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KCGI: The Kyoto College of Graduate Studies for Informatics

Japan's first IT professional graduate school

京都情報大学院大学

Link to the Pioneer Spirit

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The Kyoto College of Graduate Studies for Informatics

京都情報大学院大学

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The Kyoto College of Graduate Studies for Informatics (KCGI)

◆We offer two fields of concentration: Informatics and Management Studies

For those aiming for senior executive positions, such as Chief Information Officer (CIO) and Project Manager.

◆We accept students from a wide range of fields, including both humanities and sciences

Even computer novices can enroll at KCGI. Learn according to your starting level.

◆With programs such as the long-term study system, we support continuing education for working professionals

KCGI supports diverse ways of attending classes. In addition to daytime classes on weekdays, KCGI offers options such as evening and Saturday classes as well as e-learning. With programs such as the long-term study system, which extends the period of study to three or even four years with two years worth of tuition, we support students who wish to study while they continue to work.

◆KCGI accepts applications in a wide range of fields of IT (ICT)

Of the wide range of knowledge related to IT, KCGI has eight fields of concentration that are of particular interest to the business world in which IT-related knowledge and skills are in high demand. KCGI enables students to learn the diverse knowledge and skills that society expects of an IT professional. We also offer courses on IT (ICT) applications sought in a wide range of industrial fields.

◆We've opened satellite schools in Sapporo and Tokyo. And we're still expanding, in Japan and overseas

Students can attend casses and study at each satellite school. We plan on opening further satellite schools in a number of regions, including overseas.

◆Faculty with a wealth of real-world experience

Many of our instructors continue to serve on the forefront of business. Some are CIOs at major companies; others are active on the cutting edge of the content business.

◆Large numbers of KCGI students have passed the SAP ERP Certified Consultant exam

Through attentive one-on-one instruction, we support students' acquisition of high-level qualifications. Upon gaining the qualifications, many students are hired by or transfer to major corporations.

◆Many classes are offered bilingually or in English

KCGI offers many classes in English and others in languages other than Japanese and English. It is possible to earn a degree taking classes in English only.

◆We participate in global content events

Every year KCGI exhibits at Japan Expo, a general exposition on Japanese culture held in France. We also co-sponsor Kyoto International Manga Anime Fair ("Kyomafu"), a trade fair for all things related to manga and anime.

◆KCGI sits on the secretariats of the Nippon Applied Informatics Society (NAIS) and the Kyoto Manga and Anime Society (KMAS)

We've established academic associations in a wide range of genres related to IT (ICT). Through these associations, we're pursuing R&D and building networks.

◆KCGI is proud to be the administrator of the new top-level domain indicating Kyoto, .kyoto, which we will use to showcase the Kyoto brand worldwide

With support from the government of Kyoto Prefecture, and with the permission of the global domain administrator, KCGI has become the world's only educational institution to administer and operate a geographic-name-based top-level domain.

◆Individuals with high-level IT skills earn an average of ¥9.37 million per year

According to Japan's Information Technology Promotion Agency (IPA), version three of the agency's IT skill standards positions "high level" (levels 4 and 5) individuals as "individuals established in specialized fields as professionals who are able to apply knowledge and practical skills to train the next generation. According to *Results of the Fact-finding Survey on Salaries in IT-related Industries*, published by the Ministry of Economy, Trade and Industry (METI) in August 2017, the average salary at level 5 is ¥9.37 million per year. Raising one's career to such a level takes more than accumulating work experience at a company. A highly effective option is to pursue practical studies in the fields of business and IT at a professional graduate school such as KCGI.

First professional IT graduate school to be certified by the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

No. 1 & the Only One!

京都情報大学院大学

School Philosophy

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

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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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.

*ICT: Information and Communication Technology

A KCGI Education

President & Professor,
Kyoto Joho Gakuen

Wataru Hasegawa
長谷川 亘

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 (ANIA)
Founder, Information Technology Federation of Japan (IT Renmei)
Representative Director & Prime Vice Chairman, Japan Federation of IT Associations
Chair, Information Processing Society of Japan (IPSJ)
Chair, Japan Massive Open Online Education Promotion Council (JMOOC)
Vice Chair and Member of Management Planning Committee, IT Coordinators Association (ITCA)
Member, Personnel Training Council
Member, IT Security Slogan, Poster and Four-panel Manga Contest Examining Committee IPA
Member, Management Committee, Advanced Polytech Center
Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers
Advisor and Chair, Nippon Applied Informatics Society (NAIS)
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, Honors Master Thesis

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 since its establishment in 1963. During that time, not only high school graduates but also many graduates of four year universities have enrolled and studied at this school. 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. These majors were treated as merely a sub-field in traditional major programs such as business management, industrial engineering technology and majors related to information. They 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 personnel 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. At KCGI, students gain a general grounding in IT. The curriculum is continually revised and updated to ensure that students can apply what they have learned and play an active role in their chosen fields. Students who complete their courses at KCGI possess the strong knowledge and skills and broad perspective necessary to play an active role in any of a wide range of fields in Japan or overseas.

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.

In addition, KCGI is independently building out a comprehensive network of universities and other educational institutions for partnership and exchange, in China, South Korea and other countries worldwide. Already KCGI students can avail themselves of partnerships with over 100 institutes of higher learning around the world. While deepening existing ties, KCGI is actively developing its educational business. At its inception, KCGI had admission capacity of just 80 students (total capacity of 160). Since April 2020, admission capacity has been 600 (total capacity of 1,200 in FY2021), representing a 7.5-fold expansion. This admission capacity is one of the highest for any informatics graduate school in Japan.

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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At the Turning Point of a New Era

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

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, Toyohashi University of Technology

Former Professor, Kwansei Gakuin University

Former Professor, Guest Professor, University of Illinois and others.

Fellow of ACM, the Information Processing Society of Japan, the Japan Society for Industrial and Applied Mathematics.

Member Emeritus, Operations Research Society of Japan, Scheduling Society of Japan

Courses:
Advanced Topics in Systems Theory, Honors Master Thesis

The Industrial Revolution of the late 18th to late 19th century was sparked by the emergence of a new source of power: the steam engine. The expansion in productive capacity that ensued accelerated further later on, when electricity and petroleum came into use. By the 20th century, productive capacity far outstripped the level humanity needed to survive. This state of affairs prompted a so-called "shift from quantity to quality," in which the mass production of the past gave way to the era of small-lot, multi-model production. Amid this enormous wave, the world's industrial structure changed in profound ways, giving rise to a new social order.

As the late 20th century gave way to the start of the 21st, once again information and communication technology (ICT) drove revolutionary change. This was the Information Revolution. The source of the revolution, computer technology, had existed for about 70 years, but it now progressed exponentially, rising to previously unimaginable heights of processing speed and memory/storage capacity. Compared with the Industrial Revolution, the pace of change in the Information Revolution is orders of magnitude faster. Whereas the number of neurons in the human brain is thought to be in the neighborhood of 10 raised to the 11th power, the number of elements that make up a computer is already poised to surpass this figure. Arguably, in hardware terms, the computer has already drawn even with the human brain. The other driver of the Information Revolution, communication technology, is evolving rapidly as well. In addition to the transmission of information using electrical currents and radio waves, communication using light—optical communication—has become practical, ushering in the age of digitalization. By using the greatest result of this revolution, which is the internet, we can now send not only text but also photos and even video data from anywhere in the world to any other, instantaneously.

This progress in ICT has wrought far-reaching changes in our lives. Powerful computers can now solve partial differential equations that describe changes in the atmosphere faster than the weather phenomena themselves can unfold. This deciding factor has made numerical weather forecasting possible. Computer software can now analyze and recognize speech faster than humans can utter it, enabling people and computers to engage in dialogue in real time. The barriers to memory capacity have all but melted away. Computer systems can now remember and store as digital data all the books in the world, all the information an individual can gather in her lifetime through eye and ear, and all the communications that flow between people. As they get faster, computers themselves are also getting smaller. Mobile telephones and smartphones have found a place in the pocket of virtually everyone on Earth. Some people even sport wearable computers, in their eyeglasses, wristwatches or clothes. Robots have been made possible for the first time by integrating these leading-edge technologies. They can not only replace certain human physical functions but also incorporate advanced AI, playing roles resembling new living creatures. New and fascinating types of robots are emerging one after the other. We have nursing-care robots that help people with mobility issues and robots that answer visitors' questions and guide them to their destinations. There are robots that stay in people's homes, conversing with them in the role of pets.

Zooming out, we see that business, politics and international relations are by no means excluded from the reach of ICT. Communication infrastructure, represented by the internet, has become global, connecting the entire world on a network. As a result, new multinational businesses are emerging in a steady stream. In fact, the very nature of nation-states and societies is impacted and changing at a dizzying pace.

While ICT has made our lives incredibly convenient, however, it has fomented new threats, about which we must be vigilant. Every day we are annoyed by spam in our inboxes and computer viruses trying to steal into our computers. These attacks may be used to violate our privacy or commit computer crime and even cyberterrorism. The effects range from minor inconveniences to serious threats; one error in our response can lead to disaster. Confronting these issues is a major concern today.

As the Information Revolution engendered by ICT marches onward, what's next? AI was created by humans yet, in the game of chess for example, it surpassed the human world champion in 1997. AI has now surpassed the abilities of professionals in games such as shogi and go. In the near future, AI may progress sufficiently through its own learning to become able to create still more advanced AI, all by itself. If such a self-propagating cycle begins, the day when computers become smarter than humans will not be far off. Futurists refer to this moment as the "singularity." But after the singularity, will humans and AI live together in peace?

We have now discussed a wide range of aspects of ICT. As these conflicts play out, humanity finds itself right in the midst of a transformation. We may say, with only a little exaggeration, that we have reached a turning point for the future of the human race.

The Kyoto College of Graduate Studies for Informatics (KCGI), Japan's first ICT-focused professional graduate school, was founded to respond to challenges such as these. KCGI is now in its 19th year of operation since it opened in April 2004. KCGI's parent institution, Kyoto Computer Gakuin (KCG), was established in 1963, when computing was in its infancy. KCGI is proud successor to KCG's traditions and successes.

The Founding Philosophy and Purpose of KCGI is to "respond to the needs of society, take charge of the times, and train applied information technology specialists with advanced practical abilities and creativity to lead the next generation." To accomplish this goal, KCGI has established a Specialization in Web Business Technology for Applied Informatics. From the wide range of fields encompassed by applied informatics, students can select any of the following fields of concentration: Artificial Intelligence, Data Science, Web Systems Development, Network Administration, Global Entrepreneurship, ERP (corporate trunk systems), IT Manga and Anime and Tourism IT. New students choose one of these fields of concentration. Outside of this field of specialization are the Supporting Electives and Industry Courses (Agriculture, Education, Content Marketing, Fintech, Marine and Health & Medical), from which students may freely choose.

After its foundation, KCGI opened satellite schools in Sapporo and Tokyo. Student capacity has grown in leaps and bounds. At this turning point in the history of ICT, KCGI is off to a running start. While diligently devoting itself to ICT, KCGI is also committed to developing personnel with a full understanding of ICT's impact on society and the ability to lead society in a beneficial direction. KCGI welcomes ambitious students, regardless of age, work history, nationality, or whether their background is in the humanities or the sciences. In addition to fresh university graduates, KCGI warmly welcomes those already in the working world and seeking to advance their careers and people overseas who are interested in studying in Japan.

Color of KCG Group

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

For the international students, KJLTC is the first entrance of 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

From its inception, KCGI has always implemented the latest in e-learning systems. Later, the Sapporo and Tokyo satellite schools opened their doors. In addition, KCGI offered online classes in real time, linking universities around the world with the Kyoto Head School. KCGI makes every possible effort to stay up to date and maintain a successful track record on online-classroom technology. We also strive to achieve online classes that are just as effective as conventional-in-person lessons. KCGI currently offers four formats for instruction:

1) Conventional, in-person classes in a classroom

2) Real-time, online classes, enabling bidirectional communication via online-conferencing tools and e-learning systems

3) Hybrid classes, in which instructors provide lessons either in a classroom or from a remote location while students select whether they wish to attend in the classroom or at home or another location other than the classroom

4) Asynchronous, on-demand lessons in which the student can view and listen to class content within a specified time-frame. With this choice of formats, students attend classes without being compelled to present themselves at a particular place or use a particular tool.

Future developments in the COVID-19 pandemic cannot be predicted. In such times, out of an abundance of caution, KCGI is paying close attention to related social conditions, including the status of the pandemic in Japan and the spread of vaccination, to select and allocate these four class formats appropriately. KCGI is committed to providing students with a safe and effective study environment. Going forward, as in the past, KCGI students can choose the class format that's right for them, even under conditions of a pandemic, so that they can pursue their studies effectively and with safety and peace of mind.

Studying IT (ICT) and Management and Applying it in Various Industries

■ 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.

Hybrid classes: Your choice of studying in the classroom, at home or elsewhere

■ 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. In a typical Japanese graduate school, students complete 32 units to earn a master's degree. In contrast, at KCGI a master's degree requires completion of 44 units—12 more than at a conventional graduate school. Why is this? It's because at KCGI, our goal is to develop people whose specialized knowledge of their chosen field is not only deep but broad, not only thoroughly versed in ICT skills and knowledge but also capable of putting them to practical use.

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.

■ Overseas Study and Overseas Dispatch Classes

KCGI partners with numerous colleges and universities in a wide range of countries, including the Rochester Institute of Technology in Rochester, NY, USA. KCGI actively sends students to study abroad at these partner institutions and takes part in international academic conferences. We also make active use of overseas internship programs, for example providing opportunities to participate as teaching assistants (TAs) in classes at partner schools overseas.

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.

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

KCGI offers many lectures in “English mode,” so that students can, attend classes and earn a KCGI masters degree entirely in English. Some of these lectures are taught by top-level instructors invited from overseas. Currently KCGI hosts overseas students from 15 countries and regions (including students who completed their courses in March 2022), many of whom choose to attend lectures in English. This is a major advantage of a KCGI education.

This option is not just for foreign students. Japanese students can also attend lectures in English, provided their English proficiency has reached the required level. KCGI offers a great chance to its Japanese students to polish their English proficiency while studying ICT, providing them with a diverse international studying environment.

The IT industry demands that people continually absorb the latest information. People who can put useful information to work in development or production are the ones who will grow to become successful business people. The IT field generates new technologies every day, so the ability to catch up on the latest information is vitally important. Of course, many of these leading-edge technologies arrive on Japan’ s shores from the United States and other overseas countries and regions, so the information about them is almost always written in English. Engineers from countries whose official language is English vastly outnumber Japanese engineers, so high-quality information and articles are necessarily written in English in most cases. If you can catch up early with the English-language information you need to perform your duties and improve your skills, you will unquestionably find that ability to be a significant advantage in your work.

Students aiming for a career at the pinnacle of their industry, for example at a foreign-affiliated IT company or consulting firm, can use the KCGI advantage, English mode, to good effect.

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.

AI Architect

Artificial intelligence (AI) is a key technology for realizing the people-centered society of the future, as represented by Society 5.0. An AI architect is not merely someone who is proficient in machine learning and other AI technologies, but rather an advanced, specialized professional who can put to use skills in analyzing target duties and fields of application and in developing and applying AI systems to solve problems and advance optimization in a wide range of fields. AI architects are expected to play a vital role, as they will be in charge of core duties in building the social systems and running the industrial structures of the future.

System Integration Consultant

Due to a lack of in-house IT talent, the demand for external consultants in promoting information technology 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 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.

Entrepreneur

An entrepreneur is someone who starts a business from scratch. As the founder of a new business or project, the entrepreneur must have the strong ambition to stick firmly to the founding principles of the company and the leadership to pull the entire organization in the intended direction. The entrepreneur bears heavy responsibility for the execution of the company’s business and must have a solid grasp of the state of the business and issues on the shop floor at all times. For these reasons, excellent management skills are a must.

IT Architect

The IT architect is an advanced, specialized professional possessing a deep understanding of IT. The responsibilities of the IT architect encompass the entire series of duties from proposal of an IT strategy and drafting of a grand IT design to solve a management or work problem to IT planning and subsequent advancement and implementation. To the duties of an IT specialist, the IT architect adds a management perspective, examining and proposing common specifications and requirement definitions for system development as well as target states for systems. The IT architect must have the skills to specify the conditions for operating and maintaining a system, based on the overall system orientation and arrangement.

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 Scientist

The data scientist collects, extracts and analyzes necessary information from the mass of Big Data and uses that information to propose measures aimed at improving the condition of a business. The expansion of Big Data was cited in METI’s *Survey Results on the Latest Trends and Projections in IT Personnel*, suggesting that demand for data scientists is set to climb. In recent years, the beneficial use of Big Data in fields such as agriculture and medicine has been advancing, broadening the fields in which it is applied. In addition to knowledge of marketing and management, data scientists are expected to possess IT skills such as statistical analysis and data mining as well as the ability to think logically based on hypotheses and proving tests.

Educational Environment and Systems

A practical education environment including world-standard business systems

SAP ERP Systems for Education

■ Developing Business Personnel by Implementing ERP Packages from SAP

To develop Business Personnel with advanced IT skills in the IT field, KCGI has implemented SAP S/4HANA, an enterprise resource planning (ERP) system from Germany's SAP GmbH, the world's largest ERP packaged-software vendor, to create a practical learning and research environment. KCGI is the institution in Japan that has introduced such a system to develop full-fledged specialists in ERP including system development.

■ Effective Implementation in Management

SAP's ERP systems are huge, complex systems. At KCGI, students do not merely learn how to operate SAP ERP systems. They also learn the sequence of work procedures at companies, while advanced practical skills such as customizing SAP systems to support work processes and consulting on introducing ERP systems at companies.

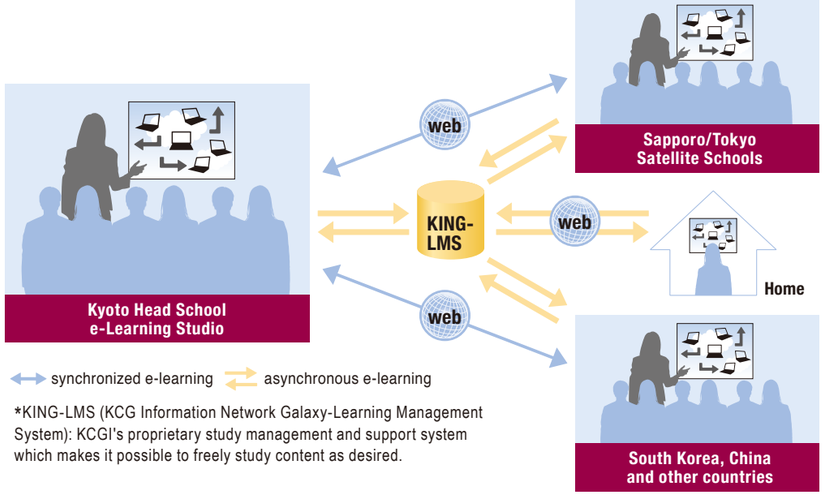
■ Cultivating Advanced Practical Skills

At KCGI, students examine, from a variety of angles, how SAP S/4HANA works and how it can support work processes. Through practical study, students learn how the implementation of ERP changes overall work processes, including purchase-inventory management, production, sales and distribution, accounting and human resource management. Through its specialist ERP courses, KCGI graduates students have passed the qualification exam for Certified SAP Consultant.

Learning Management 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.

Electronic Libraries

To access the latest information in the IT field, KCGI subscribes to a number of electronic libraries. Among these are the libraries of the Association for Computing Machinery (ACM), an ICT academic association in the United States; the Institute of Electrical and Electronics Engineers (IEEE); and the Information Processing Society of Japan (IPSJ). At each of these scholarly associations, KCGI has access to the full text of numerous academic journals, focusing mainly on the publications of the academic societies themselves. In many cases we are able to access back catalogues going back decades. In addition, KCGI uses the Academic Information Network of the National Institute of Informatics (NII). These resources provide a comprehensive environment for conducting surveys and research.

New Educational Building on the Hyakumanben Campus of the Kyoto Head School

To enhance its educational environment and create a new hub for IT education and international exchange, KCGI has built a new educational building on the north side of Hyakumanben Campus of the Kyoto Head School. With the completion of the new building, the site of Hyakumanben Campus is expanded to three times its previous area.

The new educational building is four stories tall with one basement floor. Facilities include classrooms with high-flexibility specifications, to support diverse learning formats including active learning; innovation rooms, designed to promote creative thinking; individual work booths tailored to support online classes and meetings; and a library replete with books, mostly related to IT. With the completion of the new building, KCGI can provide advanced, innovative and global education, backed by KCGI's educational experience and theory. In addition, a large auditorium functions as a multi-purpose hall, while space for practical training in agricultural IT is also provided.

KCGI's admission capacity, which was only 80 students at its inception (total capacity of 160), is currently 600 (total capacity of 1,200), representing a 7.5-fold expansion. This admission capacity is one of the highest for any informatics graduate school in Japan. In recent years, KCGI has welcomed foreign students not only from other Asian countries, Europe and North America, but also from but also from Africa and from Central and South America. A new hub of learning has emerged in Kyoto, a city with a long history of erudition, attracting students from all over the world.


Large auditorium


Innovation room


Classroom with high-flexibility specifications


Individual work booths

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.

Studying at KCGI

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

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.

Educational Objectives Graduate School of Applied Informatics Technology Specialization in Web Business Technology

The purpose of this Specialization is to train advanced, specialized professionals who can respond rapidly to developments in IT and related fields; can deploy basic analytical ability backed by a broad perspective, through study and research in the theory of disciplines related to physics, engineering, management, etc., and their applied technologies; and possess the advanced technological skills required to succeed in professions that require high specialization.

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 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. Supporting Electives are courses provided with the aim of developing a broad base of knowledge independent of particular areas of concentration and industries. Mandatory Courses include courses teaching basic skills needed by businesspeople as well as practical skills of use in professional fields. At KCGI, classes are taught by outstanding individuals who are active on the front lines of their respective fields. The courses that comprise each course category reflect the latest industry trends and are updated in a timely manner.

Concentration Courses

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.

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

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.

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

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.

Mandatory

KCGI accepts students from a diverse range of backgrounds, regardless of the academic department from which they graduated. This open approach provides many professionals with opportunities to change careers, thereby fulfilling a significant social role. For this reason, the mandatory courses are set with the aim of nurturing the basic skills in vigorous and logical communication that are expected of an advanced specialized businessperson, regardless of the student's field of specialization.

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

◆ Course Composition

Enrollment

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

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

Select one of the above Fields of Concentration

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

Supporting Electives

or

Bespoke Curriculum

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

Master Project

Master of Science in Information Technology (Professional Degree)

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 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.

Unlike master's theses at conventional graduate schools, which center primarily on research, the master's thesis at KCGI may consist of a written master's thesis or it may consist of discovery of new knowledge or the application of existing tools to a project. Students are free to select their own themes and approaches based on their own preferences and aspirations.

The master project is the culmination of the student's studies. The aim is to provide students with the opportunity to improve the lives of real communities and people through the practical application of ICT.

◆ Methods of Implementation

Students pursue their master projects on their own initiative, under the guidance of a project sponsor. A master project can be a project to apply specialized technology or it can consist of deep-diving academic research. Practice is modeled on Columbia University in the United States, the global pinnacle of the education field. A flexible approach is taken in which students can select any of the following four types of master project, based on the time available to them and the nature of the project.

Master Report

Type 1 The student chooses one course from his/her field of specialization, tackles a theme related to that course, and completes the report.

Master Project

Type 2 The student decides on a theme of his/her own free conception, pursuing a project according to his/her own aims and preferences.

Honors Master Project

Type 3 The student pursues a project with particularly advanced content or an unusually large theme. The student decides the theme himself/herself and spends the time necessary to pursue it.

Honors Master Thesis

Type 4 This type is for students aiming to produce a master's thesis on the same level as the world's great universities. The student decides the theme himself/herself and spends the particularly extensive time necessary to pursue it.

Eight Fields of Concentration Available for Study at KCGI

Fields of concentration are fields of courses that students can select to build a body of knowledge in a particular domain that is both specialized and broad-based. At KCGI, we have identified eight categories of occupational domains that are closely watched by industry and where demand for ICT-related knowledge and skills is especially high. We select and group the courses according to purposes. Each student selects one field of concentration in accordance with the student's ambitions and goals, then focuses on studying that field. (For details on each field of concentration, please see p. 17.)

Artificial Intelligence (AI)

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.

Data Science

Students learn how to analyze business information stored on the cloud or in databases and learn methods of applying that analysis for effective decision-making.

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.

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.

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.

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.

Bespoke Curriculum

The field of ICT is advancing every day. To respond to this constant progress, it may be necessary not to limit oneself to a particular field of concentration but to compose and study one's own curriculum. A student may consult with an instructor according to his/her own study objectives and freely select courses from among course groups other than the mandatory courses, to build an original curriculum covering a wide range of knowledge and fields of application. We call this approach "a Bespoke Curriculum."

Industrial Applications

As the environment surrounding ICT continues to change dramatically, the fields in which ICT is applied are relentlessly diversifying. At KCGI, the courses incorporated into each field of concentration are geared to applying those studies in specific industries and business types that require specialized knowledge, with a view to putting ICT into practical application. We focus particularly on the following six industries and business types, where expectations are especially high that the application of ICT will lead to solutions. Courses are selected and grouped with the aim of developing personnel who can play active roles in each industry. These courses can be studied in tandem with the chosen field of concentration. (For details on each industry course, please see pp. 22 & 23.)

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.

Fields of Concentration

Artificial Intelligence

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

Artificial intelligence (AI) has been a major field of informatics since it began attracting attention in the latter half of the 20th century. Today it is a cornerstone technology that is transforming society profoundly. With recognition, search and inference of natural language, voice and images emerging as core technologies, fields of application for AI are broadening exponentially, encompassing machine translation, automatic stenography, facial recognition, automated driving, medical-information processing, robots for nursing care and other applications, games such as go and chess, and entertainment such as e-sports. In this field of concentration, students study the basic theory of AI and related fields such as data science, learning how these technologies are applied through case studies. Students then become familiar with numerous software applications related to AI, with the aim of becoming specialists capable of putting AI technology to practical use. KCGI also offers training programs geared to developing advanced engineers who can develop applied software for AI.

Target career paths

- People who are studying basic and applied AI technology so they can thrive in the coming AI society
- People who possess skills in developing large-scale Python programs and can put existing AI-related software to effective use
- Advanced engineers who can manage the development of software for innovative AI applications in pattern recognition (image, voice, language, etc.) and in business

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.

Data Science

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

Data science is a branch of informatics that has recently garnered considerable attention. It has been cited as a vital discipline for the use of large-scale accumulated data in a variety of IT applied fields. For this reason, KCGI conducts research and education in related data management technologies and data analytics. Since the early days of data science, data management and analysis, data scientists have been putting database technology and statistical analytics to wide use. Recently, however, these legacy technologies have proven unable to handle the explosive growth in the sheer volume of Big Data. More advanced data-processing technologies are required, both in hardware and in software terms. Data science and AI are intimately connected. In these fields of concentration, the study objectives lie in fields of business (in the broad sense). In its preceding curriculum, KCGI reorganized the Business Data Analytics field of concentration, to keep it relevant.

Target career paths

- Analysts, who perform extraction and use of information resources (data mining), market analysis, etc.
- Consultants, who provide advice and policy for product planning
- CIOs, who can make decisions on proposal and promotion of corporate strategy based on data
- CRM managers, who construct recording models and strategies as well as forecasting models for consumer behavior

Messages from Project Sponsors **Professor Yoichi Terashita**

The projects I supervise involve research and practical experience in data accumulation, management and analysis. While projects are grounded in conventional database management technologies, students also experience the application of new data management technologies that can handle the recent emergence of Big Data. My goal is to train people who can play active roles in the many leading-edge IT companies active today. As the name of this field of concentration suggests, these data management technologies have come to be referred to collectively as "data science." Data science is sure to acquire mounting importance going forward as a foundation of IT.

Web Systems Development

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

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

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

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

- Internet Service Designer/Operator/Administrator
- 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.

Global Entrepreneurship

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

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.

In Global Entrepreneurship, students study not only concepts in IT and management but also the latest marketing methods, to be an immediate asset to a company or project. Such methods include growth hacking, which is the solution of issues using Web marketing, and growth marketing, which involves boosting profitability by grasping data focused on strengthening relationships with customers (applying Big Data and data science to improve UX, etc. in a short period of time).

Target career paths

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

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?

IT Manga & Anime

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

The "Cool Japan" strategy promoted by METI is a framework by which businesses can highlight Japanese culture, content industries and creative industries that are admired worldwide, such as manga and anime, in messaging throughout Japan and around the world. Taking note of this strategy, KCGI provides a curriculum in which students can experience a variety of situations in creative industries and engage in practical study of individual problems and solutions, to apply manga and anime in Web businesses. This experience includes creation of new business models, based on the study of existing content-creation industries and their business models, as well as practice in planning and producing anime.

Manga and anime have entered an era of large-scale joint development. In many cases, order placement and acceptance straddles national borders. As the content and creative industries in general, and anime and manga in particular, continue to develop internationally, the power of ICT has become indispensable. These industries need people who can conceive and implement solutions tailored to each situation. In addition to possessing skills in drawing, video editing and storyboarding, these personnel can wield a wide range of digital tools with the skill of an expert. This field of concentration develops people of comprehensive capabilities, able not only to create content but also to demonstrate creativity in their work and in their very lives.

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.

ERP (Enterprise Resource Planning)

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

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

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 implement ERP 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 and distribution, accounting and human resource 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 in global consulting firms.

Special Report — Over 200 KCGI students have passed the SAP certification exam!

A commemorative photo of students in the ERP field of concentration and ERP instructors

A cumulative total of over 200 KCGI students have passed SAP's SAP Certified Consultant exam. Since the first KCGI student to pass the exam did so in 2005, the numbers have steadily risen. In June 2017 the figure surpassed 100; in June 2019, 150; and this year, 200. To commemorate this milestone, students in the ERP field of concentration and ERP instructors gathered in a classroom on the Hyakumanben Campus of the Kyoto Head School to hold a ceremony.

At the ceremony, Professor Masaki Fujiwara, who had coached the students, handed out commemorative gifts to the graduates. Professor Masahiro Furusawa offered his congratulations, along with these words of encouragement: "Students, I surmise that your accomplishments are the fruits of your own diligence and of the strenuous efforts of the teaching faculty. Remember the words posted on the official SAP website: Certified consultants must continuously 'keep their skills up to date and maintain their specialized knowledge at the highest level.' Keep amassing experience and contribute to changing society for the better."

Finally, Professor Fujiwara cheered the successful students with the words: "The SAP certification exam is the global standard. When you accepted your certifications, you created for yourselves a stage on which to play a vital role in the world as ERP consultants. After you graduate, may this auspicious moment inspire you to spread your wings and accomplish great works."

IT Tourism

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

The recent COVID-19 pandemic has plunged the tourism industry to unprecedented lows. Even so, some bright spots have appeared. Sightseeing areas are emerging that are "good to live in and good to visit," and sustainable tourism is in demand. In this field of concentration, students learn about the creation of new tourism services and new tourism business models. Examples include the provision of tourism information in multiple languages and via multiple media; and the digitalization, analysis and forecasting of tourist activity history. As the tourism industry comes face-to-face with a range of new issues, this field of concentration is training a new generation of problem-solvers. These are individuals who can proposeplans to vitalize tourism areas through the use of digital transformation for tourism (tourism DX), creating and applying digital resources using digital tourism and similar tools.

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
- Tourism-DX personnel who can quickly, creatively and proactively discover useful information for the next-generation tourism industry
- Top-level management personnel who can lead the tourism industry

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

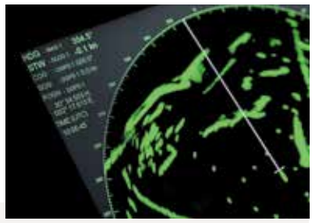
As vegetable factories and agricultural-support cloud services attest, IT can be applied to solve problems in Japanese agriculture that have proliferated in recent years, such as shortages of farm successors and declining competitiveness against imports.

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

Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice	Important
Concentration Courses	Artificial Intelligence	Statistics for IT	2		Natural Language Processing	2		
		Introduction to AI ∗	2		Medical Frontier Informatics	2		
		Introduction to Algorithms ∗	2		Robotics and AI	2		
		Computer Programming (Python) ∗	3	○	New Businesses and AI	2		
		Fundamentals of Database Technology	2		Mathematics for AI ∗	2		
		Computer Organization Theory	2		IoT and AI	3	○	
		Fundamental Mathematics for Applied Informatics	2		Speech Comprehension	2		
		Machine Learning and Its Application ∗	2		Fundamentals of Fintech	2		
		Combinatorial Optimization ∗	2		Advanced Case Studies in Agricultural AI	2		
		AI Software Applications 1, 2 ∗ (1 only)	2 each		Logical Thinking ∗	2		
		Data Mining ∗	2		Object Oriented Programming	4	○	
		Advanced Topics in Database Technology	4	○	Data Analysis 1, 2 ∗ (1 only)	2 each		
		Games and AI	2					
	Data Science	Fundamentals of Database Technology	2		Internet Business Strategies and Marketing	2		
		Statistics for IT	2		Advanced Topics in Information Ethics	2		
		Fundamental Mathematics for Applied Informatics	2		e-Commerce Methodologies	2		
		Computer Organization Theory	2		Practical Cloud Computing	2		
		Web Programming 1, 2 ∗ (2 only)	2 each	○	Organizational Behaviour ∗	2		
		Fundamentals of Computer Programming	3	○	Data Warehouses and Big Data	2		
		Introduction to Web Business	2		Cutting Edge of Applied Information Technology A In-memory Database	1		
		Qualitative Data Analysis and Transformation ∗	2	○	Fundamentals of Fintech	2		
		Exploratory Data Analysis and Visualization	4	○	Advanced Topics in Business Administration ∗	2		
		Theories of Data Mining	2		Data Analysis 1, 2 ∗ (1 only)	2 each		
		Advanced Topics in Database Technology ∗	4	○				
	Web Systems Development	Fundamentals of Database Technology	2	○	Fundamentals of Networking	2		Select one of these fields of concentration. You can also select courses from among the industry courses.
		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 only)	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 and AI	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					
	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 ∗ (1 only)	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					

Categories	Classification	Courses	Number of Credits	Practice	Courses	Number of Credits	Practice	Important
Concentration Courses	ERP	Fundamentals of Database Technology	2		Sales and Distribution System Development 1, 2	3 each	○	Select one of these fields of concentration. You can also select courses from among the industry courses.
		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	○				
	IT Manga & Anime	Fundamental Mathematics for Applied Informatics	2		Scenario Writing and Storyboarding	2		
		Computer Organization Theory	2		Rich Media Content Development ∗	4	○	
		Animation Drawing Fundamentals A, B	2 each	○	Visual Story Telling and Communication ∗	3	○	
		Web Programming 1	2	○	Special Topics in Anime, Planning, Production and Promotion ∗	2		
		Special Visual Effects	3	○	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		
		Digital Animation Creation ∗	3	○	Visual Image Processing	2		
	IT Tourism	Statistics for IT	2		Media Communication	2		
		Fundamentals of Computer Programming	2		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 Analysis I	2		IT Tourism Internship	2		
		Business Economics 1 ∗	2		Global Human Resource Development ∗	2		
		Brand Design and Business Management	2		Mobile Application Development	2	○	
Industry Courses	Fintech	Money and Banking	2		Fintech Systems Design	2		The Industry Courses are to be attended in conjunction with the Concentration. Multiple fields may be selected.
		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		
		Fundamentals of Marine IT	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	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					
Supporting Electives		Fundamental Mathematics for Applied Informatics	2		Cutting Edge of Applied Information Technology A	1		Students may select freely from the list of courses at left.
		Statistics for IT	2		Cutting Edge of Applied Information Technology B	2		
		Visual Image Processing	2		Advanced Business ICT Communication	3	○	
		Technical Communications Skill	2		Technical English Communications Skill	2		
		Business Presentation	2		Web Programming 1	2	○	
		Business Communication 1,2	2 each		Fundamentals of Database Technology	2		
		Media Communication	2		Computer Organization Theory	2		
		Business ICT Communication	3	○	Fundamentals of Networking	2		
		Advanced Topics in Systems Design	2		Fundamentals of Computer Programming	2		
		Advanced Topics in Systems Theory	2		Fundamentals of Construction IT	2		
		Production Systems Engineering	4	○	Study of Trends in Applied Technology	2		
		Robotic Process Automation	2					
Mandatory		Professional Communications in the ICT Industry	2		Project Foundations	2		☆
		Leadership Theory	2		Master Project	0,2,4,6		

• 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.

☆ For details on master projects, please see p. 15.

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.

Advanced Case Studies in Agricultural AI

The agricultural sector is rapidly losing its most experienced cohort of farmers. Using ICT and AI, a new agriculture is arising in which farmers' heuristic and implicit knowledge is converted into explicit knowledge that can be passed on to other farmers and new entrants. Through case studies, this course examines the ways in which AI is being applied in the agricultural sector.

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 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.

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.

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.

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.

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.

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.

Advanced Topics in IT Tourism

Students learn about IT tourism by analyzing issues confronting the tourism industry, from pespectives 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.

AI Software Applications 1

AI technology is said to be in the midst of a third boom today, as it progresses in leaps and bounds. Applied AI systems using new AI technologies are being actively developed in a broad swath of fields. In this course we study machine learning, which is an AI technology. Using a library of the Python language, students run representative techniques of machine learning on their own PCs, to understand the techniques of machine learning. To learn how to use machine learning in a wide range of data analyses, students study applied AI technologies (machine-learning technologies).

AI Software Applications 2

In this course, students use the Python language to mount and run important algorithms for neural networks and compare the results with the results obtained from the Python library, thereby gaining an understanding of the computing processes inside the library. Students also run a convolutional neural network, which is a representative technique of deep learning, to master its computational processes and method of running. Other deep-learning techniques, including recurrent neural networks, generative adversarial networks and deep reinforcement learning, are also covered.

Animation Drawing Fundamentals A

In animation, proportions are distorted, features are exaggerated to create compelling characters. A wide range of backgrounds are used. Though idealized, these elements are drawn based on the world we see around us every day. In this course, students focus on the human figure. Methods of drawing animated videos are studied that include distorted figures based on photographic drawing methods (rough sketches).

Animation Drawing Fundamentals B

In animation, proportions are distorted, features are exaggerated to create compelling characters. A wide range of backgrounds are used. Though idealized, these elements are drawn based on the world we see around us every day. In this course, students focus on the animal figure. Methods of drawing animated videos are studied that include distorted figures based on photographic drawing methods (rough sketches).

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.

Business Economics 1

Focusing on family finances and the markets in which companies conduct business transactions, students learn the basics of microeconomics, from the viewpoint of efficient allocation of scarce economic resources through consumption and production.

Business Economics 2

This course applies equilibrium theory to teach macroeconomics. Looking mainly at overall economic trends in a single country, we analyze factors that impact measures such as GDP, international balance of payments, exchange rates, inflation and unemployment, and consider ways of controlling them.

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.

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.

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.

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.

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.

Cyber Security

This course provides an understanding of the roles of architecture and design while presenting methods of countering threats, attacks and weaknesses using industry-standard tools and technologies. Students implement core security features and acquire the fundamental skills necessary to pursue a career in IT security. In addition to providing core knowledge required of a medium-level cybersecurity professional, this course introduces practical troubleshooting methods, so that students can develop their own capability to solve real-world security problems.

Data Analysis I

Data-analytical capability is the ability to understand and skillfully use informatic knowledge such as information processing, statistics and programming. In this course, students use R and Python, two programming languages that have attracted attention as tools for studying data analysis, to conduct statistical analysis such as sorting, regression and hypothesis testing, as well as a variety of methods necessary for multivariate analysis. Students also focus on practicing visualization methods.

Data Analysis 2

This course consists of practical lectures and drills in three fields—text mining, time-series analysis and regression modeling—based on publicly disclosed data such as the Ministry of Internal Affairs and Communications (MIAC)'s e-stat data. To provide training in joint work and presentations, students work in groups to select themes, collect data and announce results.

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.

Data Warehouses and Big Data

Large-scale collections of data, known as data warehouses, require specialized data storage formats. Although a wide range of data structures are proposed, this course studies the "data warehouse" format, a scalable relational-database management system (RDBMS) that generally adopts a multi-dimensional architecture. A wide range of solutions have been proposed from a data-science perspective for processing and analyzing large volumes of data. These are known as "Big Data processing." Students also learn about devices such as MapReduce/ Hadoop, which can process large volumes of data at high speed, along with various techniques that surpass earlier database processing such as NoSQL.

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.

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.

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.

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.

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.

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.

Financial Accounting System Development 1

Students in this course develop financial accounting systems used in ERP systems. In practical exercises, students use FI modules of SAP's fourth ERP suite, S/4 HANA, handling basic settings of financial accounting systems, invoice creation, payment and dunning processing, closing and generation of financial accounting reports.

Financial Accounting System Development 2

Students in this course develop financial accounting systems used in ERP systems. In practical exercises, students use FI modules of SAP's fourth ERP suite, S/4 HANA, handling processes in financial accounting systems such as fixed-asset management and document splitting processing.

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 internconnectedness 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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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

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.

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.

IoT and AI

Students learn about the structure, operating principles and methods of development of the Internet of Things (IoT), all of which are necessary to solve real-world problems using artificial intelligence (AI). To understand the functions of a wide variety of sensors and actuators and how to operate them, students practice using Raspberry Pi, a compact, single-board computer.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Natural Language Processing

Together with image recognition (or pattern recognition) and speech comprehension (or speech recognition), natural-language processing has a long history as one of the core technologies of AI. A great deal of research and development has been conducted in this field over the years. Representative examples of applications of natural-language processing are diverse, encompassing machine translation, abstracting, stenography and chat bots, among others. In this course, students obtain an overview of a variety of basic technologies used in natural-language comprehension and its applications as well as recent deep-learning technologies. Matters such as future research issues are also discussed.

New Businesses and AI

Students in this course study the current and future effects and impact that entrepreneurs in the field of AI have on politics, the economy and society. In particular, the course examines the question “How does one create a new business led by AI?” from three perspectives: (1) How should the company manage and use data? (2) How should the company develop the business? (3) How should the company negotiate and conclude contracts to create optimal relations with outside parties?

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

Sales and Distribution System Development 1

Students develop sales and distribution system used in ERP systems. In practical exercises, students use sales modules in SAP's S/4 HANA system to handle basic settings, organizational structures, process overviews, master data and document processing in sales and distribution system.

Sales and Distribution System Development 2

Students develop sales and distribution system used in ERP systems. Using sales modules in SAP's S/4 HANA system, students handle detailed settings of sales and distribution system and detailed processes from order acceptance to shipping, billing and receipt of payment.

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.

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.

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.

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.

Speech Comprehension

Together with image recognition (or pattern recognition) and natural-language processing, speech comprehension (or speech recognition) has a long history as one of the core technologies of AI. A great deal of research and development has been conducted in this field over the years. Representative examples of applications of speech comprehension are diverse, encompassing stenography, dialogue processing, translation telephony and speaker identification. These applications are intimately connected with natural-language processing. In this course, students learn about the basic technologies, applied technologies and future prospects of voice comprehension.

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.

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).

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.

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.

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.

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.

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.

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.

Web Programming 2

Using JavaScript, a programming language that runs on Web browsers, students learn about basic algorithms and data structures as well as techniques for dynamically updating Web pages. Students also design and implement their own interactive Web applications.

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.

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.

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.

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 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 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.

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.

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.

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.

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.

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.

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.

Fundamentals of Marine IT

With the advance of IT, recent years have seen widespread application of IT in the marine field. Nonetheless many aspects of the field remain stubbornly analog, as witnessed in the fisheries industry, meaning that the digitalization of information in the field is lagging. This course imparts basic knowledge about the sea and ships and introduces some IT-related devices used in the marine field, primarily on fishing vessels. Students board actual ships, to experience the functions of various ship-borne IT equipment and how they are used.

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.

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.

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.

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 and Law

This course offers an overview of topics such as the Personal Information Protection Act, informed consent, data management, disclosure and ethical guidelines, as they relate to medical information. As necessary, social-service administration is discussed, and explanation and examination are conducted to ensure understanding of social-service administration as well as laws whose understanding is needed to practice medicine.

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.

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.

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.

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.

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.

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.

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 learn about 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.

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.

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.

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.

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.

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.

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.

Fundamentals of Computer Programming

Provided for students in faculties that do not provide an IT major, this course covers basics of computer programming such as functions, object orientation, file input and output and graphical user interfaces (GUIs). Students also gain experience programming in Python, an interpreter language, to understand basic algorithms and data structures.

Fundamentals of Construction IT

The three basic needs of life are food, clothing and shelter. Construction is the practice of delivering one of these needs, shelter, and this course provides basic knowledge of construction and interior work. Topics covered include the procedures for designing a building and executing its construction, along with case studies of the systems and IT used. Students also learn about initiatives in the SDGs taking place in the architecture and construction industries in recent years and are invited to consider the state of construction and cities in the future.

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.

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.

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.

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.

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.

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.

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.

Web Programming 1

Using the latest Web markup languages, HTML5 and CSS3, students learn how to design Web pages and create simple animations. Through practice, students learn the procedures for creating Web pages and uploading them to servers.

Mandatory Courses

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

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.

Master Project

Focusing on practical applications for ICT and use of technology, the goal of the master project is to develop students' ability to recognize a problem, then proceed from that awareness to framing and analyzing the problem and finally tabling a solution. The master project can be any of four types of master project: A master report, a master project, an honors master project or an honors master thesis.

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.

Project Foundations

This course enables students to prepare for their master project. Its purpose is to teach students how to select an issue and set a project theme regarding practical applications for ICT and use of technology, then propose a high-quality plan and write that plan. Students also learn techniques and methods for grappling with projects.

Course Pathways by Field of Concentration (Recommended Study Patterns)

Mandatory | Core courses | Applied courses | Industry Courses / Supporting Electives | Basic courses

◆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 are cultivated to be capable of using and applying AI technology in various areas. 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
Introduction to AI	Machine Learning and Its Application	Games and AI	Fundamentals of Fintech
Introduction to Algorithms	Combinatorial Optimization	Natural Language Processing	Advanced Case Studies in Agricultural AI
Computer Programming (Python)	AI Software Applications 1	Speech Comprehension	New Businesses and AI
Fundamentals of Database Technology	Mathematics for AI	Medical Frontier Informatics	
Computer Organization Theory	Data Mining	Robotics and AI	
Statistics for IT	Data Analysis 1	IoT and AI	
Fundamental Mathematics for Applied Informatics	Object Oriented Programming	AI Software Applications 2	
	Advanced Topics in Database Technology	Data Analysis 2	
		Logical Thinking	
Professional Communications in the ICT Industry	Project Foundations		
Leadership Theory	Master Project		

Selected from other concentration courses, industry courses and supporting electives

◆Data Science

Become an analyst who can analyze business data and apply it in decision-making.

This field of concentration aims to produce analysts who can analyze business data and support the proposal and advancement of corporate strategies by leveraging techniques such as data mining and statistical analysis. In Fundamentals of Database Technology and Advanced Topics in Database Technology, students learn techniques for accumulating business data; in Data Analysis I/II and other courses, students learn techniques for extracting knowledge from accumulated data.

1st semester	2nd semester	3rd semester	4th semester
Fundamentals of Computer Programming	Data Analysis 1	e-Commerce Methodologies	Data Warehouses and Big Data
Introduction to Web Business	Web Programming 2	Qualitative Data Analysis and Transformation	Cutting Edge of Applied Information Technology A In-memory Database
Fundamentals of Database Technology	Exploratory Data Analysis and Visualization	Internet Business Strategies and Marketing	Fundamentals of Fintech
Statistics for IT	Theories of Data Mining	Practical Cloud Computing	Advanced Topics in Business Administration
Fundamental Mathematics for Applied Informatics	Advanced Topics in Information Ethics	Organizational Behaviour	
Computer Organization Theory	Advanced Topics in Database Technology	Data Analysis 2	
Web Programming 1			
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 Behaviour	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

◆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 Applications 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

◆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 System Design	Object Oriented Programming	Mobile Application Development
Computer Programming (Python)	Advanced Topics in Database Technology	Design Thinking	Web Services Development
Web Programming 1	AI Software Applications 1		
Fundamentals of Networking			
Fundamental Mathematics for Applied Informatics	Computer Organization Theory		
Fundamentals of Database Technology	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

◆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 and AI
Computer Programming (Python)	Cyber Security	IoT and Wireless Networks	Cloud Networks 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 System Design	Mobile Application Development
Understanding the Japanese Society	Business Economics 1	Data Analysis 1	Rich Media Content Development
Fundamentals of Computer Programming	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

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. Illuminated 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.

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.

Steps Toward Acquiring a Professional Degree

For students who enroll in the spring term or who start their master project in the third semester

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


Instruction in preparing for a master project

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

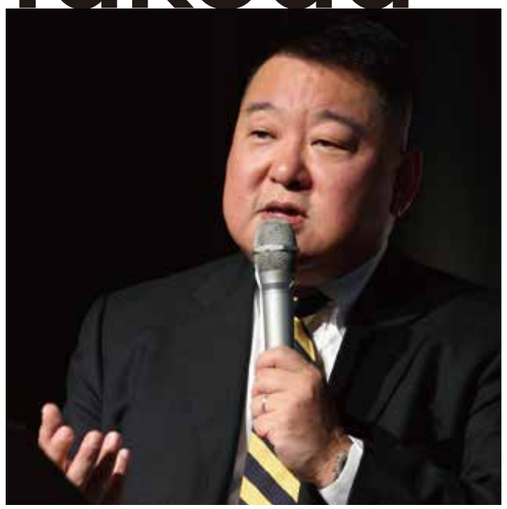
KCG Awards

Faculty Interview

Exploring business involving Japanese anime

Professor 武田 康廣

Yasuhiro Takeda



CEO, Gainax Kyoto Co., Ltd.

Member of Science Fiction and Fantasy Writers of Japan (SFWJ) and Space Authors Club of Japan (SACJ)

Professor Yasuhiro Takeda has served as director at Gainax Co., Ltd., producer of many of Japan's best-loved animated features, since the company's inception. Among the studio's numerous popular works are Nadia: The Secret of Blue Water, Gekijoban Tengen Toppa Gurren Lagann and Wish Upon the Pleiades. Professor Takeda currently serves as representative director of Gainax Kyoto, the company's animation planning and production studio established in Kyoto.

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 (https://www.kcg.ac.jp/kyocotan/cm/)

Faculty Interview

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

Professor 伊藤 博之

Hiroyuki Itoh

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

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."

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.

Art by KEI ©CFM

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.

Faculty Interview

Training the next e-business leaders

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.

Faculty Interview

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.

Faculty Interview

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.

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.

Fundamental Mission of Faculty

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.

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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
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After working as an animator at Tatsunoko Production Co., Ltd., Fumio Iida worked freelance before founding his own animated-movie production company. Currently Professor Iida is widely active as a manga artist, character designer and anime director, including production and direction of the animation for *Evangelion Shingekijoban* and *Space Battleship Yamato 2199*.

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Involved as a visual effects supervisor in the production and editing of complex special effects video in the film and TV industries.
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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)

Heikun An *Associate Professor*

Bachelor of Engineering, Kyoto University; completed Master's in Numerical Engineering, Kyoto University; Master of Engineering
Formerly employed in Software Division, Fujitsu Ltd.; former management consultant, McKinsey & Company; former management and IT consultant, Tokyo Consulting Inc.; former IT consultant, SAP Japan; former manager, Sales and Marketing Department, Ogis-Ri Co., Ltd.

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

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

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

Badr Mochizuki *Associate Professor*

Bachelor of Science in General Engineering, Al Akhawayn University (Morocco); completed master's course in information science,
Master's Degree in Engineering, Nara Institute of Science and Technology; left doctoral program at Kyoto University with approved certification: completed doctoral course in engineering at Fukui University, Doctor of Engineering
Guest researcher, Laboratory for Analysis of Architecture of Systems (LAAS)/ French National Centre for Scientific Research (CNRS);
Financial Analyst, Exedy Corporation; Information Security Engineer, Information Security Inc.


Practical laboratory


e-Learning Studio


Lecture Room


Great Hall


Lounge


Library

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
Tetsugaku-no-michi (Philosopher's Walk)
Nanzenji Temple
Kyoto City KYOCERA Museum of Art
Kyoto City Zoo
Heian Jingu Shrine
Eikando Zenrin-ji
Chionji Temple
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
Midoroga-ike Pond (also called Mizoroga-ike Pond)
Kyoto Botanical Garden
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

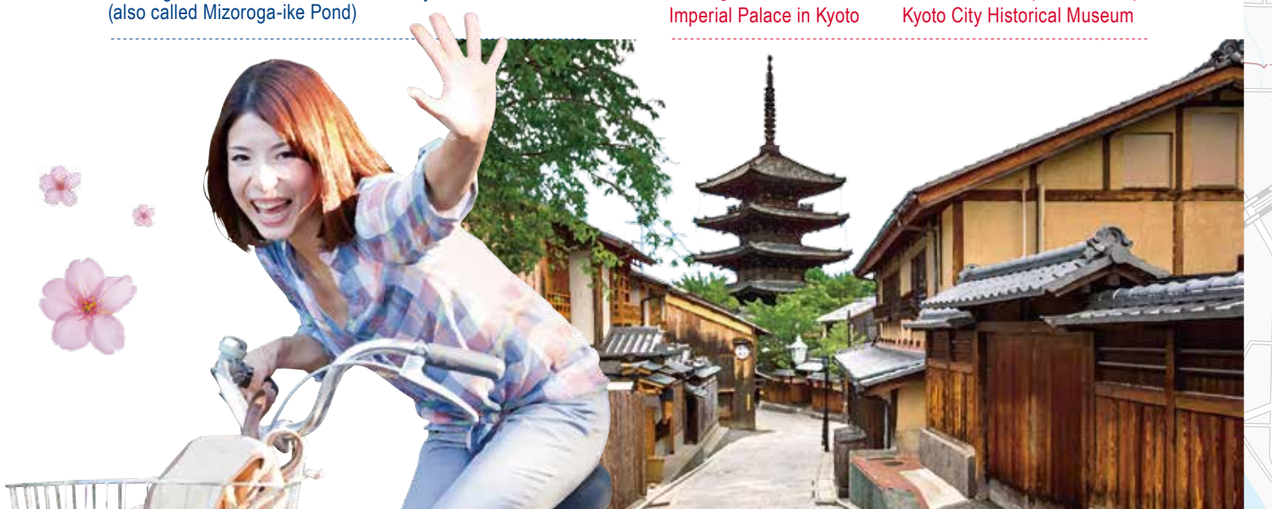
Toji
Nishi Hongwanji Temple
Higashi Honganji Temple
Tofukuji Temple
Kyoto Tower
Sanjusangendo
Kyoto National Museum
Kyoto Station Building
Kyoto Aquarium

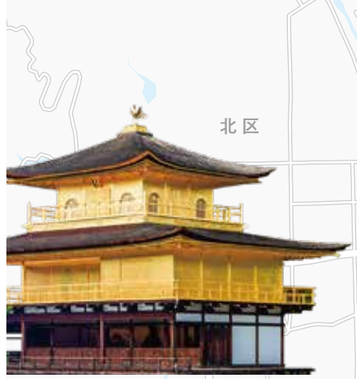
Surrounding Area of KCG Kamogawa Campus

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
Imperial Palace in Kyoto
Tadasu no Mori (shrine forest)
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.

Boasting nearly 60 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

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 has a sister school agreement with the Kyoto Computer Gakuin in 1996.

RIT
Rochester Institute of Technology

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

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

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.

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

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.

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

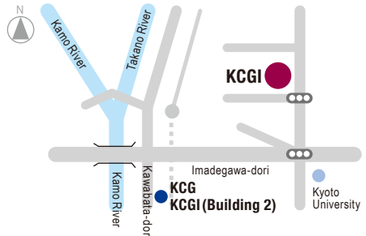
Degree: Master of Science in Information Technology (M.S. in IT)

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

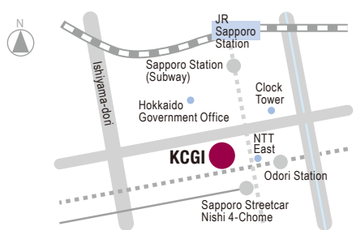
Address

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