---|---|---|---|---|---|---|---|---|
| Basic courses | Required | College of Engineering | b2012181 | Introduction to Digital Media Technology | non-test | 1 | 16 | 16 | | autumn 1 |
| | Required | College of Engineering | b2012018 | Foundation of Programming Design | test | 4 | 64 | 40 | 24 | autumn 1 |
| | Required | College of Engineering | b2012084 | Data structure and algorithm | test | 3 | 48 | 48 | | spring 1 |
| | Required | College of Engineering | b2012088 | Introduction to Database System | test | 2 | 32 | 28 | 4 | autumn 2 |
| | Required | College of Engineering | b2012041 | Basics of Painting | test | 3 | 48 | 24 | 24 | autumn 2 |
| | Required | College of Engineering | b2012132 | Form Construction | test | 2 | 32 | 16 | 16 | spring 2 |
| | Required | College of Engineering | b2012102 | Digital Image Processing (Bilingual) | test | 3 | 48 | 24 | 24 | autumn 2 |
| | Required | College of Engineering | b2012078 | Basics of Photography | test | 2 | 32 | 16 | 16 | autumn 2 |
| | Required | College of Engineering | b2012079 | Audio-visual language | non-test | 2 | 32 | 28 | 4 | spring 2 |
| | Required | College of Engineering | b2012150 | Pattern of motion | non-test | 2 | 32 | 16 | 16 | spring 2 |
| | Required | College of Engineering | b2012254 | Digital carving | non-test | 3 | 48 | 24 | 24 | spring 2 |
| Sub-total (Basic courses) | | | | | | 27 | 432 | 280 | 152 | |
| Professional courses | Required | College of Engineering | b2012142 | Film Editing and Synthesis (English teaching) | test | 4 | 64 | 32 | 32 | autumn 3 |
| | Required | College of Engineering | b2012133 | Virtual Reality (Bilingual) | test | 4 | 64 | 40 | 24 | autumn 3 |
| | Required | College of Engineering | b2012047 | Interactive digital media design | test | 2 | 32 | 16 | 16 | spring 2 |
| | Required | College of Engineering | b2012044 | Computer Graphics | non-test | 2 | 32 | 22 | 10 | spring 3 |
| Sub-total (required professional courses) | | | | | | 12 | 192 | 110 | 82 | |
| | ★Selective by module 14 credits | Module A | b2012198 | Three-dimensional film and television animation design (Maya) | test | 4 | 64 | 32 | 32 | autumn 3 |
| | | | b2012253 | Advanced film and television animation design(Maya) | non-test | 3 | 48 | 24 | 24 | spring 3 |

| | | b2012255 | Film and television special effects design | non-test | 4 | 64 | 32 | 32 | spring 3 |
|---|---|---|---|---|---|---|---|---|---|
| | | b2012104 | Digital audio production | non-test | 3 | 48 | 24 | 24 | autumn 3 |
| | Module B | b2012076 | 3D animation design(3ds max) | test | 4 | 64 | 32 | 32 | autumn 3 |
| | | b2012144 | Game art designer | non-test | 3 | 48 | 24 | 24 | autumn 3 |
| | | b2012256 | Game design and development | non-test | 4 | 64 | 32 | 32 | spring 3 |
| | | b2012257 | Mobile game development | non-test | 3 | 48 | 24 | 24 | summer 3 |
| **Sub-total (professional module courses)** | | | | | **14** | **224** | **96** | **128** | |
| **Sub-total (professional courses)** | | | | | **26** | **416** | **206** | **210** | |

**11. Teaching schedule (3)**

| Category | Type | Provided by | Course Code | Course Name | Assessment | Credit | Course Hour | Theory Learning | Practical Training | Semester |
|---|---|---|---|---|---|---|---|---|---|---|
| Practical Training | Required | College of Engineering | b4000015 | Digital media technology professional innovation and entrepreneurship | non-test | 2 | 48 | | 48 | spring 3 |
| | Required | College of Engineering | b4012005 | Program design and practice | non-test | 2 | 48 | | 48 | spring 1 |
| | Required | College of Engineering | b4012051 | Data structure and algorithm course internship | non-test | 3 | 72 | | 72 | summer 1 |
| | Required | College of Engineering | b4012185 | Web art design internship | non-test | 3 | 72 | | 72 | spring 2 |
| | Required | College of Engineering | b4012033 | Interactive Digital Media Course Design | non-test | 2 | 48 | | 48 | summer 2 |
| | Required | College of Engineering | b4012080 | Film and Television Production Course Internship | non-test | 3 | 72 | | 72 | spring 3 |
| | Required | College of Engineering | b4012075 | Virtual reality course internship | non-test | 3 | 72 | | 72 | spring 3 |
| | Required | College of Engineering | b4012186 | Labor Education B | non-test | 0.5 | 16 | | 16 | spring 3 |
| | Required | College of Engineering | b4012060 | Digital Media Technology Program Graduation Practice and Graduation Design (Thesis) | non-test | 12 | 288 | | 288 | spring 4 |
| **Sub-total (required practice courses)** | | | | | | **30.5** | **736** | | **736** | |
| | ★Professional course module Selective 6 credits | Module A | b4012079 | Film and Television Animation Course Design | non-test | 3 | 72 | | 72 | autumn 4 |
| | | Module A | b4012153 | Film and Television Animation Course Internship (Maya) | non-test | 3 | 72 | | 72 | summer 3 |
| | | Module B | b4012049 | 3D animation design internship | non-test | 3 | 72 | | 72 | spring 3 |
| | | Module B | b4012081 | Game Development Course Design | non-test | 3 | 72 | | 72 | autumn 4 |
| **Sub-total (practice module course)** | | | | | | **6** | **144** | | **144** | |
| **Sub-total (professional practice)** | | | | | | **36.5** | **880** | | **880** | |
| Extracurricular Class | Required | Others | b5110001 | Extracurricular Class | non-test | 1 | - | - | - | autumn, spring, summer |
| **Total** | | | | | | **151** | **2848** | **1542** | **1306** | |

**★1. Guidance for selecting professional module and practical module:**

Professional courses are divided into modules according to different ability requirements. Students must select one of the modules and obtain the required credits for that module. Professional practice modules must be selected according to the corresponding professional course modules.

1. Module A: Film and television animation, that is, on the basis of film and television design and image collection, this module focuses on teaching film and television animation and post-production special effects technology with AE and Maya technology as the core.

2. Module B: Virtual reality and game development, that is, on the basis of programming ability and database ability, this module focuses on teaching game role and scene design and game development technology with Unity and 3ds max technology as the core.

**2. Professional Certificates can be gained after learning following courses:**

Students who have passed Foundation of Programming Design, Program design and practice courses can participate in the professional qualification certificate assessment related to the program: Computer Rank Examination Level 2 (C++).

## 12. Prerequisite for Course Study

| No. | Course Name | Prerequisite Course | No. | Course Name | Prerequisite Course |
|---|---|---|---|---|---|
| 1 | Data structure and algorithm | Foundation of Programming Design | 9 | Interactive digital media design | Foundation of Programming Design |
| | | | | | Digital image processing |
| 2 | Program design and practice | Foundation of Programming Design | 10 | 3D animation design | Basics of Painting |
| | | | | | Form Construction |
| | | | | | Pattern of motion |
| 3 | Form Construction Basics of Photography | Basics of Painting | 11 | Film and Television Editing and Synthesis | Audio-visual language |
| | | | | | Basics of Photography |
| 4 | Digital image processing Pattern of motion Audio-visual language | Basics of Painting | 12 | Virtual Reality Game design and development | 3D animation design |
| | | Form Construction | | | Foundation of Programming Design |
| 5 | Web art design internship | Digital image processing | 13 | Computer Graphics | Advanced Mathematics |
| | | | | | Foundation of Programming Design |
| 6 | Web art design internship | Digital image processing | 14 | Interactive Digital Media Course Design | Interactive digital media design |
| 7 | 3D animation design internship | 3D animation design | 15 | Film and Television Production Course Internship | Film and Television Editing and Synthesis |
| 8 | Virtual reality course internship | Virtual Reality | 16 | Film and Television Animation Course Design Intern | Film and Television Production Course Internship |
| | | | | | Three-dimensional animation course practice |

## 13. Extracurricular Class

Through taking extracurricular classes, students are encouraged to take part in academic lectures, social practice activities, campus cultural and sports activities, innovative and entrepreneurial activities, voluntary activities, etc. to improve their social adaptability and enhance the competitiveness in the job market. Details are specified in Students' Manual.