Japan's first IT professional graduate school

KCGI: The Kyoto College of Graduate Studies for Informatics

Study cutting-edge IT in Kyoto, Japan

No.1 & the Only One！ 京都情報大学院大学 **kcg.edu**

In order to cultivate high level professionals in the field of IT

With the advancements in science and technology, remarkable technological innovations, and radical socioeconomic changes (diversification, increasing complexity, increasing sophistication, globalization, and the arrival of the age of IoT, etc.) in recent years, expectations for the education of high level IT professionals viable both in Japan and internationally are rapidly increasing.

In the field of IT, however, which spans such specialty fields as information and management, the number of colleges and graduate schools able to meet the challenges of cultivating high level IT system professionals has been virtually almost zero until now.

In order to rectify this situation, The Kyoto College of Graduate Studies for Informatics (KCGI) was established in April 2004 as Japan's first and only IT professional graduate school.

KCGI inherits the traditions and achievements of Japan's first computer educational institution, Kyoto Computer Gakuin, which has trained information process ing engineers to meet the needs of industry for 57 years. KCGI also implements internationally cutting-edge IT curricula based on a global education network with universities from around the world, including the Rochester Institute of Technology. Further, KCGI's curriculum also takes into consideration management and administration education: KCGI cultivates top leaders in fields of applying IT such as high level IT professionals and especially CIOs (chief information officers), positions for which it is difficult to receive the proper education at traditional research-oriented graduate schools.

School Philosophy

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The objective of our school is to train highly-qualified information technology professionals with strong practical knowledge of the current business practices, a solid theoretical background, and a creative and innovative spirit which will enable them to meet the demands of society and to be responsible for the current and future generation.

KCGI's Mission and Purpose

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To meet the need for high level and diverse human resources in our IT society and, furthermore, to contribute to the realization of a high level information society and the development of the economy through the provision of high level IT professionals who possess extensive knowledge and high level skills beyond what is conventional and who are also internationally minded in the age of ubiquitous computing.
Our purpose is to adapt to developments in information and related technologies and provide education on theory and practical technology in academic fields related to science, technology, and business administration in the training of high level professionals.

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The Kyoto College of Graduate Studies for Informatics

Admission Policies

The IT/ICT industry is an integrated field of both information-related and management-related fields, and its targets are complex and diverse. Consequently, the IT industry's needs for promising talents are increasingly diversifying more than ever before. To date, it was not possible to satisfy Japan industry's diverse talent supply needs with the existing Japanese educational system, being solely dependent on developing engineering undergraduate degree students at engineering-related research graduate schools. Moving forward, in order to further develop Japanese industry and economy, it is important to train people of diverse backgrounds, by all means, as highly specialized professionals in the IT/ICT industry.

From these perspectives, our school has a policy to widely accept as many students of diverse background as possible without specifying their undergraduate degrees.

1) People who have the foundational academic ability to learn specialized knowledge at our school;

2) People who have a desire to learn new things, think on their own, and create something new without being bound by established concepts; and

3) People who have a will to collaborate with others around them and solve problems through communication.

A KCGI Education

The Kyoto College of Graduate Studies for Informatics

President & Professor,
Kyoto Joho Gakuen

Wataru 長谷川 亘
Hasegawa

Bachelor of Arts, Waseda University

Master of Education, Master of Arts,
Columbia University, USA

Chairman, Kyoto Prefecture Information Industries
Association

Trustee & Chairman, All Nippon Information Industry
Association Federation

Representative Director & Prime Vice Chairman,
Japan Federation of IT Associations

Kingdom of Thailand Ministry of Education Vice
Minister's Award (twice)

Republic of Ghana Ministry of Education Award

Qualified as an Educational Administrator in
the State of New York, USA

Visiting professor, Tianjin University of Science &
Technology, China

Policy advisory committee, JDC,
Jeju Free International City Development Center

Courses: Leadership Theory, Master Project

The Kyoto College of Graduate Studies for Informatics (KCGI) is Japan's first IT professional graduate school. KCGI's parent organization, Kyoto Computer Gakuin (KCG), was Japan's first private computer education institution. KCG was established as a private school by Shigeo Hasegawa and Yasuko Hasegawa under their unique, forward-looking philosophy. KCG has been engaged in computer education for over 55 years since its establishment in 1963 and during that time not only high school graduates but also many graduates of four year universities have enrolled in and graduated from its programs. At the time of the school's founding, only research-oriented graduate schools existed in Japan.

Many of the students who enrolled after graduating from university chose KCG after searching for an institute of higher education directly connected to the practical side of computers. Even though KCG was organized under the vocational school system, it holds a role in Japanese society as an educational institution for university graduates and has also served the function of a kind of occupational and practical graduate school.

Based on this state of affairs and history, in 1998 KCG established a joint program with graduate programs (including Information Sciences and Technologies, Computer Science, and others) at the Rochester Institute of Technology in the United States and has since implemented a professional graduate school curriculum oriented towards practical learning. This collaboration between a Japanese vocational school and American graduate school programs was both the first of its kind in Japan and ground-breaking.

It was perhaps inevitable that, with well-established professionals at its core, Kyoto Computer Gakuin (KCG) would be founded and developed as a uniquely professional graduate school for IT under the new professional graduate school system. The Kyoto College of Graduate Studies for Informatics (KCGI) was founded with generous endorsement and cooperation from related parties in the financial and educational fields, the latter including faculty at Rochester Institute of Technology and Columbia University. In April of 2004, the first year in which the new system was adopted, KCGI opened as Japan's first and only IT professional graduate school.

The founding philosophy of KCGI is "to cultivate specialists in applied information technology who possess creativity and high level practical abilities which will meet the needs of society, support the present age, and lead us into the next generation." Combining IT education with international business education, KCGI created a program to cultivate engineers and particularly CIOs specializing in web business (e-business), based on the revised edition of the Information Systems (IS) master's program curriculum of the Association for Computing Machinery (ACM). KCGI's mission and purpose is to serve the need for diverse and skilled individuals in today's IT society by cultivating international professionals who possess exceptional skill levels and wide-ranging knowledge. It is our belief that these efforts will lead to economic development and the realization of an advanced IT society, as well as the development of IT and related technologies. In this way, we work to promote education on theory and practical technology in academic fields related to science, technology, and business management. Such achievements will in turn lead to the cultivation of future generations of highly skilled IT professionals.

Until the foundation of KCGI, major programs concerning web business (e-business) at the undergraduate and graduate school level were virtually non-existent in Japan. The majors were treated as merely a sub-field in traditional major programs such as business management, industrial engineering technology and majors related to information. The majors were merely researched and taught as part of a systematic and comprehensive major or as part of a major field.

What distinguishes KCGI is that, as an IT professional graduate school in the broader sense of IT, we aim to be a world-class professional school that also focuses on the cultivation of leadership abilities. Unlike many universities, we are not a "vertically divided single field" computer science graduate school, nor are we an informatics and mathematics graduate school. While we share many similarities with those institutions, we are a different genre of graduate school. In addition to curriculum designs and an advisory teacher system based on a pedagogical point of view, KCGI aims to provide a well-rounded education system integrating a wide range of elements and policies rarely seen in Japanese universities. These include learner-oriented instructional design, an education system with an open and horizontal division of labor, and periodic evaluations of learning outcomes.

Furthermore, KCGI is also focused on the cultivation of international leaders and businesspeople equipped with both IT and management skills, who can put their abilities to work throughout Asia and the world. At KCGI, we actively accept students from around the world, as part of our aim since our establishment to be the number one IT professional school in Asia.

Today IT is indispensable in our daily lives and in industry. Diversified into numerous related fields, IT addresses a vast range of societal needs. KCGI constantly revises and upgrades its curriculum, to provide its graduates with a general grounding in IT, the skills to play a vital role in the fields graduates select on that basis, and practical skills that can be applied in the industrial world. In the 2018 academic year, KCGI launched a suite of three course registration models. The Fields of Concentration provide students with professional knowledge in a specific field, from the basics to applied techniques. The Industry Courses teach effective planning and design skills for each field of industry in which IT is applied. Finally, responding to students' diverse range of study objectives, the Bespoke Curriculum allows students to select a wide range of courses related to a certain field. With the practical skills and broad outlook they acquire at KCGI, our graduates play vital roles in a wide range of fields in Japan and internationally.

KCGI has also established satellite campuses in Sapporo and Tokyo. These satellite campuses are connected to the Main Campus in Kyoto via an e-learning system, enabling students to receive cutting-edge IT professional education while studying at either satellite campus. Courses are taken in real time, enabling students to ask questions to professors directly via camera. These courses are also recorded, so students can view courses stored on our servers from home. Transcending the boundaries of space and time, students can receive a sophisticated professional education anywhere, anytime. KCGI also holds close connections with higher educational institutions around the world, including those in the United States, China and South Korea. KCGI is actively developing its educational operations while continuing to expand its international network.

Amidst the wrenching changes unfolding in the world today, KCGI is working hard to develop sophisticated IT professionals, guided by our founding philosophy and our established mission and purpose. I eagerly await the entrance of ambitious students such as yourself.

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The Kyoto College of Graduate Studies for Informatics

At the Turning Point of a New Era

Message from the President

President & Head of School of Applied Information Technology,
The Kyoto College of Graduate Studies for Informatics

Toshihide Ibaraki 茨木 俊秀

Bachelor of Engineering, Kyoto University;
Doctor of Engineering, Kyoto University (major in Electronic Engineering);
Professor Emeritus, Kyoto University;
former Dean of the Graduate School of Informatics, Kyoto University;
former Professor, Kwansei Gakuin University;
former Professor, Guest Professor, University of Illinois and others.
Fellow of ACM; the Information Processing Society of Japan;
and the Japan Society for Industrial and Applied Mathematics.

Courses: Advanced Topics in Systems Theory, Master Project

The Industrial Revolution, which occurred from the latter half of the 18th century through the 19th, began thanks to the creation of a new type of power known as the steam engine. The increase in productivity was later further accelerated by the use of electricity and petroleum, until, by the latter half of the 20th century, the productive capacity of humanity far exceeded the amount needed. The result, termed the conversion from quantity to quality, led to the obsolescence of mass production methods at the time and a transition to the age of large variety, small volume production. Amidst these stormy seas of change, the industrial composition of the world is undergoing a significant transformation, giving birth to a new social order. This same phenomenon is also occurring in the world of information. The speed of it, however, is far higher. Although just 70 some years have elapsed since the production of the first computers, their progress has been explosive, to the point where both their operational speed and memory capacity are inconceivable. The ability of computers to solve the partial differential equations which describe atmospheric changes faster than actual weather phenomena occur is the decisive factor in making numerical weather forecasting possible. Voice analysis and recognition has become fast enough to handle the speed of human speech. Barriers to memory capacity are virtually non-existent and it is now possible to store every book in the entire world as digital data. Computers also have the potential to record every bit of data taken in by a human being's eyes and ears throughout their lifetime. There is no doubt that this increase in information power has reached a level sufficient to change the quality of our very lifestyle and culture.

Indeed, I feel that since our entry into the 21st century we are increasingly seeing signs of a qualitative change. With the implementation of convenient features and decreasing size, cell phones and smartphones have found their place in people's pockets, particularly changing the lifestyle of young people. Signals over the internet can now instantaneously exchange not only letters and characters but also pictures and video data via fiber optic cable. ICT as infrastructure is globalizing finance and business and continues to exert a significant influence even on the nature of countries and societies via the direct connection of people around the world. Needless to say, not all of these changes are necessarily in a positive direction. In addition, negative aspects such as computer crime cannot be ignored. In that sense, we are truly in the very midst of this conversion, and one could go so far as to say that we are coming to a turning point in the future of humanity.

KCG, the parent organization of KCGI, was established in 1963 when computers were in their infancy. KCG grew with the development of computers as Japan's first computer education institution and has sent forth many promising graduates into the world. Inheriting this tradition and history of results, KCGI was conceived as Japan's first professional graduate school, announcing its establishment in November 2003 and welcoming its first students in April of 2004. At this turning point, we can now say we have truly begun our journey. KCGI, while continuing to devote itself to the further study of ICT, fully understands the influence this will have on society and seeks to cultivate human resources who guide it in the right direction. If you have the will, doors will open for you regardless of age, personal history, nationality, or whether you come from the humanities or the sciences. We welcome with open arms not only those who have just finished their undergraduate studies but also working adults looking to advance their careers who are already flourishing in the real world and students around the world interested in studying in Japan.

Badge of KCG

kcg.edu

The KCG Group is a global assembly of educational institutions. It includes The Kyoto College of Graduate Studies for Informatics (KCGI); Kyoto Computer Gakuin (KCG), which includes Rakuhoku Campus, Kamogawa Campus and Kyoto Ekimae Campus; Kyoto Automobile College; Kyoto Japanese Language Training Center; and KCG Career.
The emblem of the KCG Group, "kcg.edu," emblem is derived from Internet domain name (www.kcg.edu) acquired in 1995. It was selected by the CEO of the KCG group, Wataru Hasegawa, in 2003.

The domain name "kcg" stands for "Kyoto Computer Gakuin," the name of the first computer educational institution in Japan. ".edu" is a generic Top Level Domain (gTLD: one of the top sector internet domains), which only higher educational institutions approved by US accreditation organizations are permitted to use. The first registration of educational institutions under ".edu" occurred in April 1985, when six American institutions of higher learning—Columbia University, Carnegie Mellon University, Purdue University, Rice University, University of California, Berkeley and University of California, Los Angeles—acquired the gTLD. Other renowned US universities followed shortly thereafter, including the Massachusetts Institute of Technology (MIT), Harvard University and Stanford University.
In 1989 the KCG Group established a Boston campus, as a hub for overseas training and student exchange with MIT and other universities and research centers in the United States. As a result of these efforts, the KCG Group was recognized by US computer developers and pioneers of the internet age as a trusted computer school and an institute of higher learning suitable for designation with ".edu". The Group was the first educational institution in Japan to be accorded this gTLD. Later, the gTLD ".edu" was reserved exclusively for the use of educational institutions in the United States. To this day the KCG Group remains the only educational institution in Japan to carry the ".edu" designation.

The KCG Group's possession of the domain "kcg.edu" testifies that KCG and KCGI are recognized as higher educational institutions in both the United States and Japan. Our ".edu" domain stands today as a symbol of our initiative. The emblem "kcg.edu" captures the strong spirit of the KCG Group as an educational institution that consistently values the pioneering spirit in an advanced information society and reflects our educational ideal of training personnel who can shape the direction of the age.

Color of KCG Group

kcg.edu
The Kyoto College of Graduate Studies for Informatics

KCG Red
(School color of The Kyoto College of Graduate Studies for Informatics (KCGI))

Besides the school management, Shigeo Hasegawa, founder of KCG group, studied again in his later years at Harvard University to tackle studies he was unable to pursue when he was young. He rented an apartment in Boston and attended a class of literature and philosophy with young students. Based on the crimson color, which is the school color of Harvard University, school color of KCGI is established as KCG Red, as a color contrasting to KCG Blue. This expresses attitude to challenge and learn a new thing enterprisingly regardless of age or sex.

kcg.edu
Kyoto Computer Gakuin

KCG Blue
(School color of Kyoto Computer Gakuin (KCG) and KCG Group)

Because all the original members of KCG in its establishment were graduates and graduate students of Kyoto University, the color of KCG and KCG Group is selected on the basis of the Kyoto University's school color, the dark blue. The color has begun to be used from around 1970, we defined the color as "KCG Blue" on the 35th anniversary in 1998.

kcg.edu
Kyoto Computer Gakuin Automobile School

KCG Orange
(School color of Kyoto Computer Gakuin Automobile School (KCGM))

The Kyoto Computer Gakuin Automobile School fosters automotive mechanics with advanced techniques and knowledge in IT and networking applicable to next-generation automotive technologies. For KCGM, a new member of the KCG Group joining in 2013, we designated orange as its school color to express its new vigor brought to the KCG Group.

kcg.edu
Kyoto Japanese Language Training Center

KCG Green
(School color of Kyoto Japanese Language Training Center (KJLTC))

For the international students, KJLTC is the first entrance of the KCG group. KJLTC is a Japanese Language educational facility, recognized by the Minister of Justice, and assigned as a preparatory education curriculum by Ministry of Education, Culture, Sports, Science and Technology. From the imagery of the green earth of seven continents, a green color is selected as the school color, as a color contrasting to KCG Blue and KCG Red mentioned above.

Features of KCGI

Truly master practical skills useful in society.

■ Curriculum design adapted to the needs of industry and advances in IT

At KCGI, curricula, program designs, and instructional designs are created with advice from specialists both inside and outside the school in order to promote education adapted to the needs of industry. In addition, world-class, cutting-edge IT education curricula are imported and jointly developed based on our collaboration with the Rochester Institute of Technology in the United States in order to adapt to the rapid changes in IT (ICT).

■ Thoroughly practice-based curriculum composition

In order to cultivate human resources who possess both IT (ICT) and management skills, KCGI takes into consideration students' ability to take many classes not only in the field of IT but also subjects related to business such as management and economics. In their final year, students at KCGI plan and implement a master project in place of a master's thesis, acquiring the high level skills needed to establish their careers.

■ Adoption of effective education methods through the use of both e-learning and in-person classes

With powerful support from professors from Columbia University in the United States, KCGI aims to realize world-class, high-level IT education. Stressing flexibility even in the way classes are taught and taken, courses are practical and varied in composition, including case studies, fieldwork, group work, and discussions. In addition, KCGI has established a full-fledged e-learning studio and implements effective education through the use of both e-learning and in-person classes.

Study a good balance of IT (ICT) and management.

■ Cultivating professionals capable of operating in multiple fields, such as IT and management

Talented individuals possessing both IT (ICT) skills, with web technology as a mainstay, and management skills, such as management strategy creation, are in demand in the modern business scene. KCGI cultivates professionals who understand multiple specialized fields, such as information and management. Curricula are organized so that students can study a good balance of information and management courses as is appropriate to their individual backgrounds.

■ Appointment of numerous instructors with practical experience in corporate and other IT strategy development

In order to cultivate professionals, KCGI appoints many practically experienced faculty such as instructors with experience working as CIOs at major companies. Our teaching staff cultivate students' practical skills through courses based on their actual experience. Students acquire comprehensive professional skills while increasing their understanding of the latest theories and technologies directly connected to practical usage.

Change career paths and flourish in the field of IT.

■ Students from a wide range of fields, whether in the humanities or the sciences, can enroll

One of the objectives of KCGI is to develop advanced IT professionals with a wide range of backgrounds. We recruit a diverse range of entrants from numerous fields in the humanities as well as the sciences, without limiting the departments or major areas of study from which they are expected to have graduated. KCGI supports students from a wide array of backgrounds, offering elective courses appropriate to the existing knowledge, skills, and needs of students. To enable working adults to continue studying while employed, KCGI provides support with a diverse range of learning options. We proudly create opportunities to change career paths, something which has traditionally not been properly provided by graduate schools in Japan.

■ Take classes appropriate to the knowledge you bring to KCGI

Students vary in skill levels in IT study at KCGI, from humanities graduates with virtually no knowledge of computers to working adults flourishing as SEs in the IT industry. KCGI offers the optimum course pattern for each individual student based on their existing skills in IT and future goals. This makes it possible even for students without a prior background in the field to comfortably reach their goals in stages. Students who already possess basic knowledge of the field can begin their studies with more specialized courses, making it possible to effectively grow and extend their skills.

We aim for an active role on the global stage.

■ Courses conducted by leaders in the field of IT from around the world

IT business is a field developing globally and across national boundaries. KCGI invites top class professors from regions around the world including North America and Asia to help students acquire an international perspective. KCGI concludes scholarly exchange agreements and business collaborations with universities around the world, including the Rochester Institute of Technology in the United States and the Graduate School of Information Security at Korea University, which is one of the top programs in the world in the field of information security. KCGI is also focused on the development of international relations, including engaging in joint research and international symposiums.

We train students to become global players through a full roster of classes in English Mode.

KCGI offers many classes in English Mode, enabling students to complete their courses and obtain Master's degrees studying solely in English. A number of these courses are taught by some of the most distinguished professors from overseas. Students from more than 17 countries and regions, including both undergraduate and graduate students, study at KCGI. Many choose courses taught in English. Japanese students can also study in English Mode, provided they meet the required English proficiency levels. Leveraging the benefits of this cosmopolitan environment, these students not only improve their English while studying IT but also acquire an international mindset.

Premathilaka Shashikala Nimanthi (S)
Student enrolled in KCGI in April 2018, Graduate of Rajarata University

Koichi Hasegawa (H)
Professor of KCGI

Student Interview

Professor Hasegawa (H): Hi, how are you?
Premathilaka Shashikala Nimanthi (S): I'm very fine, thank you.
H : OK, let's talk about your life at KCGI. First, please relax (ha-ha).
S : Thank you.
H : How is your life in Japan?
S : Before I came to Japan, I really admired Japanese culture and life. I especially liked the self-discipline and self-control of Japanese people. The only difficult thing is Japanese language.
H : I see. How did you learn about our graduate school?
S : I wanted to do my Master's degree outside of Sri Lanka. So, I searched many universities. At that time, a Sri Lanka agency introduced me to KCGI. I learned that KCGI has Master courses that can be taken in English and Japanese. Then, I searched the KCGI's online website, where I found details about the school, courses and especially about job focus areas. I was really happy because I could come to Japan.
H : So, you are interested in Information Technology….
S : Yes, my undergraduate degree was in Information and Communication.
H : How are your studies going so far?
S : I am really enjoying my studies here. I have learned so much interesting and useful things across many IT fields. And the KCGI professors are teaching me a lot. They have much knowledge and experience to share. I have learned a lot of

things from them, and also have done self-study using the class materials. It's been a really good experience.
H : What is your concentration?
S : My concentration is ERP.
H : Do you have any favorite courses?
S : Yes, I enjoy all courses especially, "International Accounting" and "Computer Organization Theory".
H : In the future, do you want to take a job related to ERP?
S : Yes, after I graduate, I want to start my career as an ERP consultant. Before I came to Japan, I worked as a project manager. While I am here, I wish to pursue a job as an ERP consultant.
H : Are you planning to take the test for ERP qualification?
S : Yes, my professor always recommends me to take extra examinations. I will register for the SAP ERP examinations soon.
H : After you graduate from KCGI, do you want to stay in Japan and find a job?
S : Yes, I would prefer to find a job here in Japan. I want to work in a company which has branches all over the world so I can get more work experience in different environments. One day I would like to return to Sri Lanka and give back to my country. That is my target. I have been given so many things from my country so I feel it is my responsibility to give back my knowledge.
H : I see. Thank you for your time and cooperation.

Harness your studies to flourish in society.

■ Making your ideal job a reality with thorough individual guidance

KCGI aims to enable all students to find jobs when they graduate. Instructors in charge leverage their experience and personal networks in industrial and other communities on students' behalf. Through one-on-one consultation with students, instructors work to help students find their dream careers. In addition, KCGI provides a wide variety of support for students looking to start their own company, including providing the knowhow needed to establish, manage and operate a business.

■ Cultivation of business networks among graduates

Each year KCGI produces numerous and highly diverse graduates focused on the keyword of IT, and KCGI also concentrates on cultivating a business network composed of these graduates. KCGI establishes numerous opportunities to engage in group work during students' tenure with the goal that students will harness each other's unique skills after graduation and cooperate in business development and expansion.

Environment

A practical education environment including world-standard business systems

Educational SAP System

■ Cultivating truly practical talent via SAP's ERP package

IT education at traditional universities and graduate schools often lacks the perspective of "how can this be utilized in business?" In particular, until now there was no environment for pursuing education which could be utilized in real world IT concerned with actual business activities such as business and departmental integration. KCGI uses the ERP (Enterprise Resource Planning) software from SAP AG of Germany, one of the world's leading ERP package venders, for education, and provides a practical study and research environment in order to cultivate high level practical human resources in the field

of IT. The enterprise resource planning (ERP) system is used by roughly 437,000 companies, including those adopting its peripheral software (SAP figures as of March 2020). Among major companies, 92% of the firms in the Forbes Global 2000 use the SAP ERP.

Conventionally this system has been used by other academic institutions for providing education on business administration and information management. One of the features of KCGI, however, is that only KCGI, the first Japanese IT professional graduate school, uses this software in Japan to provide true ERP professional education which includes system development.
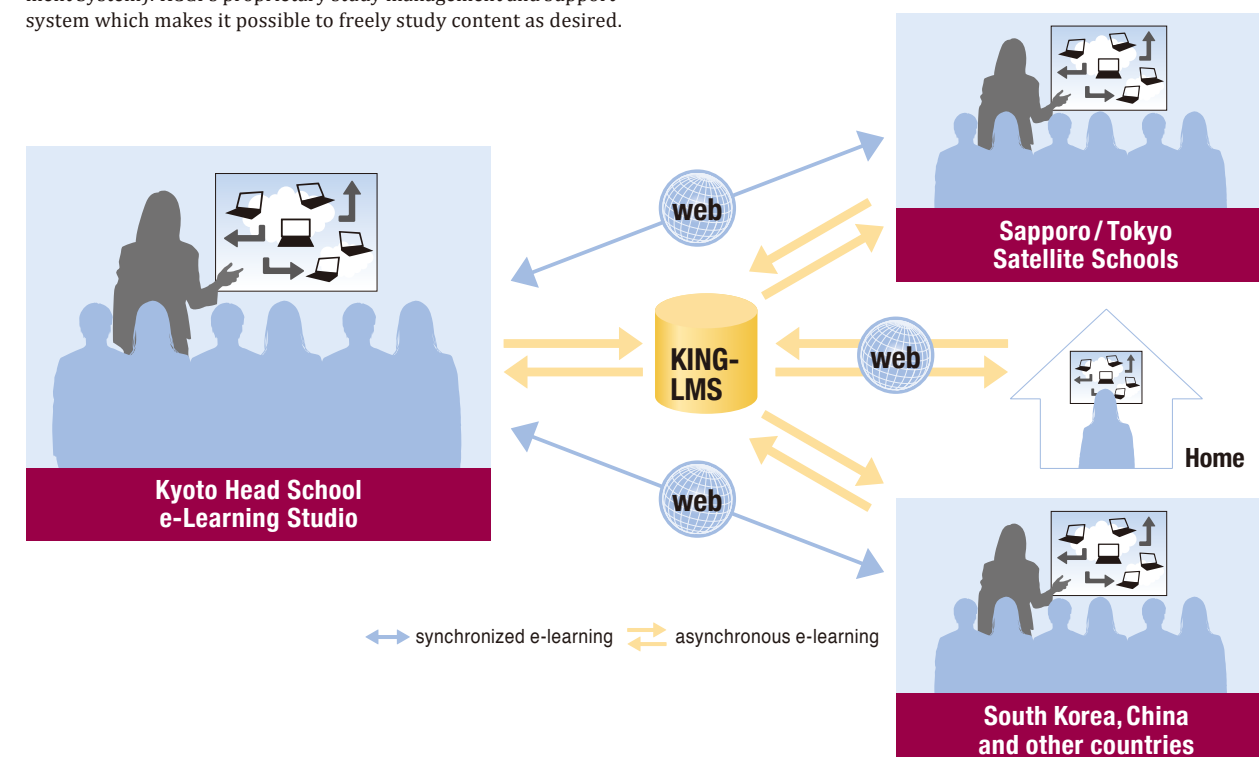
E-Learning System

KCGI uses a next-generation e-learning system to link the main campus in Kyoto with the satellite campuses and other locations, broadcasting lectures in real time and supporting students with a comprehensive remote learning environment.

The latest e-learning system links Sapporo, Tokyo and Kyoto to provide real-time lectures (synchronized e-learning). We also use the study content incorporated in KING-LMS to enable study and review anytime, anywhere online. With these innovations, KCGI offers many courses that can be taken completely online (asynchronous e-learning).

∗KING-LMS (KCG Information Network Galaxy-Learning Management System): KCGI's proprietary study management and support system which makes it possible to freely study content as desired.

■ Supporting Learning for Busy Working Adults

In recent years an increasing number of working adults are seeking to improve their skills and seek out new careers by studying at graduate schools. KCGI supports these working adults who wish to study while working, aiming to become advanced IT professionals.

web

Sapporo / Tokyo Satellite Schools

KING-LMS

web

Home

Kyoto Head School e-Learning Studio

web

⟷ synchronized e-learning   ⇄ asynchronous e-learning

South Korea, China and other countries

Active Fields

The introduction of IT (ICT) which is of a high level compared to traditional IT in accordance with the increasing sophistication of IT (particularly the diffusion of web business technology) is now a challenge faced by the world of industry. Specifically, there is a movement towards utilizing IT (ICT) not merely as a means of improving business but rather in the creation of high level business strategies. This means the introduction of IT at the top levels of business management; the human resources involved in this will require both high level knowledge and skills and at the same time high level management sense.

KCGI has created curricula designed to cultivate the high level IT talent required by industry. Graduates of KCGI are expected to work in IT-related occupations such as the following.

CIO (Chief Information Officer)

As the implementation of IT in companies grows and IT increasingly comes to support the basis of business management, companies are increasingly seeking CIOs who will draft IT strategies and play a part in company management. CIOs are high level professionals who take part in the design of company management strategies, develop information strategies aimed at creating environments which enable the realization of said management strategies, and turn the diverse array of management knowhow possessed by the company into effective information systems.

Project Manager

As a leader of projects promoting the introduction of IT, the role of the project manager is important. Project managers are high level professionals who consider the effective utilization of internal management resources, possess the ability to comprehensively manage and optimize the same, and introduce the latest information technology as appropriate. As such, project managers must possess extensive knowledge about both IT and business management. In addition, as project managers often participate in cross-department projects involving numerous people of different positions, they also require high level communication and leadership abilities.

Senior SE, Web System Architect

Senior SEs are engineers who assist project managers and also manage their own projects. Senior SEs must have a deep understanding not only of technology but also management factors such as costs and workflow. Web system architects follow the instructions of project managers and senior SEs to engage in the actual development of systems, harnessing the latest IT skills.

System Integration Consultant

Due to a lack of in-house IT talent, the demand for external consultants in introducing IT in Japanese companies is growing. System integration consultants are high level professionals who provide consulting concerning business system planning in accordance with the management strategies of the client company and who possess the skills needed to efficiently implement links between companies which will help them to succeed in today's fiercely competitive international business environment. As system integration consultants must understand and respond appropriately to client needs, they must have strong IT, management, and communication skills.

Web Marketing Professional

Web marketing professionals are high level professionals who execute e-business and possess the web skills to create e-business sites, the ability to draft strategies for providing services over the internet, and the marketing techniques needed to understand consumers' internet behavior. Web marketing professionals must have a wealth of knowledge concerning business transactions as well as advanced knowledge and skills concerning networks such as distribution systems and web security.

System Architect

System architects are high level professionals who analyze the issues involved in the IT strategy drafts of companies, create frameworks for finding solutions, and design new system architecture which integrates increasingly complex existing systems. System architects play a central role connecting the strategy drafts of companies with actual system development. As such, they require not only IT skills but also extensive knowledge of business, administration, and management.

Information Security Consultant

Information networks are indispensable infrastructure to making e-commerce and an IoT a reality. However, the security risks to these networks are also continuing to expand. An Information Security Consultant offers advice and support to customers in formulating information security policies and in securing information assets. To understand the conditions the customer faces, and to respond appropriately to these, an Information Security Consultant requires management and communication abilities.

Content Production Manager

Content Production Managers oversee project teams in the production of media contents, such as movies, animation and game software. Firstly, a proposal is drafted, then production negotiations are initiated with the company with the cooperation of the team, and a concrete budget is secured. Also, Content Production Managers must plan how they can recover this funding using the finished product, and execute this plan. This requires the capacity to analyze past project performance and current market conditions, and the leadership to organize a team to execute your plan.

Data Analyst

Data analysts collect a wide range of data about customers and products acquired through business activities and analyze them objectively to discover characteristics and trends in the data. They then table proposed solutions to issues in management and system development. The use of Big Data in fields such as agriculture and medicine has been advancing in recent years, and the range of fields in which it is applied is continuing to broaden. Data analysis requires knowledge of marketing and management, IT skills such as statistical analysis and data mining, and logical thinking based on framing and testing hypotheses.

Educational Goals

For our school to realize its mission and purpose in educating students, we set our educational goals for our web business technology major as stated below.

1) Attainment of Fundamental Literacy

Students are expected to learn social and communication skills that serve as foundations to promote business. Students are also expected to understand fundamental technologies such as software and hardware networks that structure IT/ICT.

2) Improvement of Planning and Designing Ability

Students are expected to develop abilities: 1) to research widely and analyze the current and future trends of business and its supporting IT/ICT; and 2) to plan and propose a logical approach to pressing corporate and societal challenges. Moreover, students are also expected to develop the ability to design various systems and contents that materialize proposed plans.

3) Improvement of Development and Implementation Ability

Students are expected to develop the ability to either personally utilize systems and contents that were planned and designed through the software implementation or offer them to end users. In the process, students are expected to deepen their practical knowledge related to various tools and coding rules that are required to develop and operate these systems and contents.

4) Fostering Professional Awareness and Ethics

Students are expected to develop the ability to take charge of business processes responsibly. In order to continuously improve business processes, they are also expected to develop high professional awareness and ethical perspectives. With these two things combined together, we expect students to acquire practical leadership skills and methods to manage organizations.

Curriculum Policies

Consistent with our mission and goals, we offer a curriculum to train highly specialized professionals who possess both IT/ICT management skills and can actively develop their chosen IT business field.

1. The curriculum courses are categorized into the following categories:

• Fields of Concentration – courses that are grouped systematically to deepen knowledge about specific areas of study.
• Industry – courses that are focused on the practical use of technology and skills in a specific industry with business and IT experts using case studies and project based learning.
• Supporting electives – courses that include technology trends, high-level theoretical courses as well as supporting skill courses that complement Concentration and Industry areas.

2. Establishment of Course Registration Models and Method

In response to their learning objectives and preferences, students choose one "Concentration", a set of courses which emphasizes broad and deep expertise from basic foundational knowledge to application and practice in a specific IT related field within a wide range of knowledge. In addition, the Bespoke Curriculum allows students to select courses that correspond to a wide variety of student needs and their personal goals of study and research.

To expand their learning into professional application, the curriculum also offers Industry courses that emphasize practical application of technology in a wide range of industrial fields. Students apply their knowledge to specific problems as well as create designs and plans in a variety of industries. Industry courses are meant to complement the students main Concentration courses.

3. Master Project

Together with coursework, our curriculum is designed to foster students' practical and applied ability by pursuing their own interest by completing a Master Project under Faculty guidance.

4. Responses to Changes

Our curriculum quickly responds to rapid changes in the IT/ICT industry. The school constantly reviews and modifies the curriculum in accordance with Industry and societal changes that are needed for highly skilled professionals in Japan and abroad.

Diploma Policies

The school confers a Master's degree to individuals who fulfill the following requisites.
1) Full completion of pre-determined coursework within the allotted time period (e.g. 4 semesters)
2) Full completion of pre-determined credits for graduation

The school aspires that the students possess the following attributes:
a. Acquire and expand on the foundational knowledge to become contributors to their profession.
b. Apply this knowledge in the students' chosen field to become highly skilled professionals.
Behave in a high ethical manner to become respected members in their profession.

Integrated Programs for the Development of Highly-Qualified Information Technology Professionals

One of the goals of KCGI's School Philosophy is the development and graduation of highly-qualified information technology professionals. To achieve this goal, KCGI establishes integrated curricula, combining a range of course registration models to cater to students' varying educational objectives with student-driven projects and activities.

■ Acquiring Specialization

As a highly-qualified information technology professional, it is unrealistic to expect to cover the entire vast range of knowledge about IT. To enable students to specialize, KCGI identifies a number of particular fields and develops curricula for those fields. These Fields of Concentration enable students to acquire broad and deep knowledge about their chosen fields, ranging from its basics to applied technologies and practical skills.

■ Responding to the Needs of Society

Across the gamut of modern industries, the need for applied IT to raise efficiency, gather knowledge and otherwise solve problems is mounting steadily. KCGI is responding to these needs by organizing Industry Courses that enable students to select a field of industry and practice IT in that field, learning through case studies and by tackling issues.

■ Demonstrating Creative and Practical Skills

A highly-qualified information technology professional must be able to apply the knowledge they acquire in each course to practical uses and solutions to real problems. They must be able to plan and design the series of actions to be taken on their own initiative and return the benefits of those solutions to others. To ensure that students acquire the knowledge they need, students pursue a curriculum consisting of a Master Project on any of a wide range of themes as well as Research Projects/Independent Study, under the guidance of a Project Sponsor.

Professional Orientation

Acquiring Specialization

Developing Highly-Qualified Information Technology Professionals

Demonstrating Creative and Practical Skills

Responding to the Needs of Society

■ Professional Orientation

Highly-qualified information technology professionals are expected to fulfill their roles as highly trained professionals capable of solving real problems and delivering practical solutions in actual industrial fields. To this end KCGI encourages students to apply for internships. Internships provide opportunities for hands-on experience that can raise students' levels of technical proficiency and sharpen their problem-solving skills.

The selection of an instructional model and the assignment of projects and the like are not imposed uniformly on all students. Rather, students can combine a wide range of selections according to their interests and passions and the depth of their studies. KCGI designs curricula that respect students' freedom to pursue the studies of their choice while ensuring that they discover the knowledge and techniques required of and appropriate to a highly-qualified information technology professional.
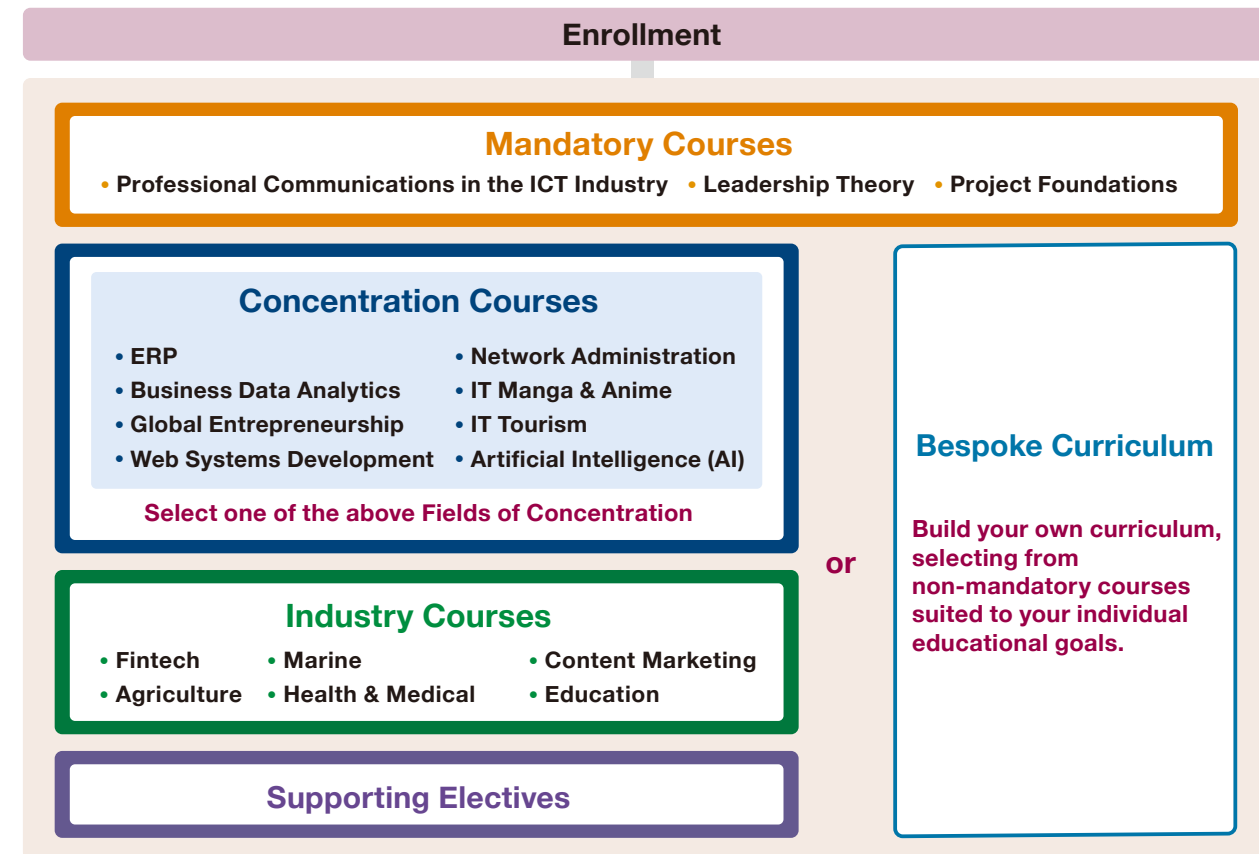
Curriculum Structure at KCGI

KCGI assembles curricula that provide the basic techniques and knowledge students will need in the ICT field. Mandatory Courses include courses teaching basic skills needed by businesspeople as well as practical skills of use in professional fields. Concentration Courses are courses with diverse content about a particular professional field. Industrial Courses consist of courses related to major fields that are in high demand.

Because of the fast-evolving nature of ICT, however, in some cases students need to compose and study curricula in unconventional ways. To address this need, students can, in consultation with their instructors, create their own curricula by selecting from non-mandatory courses suited to their individual educational goals. Such a curriculum is called a Bespoke Curriculum.

Enrollment

Mandatory Courses
• Professional Communications in the ICT Industry   • Leadership Theory   • Project Foundations

Concentration Courses
• ERP
• Business Data Analytics
• Global Entrepreneurship
• Web Systems Development
• Network Administration
• IT Manga & Anime
• IT Tourism
• Artificial Intelligence (AI)

Select one of the above Fields of Concentration

Bespoke Curriculum

Build your own curriculum, selecting from non-mandatory courses suited to your individual educational goals.

or

Industry Courses
• Fintech
• Agriculture
• Marine
• Health & Medical
• Content Marketing
• Education

Supporting Electives

Master Project

Master of Science in Information Technology (Professional Degree)

◆ Mandatory Courses

KCGI accepts students from a diverse range of backgrounds, regardless of undergraduate major. This openness is one way we fulfill our mission to society of providing challenging career opportunities to as many people as possible. As such, mandatory courses at KCGI are those that instill the core skills for effective and rational communication expected of a high level professional, regardless of each student's field of specialization.

Required • Professional Communications in the ICT Industry
• Leadership Theory   • Project Foundations

◆ Research Projects/Independent Study

Research Projects/ Independent Study is a system in which students pursue research under their own initiative, unconstrained by the boundaries of the courses offered at KCGI, under the guidance of an academic advisor. In this framework, students compile their research results in a research report, which they present orally. If the results presented are sufficiently strong, students are awarded the credit. Some types of Master Project may be combined with a Research Project or Independent Study.

◆ Selecting Your Courses

In consultation with an academic coordinator, students select from Fields of Concentration, Industry Courses and Supporting Electives the courses they will study in each academic semester, to plan their own individual study plans.

These courses are divided into basic courses, which do not have knowledge prerequisites, and applied courses, which do demand a certain level of prerequisite knowledge. To ensure that students can achieve sufficient academic results, a course pathway (recommended pattern of study) is specified. At the same time, a limit is placed on the number of course credits a student can complete per term. This provision ensures that students can develop a study plan that leaves enough time for individual study.

◆ Internships

KCGI offers an internship program that enables students at KCGI to obtain work experience for a set period of time at a business or organization related to their field of study. Students are expected to apply the professional knowledge and communication skills they acquired at KCGI in a real-world work environment, thereby putting what they have learned to practical use. After they complete the internships, students submit a participation report and present an oral dissertation to earn the credit.

Master Project

Many KCGI instructors have extensive experience in advising students at Kyoto University and other distinguished Japanese universities, or have been active on the front lines of business globally. KCGI students can receive guidance directly from these instructors on their master projects.

◆ Overview

Master projects at KCGI are mandatory courses that focus on practical applications and technologies in use in IT, with the objective of leading students in setting, analyzing and solving problems based on their own awareness of issues. In comparison with traditional university Master's-degree projects, in which the accent is on research, KCGI master projects aim to create opportunities for students to improve life for society or individuals in some way using existing tools, framework and so on in addition to delivering new findings.

◆ Objectives

In KCGI master projects, students analyze issues and present solutions to them by focusing on specific tools (including platforms, software, services, frameworks and business models), drawing on the specialized knowledge in fields and industries they have acquired in their studies.

◆ Methods of Implementation

The student pursues the Master Project on his or her own initiative, under the guidance of a Project Sponsor (instructor in charge of the Master Project). The steps taken in each semester are as follows. KCGI adopts a flexible approach modeled on that of Columbia University, the world leader in the field of education. Depending on the period and content of study, each student chooses one of the following four types: 1) Master Report 2) Master Project 3) Honors Master Project 4) Honors Master Thesis

Flow Example of Events in a Master Project (Overview)

2nd semester
The student attends the Project Foundations (mandatory course) for the Master Project and learns generally about the project composition and method of implementation. Students who plan to do a Master Project are expected to prepare and submit a research plan.

3rd and 4th semesters
Each student reports regularly to his or her project sponsor regarding the progress and results of the project. Before completion, the student submits a thesis etc. and is interviewed by instructors by means of an oral dissertation.

e-Learning Studio   Lecture Room

Great Hall

Composing Your Courses

To earn the degree of Master of Science in Information Technology (MS in IT) at KCGI, all students are required to complete successfully a certain number of credits and complete a master project.

The courses offered at KCGI are divided into the following three: Fields of Concentration, Industry Courses and Supporting Electives. Out of the wide range of courses related to Web-based business, KCGI selects courses that attract strong industry attention and in which demand for related knowledge and skills is high. We then group these courses into curricula, enabling students to concentrate on their studies efficiently. To free students to study in their own way, the curriculum design permits selection of courses unrelated to one's specific field.

Fields of Concentration	Students select a specific, specialized field from among the vast body of IT-related knowledge and deepen their knowledge within that scope. To assist students in acquiring a specialized yet sufficiently broad base of knowledge, courses are grouped into various fields.
ERP	Students study the enterprise resource planning (ERP) systems which companies use to manage the information of people, goods and money, and to support business decision-making.
Business Data Analytics	Students learn to analyze the information accumulated in the cloud and in databases and use their analyses to support effective decision-making.
Global Entrepreneurship	This curriculum teaches the knowledge and skills needed to succeed as an entrepreneur in the IT business, including the entrepreneurial mindset, leadership, and methods of data analysis and use.
Web Systems Development	Students in this curriculum learn how to plan and design websites that connect to resources such as databases and cloud services, as well as how to create Web applications for the PC and smartphone.
Network Administration	Students of this course learn how to build networks according to their intended application, study cloud computing and security management, and learn how to develop and implement various client/server systems.
IT Manga & Anime	This curriculum teaches students how to use digital tools to plan and produce animated and other visual content, as well as how to incorporate such content into one's business.
IT Tourism	In this curriculum, students learn about ICT applications in tourism, IT implementation in the tourism business, management of tour, accommodation and other information, and planning and design of tourism content.
Artificial Intelligence	Students in this course learn the basic theory and application of artificial intelligence (AI) and related technologies, drawing on real-world case studies in diverse fields. Participants also acquire proficiency in AI-related software and learn how to use and apply it in a variety of AI fields.
Industry Courses	These courses focus on the practical application of professional knowledge and technology in specific fields. The courses are specialized for each industry. Lectures are offered by outstanding individuals active on each industry's front lines. These and other courses are constantly updated to reflect cutting-edge trends in each industry studied.
Fintech	Fintech is IT applied in the financial field. These courses explore the core operations of banks as well as the current status of electronic money, virtual currencies and other financial technologies.
Agriculture	Students learn how IT is applied in agriculture. Topics include use of IT to control cultivation environments (as in plant factories) and the revolution in produce distribution.
Marine	This curriculum concerns the application of IT in shipbuilding and ocean-going transport. Students learn about ship navigational controls and control of environments for marine aquaculture.
Health & Medical	Students learn about IT applications in the medical field. Topics covered include management of data in electronic medical records and diagnostic support using AI and data visualization.
Content Marketing	Students learn IT applications in manga, anime, video, music and other media. Among the topics handled are digitalization of the production process, management of intellectual property rights and promotional strategy.
Education	In these courses students learn about IT applications in the education field. These include design and production of e-learning content, a wide range of communication systems, and more.
Supporting Electives	This curriculum consists of courses teaching the basic skills students will need as professionals regardless of industry or field of concentration, such as communication and management, as well as courses covering case studies of leading-edge ICT applications and technological trends. Because it brings together courses from a wide range of perspectives from basic to applied, this curriculum enhances students' breadth of learning.
Communication	Students of these courses learn how to communicate logically and clearly in the IT and business fields, developing skills in conversation, self-expression and so forth.
Management	Students acquire the ability to understand and apply the general approaches to management necessary in an enterprise environment.
Manufacturing	Efforts to improve quality and frameworks to spark innovation in manufacturing are explored in detailed case studies in these courses.
Advanced Applications and Technological Trends in IT	Students of these courses study cases of advanced applications of IT and detailed case studies of technological trends.

Fields of Concentration

In the Fields of Concentration, students' aim is to acquire knowledge, both specialized and wide-ranging, related to one particular field among the wide range of IT-related fields available to choose from. KCGI provides a list of fields for which students can choose courses. The following eight categories represent eight fields that KCGI has identified as attracting intense industry interest and requiring IT-related knowledge and skills. Courses are selected and grouped according to students' objectives.

ERP(Enterprise Resource Planning)

Enterprise Resource Planning (ERP) is an approach for comprehensive management of all of a company's resources —people, goods, machinery, money and information—using IT. Understanding the enterprise resource planning systems (ERP systems) which can realize this approach is the first step of ERP system implementation, which can improve the company's business process.

In this concentration, students engage in practical study by using SAP ERP educational systems (SAP S/4 HANA), including business integration, financial accounting system, sales and distribution system. Students also survey case studies of problem analysis and ERP implementation at a range of companies. In addition, students conduct research on connecting ERP with the latest enterprise infrastructure, such as in-memory databases and IoT.

Target career paths
● ERP implementation consultant　● ERP customization engineer　● ERP add-on development engineer

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Messages from Project Sponsors　**Professor Yi Li**

In these days of intensifying competition, many companies are implementing ERP integration packages to improve their business. As companies in a diverse range of business install ERP systems as core systems for business integration, ERP consultants are needed who have the skills to analyze the characteristics of each business type and implement systems that respond to the needs of each company's operations.

Having acquired knowledge of management and accounting and learned basic IT skills such as programming, students at KCGI learn how to customize ERP systems for purchase inventory, production, sales logistics, accounting and personnel management. In the Master Project, students conduct research on industry-specific ERP implementation and propose solutions to management issues aimed at improving business processes. Students not only customize ERP systems but also develop add-ons and external systems when necessary.

As globalization advances, demand for ERP consultants who can play a role on the international stage is mounting. KCGI develops global ERP consultants who can respond to the needs of the age, in both Japanese and English. In addition to customization of English/Japanese ERP systems, we advance research that responds to the need for ERP systems that are compliant with international financial reporting standards (IFRS). We also conduct research on implementation of country-specific ERP systems, surveying the accounting systems and business customs of various countries. Many of our students are working hard to fulfill their dreams of becoming ERP consultants with global consulting firms.

The Path to Becoming an ERP Consultant

The main courses studied in the field of concentration of ERP consist of the following lectures and practicums, which are taken in the order shown. This process prepares students for the qualification exam to become a certified SAP consultant and enables them to acquire expertise in ERP project implementation in corporate settings. These courses can also be attended by students who have selected a field of concentration other than ERP.

1st semester	**Introduction to Management Information Systems**	▶ Information Systems for Enterprises ▶ System Integration and e-Business
2nd semester	**Lectures in Preparation for the Certified SAP Consultant Examination** ▶ Financial Accounting System Development 1,2 ▶ Sales and Distribution System Development 1,2　▶ Production Control System Development	
3rd and subsequent semesters	**Practical Study on Development and Implementation of ERP Systems** ▶ Mock ERP Implementation Project　▶ Internship　▶ Add-on Development and Programming	

Business Data Analytics

Business data analysis is a business technique that is gaining increasing attention from numerous fields of industry in recent years. The main purpose of business data analysis is to provide companies with the effective decision-making they need to develop their businesses.

As companies accumulate a wide range of data, data management becomes increasingly complex, confronting companies with a wide range of difficult problems. The aim of this concentration is to develop in students an understanding of ways to discover solutions to these problems. Students learn how to analyze and process data and use those analyses to solve a host of enterprise issues. Vital concepts such as strategic customer relationship management (CRM), based on understanding of marketing and statistical analytical methods; and supply chain management (SCM), used to handle business models involving logistical infrastructure and purchasing, are also studied.

Target career paths
- Analyst who performs data mining (extraction and use of information resources), market analysis, etc.
- CEO who can make decisions, such as proposing and advancing corporate strategy, based on data
- Consultant who can offer advice and guidelines on product planning
- CRM manager who constructs models for describing consumer behavior and for developing strategies and forecasts

Messages from Project Sponsors **Professor Hong Seung Ko**

The projects I supervise are mainly focused on B2C marketing strategy for efficient operation of online businesses ("e-marketing"). While accumulating an understanding of ICT which forms the basis of e-marketing, my students analyze the purchasing behavior of potential customers online, to increase online sales and earnings. These results are then applied to develop strategy, using statistical techniques such as cohort analysis and AHP analysis.

Once a year, representatives of the students on whose projects I advise travel to international academic conferences held in North America, Europe and so on, to deliver presentations in English. I invite you to study the marketing strategy at the heart of customer-focused knowledge management. Will you take on the challenge of presenting at an international academic conference overseas?

Global Entrepreneurship

Global entrepreneurs launch, develop and manage their own and others' venture businesses and apply their expertise to support the development of businesses in other industries. The aim of this concentration is to foster in students an entrepreneurial mindset and leadership while providing the knowledge and skills necessary to start an enterprise in the global business field. While focusing on global business, including e-commerce and Web-based business, students study basic concepts in finance, marketing and management.

Target career paths
- Management consultant
- Enterprise manager
- Support personnel for enterprise analysts and venture investors
- Business development producers in enterprises

Messages from Project Sponsors **Associate Professor Kengo Onishi**

KCGI actively recruits instructors with experience as businesspeople and entrepreneurs. Under their guidance, KCGI has graduated numerous entrepreneurs since its inception. As a specialized graduate school, KCGI offers curricula geared to developing entrepreneurs as no other institution can, teaching ICT-based marketing, customer management and knowledge of management duties that entrepreneurs require.

On the basis of these results, KCGI was nominated to serve in the Cooperative Educational Agency for Setting, Testing, Evaluation, etc. of Model Curricula for IT Entrepreneurs, etc. in the Development of IT Entrepreneurs at Universities, a body within the Information-technology Protection Agency (IPA) of the Information Technology Promotion Agency. KCGI is now working diligently with other universities to create new curricula for the development of entrepreneurs. If you apply your skills in ICT to hone your ability to create reports, starting your own business, with appropriate support from public agencies, can become a reality for you.

Web Systems Development

Web systems development as a rule includes both production of websites on corporate intranets, holding content for company-internal use, and production of websites on the internet, published for outside use. Generally, web system developers code websites using programming languages and markup languages such as HTML5. However, their duties also include use of content management systems (CMS). In this concentration, students learn how to program and code Web systems and study the basics of networks.

Target career paths
- Designer/programmer of convenient and useful websites ● Producer engaged in launching new websites and supporting and improving existing ones
- Website manager supporting and improving excellence in his company's website
- Engineer who can integrate existing web services with cloud services to build applications

Messages from Project Sponsors **Associate Professor Takao Nakaguchi**

Web system development is incredibly varied. It uses mature technologies that are already widely used to produce services efficiently, but it also makes use of the latest technologies to create services never seen before. It may involve Web systems with the kinds of administrative screens seen in office settings, or it may consist of creating AR applications for use on smartphones. Some projects may involve the Internet of Things (IoT), which gathers information from devices such as sensors and cameras. Others may apply artificial intelligence (AI) to integrate image recognition with abnormality detection, for example. Many recent system development projects were realized using Web technology. A wide range of programming languages, databases and so on also come into play.

What is important, when operating with such a diverse range of technologies, is to establish clearly the purpose for which you are developing the system. What field is the system intended for use in? What is the problem and how will the system solve it? What technologies will you use to create your proposal? Once you have established these things, you can develop your system, have users try it out and evaluate the results. Participation in such projects provides students with the skills they need to design and develop the systems on which society depends. After completion, we expect students to embark on active careers as Web technology experts.

Network Administration

Network services are a critical element of today's information systems. Network administrators build computer networks and server systems, troubleshoot obstacles, and manage and support these networks and systems. When trouble occurs on a network, the network administrator recovers from the problem and maintains the data on the network. In this concentration, students acquire knowledge about the operation of network systems and about information security.

Target career paths
- Maintenance/operations engineer for corporate internet services ● Security manager for corporate intranets and mission-critical business systems
- Manager who builds and operates various server environments (Web, database, video, etc.)
- Consultant integrating and supporting a wide range of networks, including cloud services and IoT devices
- Engineer developing and operating client/server software for network systems

Messages from Project Sponsors **Professor Shozo Naito**

My area of specialization is in information security and networks. In constructing and operating an information system, networks and security complement each other, like the wheels of a car. Networking makes information systems convenient but also increases its security risk in direct proportion. Network technology and security technology are constantly advancing in competition with each other, in a kind of arms race. "Ubiquitously networked society" is a buzzword you hear these days. It refers to a current trend in which all kinds of things are being increasingly connected in a network. Conversely, another trend now in progress is the centralization of everything from hardware and platforms to software (applications) on data servers, as represented by cloud computing.

Of course, a service environment such as the one I've just described can only be realized with robust information security. The scale of the damage that can occur from leakage of personal information, infection with computer viruses, hacking of Web servers, takedown of websites and e-commerce fraud increases in proportion as networking expands. But returning to a closed, un-networked state is not a viable option. Instead we must find solutions that provide a judicious balance for the current situation.

I invite our newly arriving students to take up the challenge of studying the latest network and information security technology, striking a balance between theory and practice. This curriculum also provides an opportunity to consider the roles that information technology and the information ethics involved in using it play in social systems.

IT Manga & Anime

► For information on the course pathway for this field of concentration, please see page 34.

Japan's content-creative industries, led by manga and anime, are captivating worldwide attention. At KCGI, students experience a wide range of situations encountered in creative industries, such as creating new business models based on research on older business models in the content-creative industries and practicing planning and producing anime. This curriculum provides students with practice in finding solutions for individual problems encountered in content creation. The power of ICT is indispensable in the content and creative industries, so students learn to master digital tools. The curriculum also develops the skill of devising solutions to apply in a wide variety of situations.

Target career paths
- Producer who comprehensively handles planning, production and promotion of cartoon and animation content
- Content creator skilled in the use of both digital and analog production tools
- Director who can use video composition and effects with the right impact for the purpose of each production
- Marketing director who can plan content in view of trends in the cartoon and animation markets, in education, entertainment and so on

Messages from Project Sponsors **Professor Koji Ueda**

My fields of specialization are curriculum development regarding programming, multimedia and ICT and technology transfer to developing countries. For developing and developed countries, I believe it will soon be possible for everyone worldwide to obtain the education they want simply and effectively, using excellent content available through e-learning. When that happens, I expect animation, a method of expression found everywhere, to be put to effective use in this regard.

Becoming an anime creator involves the skills to apply digital tools to create works of art, but it includes much more. Anime creators need to know about business models that encompass methods of content development, cost control and distribution of works of art. Content creators must also have the flexibility to create content that can easily be introduced across borders, based on an understanding of the conditions and cultures of each country. My goal for this concentration is to develop content creators who can approach content creation from a comprehensive viewpoint and distribute it worldwide using ICT.

Artificial Intelligence

► For information on the course pathway for this field of concentration, please see page 35.

From the beginning of the 21st century, AI emerged as a fundamental technology destined to transform society, as the theory of Deep Learning advanced in leaps and bounds, acquisition of Big Data using the internet became easy and microprocessors and other computer systems took quantum leaps in speed and capacity. The scope of applications for AI is expanding headlong, currently embracing machine translation, self-driving vehicles, medical information processing, robots for nursing-care services and the like and e-sports, as well as proposal of corporate strategies, new approaches to agricultural management and other business applications. In KCGI's field of dedicated studies in AI, students begin by acquiring a basic grounding in AI theory and learning through real-world examples of the fields in which it is applied. The curriculum then proceeds to the study of numerous related software programs, aiming to cultivate professionals capable of using and applying AI technology.

Target career paths
- People who have the skills to thrive in the coming AI-assisted society
- People who can apply and use AI in a wide range of fields

Messages from Project Sponsors **Professor Shinji Tomita**

The basic theory of mathematics is vital for the study of AI. Actually math is not just the number one requirement, but number two and number three as well. Unfortunately, a lot of students hate mathematics. It's a shame, really, because this delicious fruit is waiting for them to pluck, but they won't because they already dislike it before they even taste it.

I don't believe, as some do, that in 2045 the "singularity" will happen, in which AI takes the place of humans. There's no question that AI will transform society beyond recognition. That's why we must equip people with the skills they will need to thrive in the coming AI-assisted society. After people have studied and understood the basic theory they will need, then fine, they can forget that basic theory if they like. But first they need to experience AI technology for themselves.

IT Tourism

► For information on the course pathway for this field of concentration, please see page 35.

The Japanese government's tourism promotion plan has had profound effects in recent years. The number of foreign visitors to Japan is rising rapidly, having reached an all-time high of 31.88 million visitors in 2019 (source: survey by the Japan National Tourism Organization). Each of the cities in which KCGI has a campus —Kyoto, Sapporo and Tokyo— is highly popular with tourists, creating an atmosphere that constantly reminds one of the needs and issues involved in tourist services.

This field of Concentration, which is particularly geared to exchange students, leverages these advantages to explore new tourism services and business models that use IT. KCGI teaches people to solve real-world problems, through activities such as provision of tourism information in multiple languages and media and digitization, analysis and forecasting of customer activity.

Target career paths
- Engineer engaged in planning of tourism systems, system development and use of Big Data
- Manager possessing the skills to make tourism service management more efficient using IT

Messages from Project Sponsors **Professor Meihui Li**

My specialty lies in global personnel development. In recent years, globalization of economies has advanced while the number of foreign-affiliated companies entering Japan has increased. At the same time, overseas markets have grown more dynamic than ever. As a result, a sharp increase has been seen in the number of Japanese enterprises seeking to move manufacturing and sales bases overseas. Demand for global personnel is booming at those companies, which are now scrambling to train, retain and secure such individuals. As the national government presses forward with its policy of making Japan a prime tourist destination, the tourism industry is attracting mounting interest as a key industry supporting the Japanese economy. The current surge in demand for people who can work in inbound tourism is certainly related to this trend.

In the midst of this bounty, one emerging problem is overtourism. Problems such as overcrowding of public transit and behaviors perceived by Japanese as lacking in manners cause locals to feel a loss of security or safety. KCGI is located in Kyoto, a city rich with tourist attractions. Should the numerous traditional temples and shrines located throughout Kyoto be regarded as holy sites or as tourism resources? We routinely observe real-life cases of the friction between preservation of a regional cultural heritage and tourist demand.

In this field of specialization, we use fieldwork to debate and think about measures to solve these problems, from the point of view of global integration of science with art. We aim to develop IT tourism specialists with the knowledge, skill and broad perspective to work on the front lines of IT tourism in Kyoto, one of the world's great sightseeing cities.

Milan's most prestigious school of tourism education

The International University of Languages and Media (IULM), located in historic Milan, is Italy's most prestigious school of tourism education and a partner of KCGI. Founded in 1968, IULM consists of three faculties—Tourism; Fine Arts; and Language and Communication—and has a student body of some 6,300 undergraduate and graduate students.

IULM International University of Languages and Media
https://www.iulm.it/en/home

● MILANO

Double Degree Program

(Two-year) **KCGI + IULM** (One-year)

This program extends KCGI's normal 2-year Master's program to 3 years, with the final year of study completed as an exchange year at IULM, KGCI's partner school. Upon completion of this program, students can receive Master's degrees from both IULM and KCGI. The degree can be obtained in Japanese or in English at KCGI, and in English at IULM.

Study tourism at the top schools in the world, in English!

Interact with students from Italy and many other countries over a three-year study period!

Graduate with degrees that open career paths in Japan, Italy and many other countries!

You can even join internships in Japan, Italy and other countries!

Responding to Industry

These courses apply studies in fields of concentration to specific industries that require specialized knowledge on practical use of ICT. KCGI has focused on the six industries and business types listed below as those in which IT can be expected to play a vital role in solving a range of issues. Courses are selected and grouped with a view to developing people who can play an active and dynamic role in each respective industry.

Fintech

Fintech is an umbrella term for new financial IT services such as electronic settlements and virtual currencies. Today fintech is one of the most closely watched sectors on the business landscape.

Students learn about the accounting and financial arrangements that form the background to financial IT services, while also studying the state of fintech system design. Using this knowledge as an entry point, students learn to combine a range of IT skills, such as Web and smartphone application development and data collection and analysis, to play an active role in fintech.

Target career paths
- System engineer or planner, backed by financial and accounting literacy and basic knowledge of Web business
- Data analyst who collects and analyzes customers' personal and financial information
- Application engineer applying new technologies such as virtual currencies and financial APIs

Agriculture

As vegetable factories and agricultural-support cloud services attest, IT can be applied to solve problems in Japanese agriculture that have proliferated in recent years, such as shortages of farm successors and declining competitiveness against imports.

We introduce a wide range of current case studies on the intersection of agriculture with IT; background information on the frameworks by which produce is grown, distributed and consumed; and directions in innovation of these frameworks. Students learn how to design stand-alone systems in agricultural IT, including environmental sensors and IoT. By combining this knowledge with concentrations such as Business Data Analytics and Web Systems Development, students can aim for careers as engineers and consultants with active roles in the agricultural field.

Target career paths
- Data analyst who collects and analyzes data on producer behavior and agricultural product quality
- Developer of e-learning materials to preserve the expertise of producers in textbook form and train successors
- System engineer or consultant supporting direct connections between producers and consumers (CRM)

Marine

The development of the marine and aquaculture industries depends on the use of IT to enhance navigational safety and make fishing efficient and sustainable. Today the industry is searching for new IT-based solutions, such as marine resources with traceability features using satellite tracking and systems for collecting environmental data. Meanwhile the marine industry is under pressure to reduce energy consumption and improve safety in navigation, reduce greenhouse-gas emissions, prevent marine pollution and use natural energy from the sea. In this industrial field, KCGI trains the future leaders of marine IT.

Target career paths
- System engineer who can construct and operate a wide variety of IT systems to support navigational safety
- Consultant who plans and develops e-learning materials, drawing on the expertise of fishermen and aquaculture workers to train the next generation
- Manager who can analyze and manage logistics in aquaculture from production through distribution and sales

Health & Medical

The implementation of IT in the medical field is advancing at a galloping pace, embracing medical clerical systems, ordering systems, electronic medical record systems, image diagnosis and much more. Treatment data formerly used to treat one patient at a time, medical-equipment data and so on are being gathered and analyzed as Big Data, for use in preventing infectious diseases and optimizing treatment plans. Analysis of words and phrases related to medical treatment on the internet is playing a role in the forecasting and prevention of infectious diseases. In these and other ways, the use of IT in medicine is expanding, creating high demand in the medical field for professionals who can apply advanced IT to a host of problems.

Target career paths
- System engineer capable of developing, configuring and operating a wide range of IT systems in the medical field, including systems for electronic medical records and remote medicine
- Data assistant having the expertise to collect, analyze and visualize medical and medical-equipment data to support physicians' diagnoses
- Engineer who can manage information networks for hospitals and regional medical care

Content Marketing

This industrial field deepens the student's understanding and appreciation of intellectual property, a concept at the core of any content business. These courses deal with the handling of copyrights for manga and anime; websites hosting music, images and video; and works in a wide variety of formats by the artists who create this content. Students also learn about the content business itself and research business models that use popular characters.

While acquiring the necessary knowledge and techniques to manage processes from planning and production to promotion regarding comic books, animation and other content, students survey and analyze the latest trends in technology and the international market. On the basis of this research, students submit improvement proposals and business models.

Target career paths
- Marketing director who plans educational, musical and other content that incorporates trends in the comic-book and animated-cartoon markets
- Planner who develops marketing strategy in consideration of the legal framework surrounding intellectual property, including copyright and other intellectual property rights

Education

A wide range of IT terminals have found their way into the educational space today, including a wide variety of e-learning systems and tablets. Combining educational materials from an instructor with other media and modes of expression, to create and share new content, is now a basic educational process. Educators can create compelling and accessible educational resources incorporating not only text and pictures but also audio, video and infographics. Activities such as organizing and presenting graphed data from one's own studies are now routinely demanded.

It is now expected, not only in education but also in a wide range of industrial fields such as agriculture and marine operations, that veteran practitioners will find ways to preserve their expertise and bequeath it to future generations. This is to be done by recording and organizing this knowledge as video or activity data and drawing from these resources to create educational materials accessible to a wide audience.

Students learn how to combine a wide range of media and modes of expression based on an appropriate instructional design, thereby creating an effective environment for e-learning. Through this process students engage in practical study of the use and application of educational media in ways that are effective in fostering dialogue between students and instructors.

Target career paths
- Educational professional engaged in the development and operation of e-learning systems using a wide range of media and modes of expression
- Content creator who uses and conveys to future generations the expertise of a wide range of industrial fields through the development of e-learning materials
- Engineer involved with the analysis and design of educational communication systems that integrate a wide variety of media

Main Credit Courses for Major in Web Business Technology

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Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice
Concentration Courses	ERP	Fundamentals of Database Technology	2		Sales and Distribution System Development 1, 2	3 each	○
		Statistics for IT	2		Production Control System Development	3	○
		Fundamental Mathematics for Applied Informatics	2		Material Management System Development	3	○
		Web Programming 1, 2	2 each	○	Human Resource Management System Development	3	○
		Information Systems for Enterprises *	2		ERP Business Applications Development *	3	○
		System Integration and e-Business *	4	○	Advanced Topics in ERP Consultation	2	
		International Accounting	2		Object Oriented Programming	4	○
		Financial Accounting System Development 1, 2 *	3 each	○			
	Business Data Analytics	Fundamentals of Database Technology *	2		Data Science *	2	○
		Statistics for IT	2		Qualitative Data Analysis and Transformation	2	○
		Fundamental Mathematics for Applied Informatics	2		Exploratory Data Analysis and Visualization	4	○
		Computer Organization Theory	2		Theories of Data Mining	2	
		Web Programming 1, 2 *(2 only)	2 each	○	Machine Learning and Its Application	2	
		Mathematics for AI	2		Advanced Topics in Database Technology *	4	○
		AI Software Applications 1, 2 *(2 only)	2 each		Environment Information System	2	
		Computer Programming (Python) *	3	○	Design Thinking	4	
		Introduction to Web Business	2		Internet Business Strategies and Marketing	2	
	Global Entrepreneurship	Statistics for IT	2		Brand Design and Business Management	2	
		Fundamental Mathematics for Applied Informatics	2		Internet Business Strategies and Marketing *	2	
		Web Programming 1	2	○	e-Commerce Methodologies *	2	
		Leading Meaningfully for Sustainable Growth	2		Global Entrepreneurship and Business Models *	2	
		Organizational Behaviour	2		IT Business Negotiation	2	
		Advanced Topics in Information Ethics	2		Game Theory and Negotiation	2	
		Introduction to Web Business *	2		Design Thinking	4	
		Business Economics 1, 2	2 each		Practical Cloud Computing	2	
		Intellectual Property Rights Law	2		New Laws for the Entrepreneur	2	
		Advanced Topics in Business Administration*	2		Project Management *	2	
		Practical Studies for Business Management *	2		Global Human Resource Development	2	
		Current Issues in IT Industry	2				
	Web Systems Development	Fundamentals of Database Technology	2		Fundamentals of Networking	2	
		Statistics for IT	2		Introduction to Web Technology	2	
		Computer Programming (Python) *	3	○	Web Services Development	4	○
		Fundamental Mathematics for Applied Informatics	2		Web Programming 3 *	4	○
		Web Programming 1, 2 *	2 each	○	Object Oriented Programming	4	○
		AI Software Applications 1	2		Object Oriented System Design *	4	○
		Introduction to Web Business	2		Software Engineering	2	
		Advanced Topics in Database Technology *	4	○	Design Thinking	4	
		Computer Organization Theory	2		Mobile Application Development	2	○
	Network Administration	Fundamentals of Database Technology	2		Cloud Networks and Virtualization	3	○
		Statistics for IT	2		IoT and Wireless Networks *	3	○
		Fundamental Mathematics for Applied Informatics	2		IoT Application Systems	3	○
		Web Programming 1	2	○	Information Security *	2	
		Computer Organization Theory	2		Routing and Switching *	2	
		Computer Programming (Python) *	3	○	Advanced Studies in Networking *	2	
		Fundamentals of Networking *	2		Introduction to Web Technology	2	
		AI Software Applications 1	2		Web Services Development	4	○
		System Administration	2		Cyber Security	4	
		New Laws for the Entrepreneur	2		Advanced Topics in Information Ethics	2	
		Advanced Routing and Switching	4				
	IT Manga & Anime	Fundamental Mathematics for Applied Informatics	2		Digital Animation Creation *	3	○
		Computer Organization Theory	2		Scenario Writing and Storyboarding	2	
		Animation Drawing Fundamentals A, B	2 each	○	Rich Media Content Development *	4	○
		Web Programming 1	2	○	Visual Story Telling and Communication *	3	○
		Special Visual Effects	3	○	Special Topics in Anime, Planning, Production and Promotion *	2	

Important (Concentration Courses): Select one of these fields of concentration. You can also select courses from among the industry courses.

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Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice
Concentration Courses	IT Manga & Anime	Visual Image Processing	2		Computer Graphics *	2	
		Digital Audio Production	2		Practical Anime Production	2	
		Advanced Special Visual Effects	3	○	Entertainment in IT	2	
		Special Topics in Content Industry	2		Brand Design and Business Management	2	
	IT Tourism	Statistics for IT	2		Media Communication	2	
		Computer Programming (Python) *	3	○	Project Management	2	
		Fundamental Mathematics for Applied Informatics	2		Fundamentals of IT Tourism *	2	
		Web Programming 1, 2 *(2 only)	2 each	○	Fundamentals of Tourism Business *	2	
		Object Oriented System Design	4	○	Understanding the Japanese Society	2	
		Rich Media Content Development	4	○	Tourism Destination Management	2	
		Visual Story Telling and Communication	3	○	Tourism Data Analysis	2	
		Special Visual Effects	3	○	Advanced Topics in IT Tourism	2	
		Special Topics in Anime, Planning, Production and Promotion	2		Tourism Design *	2	
		Data Science	2	○	IT Tourism Internship	2	
		Business Economics 1 *	2		Global Human Resource Development *	2	
		Brand Design and Business Management	2		Mobile Application Development	2	○
	Artificial Intelligence	Statistics for IT	2		Data Mining	2	
		Introduction to AI *	2		Advanced Topics in Database Technology	4	○
		Introduction to Algorithms *	2		Games and AI	2	
		Computer Programming (Python) *	3	○	Natural Language Comprehension / Voice Comprehension	2	
		Fundamentals of Database Technology	2		Medical Frontier Informatics	2	
		Computer Organization Theory	2		Robotics and AI	2	
		Fundamental Mathematics for Applied Informatics	2		Data Science *	2	
		Machine Learning and Its Application *	2		Society and AI 1, 2	2 each	
		Combinatorial Optimization *	2		Computer Programming (Java) *	3	○
		AI Software Applications 1, 2 *(1 only)	2 each		Mathematics for AI *	2	

Important (Concentration Courses): Select one of these fields of concentration. You can also select courses from among the industry courses.

Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice
Industry Courses	Fintech	Money and Banking	2		Fintech Systems Design	2	
		Fundamentals of Fintech	2				
	Agriculture	Agricultural Informatics in Next Generation	2		Agricultural Information Systems Design	2	
		Agricultural Economics	2				
	Marine	Fundamentals of Marine Industries	2		Marine Information Systems Design	2	
	Health & Medical	Medical Information and Law	2		Medical Information Systems Design	2	
		Medical Frontier Informatics	2				
	Content Marketing	Special Topics in Content Industry	2		Entertainment in IT	2	
		Music in IT	2		Content Promotion Strategy	2	
	Education	Fundamentals of e-Learning Systems	2		Library Informatics	2	
		Instructional Design in e-Learning Business	2		International Comparative Study of School and Corporate Education	2	
		e-Learning Courseware Development	2				

Important (Industry Courses): The Industry Courses are to be attended in conjunction with the Concentration. Multiple fields may be selected.

Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice
Supporting Electives		Fundamental Mathematics for Applied Informatics	2		Advanced Topics in Systems Design	2	
		Statistics for IT	2		Advanced Topics in Systems Theory	2	
		Technical Communications Skill	2		Production Systems Engineering	4	○
		Business Presentation	2		Robotic Process Automation	2	
		Business Communication 1,2	2 each		Cutting Edge of Applied Information Technology A	1	
		Logical Thinking	2		Cutting Edge of Applied Information Technology B	2	
		Media Communication	2		Advanced Business ICT Communication	3	○
		Business ICT Communication	3	○	Technical English Communications Skill	2	

Important (Supporting Electives): Students may select freely from the list of courses at left.

Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice
Mandatory		Professional Communications in the ICT Industry	2		Project Foundations	2	
		Leadership Theory	2				
	Master Project	Master Report	0		Honors Master Project	4	
		Master Project	2		Honors Master Thesis	6	

Important (Master Project): ☆

• Core courses are those marked with an asterisk "*". Core courses are courses that teach important knowledge and skills for each field of concentration.
• At least 44 credits are required to complete the program (including mandatory courses).
• To keep up with changes in technology and societal needs, courses offered may change from one academic year or term to the next. Also, your selected course may not be offered if at least five people do not sign up for it.
☆ Numbers of credits listed indicate the total number of credits required to complete the Master Project.
The number of credits listed for the Honors Master Project and Honors Master Thesis include credits for research projects and independent study.

Overview of Courses

Concentration Courses

The purpose of these courses is to deepen students' knowledge in a particular field, chosen from specific fields within the wide range of IT-related knowledge. Courses are grouped by field, so that students can obtain both specialized and broad-based knowledge.

◆ ERP

Learn about management of information regarding human resources, goods, machinery and money, as well as core information systems to support management decision-making.

Fundamentals of Database Technology

Students will learn the basics of databases, as well as their use in various corporate operations, and will learn about techniques of data definitions and data control.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Web Programming 1, 2

In 1, students learn how to use the latest programming languages, HTML5 and CSS 3, to design Web pages and create simple animations. In 2, students gain comprehensive skills in programming dynamic Web pages using JavaScript.

Information Systems for Enterprises

Students will learn about the objectives of corporate activities and the role of main operations in accomplishing these objectives. Students will understand what kinds of information occur in main operations and how this information has become systematized. This is the prerequisite knowledge to learning about the ERP (Enterprise Resource Planning) system.

System Integration and e-Business

Students will understand enterprise's structure and business processes, and learn about business integration (e-business) through SAP ERP to achieve competitive edge using the latest IT (ICT).

International Accounting

Due to the vast increase in international business, the demand for international accountants grows rapidly. To train global personnel with solid foundation of international accounting, this course covers the knowledge of English bookkeeping, including journals, adjusting entries, consolidated financial statements etc. This course will introduce the difference between IFRS and JGAAP as well.

Financial Accounting System Development 1, 2

Students will develop a financial accounting system used for an ERP system. Through hands-on exercises, students will use SAP system FI modules, and handle basic settings for the financial accounting system, processing payments/requests for payments, processing of closing, financial statement reports, and management of fixed assets etc.

Sales and Distribution System Development 1, 2

Students will develop a sales and distribution system used for an ERP system. Through hands-on exercises, students will use SAP system SD modules, and handle basic settings for the sales and distribution system, and all other processing, from sales orders to cash receipts.

Production Control System Development

After understanding the basic structure and functions of the production control system used in ERP systems, students practice configuring the system using the SAP PP (Production Planning) module. Students learn the setting of master data (material master, bill of materials, work center, operation), use material resource planning to plan components, create production orders or process orders.

Material Management System Development

Students will develop a material management system used for an ERP system. Through hands-on exercises, students will use SAP system MM module, and handle basic settings for the material management system, processing purchasing, goods receipt, material storage, etc.

Human Resource Management System Development

Students will develop a human resource management system used for an ERP system. Through hands-on exercises, students will use SAP system HR module, and handle basic settings and processing of the human resource management.

ERP Business Application Development

To customize various modules in ERP system for a specific company to meet its business requirements, a wide range of add-on (additional functions) development is necessary, such as data output, creating reports, etc. In this course, students learn the ABAP language which is used for add-on development in SAP ERP system, including basic grammar, database, other functions, and implement it.

Advanced Topics in ERP Consultation

In this course, to acquire knowledge and skills required of ERP consultants, students discover problems in real-world situations and describe them in writing, then submit mock proposals for solving those problems.

Object Oriented Programming

Using Java, the most commonly used Object Oriented programming language, students learn through practice how concepts specific to Object Oriented programming, such as encapsulation, inheritance and polymorphism, are incorporated into program code. The course also touches on methods of Object Oriented implementation of database and Web service systems using Java.

◆ Business Data Analytics

This course teaches methods for analyzing business information accumulated in the cloud and database and applying that analysis in effective decision-making.

Fundamentals of Database Technology

Students will learn the basics of databases, as well as their use in various corporate operations, and will learn about techniques of data definitions and data control.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Data Science

Strength in data science is the ability to understand information processing, statistics, programming and other disciplines of the information sciences and put them to skillful and effective use. We begin with an introduction to the R programming language, a tool for learning about data science that is attracting attention. Next, we study various techniques that are needed for statistical and multivariate analysis, such as classification, regression and hypothesis testing, focusing on practical study.

Qualitative Data Analysis and Transformation

Qualitative data are data that cannot be directly quantified, such as responses in the comments section of a questionnaire. This course teaches methods for converting such raw qualitative data into forms amenable to quantitative analysis.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Computer Organization Theory

Students will acquire the basic knowledge required in order to construct and manage information systems, web business technology and the hardware and software of computer systems, which is the foundation of web system development.

Web Programming 1, 2

In 1, students learn how to use the latest programming languages, HTML5 and CSS 3, to design Web pages and create simple animations. In 2, students gain comprehensive skills in programming dynamic Web pages using JavaScript.

Mathematics for AI

In this course, students study the basic mathematical concepts they need to understand deep learning algorithms, as well as aspects such as mathematical methods, coefficients, methods of constructing models, learning algorithms, coding in the Python language, learning rules for linear regressions, single-value, multi-value and other learning rules and error propagation methods.

AI Software Applications 1, 2

In AI Software Applications 1, students used the library of the Python programming language to apply various techniques of machine learning, to gain an overall grounding in the methods. In AI Software Applications 2, students mount and run the key components of a neural network using Python and compare the results from those obtained from the Python library to understand the internal processing. The course also teaches how to run convoluted neural networks using the Python library, gaining a general understanding of these methods.

Computer Programming (Python)

The Python programming language has a number of features optimized for AI processing, such as a wide-ranging library. Students of this course study the grammar of Python and acquire skills they will need to program in the Python language.

Introduction to Web Business

Students will examine various case examples and learn about business models from the perspective of web businesses so that they may acquire the technical skills necessary for the construction and management of a web information system necessary to web business.

Exploratory Data Analysis and Visualization

Students in this course learn ways of organizing vast quantities of data gathered for analysis into visualized forms such as graphs, so that characteristics and trends contained in the data can be rendered visible and easily understood.

Theories of Data Mining

Decision-making, through BI (Business Intelligence) based on large amounts of data, in corporate management of recent years is growing in importance. Students will understand the various techniques to data mining, the core methodology to BI, and learn the theory required to make use of those techniques.

Machine Learning and Its Application

This course presents an introduction to the learning systems and algorithms that are the basic technologies of machine learning, including concept learning, evolutionary computing, three-level neural networks and deep learning. Students deepen their understanding by reading and understanding simple demonstration programs in the C and Java programming languages.

Advanced Topics in Database Technology

Students will acquire various techniques—from basic database theory to actual database use—required to construct a high-quality, high-performance database system required for an effective web business, through hands-on experience.

Environment Information System

This module will examine cases of environmental problems, and explore the various data-processing techniques and systems involved in the effective use of that information.

Design Thinking

Design thinking is a way of thinking oriented toward creative problem solving. It is applied in the design of technology and environments. This course introduces the theory and methodology of design thinking, focusing on human-centered design.

Internet Business Strategies and Marketing

One must understand consumer behavior on the Internet to manage an Internet business. Through considering case examples of the applications of e-marketing in various fields and real-world models, students will think about e-marketing methods using new Internet business strategies.

◆ Global Entrepreneurship

Students in this course learn the knowledge and techniques necessary to start one's own business in the IT field. Content includes the mindset of the entrepreneur, leadership, and methods of data analysis and application.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Web Programming 1

Learn how to design Web pages and simple animations using the latest Web markup languages, HTML5 and CSS3.

Leading Meaningfully for Sustainable Growth

A wide range of frameworks for discerning the significance in work and enabling the sustainable growth of an enterprise are the subjects of this course. By applying these frameworks to real school activities and duties, and planning and executing strategies for sustainable growth, students learn how to turn themselves and their organizations into significant actors.

Organizational Behavior

As the culturally-diverse and multinational workplace environment continues to advance in recent years, it will become important to understand the behavior of organizations and their constituents, as well as the kinds of interplay between them. In this module, students will gain deep understanding of themselves, others and organizations, and gain new knowledge to improve their efficacy.

Brand Design and Business Management

After gaining a grasp of brand design and management theory, students study strategies for enhancing the strength of their company's brand, through brand marketing and brand management. Case studies from familiar corporate brands are researched, so that students acquire skills in creating their own brands as entrepreneurs.

Internet Business Strategies and Marketing

One must understand consumer behavior on the Internet to manage an Internet business. Through considering case examples of the applications of e-marketing in various fields and real-world models, students will think about e-marketing methods using new Internet business strategies.

E-Commerce Methodologies

Students will understand the mechanisms, models, technological points of caution, and the social significance of e-commerce on the Internet, and will learn the techniques required for these, as well as construction strategies, design techniques, applications and management techniques of websites.

Global Entrepreneurship and Business Models

Students will learn the process involved from making new ideas into a reality and starting up new IT businesses, and will acquire knowledge on the development, planning, marketing and contents necessary for such a startup. They will also learn the project management involved in the preparations for this.

IT Business Negotiation

Negotiation is a necessary and crucial component of business. In this course, we will cover negotiation case studies specific to IT business, and students will learn negotiation techniques in IT business through role play, beginning with the basics.

Advanced Topics in Information Ethics

There is an immense amount of information on the Internet and an individual can easily communicate information in our current era. Students will learn the theory needed to consider the ethical problems specific to an information society that any advanced IT professional should know. Students will also learn the practicalities of applicable cases and specific security protocols, such as with copyright law and laws on the protection of personal information.

Introduction to Web Business

Students will examine various case examples and learn about business models from the perspective of web businesses so that they may acquire the technical skills necessary for the construction and management of a web information system necessary to web business.

Business Economics 1,2

Students of these modules study microeconomics in part 1 and macroeconomics in part 2, learning the basic theory in each. In part 1, students consider the supply/demand relationship between producers and consumers and their links to market mechanisms. In part 2, students learn methods of analyzing key economic variables such as production, consumption and employment on the national level.

Intellectual Property Rights Law

Knowledge of intellectual property rights is indispensable to anyone in the field of IT. This module explains what intellectual property rights are, and provides commentary on the protection of intellectual property rights in IT by giving specific examples, such as legal precedents.

Advanced Topics in Business Administration

Students will learn basic knowledge regarding business administration. They will study wide-ranging basic theory that is the common language in business, and will aim to consider the whole in a unity. The students will cultivate comprehensive judgment abilities on complex problems faced in practical situations as a business person.

Practical Studies for Business Management

Students will consider and debate the qualities of thinking and judgment of a business manager using various case studies regarding the management of an IT company. Main topics include the objects of management, the actors and responsibilities of management, and the exercising of leadership capacity.

Current Issues in IT Industry

Students will grasp the realities of the IT industry while also understanding the changes of external environments, such as with cloud computing. Students will cultivate practical abilities on how to prepare a corporate internal environment as a group of people.

Game Theory and Negotiation

This course is an overview of the main topics in game theory as well as negotiating strategy. Students in this course learn basic expressive formulas for conflict, explaining concepts and resolution, as well as methods for applying these formulas in other fields. Both cooperative and non-cooperative game approaches are explored.

Design Thinking

Design thinking is a way of thinking oriented toward creative problem solving. It is applied in the design of technology and environments. This course introduces the theory and methodology of design thinking, focusing on human-centered design.

Practical Cloud Computing

Students will be introduced to various solutions that are currently available with cloud computing. Students will debate the cost cutting, merits of Cloud Computing in corporations and organizations, from a perspective on optimization of strategy, planning and social media.

New Laws for the Entrepreneur

You may have an idea for an amazing business model using a new technology, but to turn that model into reality and grow your business, rules are deeply important. In this course, you will learn how rules and business growth are related by examining, through real-world examples, how to approach the rules for growing a company with a new business model.

Project Management

Students of this course come to understand the items that must be managed to draft a business plan in an online environment and bring a business to fruition. Through real examples and case studies, students engage in practical study of project management methods and the use of a variety of tools.

Global Human Resource Development

This course explores and deepens understanding of a wide range of topics for the purpose of training an international workforce. As inbound demand grows as a result of efforts to make Japan a tourism destination, the development of personnel capable of handling the inbound market has emerged as a pressing issue. Students learn about the demand for inbound-tourism personnel and about developing that personnel base.

◆ Web Systems Development

Students in this course learn skills such as planning and producing a website linked to databases and the cloud and how to produce Web applications for the PC and smartphone.

Fundamentals of Database Technology

Students will learn the basics of databases, as well as their use in various corporate operations, and will learn about techniques of data definitions and data control.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Computer Programming (Python)

The Python programming language has a number of features optimized for AI processing, such as a wide-ranging library. Students of this course study the grammar of Python and acquire skills they will need to program in the Python language.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Web Programming 1,2

In 1, students learn how to use the latest programming languages, HTML5 and CSS 3, to design Web pages and create simple animations. In 2, students gain comprehensive skills in programming dynamic Web pages using JavaScript.

Fundamentals of Networking

This course imparts knowledge and skills related to network architecture as well as TCP and lower levels. This basic knowledge of networks is needed to build and use Web-based information systems.

Introduction to Web Technology

Students will learn the concepts of client/server architecture and multi-tier architecture, and acquire the basics of hardware, system software and middleware. Additionally, students will learn about telecommunication technology, web server management and security.

Web Services Development

Students will acquire the latest advanced web programming techniques so that they may gain knowledge of models and the technology involved in next-generation software systems and web services.

Web Programming 3

This module teaches students how to create a dynamic website using PHP, currently the most widely used language for Web programming. Students will design and implement advanced applications linked to JavaScript and databases (SQL), among others.

Object Oriented Programming

Using Java, the most commonly used object oriented programming language, students learn through practice how concepts specific to object oriented programming, such as encapsulation, inheritance and polymorphism, are incorporated into program code. The course also touches on methods of object oriented implementation of database and Web service systems using Java.

AI Software Applications 1

Students practice various methods of machine learning using Python libraries, which are required for AI programming, thereby gaining a general understanding of the methods.

Introduction to Web Business

Students will examine various case examples and learn about business models from the perspective of web businesses so that they may acquire the technical skills necessary for the construction and management of a web information system necessary to web business.

Advanced Topics in Database Technology

Students will acquire various techniques—from basic database theory to actual database use—required to construct a high-quality, high-performance database system required for an effective web business, through hands-on experience.

Computer Organization Theory

Students will acquire the basic knowledge required in order to construct and manage information systems, web business technology and the hardware and software of computer systems, which is the foundation of web system development.

Object Oriented Systems Design

Students will acquire software development and programming technical skills for developing web applications. They will understand the object oriented paradigm, learn the skills required for systems analysis and design, and aim to develop an efficient, high-quality system.

Software Engineering

Students will learn the various techniques to design, implement, test and maintain software products. They will also evaluate the totality of software resources, and discuss the knowledge required to achieve a truly effective information system, chiefly from a theoretical and methodological standpoint. The latest topics will also be explored as they arise.

Design Thinking

Design thinking is a way of thinking oriented toward creative problem solving. It is applied in the design of technology and environments. This course introduces the theory and methodology of design thinking, focusing on human-centered design.

Mobile Application Development

In this course, students develop applications for Android, a generally used operating system for smartphones, using the Java programming language. For this purpose, students learn the basics of Java and study Android APIs as well as Android design patterns and frameworks.

◆ Network Administration

Among the courses studied in this concentration are methods of configuring networks according to purpose, cloud computing, security management, and how to develop and install various client/server systems.

Fundamentals of Database Technology

Students will learn the basics of databases, as well as their use in various corporate operations, and will learn about techniques of data definitions and data control.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Web Programming 1

Learn how to design Web pages and simple animations using the latest Web markup languages, HTML5 and CSS3.

Computer Organization Theory

Students will acquire the basic knowledge required in order to construct and manage information systems, web business technology and the hardware and software of computer systems, which is the foundation of web system development.

Computer Programming (Python)

The Python programming language has a number of features optimized for AI processing, such as a wide-ranging library. Students of this course study the grammar of Python and acquire skills they will need to program in the Python language.

Fundamentals of Networking

This course imparts knowledge and skills related to network architecture as well as TCP and lower levels. This basic knowledge of networks is needed to build and use Web-based information systems.

AI Software Applications 1

Students practice various methods of machine learning using Python libraries, which are required for AI programming, thereby gaining a general understanding of the methods.

System Administration

Students learn the basics about address and user allocation, various server protocols and other information necessary when constructing in-house LANs, intranets and other networks used to manage and operate companies. In addition, students practice operating actual network servers, familiarizing themselves with various settings and operations.

Cloud Networking and Virtualization

Elemental technologies of cloud services such as Infrastructure as a Service (IaaS)/Platform as a Service (PaaS), as well as sample applications (such as Google App Engine) are studied in this course. Of the elemental technologies, the course focuses particularly on virtualization, which is a particularly important technology for flexibly constructing server resources in the cloud.

IoT and Wireless Networks

Using real case studies, this course examines the Internet of Things (IoT), the paradigms and features it brings to today's IT-driven society, and its design and implementation. The course also discusses recent technological trends in IoT and touches on issues such as reliability and security.

IoT Application Systems

IoT is a new form of information service that connects objects via the internet. In this course, students learn about a wide range of information systems that apply IoT, their basic technologies, and the methods of improving efficiency and security that must be applied when designing systems. Using the programming languages Raspberry Pi and Python, students learn methods of using peripheral modules necessary for producing prototypes.

Information Security

Students will acquire the techniques to construct security—an essential factor in next-generation information systems. Students will understand and analyze the reality of Internet threats, such as illicit activity and computer viruses, and learn the techniques and skills to counter those threats, while considering the strengths and limits of that safety.

Routing and Switching

This course encompasses the content of one CCNAv7 course, Introduction to Networks, and the first half of another, Switching, Routing, and Wireless Essentials. Focusing on providing practical experience with network settings and configuration, the course covers the basics of LAN switching as well as IPv4 and IPv6 routing, network management and network security.

Advanced Studies in Networking

This class deals with the construction principles and features of information (communication) networks such as the internet and provides an understanding of the concept of the TCP/IP protocol stack. Network technologies, such as wired and wireless LAN, WAN and MAN; are control technologies, such as routing control, flow control and congestion control; and quality of service (QoS) warranties are all explained in this course.

Introduction to Web Technology

Students will learn the concepts of client/server architecture and multi-tier architecture, and acquire the basics of hardware, system software and middleware. Additionally, students will learn about telecommunication technology, web server management and security.

Web Services Development

Students will acquire the latest advanced web programming techniques so that they may gain knowledge of models and the technology involved in next-generation software systems and web services.

New Laws for the Entrepreneur

You may have an idea for an amazing business model using a new technology, but to turn that model into reality and grow your business, rules are deeply important. In this course, you will learn how rules and business growth are related by examining, through real-world examples, how to approach the rules for growing a company with a new business model.

Advanced Routing and Switching

This course encompasses the second half of the one CCNAv7 course, Switching, Routing, and Wireless Essentials, as well as another CCNAv7 course, Enterprise Networking, Security, and Automation. Focusing on providing practical experience with network settings and configuration, this implementation-based course covers VLAN routing, STP/Etherchannel, WLAN, switch security, network virtualization, SDN and network automation.

Advanced Topics in Information Ethics

There is an immense amount of information on the Internet and an individual can easily communicate information in our current era. Students will learn the theory needed to consider the ethical problems specific to an information society that any advanced IT professional should know. Students will also learn the practicalities of applicable cases and specific security protocols, such as with copyright law and laws on the protection of personal information.

◆ IT Manga & Anime

Learn about technologies for planning and production of anime and video content using digital tools as well as methods for linking those work products to business.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Computer Organization Theory

Students will acquire the basic knowledge required in order to construct and manage information systems, web business technology and the hardware and software of computer systems, which is the foundation of web system development.

Animation Drawing Fundamentals A, B

Animations create a host of memorable characters and backgrounds by distorting and exaggerating their features, yet each of these elements is inspired by the world that people see every day. In this course, students learn the basics with realistic rough sketches and proceed to add distortions to create line drawings for animations.

Web Programming 1

Learn how to design Web pages and simple animations using the latest Web markup languages, HTML5 and CSS3.

Special Visual Effects

This course introduces the principles of special visual effects used in video, with real-world examples. During the stage of turning the recorded video into the final product, students learn through practice with editing software (such as Adobe Premier) how to create an effective presentation.

Visual Image Processing

Students will grasp the essential qualities of image data, which serves as the crucial information interface in networks, as well as techniques for handling such. Students will also understand image use to effectively display information, as well as three-dimensional image technology and mixed reality technology from a human interface perspective.

Digital Audio Production

Students will gain basic knowledge of the digitization of audio, and will record their own voice to process. Additionally, they will dub animations and movies, and learn the realities of audio technology for video. Students will also learn the techniques to improve audio as a processed source, such as through enunciation.

Advanced Special Visual Effects

Acquire key practical techniques used in Hollywood movies, using the same post-production software that Hollywood uses. For example, learn about visual effects such as fires and explosions, effective use of digital composition and efficient workflows.

Special Topics in Content Industry

Students learn about two characteristics of Japan's content industry: its deep cohort of creator candidates, fed by a rich tradition of fan content-making; and the support its market enjoys from a mature consumer base that purchases minor titles and fan magazines in a diverse range of genres. The course also considers the ways in which those worlds are connected to the anime industry.

Digital Animation Creation

Students begin by learning traditional techniques for creating basic hand-drawn anime, then trace those shapes to create actual short animated features using a range of software. In this way students gain a basic grounding in the overall animation production process. The course introduces a wide variety of software so that students can burnish their skills in producing their own animated features.

Scenario Writing and Storyboarding

There are various applicable fields in animation, such as contents that explain matters and transitions to websites. Students will consider from various angles a storyboard and scenario as one design drawing.

Rich Media Content Development

Students will undertake the development of contents, such as web advertising and notifications of products and events, aimed at distribution through the Internet. Students will use video editing software and animation editing software etc. User interface and usability will also be covered, and students will work on content creation that is easier to use and has more appeal.

Visual Story Telling and Communication

The basic skills of shooting video with a video camera and editing footage with editing software are covered in this course. The course also fosters skills in gathering and organizing information and presenting it in video form. By creating short videos, students learn the characteristics of various methods of expression through video and a variety of styles.

Special Topics in Anime, Planning, Production and Promotion

Students will be introduced to various topics relating to the current state of the Japanese animation industry, including the industry business, technology and production flow, overseas strategies, and the talent that's in demand. The transformation of the industry structure through technological development will also be covered. Additionally, students will consider the various problems related to copyrights, and the strategy of the contents industry due to the spread of the Internet.

Computer Graphics

Students in this course learn about the history of 3D computer graphics, its basic techniques and theory, and the mathematics and physics behind its software-internal processing. Students also create basic works using applications such as Autodesk Maya and deepen their understanding of the theory underpinning it.

Practical Anime Production

This course is taught by creators, producers and character designers with over 30 years' experience at Gainax, the studio famous for anime works such as Tengen Toppa Gurren Lagann. In this omnibus-type course, students learn from these veterans about real-life problems in anime production and the anime business, production methods, promotion, and approaches to artwork production.

Entertainment in IT

Students will get on-site experience and comprehensive understanding of how ICT is used throughout the process of stage arts, from concert preparations, to rehearsals and live performances. Additionally, students will deepen their understanding of audio through the lectures on and the hands-on exercises with voice over techniques to put audio to video.

Brand Design and Business Management

In this course, students grasp brand design and management theory and study strategies to enhance a company's brand value, such as brand marketing and brand management. The aim is to acquire skills in building a brand as an entrepreneur.

◆ IT Tourism

Topics studied in this course include IT applications in the tourism field, IT implementation in the tourism business and management of tour and accommodation information, as well as planning and design of tourism content.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Computer Programming (Python)

The Python programming language has a number of features optimized for AI processing, such as a wide-ranging library. Students of this course study the grammar of Python and acquire skills they will need to program in the Python language.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Web Programming 1, 2

In 1, students learn how to use the latest programming languages, HTML5 and CSS 3, to design Web pages and create simple animations. In 2, students gain comprehensive skills in programming dynamic Web pages using JavaScript.

Object Oriented Systems Design

Students will acquire software development and programming technical skills for developing web applications. They will understand the object oriented paradigm, learn the skills required for systems analysis and design, and aim to develop an efficient, high-quality system.

Rich Media Content Development

Students will undertake the development of contents, such as web advertising and notifications of products and events, aimed at distribution through the Internet. Students will use video editing software and animation editing software etc. User interface and usability will also be covered, and students will work on content creation that is easier to use and has more appeal.

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Special Visual Effects

This course introduces the principles of special visual effects used in video, with real-world examples. During the stage of turning the recorded video into the final product, students learn through practice with editing software (such as Adobe Premier) how to create an effective presentation.

Special Topics in Anime, Planning, Production and Promotion

Students will be introduced to various topics relating to the current state of the Japanese animation industry, including the industry business, technology and production flow, overseas strategies, and the talent that's in demand. The transformation of the industry structure through technological development will also be covered. Additionally, students will consider the various problems related to copyrights, and the strategy of the contents industry due to the spread of the Internet.

Data Science

Strength in data science is the ability to understand information processing, statistics, programming and other disciplines of the information sciences and put them to skillful and effective use. We begin with an introduction to the R programming language, a tool for learning about data science that is attracting attention. Next, we study various techniques that are needed for statistical and multivariate analysis, such as classification, regression and hypothesis testing, focusing on practical study.

Business Economics 1

This course introduces the basics of microeconomic theory. The relationship between supply from producers and demand from consumers and their connection to market mechanisms are considered.

Brand Design and Business Management

In this course, students grasp brand design and management theory and study strategies to enhance a company's brand value, such as brand marketing and brand management. The aim is to acquire skills in building a brand as an entrepreneur.

Media Communication

Against a background of a mounting global need for IT-based solutions to a wide range of social issues, students learn how to make effective use of leading-edge media and communication technologies as well as ethics and practical knowledge for use in problem-solving.

Project Management

Students of this course come to understand the items that must be managed to draft a business plan in an online environment and bring a business to fruition. Through real examples and case studies, students engage in practical study of project management methods and the use of a variety of tools.

Fundamentals of IT Tourism

In this class, students' aim is to understand the perspectives and basic knowledge they will need to study IT tourism. In addition to introducing advanced case studies from around the world on the nature of tourism and its interconnectedness with IT, the course examines the unique characteristics of tourism that applies ICT. A wide range of approaches, including group discussion, are used to impart knowledge of ICT as it is used in the tourism field.

Fundamentals of Tourism Business

Students gain a basic understanding of the tourism business and tourism information. Through case studies in handling tourism information, students learn how to apply basic knowledge of tourism marketing in areas such as product development and promotion and consider related issues. The course also examines the latest case studies in areas such as inbound tourism and invigoration of tourist attractions, gaining knowledge aimed at solving problems.

Understanding the Japanese Society

This course explores what makes Japanese society work as well as the characteristic behaviors, attitudes and patterns of thought of the Japanese people. Based on wide-ranging case studies, students study perspectives on Japanese society through lectures, group discussions and presentations.

Tourism Destination Management

From the perspective of tourist-attraction management, this course teaches about tourism information collection and analysis and region based methods of designing information services, based on the strategic objectives of the target tourist attraction, such as attracting foreign tourists and distributing groups of tourists to avoid overcrowding.

Tourism Data Analysis

Students in this course learn the basic theory and skills to analyze and evaluate tourism data. Using actual tourism data, students learn basic theory and skills in data analysis, including data collection and preprocessing, clustering and classification, forecasting and time-series analysis.

Advanced Topics in IT Tourism

Students learn about IT tourism by analyzing issues confronting the tourism industry, from perspectives that include the development of Japan's tourism industry, policy and planning, development of human resources and marketing. Those who complete the course will be able to consider and propose methods of stimulating regional development by promoting tourism using IT.

Tourism Design

Learn how to design "the new tourism" using IT. Students learn about approaches to the marketing of tourism phenomena through theory, case-study research and discussion. They then embark on field study to create tourism designs that can lead to tourism business.

IT Tourism Internship

The aim of this course is to apply the specialized knowledge students have gained in industries related to tourism, such as the travel, accommodation and airline service industries. Through practical, on-the-job experience in Japan and abroad, students acquire the knowledge and practical skill set they will need to carry out their duties and build their careers in the tourism business, particularly using IT.

Global Human Resource Development

This course explores and deepens understanding of a wide range of topics for the purpose of training an international workforce. As inbound demand grows as a result of efforts to make Japan a tourism destination, the development of personnel capable of handling the inbound market has emerged as a pressing issue. Students learn about the demand for inbound-tourism personnel and about developing that personnel base.

Mobile Application Development

In this course, students develop applications for Android, a generally used operating system for smartphones, using the Java programming language. For this purpose, students learn the basics of Java and study Android APIs as well as Android design patterns and frameworks.

◆ Artificial Intelligence

Through case studies in a diverse range of fields, students in this program learn the basic theory and application of AI and related technologies. Students become conversant in AI-related software, so that they can use and apply it in a wide range of AI fields.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Introduction to AI

This course answers the question, "What is AI?" To do so, the course delves into such aspects necessary for its understanding as the definition of AI, the history of AI research, the basic theory of machine learning and other aspects of AI, current issues in AI and the ethics of using AI.

Introduction to Algorithms

After learning how to write algorithms in the Java programming language, students in this course run programs in Java on a PC and confirm that it ran as intended. Students also learn how to convert algorithms described in Java into general-purpose descriptive formats such as flow charts and pseudo-language

Computer Programming (Python)

The Python programming language has a number of features optimized for AI processing, such as a wide-ranging library. Students of this course study the grammar of Python and acquire skills they will need to program in the Python language.

Fundamentals of Database Technology

Students will learn the basics of databases, as well as their use in various corporate operations, and will learn about techniques of data definitions and data control.

Computer Organization Theory

Students will acquire the basic knowledge required in order to construct and manage information systems, web business technology and the hardware and software of computer systems, which is the foundation of web system development.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Machine Learning and Its Application

This course presents an introduction to the learning systems and algorithms that are the basic technologies of machine learning, including concept learning, evolutionary computing, three-level neural networks and deep learning. Students deepen their understanding by reading and understanding simple demonstration programs in the C and Java programming languages.

Combinatorial Optimization

An optimization problem is a type of problem in which we seek to minimize a target coefficient under certain assigned conditions. A classic example of an optimization problem is the "traveling salesman problem," in which a salesman must find the shortest route to visit an assigned number of cities only once each. While there are many optimization problems, this course deals with typical network optimization problems such as the traveling salesman problem.

AI Software Applications 1, 2

In AI Software Applications 1, students used the library of the Python programming language to apply various techniques of machine learning, to gain an overall grounding in the methods. In AI Software Applications 2, students mount and run the key components of a neural network using Python and compare the results from those obtained from the Python library to understand the internal processing. The course also teaches how to run convoluted neural networks using the Python library, gaining a general understanding of these methods.

Data Mining

Data Mining (DM) is to discover and mine rules (knowledge) hidden in a huge amount of data, and to classify a huge amount of chaotic information. This course describes the various methods available for DM, related algorithms, their suitability and applications, and identifies tools and methods for mining data that may exist in different formats. This course also provides students with the ability to use DM techniques and tools.

Advanced Topics in Database Technology

Students will acquire various techniques—from basic database theory to actual database use—required to construct a high-quality, high-performance database system required for an effective web business, through hands-on experience.

Games and AI

The application of AI to games such as chess, shogi and Go has a long history. In the process, wide-ranging research and development has proceeded in the fields of game theory and search theory. Drawing on the example of AlphaGo, a program that shocked the Go world by defeating its top Go players, this course examines how techniques such as deep learning, Monte Carlo tree searches and reinforcement learning are combined to devise strategies for the next move in a game.

Natural Language Comprehension/Voice Comprehension

Natural language comprehension, voice comprehension (recognition) and image comprehension (pattern recognition) all share a long history as core technologies of AI, and wide-ranging research and development has been conducted on each. Representative applications vary widely, including automated translation, abstracting, shorthand-record compilation, telephone translation and dialogue with robots. In recent years, deep learning has played a central role as a core technology of AI. In this course, students learn the sorts of fields to which deep learning is applied and discuss the question of what research issues remain for future inquiry.

Medical Frontier Informatics

Research on medical AI has progressed at a fever pitch worldwide in recent years, with AI applied in the development of technologies for medical diagnosis, medical image diagnosis and other applications. Practical applications are beginning to emerge. Over the next few years, systems that use AI to support the diagnosis of disease are expected to find adoption around the globe. In this course, students learn the basics of AI; study methods of applying AI to the diagnosis of medical images, with reference to specific case studies; and examine other applications of AI in the medical field (medical AI).

Robotics and AI

Robots have emerged as a fusion of mechanics and electronics, as industrial robots used by the automaking industry to assemble vehicles. Today, with the addition of AI, robots are diversifying into a wide array of applications, including housekeeping, caregiving, reception, product information, warehouse (inventory) management and office fixed-process support (robotic process automation: RPA). In this course, students explore how robots are used and applied in a wide range of fields.

Data Science

Strength in data science is the ability to understand information processing, statistics, programming and other disciplines of the information sciences and put them to skillful and effective use. We begin with an introduction to the R programming language, a tool for learning about data science that is attracting attention. Next, we study various techniques that are needed for statistical and multivariate analysis, such as classification, regression and hypothesis testing, focusing on practical study.

Society and AI 1, 2

AI technologies are in the process of wreaking a dramatic transformation on social systems. They are also in wide use in various business fields. In Society and AI 1, students focus on case studies such as automated driving in coordination with GPS, use of facial recognition to enhance security in public and other facilities, and use of drones in delivery services. In Society and AI 2, students discuss the current status and future prospects of AI. Students explore the ways in which AI is applied in and is transforming the world of business, with examples including financial services (fintech), next-generation agricultural management and the construction of smart homes and cities using IoT.

Computer Programming (Java)

In order to understand the various algorithms used in applied AI, devise new algorithms and test them with programming, study of programming languages capable of manipulating various data structures is required. This course explores Java, a language that is suited to these purposes and is considered the "second language" of dedicated fields of AI.

Mathematics for AI

In this course, students study the basic mathematical concepts they need to understand deep learning algorithms, as well as aspects such as mathematical methods, coefficients, methods of constructing models, learning algorithms, coding in the Python language, learning rules for linear regressions, single-value, multi-value and other learning rules and error propagation methods.

Industry Courses

These courses are focused on the practical application of specialized knowledge and techniques in specific industries. Each set of courses is tailored to a specific industry and business.

Money and Banking

In this course students think about the basic role and functions of finance, such as transferring funds and risk, creating credit and settlement, thereby gaining opportunities to design financial operations according to business needs. The course also touches on the kind of financial knowledge newly required in Japan with social changes such as an aged demographic structure and rules of responsibility.

Fundamentals of Fintech

This course provides an overview of the economic role of the financial sector (including banking, securities, insurance, etc.) and the products and services it provides. System functions required for the management of this information, both company-internally and for customer use, are examined. Case studies are also conducted with respect to the latest financial-information systems and applications.

Fintech Systems Design

Using case studies, this course examines issues such as the security and API disclosure required of financial-information systems. The course also considers in detail the revolution in financial-information systems being fomented by new technologies such as Blockchain and cloud services.

Agricultural Informatics in Next Generation

Smart Agriculture, which synergizes old and new models of agriculture with other industries, is gaining attention. It is no longer just about producing vegetables—patterns of distribution and consumption are also transforming agriculture into a new style of industry, and IT is at the heart of this transformation. Students will learn concepts and practical examples of this.

Agricultural Economics

Students will consider the economic facets of agriculture in a larger context of the liberalization of trade of agriculture produce and the problem of food shortages in developing countries. Students will understand the links of business management, politics and law with agriculture, and will learn the integrated flow of agriculture from food production to consumption.

Agricultural Information Systems Design

Students will undertake design and development of a prototype information system that collects, analyzes and provides to producers and consumers information, such as environmental data on farms and market distribution volume, to achieve stable supply of high-quality agricultural produce.

Fundamentals of Marine Industries

Students will consider the economic and business facets in the marine industry, including shipping, fisheries and leisure, and deepen their understanding of the nature of that business model.

Marine Information Systems Design

Students will design and develop a prototype information system for the marine industry that collects information from sonar, GPS and various other environmental sensors and can be used in the navigation management of shipping and control of the aquaculture environment.

Medical Frontier Informatics

Research on medical AI has progressed at a fever pitch worldwide in recent years, with AI applied in the development of technologies for medical diagnosis, medical image diagnosis and other applications. Practical applications are beginning to emerge. Over the next few years, systems that use AI to support the diagnosis of disease are expected to find adoption around the globe. In this course, students learn the basics of AI; study methods of applying AI to the diagnosis of medical images, with reference to specific case studies; and examine other applications of AI in the medical field (medical AI).

Medical Information Systems Design

This practical course of study teaches students skills such as appropriate modeling for management of information on patient cases, pharmaceuticals and the like as well as database search techniques and the like, as well.

Special Topics in Content Industry

Students will learn about the characteristics of the Japanese contents industry, such as 1) the active fan-base, and the numerous aspiring creators, as well as 2) the support of the market by mature consumers who purchase minor titles and topical magazines in various genres. Students will think about how this is linked to the anime industry.

Music in IT

In this course, students will understand that music is content that has an integral relationship with the various elements of technology and business according to the era. Students will look at historical trends and also search for future trends that will match changing lifestyles and music.

Entertainment in IT

Students will get on-site experience and comprehensive understanding of how ICT is used throughout the process of stage arts, from concert preparations, to rehearsals and live performances. Additionally, students will deepen their understanding of audio through the lectures on and the hands-on exercises with voice over techniques to put audio to video.

Content Promotion Strategy

The world is awash in content promoting a full spectrum of products and services. What businesses need, however, are strategies for conveying that content effectively to users. In this course, students promote an event through websites, social-network posts and other content and appraise and analyze their effects.

Fundamentals of e-Learning Systems

Students will be introduced to numerous case examples of e-Learning systems, such as infrastructure and the measurement of educational effects. Students will learn various analytical techniques and be able to propose areas of improvement.

Instructional Design in e-Learning Business

Students will learn about the instructional design techniques required in developing e-learning systems, and they will put e-learning system design to practice using these. Additionally, students will also learn the knowledge required when planning business.

e-Learning Courseware Development

Students in this course examine case studies of use and leading-edge development of educational materials, for e-learning, focusing on video materials. Using an actual development environment, students present and implement their own e-learning educational materials in a group-project format, to develop the suite of skills necessary to succeed in educational-material development.

Library Informatics

The library is the public facility most familiar to us in our daily lives. In recent times libraries have advanced greatly, with the advent of information search systems, multi-library stack searches and other IT innovations. Topics covered include services available in Japanese libraries; information search technologies with real-world applications; and the future of libraries as a hub for lifelong learning and solution support services.

International Comparative Study of School and Corporate Education

Participants in this course look closely at the labor market and its trends, learn about the types of skills that will be needed in the future and examine the options available for dealing with shifting realities on the national, workplace, school and individual levels. Students obtain the knowledge required of persons responsible for advancing corporate in-service training.

Supporting Electives

Supporting Electives consist of courses that teach basic communication, management and other skills that every businessperson requires regardless of industry or field of concentration, as well as courses on leading-edge case studies and technology trends in IT. These courses consider IT from a wide variety of perspectives, from the basics of IT business to applications, providing students with a broad-based grounding in the field.

Fundamental Mathematics for Applied Informatics

Students taking this course will acquire logical thinking skills through mathematics and acquire knowledge that will be useful in the application of IT in the coming age of AI. The course starts with the basics and explains some useful tools.

Statistics for IT

In today's world of advanced IT, statistics play a vital role in analyzing and thinking about cause-and-effect relationships in society and economies using collected data. In this course, students learn basic concepts and methods in statistics and, through the use of concrete examples, acquire basic knowledge and skills required for statistical analysis.

Technical Communications Skill

As IT advances in society, more advanced and practical business Japanese-capable talent are needed. Communicating information, knowledge and ideas without misunderstandings is a necessity in business. Students will acquire skills in word selection, conversation, writing for business correspondence and presentation to accomplish this.

Business Presentation

Presentation skills to communicate plans and proposals to others are currently in high demand. Students will learn everything from word selection, manners of speaking, phrasing of messages, and creation of slides using images, music and specialized software, and put these to effective use in a presentation.

Business Communication 1, 2

The aim of these courses is to improve students' knowledge of business in Japan and corporate communication skills. Focusing on expressions widely used in business situations, the course teaches business Japanese, touching on business etiquette and conditions prevalent in Japan.

Logical Thinking

In this course students gain an overview and basic approach to logical thinking as it is practiced in creative and innovative businesses. Through lectures, case studies and presentations, students learn how to use various tools and stimulate creativity. Students form teams to practice logical thinking to solve problems, fostering skills in problem-solving, facilitation and explanation.

Media Communication

The global need for people who can solve a wide range of social issues through ICT-based communication is mounting steadily. Against that background, students learn how to apply the latest media communication techniques effectively and gain practical knowledge useful in problem-solving.

Business ICT Communication

In ICT-related businesses, participants are bound to encounter knowledge related to the fields in which each business is engaged and the industry terminology used in each. This course enhances the communication skills needed to express oneself in correct Japanese and to convey one's thoughts and ideas effectively in discussions with customers or in-house.

Advanced Topics in Systems Design

Students will learn the theory and practical skills to analyze the complex systems found in management, business and technology. In particular, students will learn how to judge conditions effectively when using wide-ranging and complex systems in-house, using both abstract and practical models.

Advanced Topics in Systems Theory

Students will understand the theory and practical elements to analyze complex systems as they appear in the fields of management, economy, and technology. Students will acquire methods to allow for rational judgment based on abstract and practical models particularly when circumstances arise that involve various complexities and rivalries.

Production Systems Engineering

Understanding corporate activities from the flow of production information is crucial in the manufacturing industry. In this module, students will keep PLM in view as they grasp the concepts related to corporate strategy planning, such as demand forecasting, production planning, production scheduling, and distribution management. Students will also learn about the IT technology that accompanies this.

Robotics Process Automation

In robotics process automation (RPA), routine work previously performed by humans on terminals is converted into settings (instructions) by which software robots perform the operations instead. Companies that implement RPA can reduce worker-hours and improve operating efficiency. In this course, students learn about the advantages of RPA and the tasks to which it can be applied and learn how to write programs based on actual RPA.

Cutting Edge of Applied Information Technology A, B

This course will cover the latest information from theory to applicable fields in an omnibus manner. The module will explain the latest trends in the ever-advancing IT industry, and students will be expected to link these to the development objectives of their projects.

Advanced Business ICT Communication

Building on the knowledge acquired in Business ICT Communication, students touch on the latest topics in ICT and the current state of ICT businesses, so they can gain the ability to conduct product development and planning (draft proposals) in Japanese.

Technical English Communications Skill

The ability to make use of the latest information from overseas is vital in the ICT world. This course aims to improve students' English-language communication skills for use with ICT and ICT work environments. Students build these capabilities through role-playing premised on ICT workplaces, presentations and oral communication with technology as the main topic, and written expression in English.

Mandatory Courses

These courses cultivate the interpersonal skills and ethical awareness required of professionals, as well as the leadership skills to lead an organization.

Professional Communications in the ICT Industry

This course teaches students the basic skill set needed to give presentations on a wide range of IT topics to specialists and general audiences alike. Methods of surveying technical trends and related case studies and preparing documents and presentation materials in a logically constructed fashion are also studied.

Leadership Theory

Students will consider what qualities underpin the actions of a new leader with the ability to teach and educate an entire organization, as well as to grasp the constantly-shifting technological, social and cultural trends. Students will also focus on the analytical methods of factors internal and external to an organization, and carry out practical leadership in a group teaching/education format.

Project Foundations

The Master Project is the culmination of the student's studies. This course teaches methods students can use to organize and analyze materials and compose and write their thesis etc., as required to complete the Master Project. The aim is to enable students to write a research plan for their Master Projects by the end of the course.

Course Pathways by Field of Concentration
(Recommended Study Patterns)

Mandatory courses	Core courses	Applied courses	Basic courses

◆ ERP

For students who are studying ERP to become a consultant who optimizes business processes

This concentration is for students who aim to be an ERP consultant who introduces and optimizes corporate IT systems, or a system engineer or programmer who designs and develops add-ons for ERP packages. By studying applied courses related to SAP's ERP packages (Financial Accounting System Development 1, 2, for example), the student can learn about ERP systems in stages.

1st semester	2nd semester	3rd semester	4th semester
Information Systems for Enterprises	Financial Accounting System Development 1,2	Sales and Distribution System Development 1,2	Advanced Topics in ERP Consultation
System Integration and e-Business	ERP Business Application Development	Material Management System Development	Human Resource Management System Development
International Accounting	Production Control System Development	Object Oriented Programming	
Web Programming 1	Web Programming 2		
Statistics for IT	Fundamentals of Database Technology		
Fundamental Mathematics for Applied Informatics			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ Business Data Analytics

For students who want to become an analyst who guides corporate decision-making by analyzing business data

This concentration suits students who aim to become analysts supporting the proposal and advancement of corporate strategy by analyzing business data, leveraging methods such as data mining and statistical analysis. Students attend Fundamentals of Database Technology and Advanced Topics in Database Technology to learn methods of accumulating business data and attends Data Science, Machine Learning and Its Application, etc. to study methods of deriving new knowledge from the accumulated data.

1st semester	2nd semester	3rd semester	4th semester
Computer Programming (Python)	Data Science	Advanced Topics in Database Technology	Environment Information System
Introduction to Web Business	Machine Learning and Its Application	AI Software Applications 2	Design Thinking
Fundamentals of Database Technology	Theories of Data Mining	Qualitative Data Analysis and Transformation	
Web Programming 1	Web Programming 2	Exploratory Data Analysis and Visualization	
Computer Organization Theory	AI Software Applications 1	Internet Business Strategies and Marketing	
Statistics for IT	Mathematics for AI		
Fundamental Mathematics for Applied Informatics			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ Global Entrepreneurship

For students aiming to become an entrepreneur who applies IT in a new business

Students in this concentration aim to be entrepreneurs who take up the challenge of launching a business that strategically manages people, funds and/or information. The student learns how to propose a business plan, which is a vital part of launching an enterprise, by attending Global Entrepreneurship and Business Models. To learn how to manage the new company's accounts after startup, the student attends Current Issues in IT Industry. In Organizational Behavior, the student learns how to motivate human organizations.

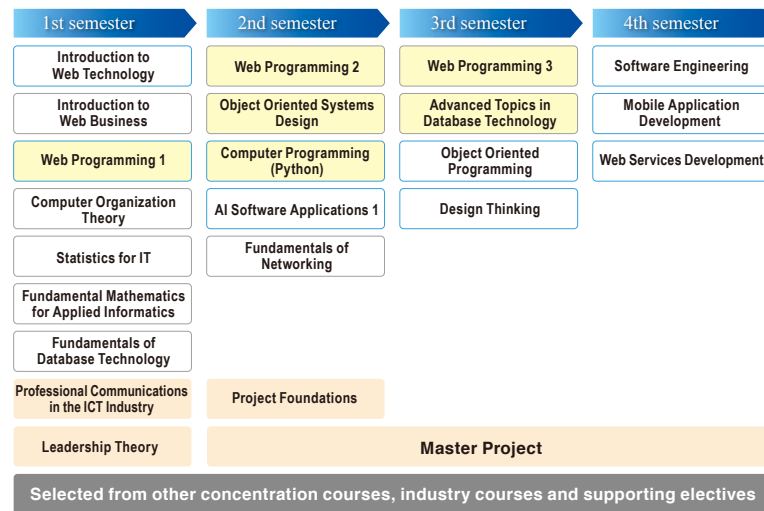| 1st semester	2nd semester	3rd semester	4th semester
Business Economics 1	Project Management	Global Human Resource Development	Game Theory and Negotiation
Business Economics 2	Global Entrepreneurship and Business Models	Internet Business Strategies and Marketing	Advanced Topics in Business Administration
Introduction to Web Business	Practical Cloud Computing	E-Commerce Methodologies	New Laws for the Entrepreneur
Statistics for IT	Intellectual Property Rights Law	Design Thinking	Leading Meaningfully for Sustainable Growth
Fundamental Mathematics for Applied Informatics	Current Issues in IT Industry	Practical Studies for Business Management	
Web Programming 1	Advanced Topics in Information Ethics	Brand Design and Business Management	
	Organizational Behavior	IT Business Negotiation	
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

Mandatory courses | Core courses | Applied courses | Basic courses

◆ Web Systems Development

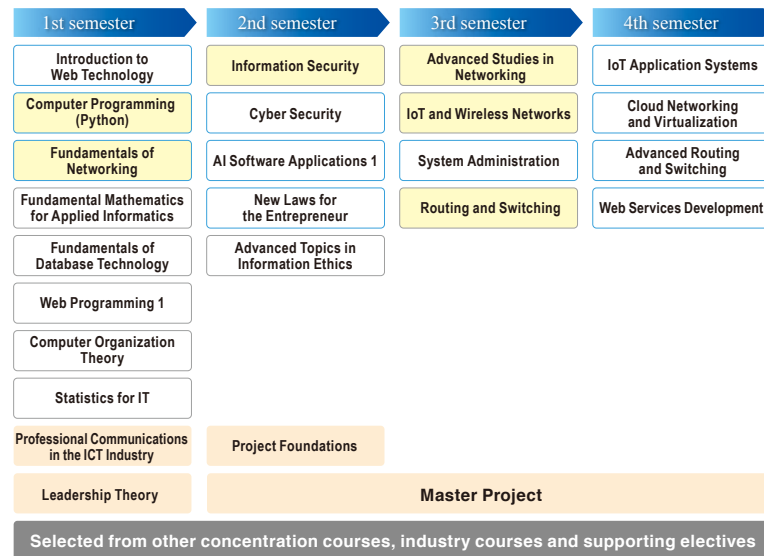### For students who are strongly focused on developing Web systems centered on HTML5

To become an engineer who develops Web apps or a manager of a website, the student can build up his development skills by attending Web Programming 1–3. By attending Fundamentals of Database Technology and Advanced Topics in Database Technology, he or she can learn to construct the section that manages the data provided by the Web system. In addition, the student can add Object Oriented Systems Design and Software Engineering to his curriculum to learn about designing processes further upstream.

1st semester	2nd semester	3rd semester	4th semester
Introduction to Web Technology	Web Programming 2	Web Programming 3	Software Engineering
Introduction to Web Business	Object Oriented Systems Design	Advanced Topics in Database Technology	Mobile Application Development
Web Programming 1	Computer Programming (Python)	Object Oriented Programming	Web Services Development
Computer Organization Theory	AI Software Applications 1	Design Thinking	
Statistics for IT	Fundamentals of Networking		
Fundamental Mathematics for Applied Informatics			
Fundamentals of Database Technology			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ Network Administration

For students aiming for a career as a specialist in network infrastructure technology and information security
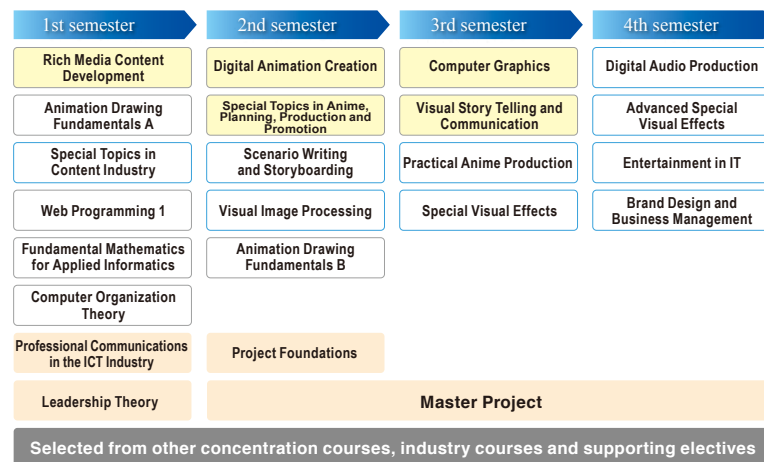
Students in this concentration aim to become a specialist in information networks, such as a maintenance/operation engineer for company-internal networks and servers, or a security manager. Having already studied network systems by attending Fundamentals of Networking and Advanced Studies in Networking, he or she challenges to learn new technologies by attending courses such as IoT and Wireless Networks and Cloud Networking and Virtualization.

1st semester	2nd semester	3rd semester	4th semester
Introduction to Web Technology	Information Security	Advanced Studies in Networking	IoT Application Systems
Computer Programming (Python)	Cyber Security	IoT and Wireless Networks	Cloud Networking and Virtualization
Fundamentals of Networking	AI Software Applications 1	System Administration	Advanced Routing and Switching
Fundamental Mathematics for Applied Informatics	New Laws for the Entrepreneur	Routing and Switching	Web Services Development
Fundamentals of Database Technology	Advanced Topics in Information Ethics		
Web Programming 1			
Computer Organization Theory			
Statistics for IT			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ IT Manga & Anime

For students who wish to become a expert content creator in animation, video or the like.
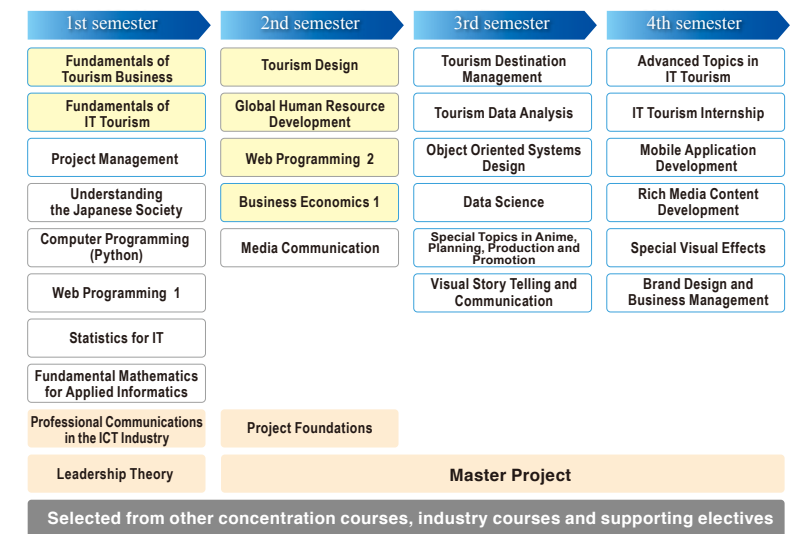
Students in this concentration aim to become a professional content creator, focusing on manga and anime. Special Topics in Anime, Planning, Production and Promotion, Scenario Writing and Storyboarding, the student learns the upstream processes of creating manga and anime, while in Rich Media Content Development and Digital Animation Creation he or she learns how to produce digital content using specific tools.

1st semester	2nd semester	3rd semester	4th semester
Rich Media Content Development	Digital Animation Creation	Computer Graphics	Digital Audio Production
Animation Drawing Fundamentals A	Special Topics in Anime, Planning, Production and Promotion	Visual Story Telling and Communication	Advanced Special Visual Effects
Special Topics in Content Industry	Scenario Writing and Storyboarding	Practical Anime Production	Entertainment in IT
Web Programming 1	Visual Image Processing	Special Visual Effects	Brand Design and Business Management
Fundamental Mathematics for Applied Informatics	Animation Drawing Fundamentals B		
Computer Organization Theory			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ IT Tourism

For students who wish to become IT tourism specialists capable of planning tourism businesses and proposing related systems
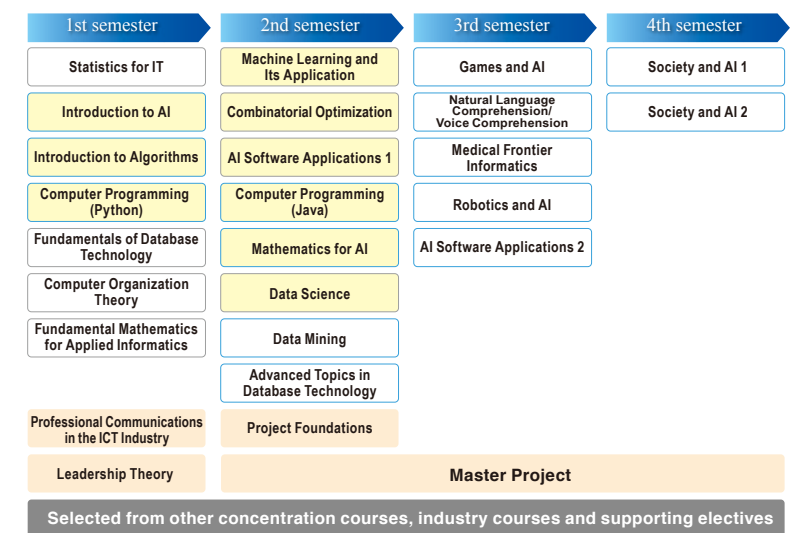
Students of IT tourism aim to become specialists who understand the characteristics of the regions that serve as tourism resources and the needs of tourists and can apply ICT in the deployment of services and marketing strategies. By attending courses such as Fundamentals of IT Tourism and Fundamentals of Tourism Business, students acquire operational knowledge and elemental skills tailored to the tourism industry. Through their studies in courses such as Tourism Data Analysis, Tourism Design and Tourism Destination Management, students learn to use social networks as a promotional tool, provide tourism information in multiple languages and media, convert tourists' activity histories into data, and apply those data in analysis and forecasting.

1st semester	2nd semester	3rd semester	4th semester
Fundamentals of Tourism Business	Tourism Design	Tourism Destination Management	Advanced Topics in IT Tourism
Fundamentals of IT Tourism	Global Human Resource Development	Tourism Data Analysis	IT Tourism Internship
Project Management	Web Programming 2	Object Oriented Systems Design	Mobile Application Development
Understanding the Japanese Society	Business Economics 1	Data Science	Rich Media Content Development
Computer Programming (Python)	Media Communication	Special Topics in Anime, Planning, Production and Promotion	Special Visual Effects
Web Programming 1		Visual Story Telling and Communication	Brand Design and Business Management
Statistics for IT			
Fundamental Mathematics for Applied Informatics			
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

◆ Artificial Intelligence

Students in this program seek to acquire the ability to thrive in the AI-assisted society of the future and to use and apply AI technology in a wide range of fields as AI specialists.
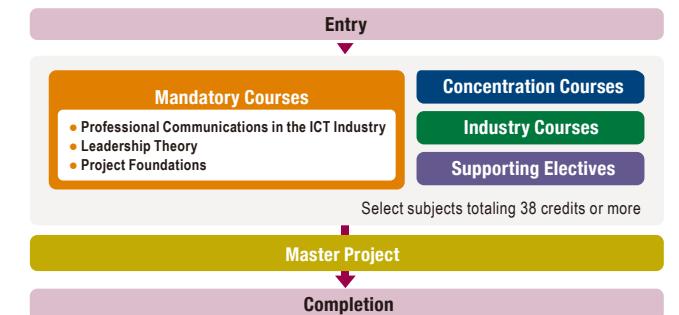
After studying the basic theory of AI and related technologies, students examine real-world case studies to discover how they can apply that basic theory and technology in a diverse range of AI applied fields. By studying Python, a language used widely in the AI field, along with numerous other software products related to AI, students develop as people capable of using and applying AI technology in a wide range of disciplines. We also offer programs that cultivate advanced engineers who can be tasked with developing AI application software.

1st semester	2nd semester	3rd semester	4th semester
Statistics for IT	Machine Learning and Its Application	Games and AI	Society and AI 1
Introduction to AI	Combinatorial Optimization	Natural Language Comprehension/ Voice Comprehension	Society and AI 2
Introduction to Algorithms	AI Software Applications 1	Medical Frontier Informatics	
Computer Programming (Python)	Computer Programming (Java)	Robotics and AI	
Fundamentals of Database Technology	Mathematics for AI	AI Software Applications 2	
Computer Organization Theory	Data Science		
Fundamental Mathematics for Applied Informatics	Data Mining		
	Advanced Topics in Database Technology		
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		
Selected from other concentration courses, industry courses and supporting electives			

Bespoke Curriculum

Choose your study approach freely to cover a wide range of knowledge and fields of application

Students can select courses beyond an individual concentration or industry courses, assembling an original curriculum that spans a wide range of knowledge and fields of application. All courses other than the mandatory courses are selected in consultation with an academic coordinator, so that students can assemble curricula that are most closely aligned with their goals. This flexibility provides an excellent means for students to aim for new applied fields in IT.

Entry

Mandatory Courses
- Professional Communications in the ICT Industry
- Leadership Theory
- Project Foundations

Concentration Courses
Industry Courses
Supporting Electives

Select subjects totaling 38 credits or more

Master Project

Completion

Significance of the Bespoke Curriculum

In a mere half-century, from the dawn of the IT and computer era in the 1960s to the present day, the IT field has advanced tremendously, transforming the shape of work and technology. In tandem with this transformation, the knowledge and skills required of students of IT and the problems they are required to address have transitioned and diversified. To cite one example, applications for smartphones have to be planned and designed for applications based on far different assumptions about use cases than for traditional PCs, such as connections to cameras, sensors and cloud services. The greatest opportunities for the debut of innovative technologies and solutions in IT lie beyond the bounds of current convention, where conventional concepts no longer apply.

To respond to students' visions for the future and their diverse needs, KCGI has created the bespoke curriculum. A bespoke curriculum enables the student to compose a curriculum based on flexible selection of courses according to his or her unique goals, unconstrained by the bounds of existing fields of concentration and industry courses. As the IT field continues to develop rapidly in multiple directions, it is entirely possible to create a new job for oneself in a new field. A bespoke curriculum enables students to leverage versatile (general-purpose) capabilities to maximum effect, applying and combining skills in a wide range of fields to create and study a personalized curriculum transcending conventional concepts.

Steps Toward Acquiring a Professional Degree

First-year students — First semester 1

Intensive study of basic knowledge

- School entrance ceremony/New-student orientation/Academic consultation
- Regular spring examinations
- Summer intensive classes

A rich student life

- Welcoming ceremony for new students
- Internship at an overseas partner university (guest lecturer)
- Business internship with a private company
- Concerts
- Career counseling

School entrance ceremony

First-year students — Second semester 2

Acquisition of highly specialized knowledge
Start preparing your Master Project

- Start of preparations for Master Project
- Regular fall examinations
- Spring intensive classes
- Special lectures by renowned Japanese and foreign instructors

A rich student life

- Career guidance
- Various job-search assistance classes
- November Festival

Classroom scene

Second-year students — Third semester 3

Study of practical and more advanced subjects
Start working on your Master Project

- Start of work on your Master Project
- Regular spring examinations
- Summer intensive classes

A rich student life

- On-campus presentations by private companies
- Acquisition of various qualifications
- Internship at an overseas partner university (guest lecturer)
- Concerts
- Participation in varoius contests

Sumer intensive classes. Deepen exchanges with the teachers through the Coffee Hour.

Second-year students — Fourth semester 4

Activities and study to enhance specialization
Completion of theme for Master Project

- Interview on Master Project by oral presentation
- Special lectures by renowned Japanese and foreign instructors
- KCG Awards (Announcement of most outstanding projects at KCG and KCGI)
- Degree conferment ceremony

A rich student life

- Degree completion celebrations

KCG Awards

Commencement

Master Project final examination

Faculty Introduction

At KCGI, there are less than 10 students per faculty member.

In order to achieve our goal of cultivating leaders who will flourish in the global IT business scene, KCGI's faculty, assembled from around the world, is composed of world-class authorities in the fields of informatics, business administration, and pedagogy, together with practically experienced experts who have planned and executed IT strategies at major companies.

Faculty Mission

KCGI has prepared an environment where each student can study as is appropriate to his or her future aspirations with the advice of faculty members.

KCGI faculty play two very important roles. First,

KCGI faculty play the role of educational resources. For students, faculty members are one of the educational resources. Students can learn the information necessary to achieve their goals from faculty members. The second role KCGI faculty play is as study coordinators. Faculty members plan and solidify the study process in order to facilitate students' understanding of study content. Linking students with various study resources is the role which faculty members execute as study coordinators.

We at KCGI believe that it is the mission of our faculty to fulfill these roles and provide maximum support so that each student may achieve his or her study goals.

◆ Professors

Yoichi Terashita *Professor / Vice President*
Bachelor of Science from Kyoto University
Doctor of Philosophy from the University of Iowa, USA
Professor emeritus at Kanazawa Institute of Technology
Former JICA (Japan International Cooperation Agency) Expert to Thailand

Shigeru Eiho *Professor / Vice President*
Bachelor of Engineering from Kyoto University   Doctor of Engineering from Kyoto University
Professor emeritus at Kyoto University   Former President of the Institute of Systems, Control and Information Engineers
Councilor of the Institute of Systems, Control and Information Engineers
Supervisor of Japanese Society of Medical Imaging Technology (JAMIT)
Fellow at the Institute of Electronics, Information and Communication Engineers

Shinji Tomita *Professor / Vice President*
Bachelor of Engineering, University of Kyoto; Doctor of Engineering, University of Kyoto (with major in electrical engineering); Professor of Engineering, University of Kyoto
Professor Emeritus, Kyoto University; former Dean of Graduate School of Informatics, Kyoto University; former Professor of Human Sciences, Graduate School, Toyo Eiwa Women's University; former professor and head of Administrative Section, designated base, Material Cell Integrated Systems Base, Kyoto University; former professor, Kyushu University; consulting professor, Harbin Institute of Technology
Member, Doctoral Education Leading Program Committee, Combined Field (Informatics)
Other past posts include Member, TC10 Committee, International Federation for Information Processing (IFIP); Trustee, Information Processing Society of Japan (IPSJ); Branch Director, Kansai Branch, IPSJ; Guest Research Director, Advanced Science, Technology & Management Research Institute of Kyoto (ASTEM RI/Kyoto); Member, Kyoto Prefectural IT Advisory Board; Member, Expert Examination Committee, Council for Science, Technology and Innovation (CSTI); Exascale Supercomputer Development Project Evaluating and Examining Committee; and Chair, Kyoto Prefectural Expert Panel on Informatics Policy
Fellow, Institute of Electronics, Information and Communication Engineers (IEICE); Fellow, IPSJ

Gary Hoichi Tsuchimochi *Professor / Vice President*
Bachelor of Arts and Master of Arts, California State University (USA); Master of East Asian Studies, Master of Education (Ed. M.), Doctor of Education (Ed. D.), Columbia University, USA; Doctor of Education, University of Tokyo
Former full-time instructor, Department of Education, Faculty of Humanities, Kokushikan University; former Professor of Human Sciences, Graduate School, Toyo Eiwa Women's University; former Professor, 21st Century Education Center, Hirosaki University; former Professor, Teikyo University; former Director, Center for Teaching and Learning, Teikyo University
Former Guest Professor, Department of Education, University of Victoria (Canada); Guest Research Fellow, Mark T. Orr Center for Japanese Studies, University of South Florida; Guest Professor, Center for the Studies of Higher Education, Nagoya University
Examining Professor, Ministry of Education, Culture, Sports, Science and Technology (MEXT) University Establishment Council (Comparative Education, History of Education in Japan, Basic Practicum in Human Sciences (Education), Basic Practicum in Pedagogical Theory of Humanity I and II); Examining Professor, MEXT University Establishment Council (Comparative History of Education);
Educational Consultant certificate, Brigham Young University, USA; Teaching portfolio training certificate, Institution for University Evaluation and Academic Degrees at Dalhousie University (Canada)

Nguyen Ngoc Binh *Professor / Vice President*
Bachelor's degree in applied mathematics from Chisinau State University (now Moldova State University), Master's degree in engineering from the Graduate School of Engineering of Toyohashi University of Technology, Doctorate degree in basic engineering from the Graduate School of Engineering Science of Osaka University (Doctor of Engineering), Honorary Doctorate of Toyohashi University of Technology, Japan.
Former Rector of VNU University of Engineering and Technology (VNU-UET), Hanoi, Former Director of VNU International Francophone Institute (VNU-IFI), Hanoi, Former Director of HUT Library Information Network Center (HUT-LINC), Hanoi.
Member of ACM/IEEE; Institute of Electronics, Information and Communication Engineers (EICE); Vietnam Association for Information Processing (VAIP); Nippon Applied Informatics Society (NAIS); former International Advisor to the National Institute of Information and Communications Technology (NICT), former President of the Radio and Electronics Association of Vietnam (REV).
Former President of Vietnam Association of Japan Alumni (VAJA), former Chairman of the ASEAN Council of Japan Alumni (ASCOJA), former Director of ASJA International (under Japan Ministry of Foreign Affairs), former Vice President of Vietnam-Japan Friendship Association (VJFA).

Masaki Nakamura *Professor / Director, Sapporo Satellite*
Bachelor of Economics from Aoyama Gakuin University
After working at Nihon Unisys, Ltd., he established dGIC Inc. in 1987.
He is the president-director of the company.
Chief Director of Hokkaido Computer-related Industrial Health Insurance Union
Chairman of Hokkaido Information system Industry Association   Chairman of All Nippon Information Industry Association Federation

Hisaya Tanaka *Professor / Director, Tokyo Satellite*
Bachelor of Engineering from Waseda University   Former Acting Manager of System Support Division, Fujitsu Limited
Former Director of Fujitsu University
Former Executive Director and Manager of IT Human Resource Development Headquarters, Information-technology Promotion Agency
Certified as a senior educator by Japan Society for Engineering Education
Member of Project Planning Committee, Japan Society for Engineering Education   Board Member of Mitou Foundation

Masanori Akaishi *Professor*
Bachelor's Degree in Engineering from The University of Tokyo and Master's Degree in Engineering (with major in mathematical engineering and information physics) from the Graduate School of Engineering of The University of Tokyo
Former Executive IT Specialist at IBM Japan
Currently a consultant at a foreign-affiliated consulting firm

Isao Akiyama *Professor*
Bachelor of Engineering from Waseda University
Laboratory Manager, Room 2046, Nihon Unisys Technology Research and Development Center

Katsunori Ishida *Professor*
Bachelor of Engineering and Master of Engineering (with major in numerical engineering) from Kyoto University.
Former General Manager, Engineering Department, Technology Division, Nippon Avionics Co., Ltd. ; former Certified Information System Auditor (CISA), United States; former Principal, Rakuhoku Campus, KCG and Director, KCG Informatics Research Center

Hiroyuki Itoh *Professor*
Bachelor of Economics from Hokkai-Gakuen University
After working at Hokkaido University as a staff, he established Crypton Future Media Inc. in 1995.
He is the president of the company.
He created "Hatsune Miku".

Tsuneo Imai *Professor*
Bachelor of Engineering from Kyoto University
Master of Engineering from Kyoto University
Former Senior Manager of Systems Division, Fujitsu Ltd.
Former Vice President, Fujitsu Learning Media Co.
Vice President, Japan E-Learning Association

Masaharu Imai *Professor*
Bachelor of Engineering, Nagoya University   Completed Doctoral Course at Graduate School of Nagoya University (majoring in Computer Science). Doctor of Engineering
Professor Emeritus and former Professor, Osaka University   Former Professor, Toyohashi University of Technology
Former Guest Associate Professor, University of South Carolina, USA   IEEE Lifetime Member and IEEE Standard Association Member
IFIP Silver Core Member and IFIP TC10 WG10.5 Member
Fellow of the Information Processing Society of Japan (IPSJ) and of the Institute of Electronics, Information and Communication Engineers (IEICE)
Associate Member of the Semiconductor & System Design Technology Committee, Japan Electronics and Information Technology Industries Association (JEITA)
Representative Director, AISIP Solutions Co., Ltd.   Director, Techsor Inc.

William K. Cummings *Professor*
Bachelor of Arts from University of Michigan, USA
Doctor of Philosophy from Harvard University, USA
Former Professor of International Education, George Washington University, USA

Koji Ueda *Professor*
Bachelor of Engineering from Kansai University
Master of Engineering from Kansai University Graduate School
Master of Science in Computer Science from Rochester Institute of Technology,USA
Formerly at Matsushita Electric Works, Ltd.
JICA (Japan International Cooperation Agency) Expert (ICT) to Mozambique

Toshio Okamoto *Professor*
Master of Educational Psychology from Tokyo Gakugei University   Doctor of Engineering from Tokyo Institute of Technology
Professor emeritus of The University of Electro-Communications   Former academic director , Former Director of Information System Studies and Former Chief of International Exchange Center of The University of Electro-Communications
Chairman of Japanese Association for Education of Information Studies   Former chairman of Japanese Society for Information and Systems in Education
Former director of Japan Society for Educational Technology   Chairman of the executive committee of e-learning AWARD
Fellow of The Institute of Electronics, Information and Communication Engineers
Chairman of ISO/SC36-WG2   IPSJ Contribution Award 2013 of Information Processing Society of Japan

Yoshitaka Kai *Professor*
Bachelor of Engineering, Kyoto University; Master of Engineering, Kyoto University (with major in mathematical engineering); Doctor of Commerce, Graduate School of Kwansei Gakuin University
Former employee, Teijin Limited; former general manager, Mitsubishi Trust and Banking Corporation
Former Associate Professor, Business Administration Studies, Kobe University; former Specialist Graduate School Professor, Kwansei Gakuin University (Director, Management Strategy Research)
Professor Emeritus, Kwansei Gakuin University

Hideaki Kashihara *Professor*
Bachelor of Engineering from Osaka Prefecture University
Master of Engineering from Osaka Prefecture University
Doctor of Engineering from Okayama University
Certified Professional Engineer in MOT and Information Engineering   Certified IT Coordinator
Former Project Manager at Dainippon Screen MFG, Co., Ltd.

Hiromi Kitayama *Professor*
Member of Information Systems Society of Japan   Supervisory business advisor of comway co.ltd.
Advisor of ALBASU Co.Ltd.   Advisor of Kyoto Prefecture Information Industries Association
Founder and the first representative director of KEISHIN SYSTEM RESEARCH CO.LTD.
Former chairman of the board of directors of Kyoto Computer system Association
Former CEO of ALPHALINE CO.,LTD

Akihiro Kimura *Professor*
Bachelor of Engineering and Master of Engineering from Kyoto Institute of Technology
Technical Engineer (Network, Information Security)
Principal of Kyoto Computer Gakuin Rakuhoku Campus
Director of Japan(Nippon) Association for Information System
Healthcare Information Technologist

Cyryl Koshyk *Professor*

Bachelor in Information Technology, Krakow University of Economics, Poland
Founder of Cinemat Studio; Founder of Dark Horizon Pictures.
Involved as a visual effects supervisor in the production and editing of complex special effects video in the film and TV industries.
He has been involved in many projects, including '300', 'Elysium', 'Now You See Me', 'After Earth', 'Silent Hill: Revelation', 'Prometheus'.

Masashi Kuratani *Professor*

Bachelor of Science and Technology, Completion of Graduate Course in Operations Research (equivalent to Master of Science and Technology),
National Defense Academy of Japan, Japan Maritime Self-Defense Force (JMSDF)
Former Chief Navigator, destroyer JDS Hatsuyuki; former Captain, destroyer JDS Umigiri; former First Mate, destroyer JDS Yudachi, JMSDF
Former Instructor (Military History), Officer Training Course, 1st Service School, JMSDF
Former Instructor (Tactics), Officer Training Course, 1st Service School, JMSDF
Completed master's course , majoring in East Asian History, at Graduate School of Literature at Bukkyo University
Former Instructor (Strategy and Military Affairs), Military History Seminar, Defensive Strategy Education and Research Department, Staff College, JMSDF

Hong Seung Ko *Professor*

Bachelor of Engineering from Tong Gok University, Korea
Doctor of Engineering from Kyoto University
Former Manager of Information Strategies, Samsung Electronics Co., Ltd.
Former CEO of Harmony Navigation, Co., Ltd.
Technical Committee Member, CALS/EC Association, Korea

Tadashi Kondo *Professor*

Bachelor of Engineering from the University of Tokushima
Master of Engineering and Doctor of Engineering from Osaka University
Former Head of Control Research, Power and Industrial Systems Research and Development Center, Toshiba Corporation
Former Professor, Faculty of Medicine; former Professor, Graduate School of Health Sciences; former Professor, Graduate School of Oral Sciences;
and Professor Emeritus, University of Tokushima

Kazuyuki Sakka *Professor*

Bachelor of Science from Kyoto University
Doctor of Science from Kyoto University
Former Part-time Lecturer, Kyoto University

Takashi Sato *Professor*

Bachelor of Computer Science from the Faculty of Engineering, Nagoya Institute of Technology
Doctor of Engineering (specializing in infrastructure engineering), Tottori University
Former General Manager, NEC Corporation

Eiki Satomi *Professor*

Master of Business Administration from Otaru University of Commerce
After working at Nanko Building Ltd. and DATT, Ltd.(current DATT JAPAN INC.), he established Media Magic Co., Ltd. in 1996.
He is the president-director of the company.
Vice-chairperson of Hokkaido Information System Industry Association
Representative of Hokkaido Mobile Content Promotion Council
The first member of Sapporo Chamber of Commerce and Industry   The 2nd Hokkaido IT strategy Examination Committee

Sanford Gold *Professor*

Bachelor of Arts, University of Michigan (USA)
Master of Arts, Ed.D., Doctor of Education, Columbia University (USA)
Senior Director of Learning Program, ADP, LLC.
Director of Learning, Prudential Financial, Inc.
Educational Consultant, EY

Peiyan Zhou *Professor*

Bachelor of Arts from the Department of Chinese Language and Literature, Peking University
Master of Arts and Sciences from the Faculty of Life and Environmental Sciences, Kyoto Prefectural University
Director, Huitai Cultural Development Co., Ltd. (China)

Yuexin Sun *Professor*

Bachelor of Arts from the School of Japanese Studies, Tianjin Foreign Studies University
Master of Arts and Sciences from the Faculty of Life and Environmental Sciences, Kyoto Prefectural University
Doctor of Engineering from the Department of Architecture, Kyoto University
President, Huitai Cultural Development Co., Ltd. (China)

Yutaka Takahashi *Professor*

Bachelor of Engineering at Kyoto University, Master of Engineering (major in applied mathematics and physics) at Graduate School of Kyoto University, Withdrawal from
Ph.D. Program with Research Guidance Approval at Graduate School of Kyoto University (major in applied mathematics and physics), Doctor of Engineering, Kyoto University
Professor Emeritus, Kyoto University   Former Professor of Informatics Research, Kyoto University   Former Professor, Nara Institute of Science and Technology
Former Visiting Professor University of Paris-Sud (France)   Former Visiting Professor French Institute for Research in Computer Science and Automation
Fellow, Operations Research Society of Japan   Project Leader, R&D project to develop integrated communication and broadcasting technology using
multi-level-connected cable TV networks, National Institute of Information and Communications Technology

Ryoei Takahashi *Professor*

Bachelor of Science, Master of Science (major in mathematics), Ph. D (engineering), Waseda University
Former Professor of Systems Information Engineering, Hachinohe Institute of Technology
Former Research Advisor to Ph.D. Program, Hachinohe Institute of Technology
Former employee, NTT Yokosuka R&D Center
Former employee, NTT Secure Platform Laboratories

Yasuhiro Takeda *Professor*

CEO, Gainax Kyoto Co., Ltd.
Member of Science Fiction and Fantasy Writers of Japan (SFWJ) and Space Authors Club of Japan (SACJ)
Founding member of Gainax. Producer of many of Japan's best-known animated works, including Nadia, the Secret of Blue Water and
Tengen Toppa Gurren Lagann

Toshiaki Tateishi *Professor*

Bachelor of Commerce from Waseda University   Representative Director of MandalaNet Limited
Managing Director and Vice-Chairman of Japan Internet Providers Association
Chief Director of The Inter-Area High Speed Network Organization
Representative Director of Internet Intelligence Okinawa Co. Ltd.
Director of Email Web Proper Use Promotion Consortium

Masayoshi Tezuka *Professor*

Bachelor of Engineering from Osaka University
Master of Engineering from Osaka University
Former Senior Researcher of Fujitsu Laboratories Ltd.
Former Senior Manager of Fujitsu Institute of Management Ltd.
Former Associate Professor of Information Engineering, Kanazawa Institute of Technology

Shozo Naito *Professor*

Bachelor of Engineering from Kyoto University
Master of Engineering from Kyoto University
Principal of Kyoto Computer Gakuin Kamogawa Campus
Former Chief Researcher at NTT Information Sharing Platform Laboratories
Advisory Professor of Korea Information Security Agency

Yukihiro Nakamura *Professor*

Bachelor of Engineering, Kyoto University; Master of Engineering, Kyoto University Graduate School (major in Mathematical Engineering), Doctor of Engineering
Emeritus Professor, Kyoto University; Professor, Graduate School of Informatics, Kyoto University; Former Professor, General Engineering Research Institute,
Ritsumeikan University
Former Manager, Knowledge Processing Research Dept., Information Transmission Network Research Center, NTT Corporation; Manager, High-Speed Transmission
Processing Research Center, Information Transmission Network Research Center, NTT Corporation; First Group Leader of PARTHENON; President of PARTHENON
Research Association Specific Nonprofit Corporation, Former President Advanced Science, Technology & Management Research Institute of KYOTO

Nitza Melas *Professor*

Main Vocalist of "Cirque du Soleil"   Singer and songwriter
Former lecturer of Musicians Institute, California, USA
She got the Los Angeles Music Award for World Music, Hollywood Music Award for World Music,
DEKA Award and many other awards. Her voice can be listened in the commercial songs of Japanese company such as SXL Home Co., Ltd. and
TOYOTA Motor Corporation.

Yasuhiro Noishiki *Professor*

Bachelor of Science and Engineering from Ritsumeikan University
Formerly at Hewlett-Packard Development Company, L.P.

Akira Hasegawa *Professor*

Bachelor of Science from Rochester Institute of Technology, USA
Master of Science from Rochester Institute of Technology, USA
Planning Manager: International Development of Computer Education (NPO)

Koichi Hasegawa *Professor*

Bachelor of Engineering from Hokkaido University
Master of Arts from Pennsylvania State University
Doctor of Philosophy from Hokkaido University
Former News Cameraman of NHK (Japan Broadcasting Corporation)

Peter G. Anderson *Professor*

Bachelor of Science from Massachusetts Institute of Technology, USA
Doctor of Philosophy from Massachusetts Institute of Technology
Former Senior Programmer at Computer Division of RCA.
Professor emeritus at Rochester Institute of Technology, Computer Science, USA

Masao Fukushima *Professor*

Bachelor of Engineering and Master of Engineering from the Department of Informatics and Mathematical Science and Doctor of Engineering from
Kyoto University   Professor Emeritus; former Professor of Informatics, Kyoto University
Former Professor, Division of Information Science, Nara Institute of Science and Technology
Former Professor, Faculty of Science and Engineering and Graduate School, Nanzan University
Fellow of the Operations Research Society of Japan

Takao Fujiwara *Professor*

Bachelor's degree from Kyoto University, Doctoral degree from the Graduate School of Kyoto University (with major in astrophysics), Doctor of Science
Professor Emeritus of Kyoto City University of Arts, former Professor and Department Head of Fine Arts Department, Kyoto City University of Arts
Former part-time instructor, Kyoto Computer Gakuin

Masaki Fujiwara *Professor*

Master's Degree, Graduate School for Creative Cities, Osaka City University; Ph. D, Management Information Science, Setsunan University; SME consultant
Former manager and chief consultant, Management Planning Department, KSR Co., Ltd.
Former Professor, Department of Business Concepts, Miyagi University; director, Business Planning Studies, Miyagi University;
assistant research director, Business Planning Research Studies, Miyagi University; former lecturer, Bond Business School,
Bond University (BBT MBA); Guest Professor, Miyagi University

Masahiro Furusawa *Professor*

Bachelor of Engineering and Master of Engineering (specializing in control engineering) from Keio University
Former System Engineer, Nomura Research Institute, Ltd.
Industry Value Engineer, SAP Japan Co., Ltd.
Part-time Professor, Miyagi University

Fredric Jon Laurentine *Professor*

Bachelor of Arts from Brown University, USA
Master of Business Administration from Harvard University, USA
Formerly at Procter & Gamble, USA   Formerly at Computer Associates, USA
Formerly at Sun Microsystems, Inc., USA   Founder and President, Two Eyes Two Ears, USA

Naoya Bessho *Professor*

Bachelor's degree in law, Keio University
Various positions at Yahoo Japan Corporation, including Manager of Legal Division; Executive Director; Manager of Policy Planning Division and Senior Compliance
Officer; Manager of President's Office; Chief Officer for Advertising; Law, Policy Planning and Public Services; and Chief Officer for Intelligence; currently Senior
Advisor to Yahoo Japan Corporation   Representative Director of Luke Consultants Co., Ltd.
Director of Kioicho Strategy Institute, Inc., Director of Law and Computers Association of Japan, Director of Association of Genetic Information, Director of
Information Technology Federation of Japan

Mark Hasegawa-Johnson *Professor*

Bachelor of Science, Master of Science, Ph.D. (Electrical and Computer Engineering), Massachusetts Institute of Technology (USA)
Professor, University of Illinois (USA)   Researcher, Advanced Digital Science Center (Singapore)
Former Associate Professor, University of Illinois (USA)   Former Post-Doctoral Fellow, University of California at Los Angeles (USA)
Former Research Assistant, Massachusetts Institute of Technology (USA)   Former Engineer, Fujitsu Laboratories Ltd.
Former Technology Intern, Motorola Corporate Research Laboratories (USA)

Masanobu Matsuo *Professor*

Bachelor of Engineering from Kyoto University
Master of Science from The University of California, Santa Barbara   Doctor of Philosophy from The University of California, Santa Barbara
The first representative of software research section in Sumitomo Electric Industries Ltd. USA. After retiring the
company, he established Twin Sun Inc. (current name is Open Axis Inc.) in USA. As a CEO, he has handled many
large-scale software development and planning, software development in the fields of medical IT and consulting.

Hiroko Mano *Professor*

Bachelor of Arts and Doctorate of Arts from Waseda University (with major in art history), Professor of Literature
Doctorate in Philosophy with major in art history from Humboldt University of Berlin

Maya Bentz *Professor*

Bachelor of Arts from Tbilisi State University, Georgia
Doctor of Education from Teachers College, Columbia University, USA
Visiting Scholar at Purdue University, USA
Former International Project Coordinator, Distant Learning Project, Columbia University

Kozo Mayumi *Professor*

Bachelor's Degree in Management Engineering from the Nagoya Institute of Technology; Master's Degree in Engineering (with major in numerical
engineering) from Kyoto University Graduate School of Engineering; Master's Degree and completion of Ph.D credits in Economics from Vanderbilt
University, TN, USA; Doctor's Degree in Economics from Kyoto University Graduate School of Economics
Former employee, Toyo Aluminium K.K.   Former part-time instructor, Kyoto Computer Gakuin   Former Professor, Tokushima University
Member of Editorial Committees of several specialist journals, including Ecological Economics, Ecosystem Services and Journal of Economic Structures

Milan Vlach *Professor*

Bachelor of Science from Charles University, Czech Republic
Doctor of Natural Sciences from Charles University, Czech Republic   Doctor of Philosophy from Charles University, Czech Republic
Doctor of Sciences from Czechoslovak Academy of Sciences
Former Professor, Charles University, Czech Republic
Former Professor of Information Science, Japan Advanced Institute of Science and Technology (JAIST)

Sonoyo Mukai *Professor*

Bachelor of Science and Doctor of Astrophysics from Kyoto University
Former Professor of Kanazawa Institute of Technology   Former Professor of the Department of Science and Technology at Kinki University
Director and Chairperson of The Remote Sensing Society of Japan
Auditor and Permanent Director of Japan Association of Aerosol Science and Technology
Specialized Committee of Japan Society for the Promotion of Science
Committee of Asia-Pacific Remote Sensing   Committee of Graduate Women In Science Japan Branch

Tadashi Mukai *Professor*

Bachelor of Science, Master of Physics, and Doctor of Physics from Kyoto University   Professor emeritus of Kobe University
Member of International Astronomical Union   Special Member of The Astronomical Society of Japan (Former Director of branch office)
Member of The Japanese Society for Planetary Sciences (Former Chairman)
Chairman of the Management Board of Nishi-Harima Astronomical Observatory Park
Former Professor of Kanazawa Institute of Technology   Former Professor of Kobe University
Former Visiting Professor of Japan Aerospace Exploration Agency   Former Chief of Center for Planetary Science of Kobe University

Shizuka Modica *Professor*

Bachelor of Arts from Doshisha University   Master of Education from Harvard University, USA   Doctor of Philosophy from University of Virginia, USA
Co-Founder and Partner of i.m.i. institute, LLC, USA
Former Student Services Coordinator and Lecturer of Weldon Cooper Center for Public Service, University of Virginia, USA
Former Research Assistant of Darden School of Business Administration, University of Virginia, USA
Former Business Manager of Cardiovascular Imaging Center, School of Medicine, University of Virginia, USA
Former Institutional Public Relations Officer, University Councilor, Special Program Assistant to the Vice President,
Assistant Manager of MBA Program, International University of Japan, Former Legal Secretary of Pacific Resources, USA
Former Secretary of Sumitomo Forestry America, Inc., USA   Fulbright Commission's International Education Administrators Program Award

Masayasu Morita *Professor*

Bachelor of Arts from University of California at Berkeley, USA
Master of Education from Harvard University, USA
Master of Philosophy from University of Cambridge, UK
Board Member, ALC PRESS, Incorporated
CEO, Hitomedia Inc.

Yi Li *Professor*

Bachelor of Arts from Beijing Language and Culture University
Master of Information Technology from The Kyoto College of Graduate Studies for Informatics
SAP Certified Consultant (Financial Accounting, Management Accounting, Production Planning & Manufacturing, Plant Maintenance,
Sales and Distribution)
Former lecturer of Dalian Foreign Language University   Formerly at AD Laboratories Co. Ltd., director

Meihui Li *Professor*

Graduated from Preschool Education Department, Shenyang Normal University   Former principle of Kindergarten of Dalian Shipbuilding Industry Company
Former member of The Association for Science and Technology of Dalian Shipbuilding Industry Company
Former manager of The No. 2 Japanese Division of Overseas Educational Service Center, Dalian Foreign Language University
Former executive vice president of Dalian Shihua Overseas Education Service Company
Former head manager of Dalian Office, The Kyoto College of Graduate Studies for Informatics
Former head manager of Dalian Office, SUBARU Automobile Engineering College   Director of The Kyoto College of Graduate Studies for Informatics
Member of The Association for information management of Chinese Independent Institute

Fei Liu *Professor*

Master of Engineering from Kyoto Institute of Technology (Information Science)
Vice-Principal of Kyoto Computer Gakuin Kamogawa Campus   Visiting Professor of China Institute of Industrial Relations
Visiting Professor of China Central Academy of Fine Arts   Visiting Professor of Beijing Polytechnic College
Visiting Professor of Beijing City University   Visiting Professor of Vocational Education Society of China
Visiting Professor of Committee of Compilation and Evaluation of New Teaching
Materials for Vocational Education of China

Akiyoshi Watanabe *Professor*

Bachelor of Engineering from Hokkaido University
Master of Engineering (Applied Systems Science) from Kyoto University
Former member of Nakamichi Ltd.

◆ Associate Professors

Seiichiro Aoki *Associate Professor*

Bachelor of Science from Osaka University   Master/Doctor of Science from University of Tokyo
Full Member of Astronomical Society of Japan
General Manager of Astronomy Promotion Project Office, Kyoto University (part-time instructor)
Part-time instructor at Kansai University   Part-time instructor at Osaka University of Economics
Former Project Researcher at Graduate School of Science, Osaka University
Former Instruction Assistant at Graduate School of Science, Kyoto University   Former part-time instructor at Shiga University

Amit Pariyar *Associate Professor*

Master of Engineering from the Department of Computer Science and Information Management, Asian Institute of Technology (Thailand)
Master and Doctor of Computer Science from the Graduate School of Informatics, Kyoto University
Postdoctoral Researcher, Institute of Social Informatics and Technological Innovations (ISITI), Universiti Malaysia Sarawak (Malaysia)

Volodymyr Mygdalskyy *Associate Professor*

Master of Science and Engineering, Odessa I.I. Mechnikov National University   Doctor of Computer Science, Kyoto University
Former computer science assistant, Odessa I.I. Mechnikov National University
Former Special Lecturer, Kyoto University   Former Temporary Lecturer, Doshisha University
Former Part-time Lecturer, Kansai University

Kengo Onishi *Associate Professor*

Bachelor of Architecture from Kansai University   Director of Onishi Building Co.Ltd.   Qualified architect of the first class
Emergency Risk Discriminator of Kyoto Prefecture   Evaluator of Quake-resistant Buildings of Kyoto Prefecture
The 22nd chairman and auditor of General Constructors Association of Kyoto Young People Section
Founder and the first vice chief director of Kyoto Keikan Forum (NPO)   Auditor of Junior Chamber International Kyoto
Founder and the first representative of Kinomachidukuri Conference (NPO)
The 31st chairman of Japan Construction Club Kyoto Construction Club   Formerly at MITSUIHOME CO.LTD.

Ming Hu *Associate Professor*

Bachelor of Science, Qingdao University. Completed Master's degree, Guizhou University (majoring in mathematics).
Completed Doctorate degree, Graduate School of Informatics, Kyoto University. Doctor of Informatics.
Former foreign-national collaborative researcher in informatics, Graduate School of Informatics, Kyoto University
Former special researcher, Japan Society for the Promotion of Science

Hironori Sakamoto *Associate Professor*

Bachelor of Engineering degree from Tokyo Institute of Technology,
Master's degree in mathematical science from the Graduate School of Mathematical Sciences of The University of Tokyo
Employee of Nihon Unisys Technology Research and Development Center

Ryoko Takahashi *Associate Professor*

Bachelor of Arts and Master of Arts from Doshisha University
Graduate from Kyoto Computer Gakuin
Master of Science in Information Technology from The Kyoto College of Graduate Studies for Informatics

Akihiko Takeda *Associate Professor*

Master of Veterinary Science from the Department of Agriculture at Nihon University
Veterinarian
System Engineer of Hitachi corporation group
e-Japan (e-Government) project member
Primary Chief of Information System Section at Kyoto Computer Gakuin

Takao Nakaguchi *Associate Professor*

Graduated from Kyoto Computer Gakuin. Completed a graduate course in Applied Informatics from the Kyoto College of Graduate Studies for Informatics, graduating top
of the class with a Master's degree in Informatics (Specialist).
Completed a Doctorate course in Graduate School of Informatics, Kyoto University, graduating with a Doctorate in Informatics.
Former director and manager, System Development Department, Admax; former guest research technician, Human Information Project (HIP),
Advanced Telecommunications Research Institute International (ATR); former Chief Technology Officer, UNTROD Corporation; former Chief Technology Officer,
@Izumi; former chief examiner, NTT Advanced Technology Corporation; former special researcher, Graduate School of Informatics, Kyoto University
Member of the Institute of Electronics, Information and Communication Engineers; the Japan Society for Software Science and Technology; and the Information Processing Society of Japan

Benjamin Nouvel *Associate Professor*

Bachelor of Arts from Toulouse University
Graduated from University of Toulouse, Master in Art History from the University of Paris (The Sorbonne)
Former Japan-France Joint Project Coordinator, Department of Multimedia, The Louvre
Former Content Planning Manager, Japan Expo

Yuko Masuda *Associate Professor*

Master of Social Work from the School of Social Work, Columbia University (New York, USA)
Four-year Master's Degree in Psychoanalysis and Analytical Psychotherapy from the Postgraduate Center for Mental Health
Bachelor of Arts in Spanish Language Studies from the Faculty of Foreign Studies, Sophia University (overseas study)

Izu Matsuo *Associate Professor*

Bachelor of Laws from Kyoto University, MBA from the University of Southern California Graduate Programs
Former Senior Product Marketing Manager, Sony Electronics Inc. (USA), Former Product Marketing Manager, Carl Zeiss Vision Inc. (USA),
Former Senior Product Manager, Kyocera International, Inc. (USA), former West Japan area manager, Expedia Holdings KK

Julia Yonetani *Associate Professor*

Bachelor of Arts from the University of Sydney (Australia), Master of Arts and Sciences (with major in International Social Sciences) from
Tokyo University Graduate School of Arts and Sciences, Doctor of History at the ANU College of Asia and the Pacific of Australian National
University (with major in History)
Currently works as a contemporary artist, exhibiting works of aesthetic impact at exhibitions worldwide while working as a farmer in Nantan,
Kyoto Prefecture.

e-Learning Studio

Practical laboratory

Lounge

Library

Campuses

Kyoto Main School

Kyoto Main School consists of two campuses. The diverse student population of these campuses conducts a wide range of study and research in pursuit of a Masters in Information Technology, the highest academic degree in the field of applied IT. Travel between the two campuses is available via a free shuttle bus.

Hyakumanben Campus, Sakyo-ku, Kyoto

Hyakumanben Campus was born as an educational and research facility in 2004, when the school opened its doors. Because most classes are held in this building, large numbers of students and faculty typically gather here. The Campus is filled with an atmosphere of passion for learning and freedom of thought, as it is located in a student area close to Kyoto University in the heart of Kyoto. At one time the Campus was the site of KCG's large computer center, where students practiced computing using the UNIVAC Vanguard computer installed there.

Kyoto Ekimae Satellite, Minami-ku, Kyoto

The Kyoto Ekimae Satellite was completed in the spring of 2005. Standing adjacent to Kyoto Station, a commuting hub transited by large numbers of commuters, this campus is exceptionally conveniently located. Conspicuous by its bright, open exterior, Kyoto Ekimae Satellite is equipped with a state-of-the-art e-learning studio, enabling numerous lectures tp be distributed internationally from this location. Together with the nearby Kyoto Ekimae Campus of KCG, the Kyoto Ekimae Satellite functions as a major hub of leading-edge IT education.

Shuttle bus

Satellite Campuses

Like the main campus, the satellite campuses attract a diverse mix of students, including people already in the working world. The satellite campuses are connected to Kyoto Main Campus not only by dispatch classes (classes taught by instructors visiting from the main campus) but also by the latest e-learning systems, which link to the main campus in real time. Learning using prerecorded video is also provided. Moreover, each satellite's dedicated instructors provide vital study backup, to help each student achieve his or her goals.

Sapporo Satellite   Located inside dGIC Inc.

In April 2012 the Sapporo Satellite Campus opened in Sapporo, in the heart of Japan's vast northern prefecture of Hokkaido. This campus was the first KCG Group facility located outside of Kyoto.

All of the dedicated instructors at the Sapporo Satellite Campus are currently active on the front lines of the IT industry. In Current Issues in IT Industry, instructors interweave the latest industry information with tales from their own experiences, providing clear explanations of the knowledge, skills and communication abilities that will be needed in the IT business of the near future. This course is intellectually stimulating not only to students undergoing IT training in Hokkaido but also to students at the Kyoto Main Campus.

Tokyo Satellite   Located inside Hitomedia, Inc.

Tokyo Satellite is situated in a location close to Roppongi Hills in Minato City, Tokyo. The Tokyo Satellite opened in October 2012 as the second location following the Sapporo Satellite.

Many of the instructors at the Tokyo Satellite are active players on the front lines of the accelerating digitalization of today's society. For this reason, the IT training and classes in logical thinking disseminated by the Tokyo Satellite are a perennial favorite with students, including students at the Kyoto Main Campus. The education provided at the Tokyo Satellite contributes greatly to the cultivation of top leaders in applied IT who can play a vital part on the world stage.

Computer Usage System

Students can make use of computer resources even outside of class time, by availing themselves of practical laboratories that are not currently in use. No reservations or additional fees are required. This state-of-the-art equipment is available for you to use.

Microsoft
Office 365 ProPlus license program for educational institutions
OVS-ES license program for educational institutions

KCG is licensed by Microsoft Corporation under the Office 365 ProPlus license for educational institutions and the OVS-ES license program. These license programs enable Office applications, various development tools and the Windows OS to be purchased at reasonable prices for use on individual devices. (Submission of a student use consent agreement is required.)

Software available for purchase

- Microsoft Office 365 ProPlus
- Microsoft Office Professional
- Microsoft Windows OS upgrades

Note: In the case of the Windows OS, only upgrades are offered.

Exploring business involving Japanese anime

CEO, Gainax Kyoto Co., Ltd.
Member of Science Fiction and Fantasy Writers of Japan (SFWJ) and Space Authors Club of Japan (SACJ)
Founding member of Gainax. Producer of many of Japan's best-known animated works, including *Nadia, the Secret of Blue Water* and *Tengen Toppa Gurren Lagann*

Professor 武田 康廣
Yasuhiro Takeda

Japanese anime and ICT.

In the Field of Concentration of IT manga & anime, KCGI is using these combinations in the search to create new markets and business models. Special Topics in Anime, Planning, Production and Promotion is taught by Professor Yasuhiro Takeda. Professor Takeda is one of the founders of Gainax, the studio renowned for such works as *Nadia, the Secret of Blue Water* and *Tengen Toppa Gurren Lagann*. As an anime producer at Gainax, Professor Takeda has been involved in numerous works, including games such as *Neon Genesis Evangelion: Iron Maiden* and manga such as *Aim for the Top 2! Diebuster, Magical Shopping Arcade Abenobashi* and *Hanamaru Kindergarten*. In collaboration with Gainax, Professor Takeda produced a commercial commemorating the KCG Group's 50th anniversary.

Business is a question of "How much revenue?"

— What would you say is the keyword in making anime a business?

My main work until now has been the planning and production of animated works at Gainax. I create anime proposals, negotiate with companies with which we would like to work to determine broadcasting slots, and ensure a specific budget. Once a production is done, it is important to think how much revenue it will gather. I suppose you could say that executing that is a business.

— Please tell us what got you involved in anime.

Works that I have planned include *Wish Upon the Pleiades* and *Tengen Toppa Gurren Lagann*. I am now working on a number of new anime plans. But I didn't plan to do this type of job. In college, I studied something completely different. Before I knew it, the events and independent productions I enjoyed doing in college had become my job. That's why I still feel like I'm doing interesting things even now. I have decided to never forget the idea of "take the initiative in fun and interesting things" from my amateur years.

— Please give us a message for students who wish to study anime.

Planning and producing anime requires a lot of energy. In addition, gathering funds and producing anime brings with it responsibility. Productions involve people looking at your work, receiving criticism, gathering funds, and bringing your company into the black. Thinking that far is the finished form of a plan. Believing that as long as you make a production, you are OK is just self-satisfaction. A production is only complete when it has been critiqued. Criticism can be aimed not only at your production but everything you release into the world, including your actions and words. That is why I ask students interested in studying anime to study with the spirit needed to fully face the criticisms one receives.

50th anniversary commercial for the KCG Group (URL: kcg.ac.jp/gainax)

Representative Director
Crypton Future Media, Inc.,
producer of Hatsune Miku

Professor

Hiroyuki Itoh

伊藤 博之

With a name derived from the Japanese phrase "mirai kara kita hajimete no oto" ("the first sound from the future"), Hatsune Miku is a virtual idol who will sing with a synthetic voice when a user inputs lyrics and a melody into a computer. Hatsune Miku has held live concerts not only in Japan but overseas as well, swaying the hearts of a multitude of fans. Hiroyuki Itoh, Representative Director at Crypton Future Media Inc., the company which created the Hatsune Miku synthetic voice software that is the cause of this sensation, has joined KCGI as a professor. Professor Itoh, who continues to develop the software which produces the computerized voices, offers the following message for the young people who will lead the IT industry of the future. "The frontier of the information revolution of which we are only midway through is vast without limit and your future prospects spread before you without limit. I ask that you dedicate yourselves to your studies with this concept firmly in mind."

The world of Hatsune Miku, which touched off a revolution in voice synthesis

Crypton Future Media is neither a video game nor an anime company. Although we are involved with making music, we are also not a record company. Because we made the hobby of computer music into a business, I think of us as a "sound seller." Hatsune Miku was first offered for sale in August 2007, but I believe that the software became a chance for people to get involved in a creative activity.

It is said that humanity has experienced three revolutions in its past. The first was the agricultural revolution. Due to this revolution, human beings, who had been forced to be nomadic due to their reliance on hunting, produced food systematically and came to be able even to store it and thus began living in fixed settlements. Due to this, societies and states formed, also creating disparities in wealth. It could be said that the development of economics also became a cause of war.

The second revolution was the industrial revolution. Sources of power were discovered and the advance of innovations such as the ability to efficiently create identical items gave birth to mass production and mass consumption. This spurred trade and commerce, helping to bring about large-scale wealth. This revolution also caused a "population explosion." In the age of a high birth and high death rate prior to the industrial revolution, the human population was virtually fixed and fluctuations of wealth in society were also slight, but with the industrial revolution the human population rapidly increased.

And the third revolution is the information revolution brought about by the value of IT as represented by the internet. Prior to the internet, transmitters of information were limited and monopolistic. Sources of information included media such as newspaper companies, television and radio stations, and publishing companies, but when these groups dispatched information, it was accompanied by a significant cost in terms of facilities and human power. Further, information at this time was low in volume and unidirectional. However, the appearance of the internet has brought about this revolution in information.

The way in which information was dispatched has changed significantly. Now the internet is an extremely close presence, appearing in the palms of our hands, on our desks, and entering our pockets. Information which can be digitized, such as news, movies, and music, is entirely informationalized, making it possible to easily transmit and store it over the internet. Life and work have become extremely convenient, fun, and comfortable; in an instant you can summon and

view your favorite videos and broadcast media. In addition, this information has made it possible for anyone to easily and instantaneously share about themselves with the world via Facebook, Twitter, and blogs, including the tiniest pieces of personal news.

I believe, however, that we are still merely experiencing the prelude to the changes that will occur due to the information revolution. The agricultural and industrial revolutions brought about serious changes to the way human beings lived. The changes caused by the information revolution have not yet reached that level. This is merely a transition period, and the real changes have yet to begin. I believe we will see drastic changes to peoples' lifestyles and the world in 20 to 30 years from now. I do not, however, know what sort of changes these will be. How these will be changed has been entrusted to us and, moreover, the young people who will shoulder the next generation.

Hatsune Miku
Illustration by KEI
©Crypton Future Media, INC.

Professor ニッツァ・メラス
Nitza Melas

Cirque du Soleil Main vocalist, singer/songwriter

She is a multilingual singer/songwriter born in Montreal, Canada, and has pleased crowds all over the world. She is one of three main vocalists for Cirque du Soleil, the entertainment troupe that continues to perform around the world as a circus and musical. She has been the only one to have a song that she has composed and arranged to play in the Cirque du Soleil show, making her the de facto top singer of the troupe. She does not belong to any labels, and not only composes and arranges her own music, but also does the graphic design, promotion and sales, herself.

A world of new entertainment

The world of art and IT are intimately connected. When creative vision meets fantastic technology, the audience is drawn into another dimension. So it's only natural that I'm involved with an educational institution that's not only on the frontline of cutting-edge technology, but also offers an environment where students can acquire knowledge in the broad field of computers, as it evolves with creativity at an astonishing pace.

In the entertainment industry, IT permeates every aspect of our business. Whether it is using computers to record and edit music, dub movies and commercials, or the diverse training and multimedia of Cirque du Soleil, highly specialized technology and keen creativity of the team of artists and technologists are required for any of the performances I give.

This collaboration between the arts and technology is the synergistic cooperative element that is needed to produce video and audio concerts. KCGI offers students the opportunity to gain the tools they need to polish the artistic and technical knowledge they need to apply to the many aspects of the business world. Projection mapping, the quintessential technology of the evolution of art expression, has created demand for positions for information processing technicians involved in the arts, and has allow for creative expression that far exceeds the expectations of audiences. KCGI is at the forefront of learning in this field, and provides an educational environment that pushes students to go beyond their potential.

Professor Nitza Melas at the concert to announce the CD 'MUΣA' on the 50th anniversary of the founding of the KCG Group.

Professor 高 弘昇
Ko, Hong Seung

Former Manager of Information Strategies (CIO), Strategy Planning Office, Samsung Electronics Co., Ltd.

Representative Director, Nippon Applied Informatics Society (NAIS)

Professor Hong Seung Ko was born in South Korea, and formerly worked for the giant South Korean electrical appliance and electronic components maker, Samsung Electronics as the Manager of Information Strategies to bring to life Internet-based corporate strategy, CALS (primarily B2B conceptually-based), and e-commerce for general consumers. He also made major contributions to the informatization and profitability of that company. Professor Hong spoke at length about the human talent that will be needed in the e-business world, as it undergoes dramatic shifts.

e-Business Requires a Strategy

—The world of e-business appears to be undergoing rapid changes. Has business also changed with the spread of the Internet?

Samsung launched their Website, both domestically and for international customers, in the mid-90s shortly after I became the Manager of Information Strategies. At the time, no one considered the Internet as a powerful tool for marketing, and it appeared to be no more than a means to improve the brand recognition of a company. However, when we opened the website, we received around 200 e-mails a day from all over the world inquiring about product aftercare services, complaints etc. That's when I had a feeling that we could probably use our website as a marketing tool.

Businesses that used the Internet, such as booking systems and stock trading, grew after that. But, we didn't see large-scale growth in sales simply by developing and launching a system for use on the Internet. There was a failed IT boom that occurred in South Korea at the time where people thought that if they just used the Internet their business would do well. They thought that they could make commerce happen if they made an Internet shopping mall, put the products up and host customers from all over the world. But almost all of those Internet shopping malls disappeared from the Internet in several years' time. Ultimately, what they probably didn't realize is that the Internet is just one tool. And, they probably lacked a strategy. No matter how many products you put up on the Internet, they are simply just up on a screen. That's because in most cases, customers bought products after they touch them with their hands and check them out.

Japanese Companies Falling Behind and a Lack of Human Talent

—Amidst these tremendous changes, how do you view the current world business environment?

Unfortunately, the current situation in Japan and South Korea, among other countries, is that there is a lack of human talent to bring to life strategies that use the Internet to improve company sales. Also, companies are making massive investments in preparing IT infrastructure, so this situation leaves them with unending problems.

What companies need is, simply put, human talent to create e-business strategy. Essentially, they need to gain the capacity to make use of IT resources for marketing and management.

It's generally thought that there is little marketing consciousness among employees in Japanese and South Korean companies. This is because the base of their thinking about salary is the equitable distribution of profits, which they can receive through the salary they earn for their day-to-day work. But, the US is different. There is constant, heavy pressure regarding the amount of work that is done and how much your job actually contributed to the company. There are almost no departments devoted solely to marketing in US companies. All the employees already have this mindset, which makes these departments unnecessary. US companies are of the mind to think about how they can improve profitability even if the economy takes a turn for the worse, so they always have the potential to move forward. This is why it is difficult for Japanese and South Korean companies to match with them. There are many companies in Japan and South Korea, including large ones, that mistake sales, advertising and branding as marketing. That's why it is currently only companies in the US that have succeeded as IT companies in using the Internet for business. There are companies that have received that type of acclaim domestically in Japan and South Korea, but they have just rode the e-business wave that has occurred due to the advancement of infrastructure and have succeeded through a money game-type speculation. Incidentally, there are also no companies in Europe that have succeeded in e-business. This is due to the major delays in the spread of the Internet.

Becoming a Specialized Graduate School to Dominate in Asia

—In this business environment, what kind of features should KCGI hammer out; what should we aim for?

There are not many graduate schools that specialize in IT. Also, Kyoto Computer Gakuin is in the ancestry of KCGI. This is our biggest benefit. Moreover, KCGI has a great assortment of faculty who have specialized skills and knowledge, and who have worked for major corporations. In my lectures, I try to speak not just about my success stories, but also about my failures. That's because failures often teach much more than successes.

This is how I train the human talent that will really be needed in this era. The educational network with universities in other countries is also expanding year after year. The field isn't just limited to Japan. I would like KCGI to be a specialized graduate school that can contribute to the training of human talent capable of working in Asia and on the global stage.

Don't be a slave to preconceived notions. Be yourself and follow your dreams.

Professor 土持 ゲーリー 法一

Gary Hoichi Tsuchimochi

Specialist in faculty development, comparative educational studies, history of postwar educational reform and cultural education

Professor Tsuchimochi says that his teaching philosophy is "working with the students of KCGI to create their lessons." He calls on KCGI students to form learning communities to create student-focused classes, exploring the themes of teaching portfolios and learning portfolios.

The original purpose of education is to serve as a catalyst for students' learning

— Could you explain each item of your teaching philosophy in turn?

Why must we avoid being enslaved by preconceived notions? Because when we do so we lose the ability to think flexibly and freely. KCGI is a place where we study leading-edge IT, including AI, and these fields call for creativity.

What's the difference between learning (gakushu) and scholarship (gakumon)? Until recently, schools were focused on passive study of things taught. This is learning. This kind of study emphasizes input. A graduate school is different from that. Nobody teaches you: The student conducts his or her own inquiry. That's the original meaning of the word "scholarship." Learning by inquiry is fundamental to being a working adult. This kind of study emphasizes output.

What is issue-discovery-driven learning? Society will increasingly demand issue-discovery-driven learning going forward. Creating new things requires discovery. And for discovery, inquiry is essential. But inquiry conducted alone can only progress so far. Students must learn not as a group but as a team. This approach, team-based learning (TBL), is spreading in place of problem-based learning (PBL).

What is a learning environment? The kind of study one does depends on the learning environment. The job of a teacher is not to teach. Instead, a teacher must be a facilitator. This is the difference between the Japanese style of education and the American style. The former is the Japanese approach, the latter the American.

What are the liberal arts? The liberal arts are the essence of a university education. Traditionally the liberal arts are associated with the humanities. But nowadays we emphasize that the liberal arts are also essential in the sciences. For example, consider the Liberal Arts Center that has just been established at Tokyo Institute of Technology. One of the professors there is a former NHK reporter, Akira Ikegami. The situation there is the same as at MIT on the east coast of the US. A similar example is Wellesley College, which is famed as former Secretary of State Hillary Clinton's alma mater and the location where the movie Mona Lisa Smile was filmed. Wellesley College is one of the United States' best known science colleges for women, yet it's renowned as a liberal arts college. I introduced their "freshman seminar" in Japan.

What are the fundamental strengths expected of a working adult? "Foundational strengths of a working adult" (shakaijin kisoryoku) is a phrase you often hear in universities and companies in Japan. Books have been published about it. One of these books contains the content of the classes I teach where I point to critical thinking, one of the virtues of the liberal arts, as a foundational strength of a working adult.

Can people coexist with AI? When a report was released contending that AI would surpass humans in capability by 2045, it sparked a sense of crisis. Many wondered whether AI would take people's jobs away. In "Enterprise-site Training by University Faculty," a joint industry-academic project of the Japan Universities Association for Computer Education (JUCE), I participated in an in-house training program at a major electronics manufacturer. This company was on the leading edge of AI technology. It is sometimes visited by Angela Merkel, Chancellor of Germany, who holds a doctoral degree in physics. She emphasized the need for coexistence, not confrontation, with AI. She regards AI as the unification of science and technology with human education.

What does it mean to study ways of learning? Both MIT and Wellesley College stress the importance of teaching "studying ways of learning" as a way of teaching people to learn independently. This is the essence of a liberal arts college.

What is university-enterprise partnership? It's my own term for the partnership between universities and graduate schools on the one hand and society (enterprises) that will be necessary going forward. It is the reason why we need to educate people to become independent learners.

On the KCG Group's educational philosophy: Every university has Admissions Policies, Curriculum Policies and Diploma Policies. The educational philosophy of KCGI's mother institution, KCG, provides examples of these: "To cultivate creativity in computer technology" and "To cultivate thinking from a wide range of viewpoints." This, in a nutshell, is liberal arts as the unification of the sciences and humanities.

Tackling the challenge of seeking unknown worlds through IT

— Finally, do you have a message for our students?

As students of KCGI, you enjoy a richer educational environment than anyone else. That's because you can easily acquire specialized knowledge of IT and apply it as you please to tackle the challenge of seeking unknown worlds. My dream is to work with the students of KCGI to create learner-focused classes, prizing communication with those students, to form a learning community. Please lend me your strength so that together we can make that dream come true.

Balancing the pursuit of digitalization with the need for security

Professor 内藤 昭三

Shozo Naito

Former Head Researcher, Information & Distribution Platform Laboratory, Nippon Telegraph and Telephone Company
Director, Cyber Kyoto Laboratory

Professor Shozo Naito worked for Nippon Telegraph and Telephone Corporation (now NTT) as the Head Researcher in the Information & Distribution Platform Laboratory. He is a specialist in networks and information security. Professor Naito spoke with us about the current state of networks and cybersecurity in Japan and the world, along with related issues, in view of the COVID-19 pandemic.

Japan Must Move Toward Promoting Digitalization

— The COVID-19 pandemic has spurred society to embrace digitalization and use of IT. The launch of a "digital agency," slated for September 2021, should accelerate this trend.

Just like the physical world, cyberspace is full of viruses, with new strains emerging seemingly every day. Mutations happen in the physical world, too, of course, and we try to respond by adapting our ways of living. In some ways Japan's digitalization has fallen behind the rest of the world. At last, however, remote working has begun to catch on. Recently guided by the approach of digital transformation (DX: the transformation of people's lives through the pervasion of digital technology; radical innovation that fundamentally overturns existing senses of value and frameworks), moves to advance digitalization are quickening in a wide variety of ways. Japan's national government appears to be moving forward with the establishment of a digital agency. I believe this is an essential direction for the private sector to take as well. The business world must grasp the risk presented by the COVID-19 pandemic and turn it into opportunity.

Naturally, however, increasing dependency on networks heightens the risks to security. Networking and security complement each other like the wheels of a car. Maintaining the balance between these two aspects is a duty we must keep in mind at all times. In the academic world, we use Zoom regularly for lectures and classes. In the private sector, online conferencing systems with stronger security are being introduced. Similarly, in account authentication, the question of how thoroughly to verify account holders must be reconciled with individuals' need for privacy. It is important to choose solutions that strike a balance between doing the things we want and the level of security we need. In order to promote digitalization, we need to keep in mind the balance between networking and security at all times.

The controversy on how far we can counterattack when cyberattacks occur

— Cyberattacks are on the rise worldwide. And they are growing ever more dangerous.

It's rumored that Russia was involved in the 2016 presidential election in the United States. Some countries are responding to the emergence of space and cyberspace as the fourth and fifth battlespaces, after the traditional ones of land, sea and air, by establishing space forces and cyber forces. Clearly we need to strengthen our responses to cyberattacks. But how far should we go to defend ourselves? An international consensus is needed on this question. Current topics of debate include: How far can a country go in counterattacking in response to cyberattacks, in the same way as one attacks enemy missile bases in response to a missile attack? How severely can we attack sites that attack us? A missile base may be located in one's own country, but a cyberattack could come from anywhere. The server used in a cyberattack could easily be located outside Japan. We need to possess the technology to cope with such threats. Going forward, society needs to have conversations to determine which methods of counteracting cyberattacks are most effective.

Cyberattacks happen not only government-to-government but at the private-sector level too. Many assets, after all, are located on the internet. Money changes hands online, with transactions beginning as virtual currencies and proceeding through digital currencies and digital settlement protocols. Information on shares and real estate is also available as electronic data. Japanese companies hold a great deal of information on intellectual property, and malevolent actors have their sights on it. Large companies are constantly bombarded by cyberattacks. While there is no such thing as perfect security, companies must prepare measures to counter these threats.

Information on a network is basically visible

— We ordinary citizens are also under constant threat from cyberattacks and cybertheft.

We love using electronic settlement, electronic money and so on because they are so convenient, but at the same time we must maintain constant vigilance with them, given the ease with which they can be hacked. The flip side of the convenient features of apps and so forth is the need to remain mindful of the security traps and hidden dangers they entail. Using a nearby free WiFi connection to go online, for example, leaves us vulnerable to eavesdropping or hacking. Basically all information on a network is visible and thus exposed to potential eavesdropping or monitoring. When you send information, you must assume that somebody is looking at it. Whenever you access a network in ways having to do with your financial accounts or revealing personal information, keep in mind the question, "Will I be all right if somebody sees this?" For example, before you send information, ask yourself if you have encrypted it correctly. It's not easy, but it's vital to remember to do this step each time. Technology plays a part in these security measures, of course, but in the end there is no substitute for awareness and prudence.

Kyoto, the city for students

Kyoto has history more than 1200 years. It was once the capital city of Japan and is still the cultural heartland of Japan. It is also an international city and many young students live in the city.
KCG campuses are located in the convenient areas and you can access them from every area of Kyoto city. In addition, they are easy to reach from other places in the Kansai region such as Osaka, Nara, Kobe, and Otsu.

Surrounding Area of KCGI Hyakumanben Campus, Kyoto Main School

There are many spots such as Ginkaku-ji Temple, which is a representative temple of the Muromachi culture, Heian Jingu Shrine, which is connected with Jidai Matsuri (one of the three biggest festivals in Kyoto), Tetsugaku-no-michi, known for its cherry blossom trees, Kyoto City Zoo, the second oldest zoo in Japan, and Kyoto City KYOCERA Museum of Art are in this area (among many other spots). It is easy to come in touch with Japanese culture and history in this location!

Spot

Ginkakuji	Kyoto City Zoo
Tetsugaku-no-michi (Philosopher's Walk)	Heian Jingu Shrine
	Eikando Zenrin-ji
Nanzenji Temple	Chionji Temple
Kyoto City KYOCERA Museum of Art	National Museum of Modern Arts
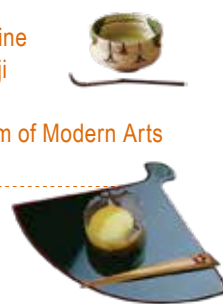
Surrounding Area of KCG Rakuhoku Campus

It is convenient to go to Rakuhoku area, from the center of Kyoto and Kyoto Station by the subway and the city bus from the Kitaoji subway station and bus terminal near Rakuhoku Campus. Kamigamo Shrine is near, Kitayama Street lined with modern buildings, and we can enjoy nature at the botanical garden, Midoroga-ike Pond, and Kamo River.

Spot

Kamigamo Shrine	Kyoto Botanical Garden
Midoroga-ike Pond (also called Mizoroga-ike Pond)	Kitayama Street

Surrounding Area of KCGI Kyoto Ekimae Satellite Campus

Kyoto Station, where the JR, Kintetsu, and city subway lines run, is a doorway to Kyoto that a lot of people visit from the all over Japan. Both modern buildings and historical buildings coexist in this area, and we can feel a contrastive atmosphere.

Spot

Toji	Sanjusangendo
Nishi Hongwanji Temple	Kyoto National Museum
Higashi Honganji Temple	Kyoto Station Building
Tofukuji Temple	Kyoto Aquarium
Kyoto Tower	

Surrounding Area of KCG Kamogawa Campus

Shimogamo Shrine, related with Aoi Matsuri, which is one of the three biggest festivals in Kyoto, and the Imperial Palace in Kyoto are near the campus. This is an area rich in nature.
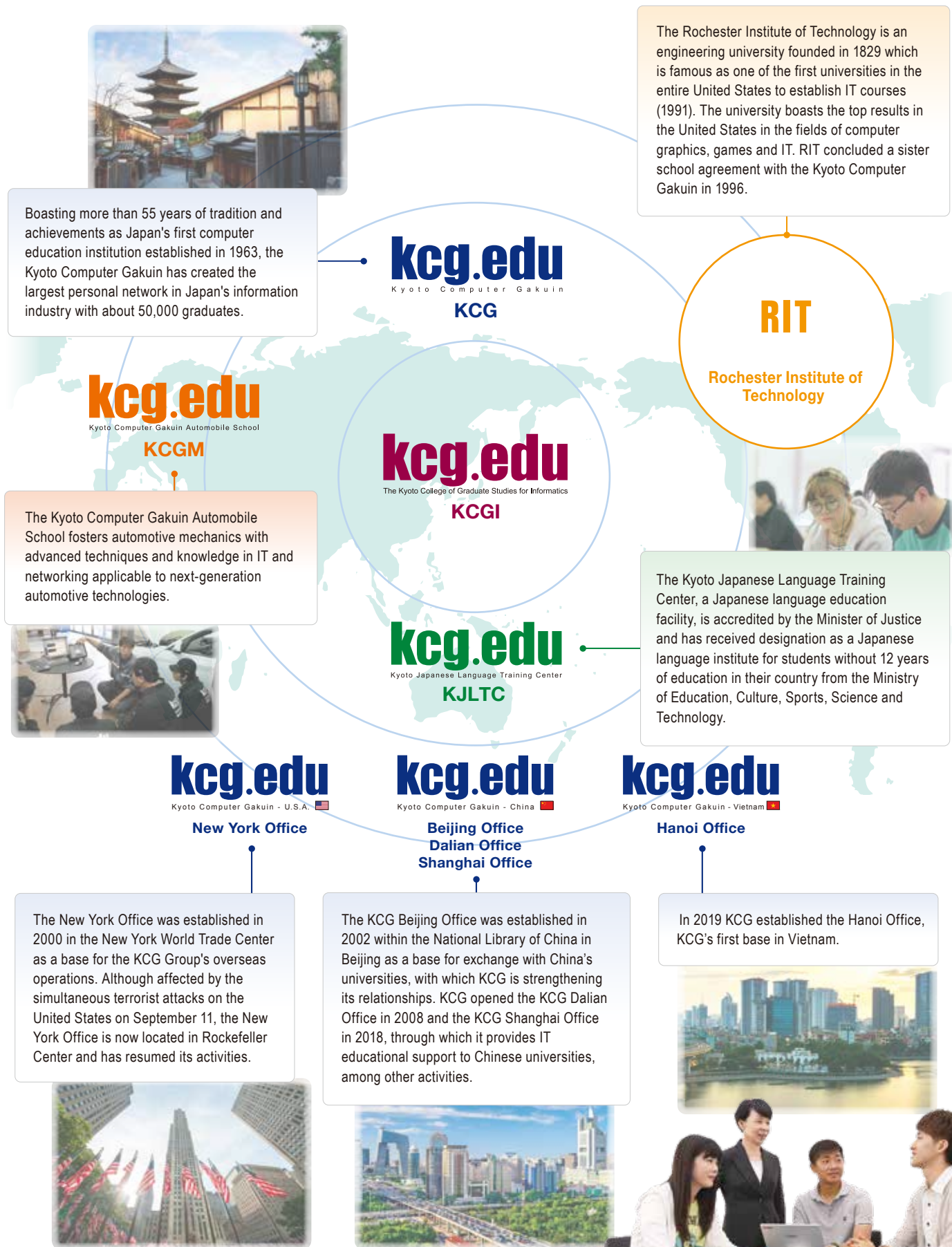
Spot

Shimogamo Shrine	Tadasu no Mori (shrine forest)
Imperial Palace in Kyoto	Kyoto City Historical Museum

kcg.edu Education Network

The Kyoto College of Graduate Studies for Informatics aims to realize world-class, high level IT education as a global education institution and as a leader in IT education while creating a close network with other KCG Group education institutions and collaborating with governments and universities overseas.

The Rochester Institute of Technology is an engineering university founded in 1829 which is famous as one of the first universities in the entire United States to establish IT courses (1991). The university boasts the top results in the United States in the fields of computer graphics, games and IT. RIT concluded a sister school agreement with the Kyoto Computer Gakuin in 1996.

Boasting more than 55 years of tradition and achievements as Japan's first computer education institution established in 1963, the Kyoto Computer Gakuin has created the largest personal network in Japan's information industry with about 50,000 graduates.

kcg.edu
Kyoto Computer Gakuin
KCG

kcg.edu
Kyoto Computer Gakuin Automobile School
KCGM

The Kyoto Computer Gakuin Automobile School fosters automotive mechanics with advanced techniques and knowledge in IT and networking applicable to next-generation automotive technologies.

kcg.edu
The Kyoto College of Graduate Studies for Informatics
KCGI

RIT
Rochester Institute of Technology

kcg.edu
Kyoto Japanese Language Training Center
KJLTC

The Kyoto Japanese Language Training Center, a Japanese language education facility, is accredited by the Minister of Justice and has received designation as a Japanese language institute for students without 12 years of education in their country from the Ministry of Education, Culture, Sports, Science and Technology.

kcg.edu
Kyoto Computer Gakuin - U.S.A.
New York Office

kcg.edu
Kyoto Computer Gakuin - China
Beijing Office
Dalian Office
Shanghai Office

kcg.edu
Kyoto Computer Gakuin - Vietnam
Hanoi Office

The New York Office was established in 2000 in the New York World Trade Center as a base for the KCG Group's overseas operations. Although affected by the simultaneous terrorist attacks on the United States on September 11, the New York Office is now located in Rockefeller Center and has resumed its activities.

The KCG Beijing Office was established in 2002 within the National Library of China in Beijing as a base for exchange with China's universities, with which KCG is strengthening its relationships. KCG opened the KCG Dalian Office in 2008 and the KCG Shanghai Office in 2018, through which it provides IT educational support to Chinese universities, among other activities.

In 2019 KCG established the Hanoi Office, KCG's first base in Vietnam.

■ Overview of KCGI

Name: The Kyoto College of Graduate Studies for Informatics
Parent organization: Kyoto Joho Gakuen
Address: 7 Tanakamonzen-cho, Sakyo-ku, Kyoto 606-8225, Japan
Graduate school: School of Applied Information Technology
Major: Web Business Technology Program
Credits required for completion: 44
Number of students admitted: 600 (Total capacity is 1200 persons.)
Course term: 2 years
Degree: Master of Science in Information Technology (M.S. in IT)

URL: https://en.kcg.edu

KYOTO

Numerous IT companies, leaders of Japanese industry, are located in Japan's center of traditional culture, Kyoto, including Rohm, Murata Manufacturing, Nintendo, Horiba, Kyocera, Nidec, and Omron. Many Nobel Prize winners were also born in Kyoto. KCGI aims to take in the fantastic energy which Kyoto produces and bring it into the classroom.

Hyakumanben Campus, Kyoto Main School

Address: 7 Tanakamonzen-cho, Sakyo-ku, Kyoto 606-8225, Japan
Access: 1 minute walk north from the Hyakumanben intersection
8 minute walk from Demachiyanagi Station; take the Keihan Electric Railway or the Eizan Electric Railway
Take the No. 17 bus from Kyoto Station, get off at "Hyakumanben" or take the No. 206 bus and get off at "Asukaicho"

Kyoto Ekimae Satellite, Kyoto Main School

Address: 10-5 Nishikujo,teranomae-cho, Minami-ku, Kyoto, 601-8407, Japan
Access: 7 minute walk west from Hachijo West Side exit of Kyoto Station

Sapporo Satellite

Address: Daigo Building 7th floor (inside dGIC Inc.), 5-11 Odorinishi, Chuo-ku, Sapporo, 060-0042, Japan
Access: 1 minute walk north from exit no. 2 of Odori Station.

Tokyo Satellite

Address: VORT Motoazabu 4th floor (inside Hitomedia, Inc.) 3-1-35 Motoazabu, Minato-ku, Tokyo, 106-0046, Japan
Access: 8 minute walk from exit 1A of Roppongi Station on the Tokyo Metro Hibiya Line
10 minute walk from exit 3 of Roppongi Station on the Toei Oedo Line