

• Department of (Computer Engineering)

1. Educational Goal

The purpose of Computer Engineering is to nurture professionals who have leadership and competence, and to train talent for contribution to an information-oriented society, nation, and society through research and development of new knowledge in the field of communication technologies to meet the needs of rapidly changing an information-oriented society.

2. Educational Objective

1) Master's Course

① An in-depth study of the theory and practice acquired in undergraduate computer science's basic knowledge and skills, that will nurture the competent computer professional to contribute to the information age.

② Through the schools, research institutes, and university cooperative research companies and education, students learn new knowledge and, contribute to the development of computer industry of the nation and the local community.

2) Doctor's course

① Profound study of a computer science with knowledge and skills that were acquired in undergraduate and master's course, in order to contribute to the field of computer of nation and society.

② Through the schools, research institutes, and university cooperative research companies and education, learn new knowledge and, contribute to the development of the computer science of the nation and society.

3) Master's and Doctorate Course

① In-depth study of computer science to develop knowledge and skills, in order to nurture competent professionals to lead in the information age.

② Through the schools, research institutes, and university cooperative research companies and education, learn new knowledge and contribute to the development of the computer science of the nation and society.

• List of Full-time Faculty

Name	Position	Degree(University)	Field of Instruction	Area of Research
Sang Gu, Lee	Professor	Ph.D.(WASEDA University)	Computer Engineering	Image processing & Embedded Systems
Gang Su, Lee	Professor	Ph.D.(Seoul National University)	Computer Engineering	Software Engineering
Geuk, Lee	Professor	Ph.D.(Seoul National University)	Computer Engineering	Artificial Intelligence
Woo-Young, Soh	Professor	Ph.D.(University System of Maryland)	Computer Engineering	Neural Networks
Jae Kwang, Lee	Professor	Ph.D.(Hongik University)	Computer Engineering	Computer Network
Eui-in, Choi	Professor	Ph.D.(Hongik University)	Computer Engineering	Database
Man Hee, Lee	Assistant Professor	Ph.D(Texas A&M University)	Computer Engineering	High Performance & Security Computing

• Course Description

• CO747 Intelligent Security Theory (수정)

In recent years, increasingly diverse and sophisticated cyber security threats are spreading worldwide. As a result, each company, institution or research institute is actively conducting research and development for a more efficient security system.

Currently, security requires a new approach to finding and blocking attackers, unlike previous ones that have been passive defenses. Recently, as the boundaries of these security platforms become blurred, there is a need for intelligent based detection security rather than user oriented boundary security.

• CO748 Advanced Malware Analysis 3 credits (수정)

Recent frequently happen many security accident to leak private information, destroying system, etc. due to increasing malware. Accordingly malware analysis's importance is increasingly highlighting in current.

Malware analysis is divided static analysis and dynamic analysis. static analysis is method to analyses without direct execution and dynamic analysis is method of analysis to monitoring about happening behavior with executed malware.

This advanced malware analysis progresses the malware analysis utilizing static analysis techniques.

· CO749 Intelligence Security Technique Seminar 3 credits (추가)

Security infringement that continuously attacks organizations recently is rapidly increasing every day. Intelligent malicious code created by attackers worldwide is being executed via multidimensional attacks and multiple attack inflow paths in the organization. Current security requires identifying and restoring malware within a much shorter time than before, and the development of technologies necessary for grasping and blocking intelligent malware is actively performed. This intelligent security technology seminar combines dynamic malware analysis and information of threats to advance real time behavior analysis and analysis of the latest threat information.

· CO750 Advanced Secure Programming 3 credits (추가)

Advanced secure programming is to complement and program parts where security vulnerabilities may occur due to the complexity of the software to be developed.

It is a series of security activities that must be followed during the software development process, such as eliminating potential security vulnerabilities that may exist in the source code for safe software development, and designing and implementing functions with security in mind.

Including coding to ensure that the system can safely be protected from domestic and foreign attacks, such as hacking that exploits security vulnerabilities in Internet homepages and software development.

It is a technology necessary for the development and management of information systems.

The US enacted the Federal Information Security Management Act of 2002 (FISMA), mandated secure programming, Microsoft introduced secure programming when developing Windows Vista.

In the case of the Republic of Korea, from December 2012 "SW development security obligation system" to eliminate security vulnerability from the SW development stage was enforced.

CO751 Security Monitoring and Control Technology Seminar 3 credits (추가)

This course covers theoretical background and implementation technique about the engine of intrusion detection system.

Also It provides practical skills for security monitoring and control and for computer emergency response.

Lastly, it handles comprehensive theory knowledge and implementation technology of information protection equipment in order to protect information assets of corporation effectively from increasing security threats.