

Descriptions of Courses

GCT501 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.

GCT 503 Culture Technology 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 are included as team-teaching members. Students conduct a new design project based on multidisciplinary team.

GCT522 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.

GCT551 Digital Design

This course is designed to study 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.

GCT541 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.

GCT533 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 Synthesizer and creates various sounds by controlling sound envelop. Finally, utilizing MAX/MSP, new sound environments will be programmed for our specific purposes.

GCT631 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.

GCT 604 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.

GCT572 Digital Communication

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.

GCT553 Theory of Digital Contents Industry

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

GCT681 Media Marketing

We will unfold the Media Marketing 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.

GCT960 M.S. Thesis

GCT965 M.S. Individual Research

GCT966 M.S. Seminar

GCT980 Ph.D Thesis

GCT985 Ph.D Individual Research

GCT986 Ph.D Seminar

5. List of Courses

Details			Category		
			GCT500	GCT600	GCT700
x0x	Mandatory	General Requirement	CC010:Special Lecture on Leadership		
			CC500 Science Writing in English CC510 Introduction to Computer Application CC511 Probability and Statistics CC513 Engineering Economy and Cost Analysis CC522 Introduction to Instruments CC530 Entrepreneurship and Business Strategies CC531 Patent Analysis and Invention Disclosure		
	Requirement in Major	GCT501: Theory of Culture Technology(required for all candidates)			
		GCT503: Culture Technology Project I(required for Master candidates) GCT604: Culture Technology Project II(required for Ph.D. candidates)			
Research		GCT960:M.S. Thesis GCT980:Ph.D. Thesis GCT965: M.S. Individual Research GCT985:Ph.D. Individual Research GCT966:Seminar (Master Candidate) GCT986:Seminar(Ph.D. Candidate)			
x1x	Elective	Art/ Humanities	GCT511:Media Aesthetics	GCT611 Digital Heritage	GCT711: Topics in Digital Socio-Humanities GCT712: Research Methodology for Culture Technology
x2x		CG/VR	GCT522:Computer Graphics and Virtual Reality	GCT621(CS580):Computer Graphics Technology GCT622: Digital Human	GCT721: Topics in Computer Graphics GCT722:Topics in Virtual Reality GCT724: Topics in Animation
x3x		Music/ Performance	GCT531:Theater Music and Design GCT532:Making and Evaluating Musical Instruments GCT533:Sound Design and Programming GCT534:Performance Planning and Management	GCT631:Music and Sound Technology GCT632:Digital Performance GCT633:20c Music and Culture	GCT731: Topics in Music Technology
x4x		HCI/Game	GCT541:Human Computer Interaction GCT542:Game Programming GCT543:Game Design	GCT641:Ludology GCT642:User Interface GCT644:Game Production	GCT741:Topics in HCI GCT742:Topics in Infotainment
x5x		Design/Image/ Architecture	GCT551:Digital Design GCT552:Information Design GCT553:Digital Contents Design GCT554:Digital Architecture	GCT651:Media Interaction Design GCT653:Virtual World GCT656:Digital Fashion	GCT751:Topics in Image Design GCT752:Topics in Digital Contents
x6x		Engineering/ Computing/ Robotics	GCT561:Scientific Concept and Thinking GCT562:Artificial Intelligence GCT563:Robotics	GCT661:Networked Media GCT662:Human-Robot Interaction	GCT763:Making Things
x7x		Language/ Literature/ Communication	GCT571:Linguistics and Culture Technology GCT572:Computer mediated Communication GCT574:Story Design	GCT673:Computational Creativity GCT672:Digital Storytelling GCT674:Text Analysis and Knowledge Mining	GCT772:Topics in Digital Storytelling
x8x		Economy/ Management/ Policy	GCT581:Cultural Economics GCT582:Theory of Culture Contents Industry	GCT681:Media Marketing GCT682:Cultural Industry Policy GCT683:e-Business Strategy	GCT781:Topics in Cultural Economics Policies GCT782:Topics in Culture Contents Marketing GCT783:Topics in Global Culture Industries GCT784:Topics in Internet Industries
	GCT583:Theory in Culture Management and Organization GCT584:Culture Intellectual Property		GCT684:Local Culture Industry GCT685:Venture Management in Culture Technology GCT686:Corporate Culture Strategy GCT687:Topics in Art Management GCT688:Global Culture Marketing		