

TANAGAWA Academy & University





Founder Kuniyoshi Obara's Calligraphy The character "yume" ("dream"), often written by founder Kuniyoshi Obara, who continued to nurture his own vast dreams, embodied his hopes that children would continue to entertain vivid hopes and dreams.

Four Seasons at Tamagawa

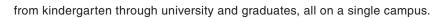






Campus Life Based on a philosophy of integrated education, Tamagawa pursues educational activities







Mission Statement

Tamagawa was inaugurated in 1929 as an elementary education organization. Later a secondary education division was added, and in 1947 Tamagawa University was established. We currently provide education from kindergarten to graduate schools within a single campus.

Founder Kuniyoshi Obara defined human beings "as an existence that has an unique individuality from birth and also a commonality with everyone in the world." The mission of Tamagawa education is to progress towards the realization of this image of a person. Our mission is to produce outstanding individuals who can contribute not only to the Japanese society but to the world. To achieve these goals, students need to improve their knowledge and skills, cultivate healthy mind and body, and lift their spirits.

People can always find dissatisfaction in any age. But someone must do the difficult work to improve the situation. People with the courage to start working in the most difficult, unappealing, painful and disadvantageous situation with a smile are those who are worthy of becoming leaders in the 21st century. Tamagawa is determined to cultivate those pioneers in life who will courageously challenge difficult situations without fear of failure, even though unknown hardships are sure to come their way. To do that, Tamagawa has advocated twelve precepts of education since its inauguration.



Message from President

As we face a rapid change in Japan, schools must educate children capable of responding to the changing needs of society. In addition to providing children with necessary and appropriate knowledge and skills, schools must help children develop a strong moral compass and the ability to understand and evaluate value systems in a changing and diverse world. While Tamagawa Academy (K-12) and Tamagawa University continue to evolve in accord with changes in society, the educational philosophy extolled since the founding of the school—with its focus on "Zenjin" Education—remains unchanged. In addition to instilling skills and knowledge, we seek to put into practice an education tailored to a new era—an education that gives children the skills needed to take the initiative in solving difficult problems and the creativity needed to blaze their own path.

Tamagawa provide a globally renowned, world-class education, seeking to produce graduates capable of applying knowledge to the benefit of the society.

Yoshiaki Obara

Twelve Precepts of Education

"Zenjin" Education

An ideal form of education is to incorporate the values of human culture harmoniously into personality. Tamagawa Academy (K-12) & University pursues education designed to create the six values, namely truth, goodness, beauty, holiness, soundness and wealth.

Respect for Individuality

Education must allow an individual to develop his or her unique self to the fullest, and achieve self-realization and fulfillment. Education with respect for individuality involves the development of each individual into a more attractive human being.

Self Study, Self Autonomy

Students need to learn by themselves, and not only through instruction. The purpose of education at Tamagawa is not merely to convey academic knowledge, but to enable students to acquire methods to find truths, through their own enthusiasm.

Highly Efficient Education

To provide smooth, efficient and appropriate education to each student, we endeavor to bolster students' academic enthusiasm and to improve efficiency, by improving the learning environment, carefully selecting teaching materials, improving teaching methods, using information technology (IT) and other means.

Education that is Scholarship

At the root of education, there are solid and eternally unchanging principles. To put these principles to work, arguments need to put forth based on evidence and scientific considerations must be accumulated, so that educational activities can be conducted with a firm belief.

Respect for Nature

Mother Nature has offered great opportunities for education. We believe that it is important to teach students to preserve our precious natural environment.

Trust within the School Community

The relationship between teachers and students needs to be full of warmth and trust. Cordiality is not the same thing as spoiling. As comrades pursuing the same scholastic area, disciplined but warm human relations should be appreciated.

"ROSAKU" Education

True moral and intellectual education is achieved only when students think, experience, try, create and act on their own. Tamagawa aims at cultivating personalities with determination and a pragmatic mind, to integrate intellect and action through ROSAKU.

Uniting Opposites

We are citizens of one nation but also citizens of the world. We should always endeavor to find the best solution between two contradictory aspects, such as ourselves as individuals and ourselves as members of the society, ideals and reality, and freedom and rules.

One Who Walks the Extra Mile and One Who is a Pioneer in Life

A verse in the Gospel of Matthew says, "And whosoever shall compel thee to go a mile, go with him twain." Education at Tamagawa aims to equip people with the practical capabilities of independently-minded pioneers, just like the salt that nourishes the ground and the light that falls on people.

24-Hour Education

Terakoya, a traditional style of education in Japan, represents a true education that we can proudly present to the world. At *Terakoya*, teachers and students acted together, worked together, ate together, sung together and learned together. Tamagawa does not aim at education within a limited time period, but at education that can be provided at any time and at all times.

Global Education

Today, internationally-minded people with a broad outlook and courage, who believe that the Earth is our home, are in demand. Tamagawa aims to provide educational programs that can be offered at any place on Earth, to develop a broad international awareness among students.

Tamagawa Academy (K-12)



Seeing the various years from kindergarten through 12th grade as a single school, Tamagawa Academy (K-12) approaches K-12 integrated education as a sequence of growth stages. To ensure students become thoroughly familiar with the skills and knowledge required at each stage, the Academy in its educational activities promotes student interaction, even across grade levels, in various aspects of learning and living.



Course learning

To create the richest possible learning environment, some courses, such as English and music, are taught by instructors with expertise in the subjects from the 1st grade. From the 4th grade, each subject is taught by a specialist.

The learning environment of Tamagawa encourages students to learn at any time by investigating topics and asking questions until they understand them. For such purpose instructors are on hand at all times in classrooms or neighboring study rooms.



Education for international understanding

The educational programs at Tamagawa allow students to grasp the diversity of cultures and values throughout the world through firsthand experience.

Overseas learning programs are available from the 5th grade in a wide range of countries, including non-English-speaking regions. As Japan's only Round Square member, Tamagawa encourages 9th to 12th grade students to participate in international conferences. In addition, Tamagawa actively recruits students from overseas, providing opportunities for all students ranging from kindergarten through 12th grade to develop an international awareness while learning in Japan.

Grade	K	1	2	3	4	5	6	7	8	9	10	11	12
Campus	Kindergarten	First Division (1~4)				Middle Division $(5 \sim 8)$				Upper Division (9~12)			
	A beautiful spirit, intellectual mind, healthy body -Familiarizing students with three goals in a well-balanced way as part of play -Acquiring knowledge and capacity to learn					Intellectual training, the cultivation of morals, physical education -Establishing self study, self autonomy; improving learning skills to give students the skills to apply their knowledge -Learning the intellectual skills needed to handle the rigors of university education							
	BLES-K*1	S-K ^{*1} BLES ^{*2}					IB class (MYP, DP)						

*1 Bilingual Elementary School-Kindergarten

*2 Bilingual Elementary School

ICT education

Information and Communication Technology education begin in 3rd grade to provide students with the ability to use computers and networks as vital tools. Students learn various important skills, including how to use these tools and netiquette. The Upper School Complex is home

to the Multimedia Resource Center (MMRC), which nurtures intellectual curiosity as a place for both classes and self-learning.



Music education

Music Education –Human education through song A day at Tamagawa starts and ends with songs. Through singing, students gain familiarity with a wealth of humanity and sensitivity and a deep feel for subjects such as the seasons and commonplace conditions in everyday life. Kindergarten and elementary students learn the enjoyment of music through singing freely, while upper class students tackle the challenge of advanced pieces for mixed chorus of four voices with orchestral accompaniment. The feeling of accomplishment from singing on stage in pursuit of precise harmony leaves an indelible impression on students long after graduation.

Extracurricular activities

By participating in activities sideby-side, students of all ages work closely together, with encouragement from older and younger students. For instance, the rugby team provides guidance suited to a student's age and growth in an integrated program for students ranging from elementary school through university level.

Tamagawa also features a thriving range of musical clubs, including the brass band and the hand-bell club. With members ranging from the 5th grade through the 12th grade, the Tamagawa Orchestra is an essential presence at school events.



Tamagawa University / Undergraduate



When Tamagawa University was founded in 1947, it marked the consolidation of an integrated academic institution encompassing levels from kindergarten through university. Since then, Tamagawa University has pursued an approach to education that seeks to identify the needs of our everchanging society and to respond appropriately, while maintaining the pioneering spirit and educational philosophy espoused from its foundation.

Today, the university comprises 8 colleges and 17 departments. In addition to the fields of specialities within each college and department, the university provides a general education program intended to instill the broad knowledge needed for educated individuals. All colleges offer an enriched learning environment and educational support structures, and stress that the formation of personality and self-directed learning as the core of the learning experience.

Enhancing quality assurance

Tamagawa University completed its 2010 evaluation self-study and in 2011 a quality assurance review was conducted for the second time based on the report submitted for the Japan University Accreditation Association (JUAA).



Tamagawa University has been certified to satisfy the applicable accreditation standards and accredited by JUAA for the seven years from April 1 2012 through March 31

2019. The purpose of evaluation is to assure and enhance the quality of their academic activities and ensure accountability for the public. In compliance with the law, universities must undergo accreditation evaluation every seven year by an institution that has been accredited by the Ministry of Education, Culture, Sports, Science and Technology in Japan and JUAA is one of the authorized bodies.

FYE: First-Year Experience

Today, university education is all but universal across Japan, where more than 60% of high-school graduates advance to university. To keep pace with the changing environment in which university education takes place, Tamagawa University approaches first-year education with the goal of ensuring a smooth transition to university life, making it as easy as possible for new students to adapt to life at university. First Year Seminar 101 and 102 are required courses for first-year students in all colleges. Students during the first half of this course develop key academic skills; in the second half, they develop individual values and life perspectives and examine their freedom and responsibilities as members of society while considering future careers. Through these courses, students strengthen their identities and learn to grow. This start enriches all subsequent university life and focuses an eye on the future.

International education

"The earth is our home," has been a slogan of international



education at Tamagawa. Since the foundation, Tamagawa has been conducting its educational activities around the world. In keeping with Tamagawa's international education policies, experienced staff of Center for University International Programs(CUIP) regularly visit educational institutions around the world to develop various educational programs with them. In addition to programs open to students from all colleges, Tamagawa also operates educational programs that draw on the unique characteristics of each college. Performance of Taiko(Japanese drums) and Japanese dancing in the United States by students of the College of Arts, and an intensive study program in Canada, in which all second-year students in the Department of Bioenvironmental Systems in the College of Agriculture learn English and horticulture for approximately four months of intensive training are among the recent examples.

e-Education

Tamagawa has established an environment in which students can learn from anywhere 24 hours a day, through activities including preparatory study using computer and networking technologies and provision of materials, based on face-to-face education. Blackboard@Tamagawa, a shared universitywide system, allows students to engage in groupwork and discussions over the campus network. The university is developing a format of study that draws on the specific strengths of both face-to-face learning and e-learning.



College of Humanities

[Department of Japanese Language Education]

The Department of Japanese Language Education aims at mastery of student's proficiency in Japanese and their profound understanding of Japanese language culture. Students seek to acquire the ability of thinking logically and critically, communicating accurately and understanding specialized knowledge necessary as an expert in Japanese. With well skilled Japanese they contribute to global society and educational institutions.

[Department of English Language Education]

The Department of English Language Education focuses on the development of proficiency in English as a Lingua Franca, and fosters highly skilled English language teachers and active members of society with a global mindset. All students will participate in a 9-month Study Abroad Program, which is carefully integrated into our 4 year BA program.

College of Agriculture

[Department of Agri-Production Sciences]

Approaching the true nature of life from both biological and chemical perspectives, this department trains human resources who can contribute to the future of the food production. Students investigate organism functions and characteristics from the molecular level to the individual organism level. The department also offers a curriculum for students aiming to be science educators.



[Department of Agri-Environmental Sciences]

Focusing on understanding natural and production environments, this department trains human resources who have a multifaceted regional and international sensibility and who can contribute to the building of a sustainable recycling-oriented society. All students participate in a 4-month Study Abroad Program in Canada or Australia, which includes not only English learning but also specialized subjects and field work.

[Department of Advanced Food Sciences]

Students investigate safe and secure food production methods as well as food functionality and safety. They learn about practical food-related technologies, including "plant factories" and techniques for developing new food functions and high-value-added food products. Taking a wide-ranging experiential learning approach to "food," this department nurture human resources capable of supporting the world's food and agriculture.

College of Engineering

[Department of Information and Communication Technology]

Students in this department study next-generation technologies to promote human communication, in particular information and communication technology (ICT). Acquiring the fundamentals of programing and sensing from the perspective of both software and hardware, it is possible to extend advanced technologies such as artificial intelligence and quantum radar. The skills acquired through experience will be advantages for success in the fields of information and communication.



[Department of Software Science]

In integrated fashion, students in the Department of Software Science learn topics such as software development, network technologies, mobile technologies, game development, and animation technologies. The department also addresses English-language, management, and communication skills.

[Department of Management Science]

Students in the Department of Management Science acquire the knowledge and practical skills they will need as the management leaders of the future, learning drafting and implementing of management strategies in an environment similar to the real business world. The department also offers a training course for mathematics educators.

[Department of Engineering Design]

The aim of this department is to lead 21st century fabrication technology based on digital technology. By providing the students not only with main design and fabrication technologies but also planning skills, management control and communication skills, students can be welcome on a global basis as an engineer, a product designer, a manager and every kind of categories. It is possible that students make products which they imagine and become an epoch-making engineering human resources.

College of Business Administration

[Department of International Management]

The Department of International Management provides an education in individualized areas of interest to allow students to acquire the specialized knowledge needed for their future roles. It provides both the deep specialization needed to succeed in business and the general outlook essential for international business leaders.

College of Education

[Department of Education]

This department seeks to train future leaders in education and individuals who will serve as specialists across a broad range of human services.

[Department of Early Childhood Care and Development]

The Department of Early Childhood Care and Development offers a full range of courses combining education and health sciences. The courses include but are not limited to pediatric medicine, nutrition science, and environmental health. This department trains human resources who will be capable of thriving in a broad area, other than kindergarten and nursery teachers.

College of Arts

[Department of Performing Arts]

By instilling a core of practical skills in fields such as music, drama, and dance, the Department of Performing Arts seeks to train not only performers, but also individuals capable of engaging in artistic activity while remaining mindful at all times of the point of contact between the performing arts and society.

[Department of Media Arts and Design]

Students in the Department of Media Arts and Design can learn media arts (video, computer graphics, light art, integrated arts), design, computer music, music theory as well as integrated arts theory, and acquire the skills for expression in today's multimedia environment with digital technologies, as well as a knowledge of English for a global society.

[Department of Arts Education]

The Department of Arts Education offers a wide range of teacher training programs in the fields of music, fine arts, and industrial arts. In order to put arts education into practice, the department has established a curriculum where one can acquire broad knowledge related to educational principles, methods, and techniques.

College of Arts and Sciences

[Department of Liberal Arts]

Drawing on a broad range of disciplines ranging from the humanities, including art and literature, through the social and natural sciences, the Department of Liberal Arts offers students instruction through an interdisciplinary approach, deepening student understanding of specific fields from a multifaceted perspective.

College of Tourism and Hospitality

[Department of Tourism and Hospitality Management]

Approaching a new era of tourism from a broad-ranging perspective, this department, with one-year study program in Australia, aims to train global citizens whose proficiency in English, tourism and information science will enable them to thrive in various leading industries connected to tourism.

The University by Correspondence

[Department of Education]

Through anytime-anywhere learning in accordance with educational objectives or qualifications sought by individual students, the Department of Education trains highly qualified educators capable of responding to society's needs.



Tamagawa University Graduate Schools



Tamagawa University Graduate Schools were established to achieve the apex in the education and research of academic theories and application, in the hope of contributing to the overall development of academic culture and welfare for humanity. At the base of these endeavors was the founding spirit of "Zenjin Education".

Graduate School of Humanities

Human Studies Major (Master's Course)

The Human Studies Major consists of four areas of inquiry: thought and culture, social ethics, cognitive behavior, and brain sciences. Students enrolled in this master's degree program examine aspects of contemporary society and humanity from a multifaceted, yet integrated perspective.

English Teaching Major (Master's Course)

Master's degree students in the English Teaching Major examine linguistic culture in a specialized and practical way in relation to English education, with English Teaching(ELT), Applied Linguistics, and culture of the English-speaking world as the areas of education and research. This program of study fosters in its students strong research skills, a rich perspective on languages and linguistics, and the skills to lead and to put theory into practice.

Graduate School of Agriculture

Biological Resources Major (Master's Course/Doctoral Course)

These programs of study explore the biological and chemical aspects of the various functions of cultivated plants, animals, forests, and microorganisms, with the goal of finding ways to make better use of these as resources. Students acquire the skills needed to help solve the many global environmental issues confronting the world.

Graduate School of Engineering

Mechanical Engineering Major (Master's Course)

Responding to current needs, the research domains of this program of study encompass new materials, new coolants, soft energy, robotics, and production systems. Students in the program also take part in joint research with corporations.

Electronic Information Engineering Major (Master's Course)

The Electronic Information Engineering Major offers five master's level courses: brain information, quantum information, intellectual media, intellectual devices, and robotics. This program of study proactively promotes interdisciplinary research.



System Sciences Major (Doctoral Course)

The Doctoral Course in the System Sciences Major provides students with a broad range of knowledge and awareness of real-world issues through active exchange with the Research Institute. Through systematic instruction and opportunities for research in highly specialized areas of science and technology, it seeks to train researchers and engineers capable of creating new value.

Graduate School of Management

Management Major (Master's Course)

This major aims to serve as a research program capable of providing information useful for business management, by deepening education and research centered on management. The goal is to train highly specialized professionals, including entrepreneurs and consultants.

Graduate School of Education

Education Major (Master's Course)

With the goal of integrating academic theory and practice in the field of education, this major trains specialists in educational research, particularly early childhood education and primary education.



Graduate School of Education (Teaching Profession)

Teaching Profession Major (Professional Degree Course)

With the goal of developing educators capable of serving as effective leaders in developing new schools, this course develops educational professionals, particularly elementary school educators.

Graduate School of Brain Sciences

[Mind and Brain Sciences Major (Master's Course)]

The Master's Program in the Brain Sciences seeks to train engineers, educators, and researchers who can contribute human society on the basis of understanding multifaceted views of mind and brain.

[Brain Sciences Major (Doctoral Course)]

The Doctoral Program in the Brain Sciences seeks to train researchers and engineers who can advance brain sciences by integrating systems neuroscience, social neuroscience, and computational neuroscience.

Tamagawa University Research Institute



Coordinated, continuing research activities are currently being conducted at 6 research centers and at one education center focused on specific fields within agricultural sciences, engineering, and humanities. In addition, individual researchers pursue and address their own research topics.

K-16 Education Research Center

The K-16 Education Research Center seeks a deeper understanding of how to enrich educational activities at levels K-16 (kindergarten through university), based on theoretical research on "Zenjin" Education.

Honeybee Science Research Center

The Honeybee Science Research Center, the only research center of its kind, pursues research intended to contribute to society in areas ranging from honeybee ecology to the production of honey.

Biosystems & Biofunctions Research Center

The Biosystems & Biofunctions Research Center pursues research intended to further both environmental conservation and efficient food production. Current research topics include plant factories that use artificial light sources such as LEDs.



Mycology & Metabolic Diversity Research Center

The Mycology & Metabolic Diversity Research Center pursues research whose goal is to identify lead compounds in pharmaceuticals and agricultural chemicals, drawing on fungi as an underexplored biogenetic resource.

Humanities Research Center

The Humanities Research Center engages in research across a broad spectrum of the humanities, with philosophy, literature, art, and historical culture at the heart.

Higher Education Development Center

This center aims to fill the gap between aging university customs and motives for transformation. Thus, the center has the following research themes: learning supports for college students; faculty development; administrator development; and institutional research.

Advanced Intelligence & Robotics Research Center (AIBot)

The Advanced Intelligence & Robotics research center (AIBot) pursues research to support the creation of human-centered social intelligence through the key areas of artificial intelligence, cognitive sciences and robot technologies in an effort to help bring about a society created through harmony of diverse values.





TSCP(Tamagawa Solar Challenge Project)

TSCP was launched as a campus wide research project focusing on solar energy technologies. With "Effective Use of Solar Energy" as its basic theme, this project is expected not just to promote academic research, but to produce educational benefits for students at the elementary, junior, and senior high school levels by providing educational materials on environmental and energy issues. The solar car created as a product of the project has participated and achieved notable results in solar car races at home and abroad.

TRCP(Tamagawa Robot Challenge Project)

TRCP is a collaboration project of the middle school and high school science education and the Engineering school of university. TRCP aims a facilitation of challenging spirits of students by having them to participate in robot competitions and a development of teaching materials that attract scientific mind of students. We were the 2008 and 2010 world champion of Robocup@home competition. The science club students are participating in Robocup junior, WRO and FLL competitions, with technical supports from robot experts at the university.

Tamagawa University Brain Science Institute



One of the philosophies of Tamagawa, "Zenjin Education", must be demonstrated scientifically. The Brain Science Institute was founded according to this philosophy. The 21st century is recognized as the age of brain sciences, and major breakthroughs in the area are expected worldwide. The results of brain sciences are being utilized in many different ways within society, such as in education and medical science. The goal of the Brain Science Institute is to understand the human mind and human beings through frontier research in not only cutting-edge neurosciences but also in behavioral, psychological, philosophical sciences, and through integration of them.

Basic Brain Science Research Center

The Basic Brain Science Research Center is composed of 4 divisions: system neuroscience, human cognitive neuroscience, neural computation, and neurobiology of insect social behavior. The center aims to uncover the working principles of the human mind based on experimental neuroscience using animal and human subjects and computational neuroscience.



Applied Brain Science Research Center

The Applied Brain Science Research Center is composed of 4 divisions: human social behavior, development of the human mind, intellectual communication between humans and robots, and philosophy of the mind. The center aims to understand the functions of the human mind based on behavioral, psychological and philosophical perspectives.



Center for English as a Lingua Franca and Tamagawa Adventure Program

Center for English as a Lingua Franca (CELF)

The center was established in April 2014 in order to offer our students English as a Lingua Franca (ELF) program, a campus-English language program, in which about 2,300 students from all eight colleges are enrolled. The program which was designed to reflect the use of English in the globalized world: It aims to make the students learn English as an international lingua franca. Teachers are from 13 different countries with 10 different first languages. In addition to regular English classes, the center also provides tutor services for students and assists professional developments for our academic staff.

Center for Tamagawa Adventure Program (TAP)

This center has been providing innovative experiential learning programs since 2000. The center provides a wide range of group communication programs for K-12 and university students for their personal, emotional and social growth. While Tamagawa is known for its *Zenjin* ("whole person") education, it is also globally recognized as a leading institution for Adventure Education.





Tamagawa University Quantum ICT Research Institute



This institute is moving ahead with research in new sciences that will completely surpass the functionality and ability of current leading edge technology represented by optical communication and super computers. The research institute has founded and hosted the major conference in this field. International conference on Quantum communication, measurement and computing(QCM&C). Following the achievement in this conference, the institute aims to develop more fundamental theory on the quantum information and the practical applications of the new theory. To realize the above project, Tamagawa University has established The Quantum Information Science Research Center for the basis theory and The High Speed Quantum Communication Research Center for developing a new quantum cryptography and quantum radar collaborating with the industries.

Quantum Information Science Research Center

The aim of this research center is to study the fundamental theory and principle of quantum information science which is organized by two major scientific fields such as information science and quantum mechanics. The basic theorems for the future optical communication are explored with studying functional analysis and quantum Gaussian state. The quantum error correcting code for quantum computer is studied by applying sophisticated algebraic theories.

Furthermore, the fundamental experiment to ensure the function of the basic theory is tried.

Quantum Communication Research Center

This research center conducts an application of the new quantum cryptography to the cloud computing system as the next generation network. This new cryptography is based on so called Yuen-2000 (Y-00) protocol and the realization method has been discovered by Tamagawa University. The proto type of the system has been made in Hitachi Information & Communication Engineering and is using in the practical data center communication as the trial test. To establish this technology as the world-wide standard, the security analysis and evaluation schemes in experiment are developed.

American Physical Society (APS) has chosen Quantum ICT Research Institute at Tamagawa University as one of 32 excellent research institutions in the world at 2015.

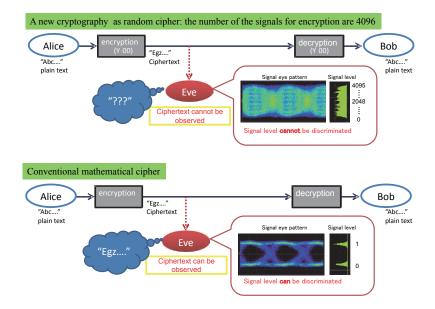
The citation is as follows;

Since it's inception in 1988, the goal of Quantum ICT Research Institute at Tamagawa University has been to understand the scientific foundations for realization of practical technology based on fundamental principles of quantum phenomena. While doing remarkable work creating a physical cipher to protect ultra high bit rate optical communication network against cyber-attacks, the centre is also focused on the creation of a Quantum Radar Camera. With high level researchers and world renowned collaborators, the Institute is set to play a major role in the future of Quantum ICT.

Tamagawa University was featured in an introduction movie which was televised at annual conference of American Physical Society held in Texas USA at March 2015.

Toward solving the security of cloud computing system -A new quantum cryptography Y-00 developed by Tamagawa University-

The institute is developing an epoch making new quantum cryptography to ensure the security for cloud computing system. The specific features of this cryptography, so called Y-00, are that the optical signal for the eavesdropper is randomized by quantum noise and he cannot obtain the ciphertext itself. Furthermore it has a tolerant against the falsifying attack. Since this system can operate at speed of the conventional optical communication and provide low latency, Tamagawa University aims to put the new quantum cryptography to the practical use, and applies it to the real data center communication network.



About Tamagawa

Tamagawa Academy & University

Established/ 1929 Address/ 6-1-1 Tamagawagakuen, Machida, Tokyo, 194-8610 JAPAN

Number of Students -University/9,641 -Academy(K-12)/2,056 Number of Faculty & Teachers & Staff/838 (As of May 1, 2018)

Campus Area/ about 610,000m² **Off Campus Facilities/** Hakone (Kanagawa)/ about 770,000m² (Research facilities for forestry and ecology) Hokkaido/ about 1,220,000m² (Research facilities for biological production and the environment in a subarctic climate Research field for northern vegetation forests) Kagoshima/ about 100,000m² (Facility for functional development of tropical vegetation) Nanaimo, BC, Canada (Tamagawa Gakuen of Canada Society)/ about 320,000m² (Laboratory for education on ecological systems)



CEO/ President of Tamagawa University/ Headmaster of Tamagawa Academy Yoshiaki Obara

Born in Tokyo in 1946.

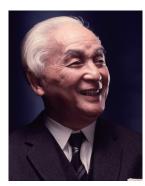
Attended Tamagawa Academy Elementary and Lower Secondary divisions, and then transferred to Roxbury Latin School in Massachusetts, the United States, when he was in 11th grade. He then graduated from Roxbury Latin, studied at Monmouth College. He also studied at the Graduate School of Arts and Education at Tamagawa University, and earned a Master's Degree in Analysis of Educational Policy from the Graduate School of Stanford University. He became Professor at the Faculty of Arts and Education of Tamagawa University in 1987. After functioning as Director of the International Education Office, Dean of the Faculty of Arts and Education and Vice President of the University, he was appointed CEO, President of Tamagawa University and Headmaster of Tamagawa Academy in 1994. In addition, he is a director of the Association of Private Universities of Japan.



Former Honorary Chairman **Tetsuro Obara**

Born in Tokyo in 1921.

Tetsuro Obara joined Tamagawa in 1951 after graduating from Keio University. After serving as a Professor at the Faculty of Arts and Education and as Vice President of Tamagawa University, he was appointed President of Tamagawa University, President of Tamagawa Gakuen Junior College for Women, Headmaster of Tamagawa Academy, and CEO in 1973 (serving through 1994). After Kuniyoshi Obara's death, Tetsuro Obara established the foundations needed to move Tamagawa into a new era, while steadfastly maintaining the philosophy of "Zenjin" Education. On June 28, 2011, he died, aged 89.



The Founder Kuniyoshi Obara

Born in Kagoshima in 1887.

Kuniyoshi Obara worked as a telegraph operator before graduating from Kagoshima Normal School and Hiroshima Higher Normal School. Following a stint as an instructor at the Kagawa Normal School, he advanced to Kyoto Imperial University, where he graduated from the Division of Philosophy. Thereafter, he served as instructor at the Hiroshima Higher Normal School. Still later, he served as superintendent of Seijo Elementary School, and then as Principal of the Seijo High School. In 1929, he founded Tamagawa, an institution founded on the "Zenjin" Education philosophy—educating the whole person—he so long had advocated. On his death in 1977, he was the last surviving founder of Japan's major private educational institutions.



1930 Completion of Chapel



1987 "Yellow Garden", the world's first yellow colored cosmos was developed



2009 Tamagawa's 80th anniversary event

History of Tamagawa

1929	Tamagawa was inaugurated.
	There were 111 students and 18 teachers.
1947	Permission was granted to establish Tamagawa University.
	Permission was granted to establish the Elementary Division as the
	New Elementary School.
	Permission was granted to establish the Lower Secondary Division
	as the New Junior High School.
1948	Permission was granted to establish the Upper Secondary Division
	as the New High School.
1950	Permission was granted to establish the Department of Education
	by Correspondence.
	Kindergarten Division was approved by Tokyo Metropolitan government.
1962	Permission was granted to establish Tamagawa University Faculty
	of Engineering.
1965	Permission was granted to establish Tamagawa Gakuen Junior
	College for Women.
1967	Permission was granted to establish Tamagawa University
	Graduate School of Engineering.
1971	Permission was granted to establish Tamagawa University
	Graduate School of Arts and Education.
1977	Permission was granted to establish Tamagawa University
	Graduate School of Agriculture.
1979	Permission was granted to establish the Advanced certificate
	program in Arts including Music, Fine Arts and Drama Majors.
1987	Museum of Educational Heritage opened.
1994	Tamagawa University Research Institute opened.
2000	Tamagawa was granted ISO14001certification: the world's first for
	a comprehensive institution.
2001	Tamagawa University School of Business Administration was established.
2002	Tamagawa University College of Education and College of Arts
	were established.
	The Integrative Human Science Program of Tamagawa University
	was chosen as a 21st Century Center of Excellence Program by the
	Japan Society for the Promotion of Science.
	The Faculty of Arts and Education was transformed into the School
2004	of Humanities.
2004	K-12 divisions were granted CITA certification.
2005	Tamagawa Gakuen Junior College for Women closed.
2005	The Graduate School of management was established.

	K-12 divisions were granted the Round Square school membership.
2006	K-12 Educational System, a 12-year integrated education program
	from kindergarten through 12th grade started.
	The Graduate School of Education was established.
	School of Humanities became College of Humanities.
	Faculty of Agriculture became College of Agriculture.
	Faculty of Engineering became College of Engineering.
	School of Business Administration became College of Business
	Administration.
2007	Tamagawa Academy International Class was established.
	Tamagawa University College of Arts and Sciences was established.
	Tamagawa University Brain Science Institute was established.
	Tamagawa University was fully accredited by Japan University
	Accreditation Association (JUAA) and became its full member.
2008	The Graduate School of Education (Teaching Profession) was
	established.
	"Origins of the Social Mind" program of Tamagawa University was
	chosen as a Global-COE (Center of Excellence) Program by the
	Ministry of Education, Culture, Sports, Science and Technology
	(MEXT).
	Tamagawa Academy was chosen as a Super Science High School
	by MEXT.
2009	Tamagawa Academy was accredited by International Baccalaureate
	Organization as a Middle Years Programme school.
2010	Ph.D. program in Brain Sciences was established.
	Tamagawa Academy was accredited by International Baccalaureate
	Organization as a Diploma Programme school.
2011	Tamagawa University Quantum ICT Research Institute was
0010	established.
2013	Tamagawa University College of Tourism and Hospitality was established.
2014	The Graduate School of Brain Sciences was established.
	Tamagawa Academy was selected as a Super Global High School
	(SGH) by MEXT.
	Tamagawa University was selected as a Acceleration Program for
	University Education Rebuilding : AP (complex type of theme I and II) by MEXT.
2016	Tamagawa Academy started BLES (Bilingual Elementary School),
	BLES-K (Bilingual Elementary School-Kindergarten), Extended
	school programmes.



2013 Charles Bolden, NASA Administrator, visited Tamagawa



2013 Symphonic Wind Orchestra won the first place in the category "Symphonic Band" with outstanding success at 7th Summa Cum Laude International Youth Music Festival in Vienna



2014 Tamagawa students demonstrated Robots to President Obama.

