

## **Descriptions of Courses**

### **CT511 Theory of Culture Technology**

This course provides students with an overall view of culture technology. This course includes visual arts and design, interactive media, cyber culture, computer music and sounds.

### **CT 513 Digital Media Project I**

This course is designed to develop Digital Media design product through analyzing product analysis, planning and design, and computing. The experts in digital media industries participate as team-teaching members. Students conduct a new design project based on multidisciplinary team.

### **CT522 Computer Graphics and Virtual Reality**

This course is designed to study theories, techniques and application methods of Computer Graphics and Virtual Reality. It covers the general overview and the history of Computer Graphics and Virtual Reality, the theories and techniques of graphics programming, analysis of 2D & 3D computer graphics software applications, computer vision, telepresence, mixed reality, network VR, multimodal human interface, and haptic interface. Application systems of CG and VR are also introduced to allow the students to build a new system.

### **CT531 Digital Design**

This course is designed to probe fundamental design theories, principles and visual languages for creating digital media and contents. Through the course, students will acquire skills of developing creative design ideas using various visualization techniques. Students will also experience a basic digital media and contents design practice.

### **CT541 Human-Computer Interaction**

The overall process of analysis, design, and implementation of human-computer interaction is considered. Topics include reflecting cultural context and user needs, analyzing tasks, designing user interface, utilizing related advanced computer technology.

### **CT553 Programming of Music & Sound Design**

The primary purpose of this lecture is to train the ability of music and sound design through programming. First, it covers both acoustic nature of sound and synthesis. Then it moves on to the structure of the Synthesizer and creates various sounds by controlling sound envelop. Finally, utilizing MAX / MSP, new sound environments will be programmed for our specific purposes.

### **CT554 Audio-Visual Technologies**

Designed primarily for engineers and non-music major students, this course deals with music and sound production in general. Starting from the basic knowledge on music history, music theory and fundamentals of musical composition, students gradually acquire theoretical as well as practical experiences in digital sound production and sound management.

### **CT612 Digital Media Project II**

This course aims at design, implementation and prototype development of advanced interactive digital media system which exploits technologies such as multimedia, mixed reality, AI, sensor, device, robotic platform, etc. based on interdisciplinary knowledge and theory stemming from computer science, design, engineering (electronic, mechanical, industrial, etc.), liberal arts and fine arts. This course also deals with those topics related to analysis and performance evaluation of the developed systems.

#### CT 621 Computer-Mediated Communication

This course is an introduction to the internet, language and communication in the context of the complex interactions of culture and technology. This course offers both theoretical approaches and case studies of these interactions from diverse domains, including computer science, linguistics, information technology, and mass media.

#### CT633 Theory of Digital Contents

This course is designed to investigate theories related to the structure and process of digital contents. Emphasis is given on building creative business models of digital contents based on the characteristics of new media.

#### CT641 Media Marketing

We will develop this course in three steps: First the media specific marketing strategy is introduced followed by the promotion theory, based on media sales process. The third step will be the sell side electronic commerce as well as brand development as a pragmatic manifestation of media marketing.

#### CT 643 Robotics and Creative Engineering

This course deals with basic theory and applications of robotics and creative engineering and system development working in the real world. Major topics include robotic manipulation, locomotion, sensing, perception, intelligence, human robot interface (HRI), telerobotics, haptic interface, brainmailing, cyberstorming, networked idea mapping, computer aided TRIZ, etc.

#### CT960 M.S. Thesis

#### CT965 M.S. Individual Research

#### CT966 M.S. Seminar

#### CT980 Ph.D. Thesis

#### CT985 Ph.D. Individual Research

#### CT986 Ph.D. Seminar