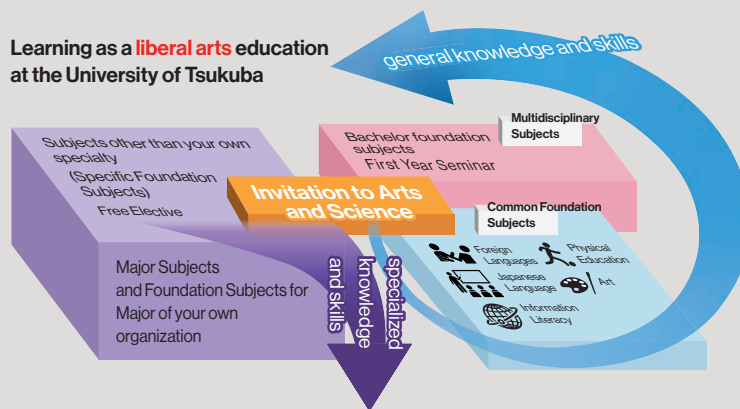


### Creative Wisdom Education and Liberal Arts Education at the University of Tsukuba

The University has established an educational system known as the “creative wisdom education” to nurture highly-skilled intellectuals with well-balanced “general knowledge and skills” including ethics, humanity, logic, internationality, communication skills, a rich physical and mental foundation, and management, planning and coordination skills, in addition to a comprehensive intellectual foundation gained through the acquisition of highly specialized knowledge “specialized knowledge and skills” and diverse, interdisciplinary knowledge. Through this system we cultivate a foundation of integrated knowledge and skills that can respond to drastic changes such as globalization and the advancement of science and technology. The acquisition of knowledge, intellectual skills such as one’s mindset, deep insights related to what it means to be human and how to live, and the ability to understand reality correctly, which are commonly in demand regardless of each student’s field of specialization, will be a driving force to delve deeper into each student’s field of specialization.

In addition to fostering knowledge of various academic fields and the ability to apply general-purpose social issues to academic fields through Multidisciplinary Subjects, the University provides a university-wide system that encourages students to take major subjects other than their own. This is considered to be the liberal arts education at the University and is also positioned as the University’s liberal arts education, including Foreign Languages, Information Literacy, Physical Education, Japanese, and Art, which are studied on a university-wide basis. If the study of Foundation Subjects for Major or Major Subjects offered in each college or major school are vertically developed toward specialization, the study of liberal arts in this University can be said to be a horizontal development of liberal arts education. We are building a university-wide curriculum with both of these as the wheels of a car.

Through the design of courses with high degree of freedom, including courses offered by various colleges or major schools that meet the interests and needs of each student, students are able to integrate within themselves the knowledge they have acquired through education that deepens their expertise and fosters their liberal arts, and acquire advanced problem-solving skills based on a broad academic perspective as creative wisdom.



## Systems to guarantee the quality of education

To promote and improve the quality of our University's creative wisdom education, we have established the Creative Wisdom Education Promotion Committee as a university-wide organization. The Committee plans, organizes, and continuously improves School Common Foundation Subjects and Multidisciplinary Subjects to foster highly common general knowledge and skills, and develop well-balanced creative wisdom while strengthening organic cooperation with each undergraduate course that cultivates specialized knowledge and skills.

## Positioning of Common Foundation Subjects in Liberal Arts Education

The purpose of the Common Foundation Subjects at the University of Tsukuba is to cultivate a broad and deep culture, comprehensive judgment, and rich humanity through the development of expressive, compositional, and communication skills that are fundamental to the acquisition of knowledge in specialized fields. In particular, while giving consideration to the composition of universal content that is not bound by academic frameworks, we have constructed a system of courses that enables students to acquire the academic and interdisciplinary background appropriate for university students.

# Multidisciplinary Subjects

## Educational purpose

From the first year to the senior year, it is our goal to help students adapt to the new study environment of a university and to form their careers independently while collaborating with them. Moreover, through contact with a wide range of academic disciplines related to nature and human beings, and diverse societies and cultures, students will learn the foundations of knowledge necessary for the future society that transcends existing frameworks, with the goal of acquiring deep insights into the true nature of human beings and their way of life, as well as the ability to correctly perceive the world.

## Educational Content

We offer small-group courses to help first-year students adjust to the new study environment of a university and support them as they begin to develop their careers independently, as well as a range of courses that provide a solid intellectual foundation for advancing into specialized fields by allowing students to think about the nature of academics. And their own relationship to it from a wide variety of perspectives over the course of their senior year.

### **First Year Seminar**

This course is offered in the spring AB module as a unit for a class consisting of about 20 new students and one class instructor. In addition to supporting students to adjust to university life in terms of both studying and daily life, such as course planning, career development, and mental health, we also facilitate communication between students and faculty members and between students.

### **Invitation to Arts and Sciences**

A course that clarifies the origins and expansion of academic disciplines at universities and their relationships with other disciplines through specific problems. This course will deepen students' understanding of the significance of the specialized fields they intend to major in, as well as the positioning of those fields in undergraduate courses.

### **Multidisciplinary Subjects**

These courses are designed to motivate students to take a bird's eye view of their own learning at university by exposing them to diverse ways of thinking and living from a broad perspective of society and the world. Through taking these courses, students

will be able to establish their own academic foundation. These courses include career-supporting content, cross-disciplinary content, content that promotes self-analysis and self-establishment, and content that cultivates adaptability to social life, so that students can think about academics in diverse ways.

## Characteristics of educational methods

In the First Year Seminar, students are divided into classes with small numbers of students, and class instructors provide careful guidance and care for first-year students.

In Invitation to Arts and Sciences, students are able to get a sense of the breadth and depth of academic study at the university, and use the University's proprietary edited guidebook as a reference for choosing their own field of specialization and future course planning.

In Multidisciplinary Subjects, students are able to choose from a variety of styles of courses, including relay lectures by researchers and notable figures from inside and outside the university who are active on the world's front lines, subjects in which graduates are invited to discuss their experiences in society, and subjects closely related to the traditions of the University.

Diverse class methods, including the use of manaba and teaching assistants, are used to provide education that guides the entire university.

## Standards that should be achieved

### **Cooperative, independent, and autonomous attitudes**

Through the First Year Seminar, communication between students and faculty members, as well as among students, is encouraged to understand the importance of teamwork and leadership.

### **Broad perspective and international character**

In Invitation to Arts and Sciences and Multidisciplinary Subjects, through contact with a wide range of knowledge and ideas related to nature and human beings, society and culture, students recognize the relative position of their major field of study and acquire a holistic view, interdisciplinary perspective, internationality and social adaptability.

## Guaranteeing the quality of education

### **Enrichment of course guidance**

We offer course guidance to ensure that students understand the philosophy and goals of the University's liberal arts education. Specifically, we provide detailed course guidance on Multidisciplinary Subjects during the orientation for each college or specialty school held after the admittance ceremony.

### **"Multidisciplinary Subjects" expert sub-committee**

We examine the nature of Multidisciplinary Subjects, course content and grading guidelines.

### **FD Implementation**

As a part of the University of Tsukuba FD Committee, class evaluation questionnaires are administered and the results are fed back to each faculty member for self-assessment and improvement of Multidisciplinary Subjects.

## Multidisciplinary Subjects

Total of at least 3 credits required

### **First Year Seminar**

1 credit required

### **Invitation to Arts and Sciences**

1 credit required

### **Multidisciplinary Subjects**

At least 1 credit required

# Physical Education

## Educational purpose

Physical Education at the University of Tsukuba (Tsukuba Taiiku) aims to foster a healthy body, emotional richness, and strong spirit through the acquisition of sports skills for lifelong sports, knowledge and practical skills to maintain and improve health and physical fitness, fair thinking as a member of society, and understanding and communication with others through various sports practices based on leading-edge health and sport sciences. The Generic Competences to be acquired include “physical and mental health, humanity and ethics” and “Cooperative, independent, and autonomous attitudes”

## Educational Content

The curriculum establishes academic work goals according to grade level: Basic Physical Education (First-year), Applied Physical Education (Sophomore), and Advanced Physical Education (Junior). The classes focus on practical exercises, but also include lectures on health, physical fitness, and the significance of sports.

### Practical exercises

For practical exercises, we offer a variety of subjects including individual sports, ball sports, martial arts, outdoor sports, and dance. In addition, fitness training, refresh gymnastics, jogging and walking, and other practical exercises related to health and physical fitness are offered.

### Lectures

In order to gain knowledge and skills to enjoy sports throughout life, students will learn about issues related to health and physical fitness, the significance of sports, as well as how to acquire sports skills.

## Educational Methods

### Classes at “authentic” sports facilities

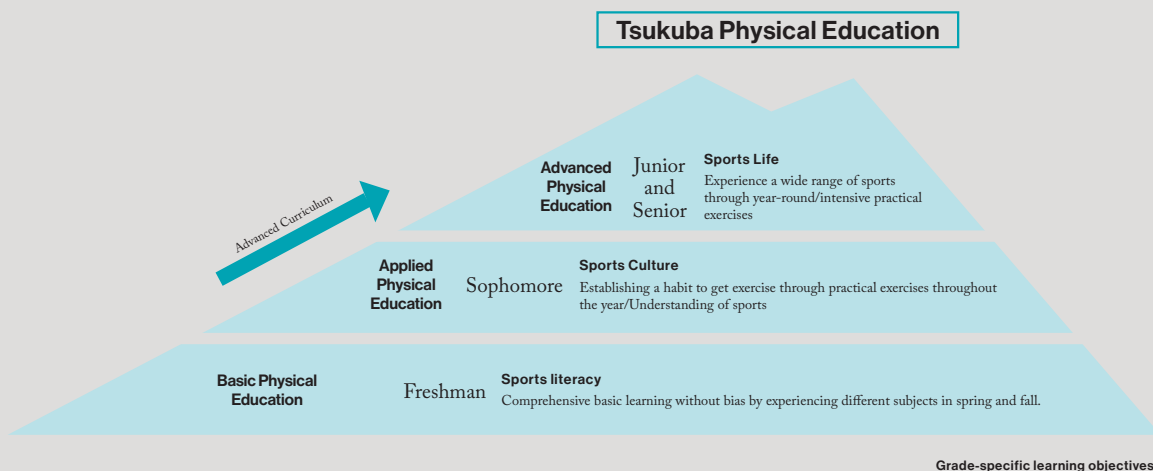
We have 17 outdoor facilities, including an athletic field that is capable of hosting official competitions, an artificial turf soccer field, tennis courts, and a jogging track that surrounds the campus, as well as 25 indoor facilities, including a central gymnasium and a heated swimming pool.

### Wide variety of courses

In addition to popular sports such as tennis, volleyball, basketball, soccer, etc., we also offer more than 30 different subjects such as gymnastics using trampolines, bodywork to learn Qi Gong and breathing techniques, jogging and walking with the aim of completing the Tsukuba Marathon, trim exercise for students with injuries and other special needs, and judo and karate that can be used for self-defense.

### Development of a wide range of seasonal sports subjects

We offer intensive seasonal courses in snowboarding, skiing, skating, sailing, windsurfing and skin diving.



### Courses by specialists

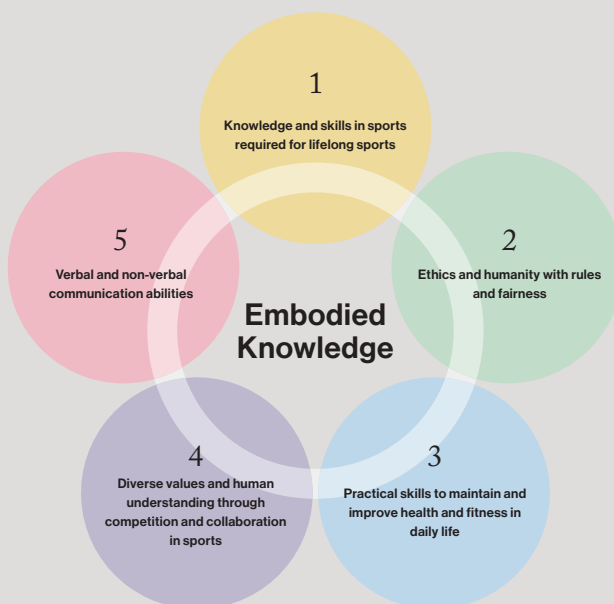
Courses are taught by experts in the subject. Courses are taught by top classes experts in their respective sports, including specialists who have won medals at the Olympics and World Championships.

### Guaranteed quality of education

- Evaluation of classes by students is conducted independently in physical education courses. The classes of faculty members who received high scores in the evaluations are shared in peer training.
- Periodic evaluations by third parties outside the university are carried out, and improvement measures are taken in response.
- In classes where safety considerations are required or assistance is needed, faculty members and teaching assistants work together to conduct the class.
- The syllabus is published on the Physical Education Center website in order that students can obtain information about the classes at any time.
- We conduct domestic and international research on University Physical Education curricula, and carry out research on curriculum models from new perspectives.

### Standards that should be achieved

The five Embodied Knowledge acquired in Tsukuba Physical Education



# Foreign Languages

## Educational purpose

This research-oriented university offers three goals for foreign languages. The first is for students to become proficient in foreign languages in their academic research activities. Second, by learning multiple foreign languages, students can understand the diversity of culture, society, and values, and cultivate their ability to think from multiple perspectives. Third, through improving their foreign language competences, students can enhance their communication skills and cross-cultural competences in their future activities in society.

## Educational Content

Courses for English as the first or second foreign language and elementary foreign languages (German, French, Spanish, Russian, Chinese, and Korean) are offered. For international or returnee students studying in English programs, Japanese language courses are offered.

### English Language

In order for students to be proficient in English in their academic and research activities, an emphasis is provided on learning specific contents with English rather than learning English itself.

#### Compulsory Subjects

English Reading Skills and English Presentation Skills are offered as EGAP (English for General Academic Purposes) courses, which will be a bridge to undergraduate specialized academic English courses. In English Reading Skills, students read academic materials intensively and also acquire general academic vocabulary and expressions. In English Presentation Skills, students learn the basics of presentations in English necessary for academic communication activities.

#### Elective and Free Elective Courses

Advanced courses or courses related to studying abroad such as English Academic Writing, English Academic Presentation, etc. are offered to suit students' diverse needs.

### Elementary Foreign Languages

Through learning a specific foreign language for the first time, students learn about the diversity of the world's cultures and societies, acquire the ability to think with multiple perspectives, develop cross-cultural understanding, and use the target language

in a practical way.

#### Compulsory Subjects

In Basic xx Language courses, students learn the basic grammar and expressions of the target language, and in Language and Culture of xx Language Areas, students learn not only specific linguistic features but also social and cultural aspects of the language.

#### Elective and Free Elective Courses

Foreign language courses such as Applied xx Language Reading and Applied xx Language Writing are offered for students aiming for intermediate to advanced levels.

### Japanese Language

Japanese language courses are offered to international students and returnee students on a proficiency level basis. These courses are offered to meet the diverse academic needs of international students.

#### Introductory and Elementary Courses

Students learn Japanese skills for living in Japan.

#### Intermediate and Advanced Courses

Courses are offered in the four skills of reading, writing, listening, and speaking depending on students' learning objectives.

#### Career Support Courses

Students will learn Japanese language skills that will help them to independently choose their own career path.

## Characteristics of educational methods

Courses that utilize both online and e-learning materials are offered.

We have Academic Writing Support Desk to assist in improving English academic writing skills.

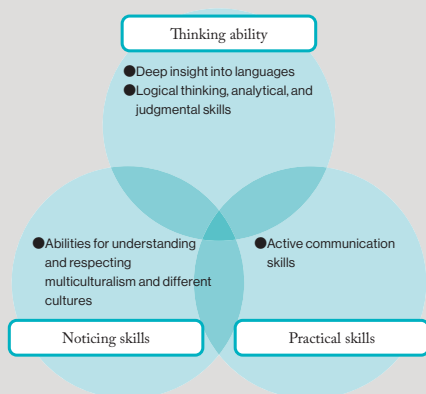
Both English and some elementary foreign languages offer three- to four-week language training programs at partner universities overseas, which place emphasis on experiencing the target language and culture of the host country.

Students receive certificates for their outstanding extracurricular foreign language activities including studying abroad, receiving good grades in foreign language proficiency tests and volunteer activities with foreign languages.

## Standards that should be achieved

### English Language

The following three skills are to be acquired as a foundation for English for general academic purposes



### Elementary foreign languages

Abilities and qualities acquired through taking compulsory courses

- Basic grammatical knowledge and basic proficiency in speaking and conversation

Abilities and qualities acquired through courses in the second year or after

- Basic 4 skills (reading, writing, listening, and speaking)
- Skills for multifaceted thinking, skills for cross-cultural understanding, and attitudes of respecting linguistic and cultural diversity
- The ability to use the target foreign languages in academic research activities

### Japanese Language

Cultivate abilities and qualities through course work

- Japanese language competence to conduct specialized research in Japanese
- Japanese language competence necessary for daily life
- Japanese language competence required for individual career paths in Japan

## Guaranteeing the quality of education

Course syllabi, clearly stating the course contents and grading criteria, are publicly available.

Class evaluation questionnaires by students are administered and the results are given to faculty members to enhance their teaching methods.

Annual foreign language education FD training seminars are held to enhance the quality of education.

TOEIC IP tests are administered in the first and third years of each school, and the results are used to assess students' English proficiency over time and for curriculum development.



# Information Literacy

## Educational purpose

In addition to basic knowledge about computers and the Internet and their place in society, as necessary as a member of society living in an information society, the following four items are objectives for students to acquire basic ideas about the use of data to support the information society.

■ To acquire the sense of ethics required in the information society, and to acquire essential information literacy for the use of Internet services

■ To cultivate the ability to take responsibility for one's actions using computers and the Internet

■ To acquire the ability to use computers, application software, and Internet services on one's own regardless of the situation in which they are used

■ To acquire the ability to properly collect and manage data, and to use the collected data for data analysis

## Educational Content

Information Literacy is made up of three subjects: "Information Literacy (Lectures)", "Information Literacy (Exercises)" and "Data Science".

In "Information Literacy (Lectures)", through learning the basic concepts of computer-based information processing and the Internet, and in "Information Literacy (Exercises)", through mastering basic information use, sharing, and information technology using computers, students acquire the above educational purpose.

In "Data Science," students acquire the fundamentals of statistics and data engineering through lectures, and achieve the above educational purpose through repeated practice of data science through class exercises.

## Characteristics of educational methods

■ "Information Literacy (Lectures)" and "Information Literacy (Exercises)" are based on the following standard academic work topics. To suit the needs of each undergraduate course, the specific academic content is adjusted based on the following standard academic work topics. In "Information Literacy (Lectures)", students learn the "know-why" of basic concepts of information, and in "Information Literacy (Exercises)", they learn the "know-how" of using, sharing, and communication skills of information.

### Standard academic work topics for "Information Literacy (Lectures)" and "Information Literacy (Exercises)"

#### Information Literacy (Lectures)

Information ethics and information security

Information representation

Basics of calculation

How computers work

How the Internet works

#### Information Literacy (Exercises)

Academic writing

Information communication and information sharing

Presentations

■ The following items are standard academic work topics for "Data Science". To suit the needs of each undergraduate course, the specific academic content is adjusted based on the following standard academic work topics.

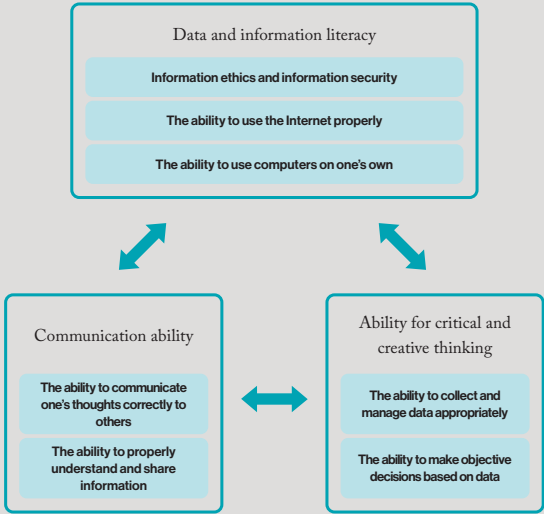
**Standard academic work topics for "Data Science"**

<b>Data Science</b>
Data collection and management 1: Types of data and data collection
Data collection and management 2: Data preprocessing and organization
Data collection and management 3: Design and management of data tables
Advanced data collection and management: Big data
Data Visualization
Data analysis 1: Understanding qualitative variables
Data analysis 2: Understanding quantitative variables
Data analysis 3: Analysis of a variety of data
Advanced data analysis: Artificial intelligence

Graduate students in Degree Programs in Systems and Information Engineering, etc. participate in classes as teaching assistants and provide detailed assistance to faculty members.

**Standards that should be achieved**

Through "Information Literacy (Lectures)", "Information Literacy (Exercises)" and "Data Science," students acquire basic skills related to the three Generic Competences of "Data and Information Literacy", "Ability for critical and creative thinking" and "Communication Skills."



**Guaranteeing the quality of education**

- Based on the standard academic topics of "Information Literacy (Lectures)", "Information Literacy (Exercises)" and "Data Science," the course content and progress will be adjusted according to the needs of each college or specialty school.
- Class questionnaires are administered and the results are fed back to each faculty member for class improvement.
- We conduct round-table discussions with faculty members to discuss and share problems and issues in classes for class improvement.
- Committee for the management of Information Literacy (consisting of representative faculty members from related organizations) discusses ways to improve classes and provides feedback to actual classes.

# Japanese

## Educational purpose

In order to survive in a globalized world and a knowledge-based society, it is necessary to acquire accurate knowledge of Japanese, their mother tongue, and to be able to use it properly to communicate their intent smoothly with others, as well as to be able to express and communicate their ideas clearly based on a variety of information. In Common Foundation Subject, “Japanese,” the goal is to acquire these Japanese language skills that are essential for academic work at university and for being active in society.

## Educational Content

■ We offer “Japanese I” and “Japanese II” which cover from basic content to advanced issues.

■ Classes are divided into classes of about 40 students per class, paying close attention to the needs of each student.

■ In the undergraduate courses that designate compulsory subjects, classes are offered in consideration of the characteristics of these courses (for example: words in informed consent (Medicine and Nursing), Coaches and words (Physical Education))

■ In the undergraduate courses that do not designate compulsory subjects, these are free courses, providing an environment in which students with different specialties can learn from each other.

### **Japanese Language I: Fundamentals of report (paper) writing**

As a starting point for report preparation, students learn the necessary basic knowledge for problem awareness, originality, a writer’s mindset, an objective stance in writing an argument, and expression, and receive practical training.

■ Understand the idea of the paper, originality, issue awareness, and the significance and value of the main topic.

■ Organize issues through the research, collection, organization, and examination of materials.

■ Learn about proper and improper writing through revision and mutual criticism.

### **Japanese II: Applied and advanced course from “Japanese I”**

This course builds on “Japanese I” to increase students’ consciousness as independent writers.

■ Clarifying the consciousness of problems and setting up a

hypothesis.

■ Understanding methods for searching literature and organizing information according to purpose.

■ Critically reading previous research, examining its relevance to the subject, and verifying its arguments.

■ Learning and executing honorifics and letter writing so that students can express themselves in a way that takes interpersonal relationships into consideration.

## Characteristics of educational methods

### **We adopt class exercises-based educational methods.**

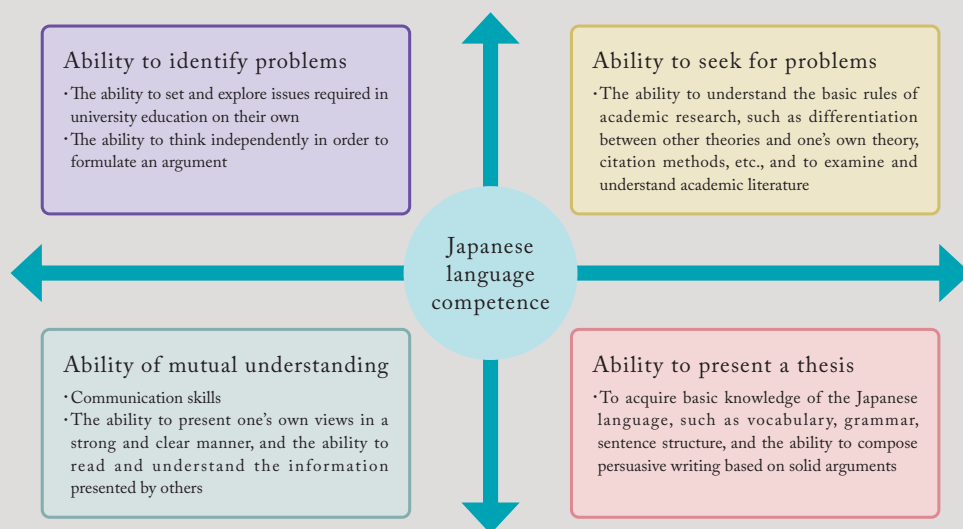
Through actually writing documents, making speeches, and critiquing each other’s work, students aim to improve their Japanese language skills.

### **Education is conducted by utilizing the expertise of faculty members.**

The classes are taught by specialists in Japanese linguistics, Japanese language education, etc., and the content of the classes is designed to leverage each of their specialties.

## Standards that should be achieved

### Achieve the four competencies



## Guaranteeing the quality of education

We make the syllabus available to the public, and clearly indicate the contents of the classes that are unique to each faculty member's expertise and the grading criteria.

We have an ample feedback system for improving classes, including class evaluations by TWINS\* and faculty members conducting their own surveys.

We have established a forum for regular discussions to improve the quality of our classes, taking into account the characteristics of each undergraduate course, and to ensure that the content of our classes is appropriate to the actual situation.

\*TWINS (Tsukuba Web-based Information Network System) is an online educational information system.

# Art and Design

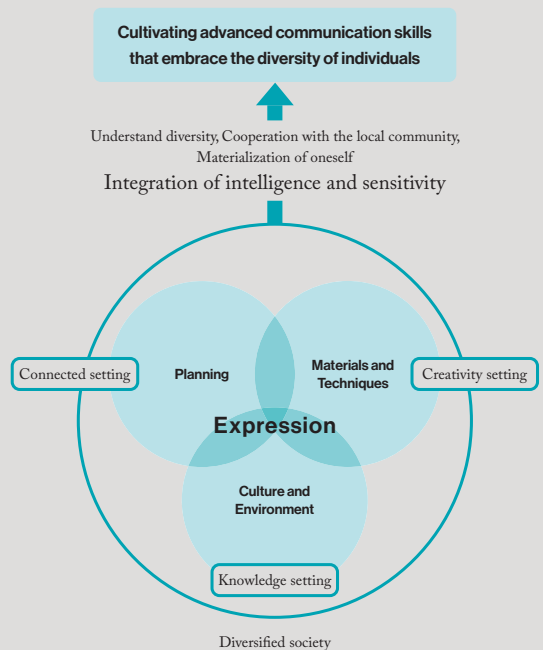
## Educational purpose

The University of Tsukuba is the only comprehensive national university in Japan with its own education and research organization for nurturing professionals in Art and Design. The liberal arts education offered by the School of Art and Design leverages these characteristics to not only provide students with a broad knowledge of art and design, cultivate their aesthetic sensibilities, and experience the joy of expression, but also to foster higher-order communication skills that enable students to accept diverse individuals and values in a global society and to communicate their own ideas. The educational goal of the Common Foundation Subject “Art and Design” is to integrate intelligence and sensitivity, and to nurture the human ability to express oneself and to have a sense of balance that tolerates the ideas of others.

## Educational Content

Art and Design education as a liberal arts education promotes the understanding of the background of different cultures and social values through the practical learning of traditions and art and design techniques and materials related to artistic expression. Students will learn specific methods and basic knowledge in order to understand how important it is for human beings to experience the joy of creating and appreciating art and design, such as drawing pictures and visiting museums, and will understand that it is something important for human beings to live as human beings. They will also aim to become citizens who act for the promotion of culture and art and design, seeking to engage with diversified local community and recognize the importance of art in developing all social infrastructures.

### Art and Design Education



## Characteristics of educational methods

Faculty members who are active as artists or researchers on the front lines of society will guide students to think deeply about their own individuality and qualities through “experiential knowledge” of art and design, instruction in techniques and expressions for “creation of works,” and “practical experience” in society.

Students study in the same workshops and practical training rooms where students majoring in Art and Design study. By working on productions and projects together with students who major in the arts and design, students can take advantage of the mutual educational benefits of learning together.

#### Creative subjects: The joy of expression in a creative setting

Students will learn about materials, techniques, and expressions related to art and design. Students will learn the basic knowledge and basic concepts necessary for creating works of art and design, such as the basic names and methods of using materials, art supplies, and tools, selecting motifs and subjects to paint, setting themes and subjects of works, the flow of creating works of art and design from start to finish, the characteristics of techniques required at each stage of creation, honing one's sense of form, understanding forms, color expression, and mental preparation for creating works of art and design.

Workshops on Oil Painting  
Workshops on Japanese-style Painting  
Workshops on Sculpture  
Practice: Calligraphy (A,B,C)

Practice: Picture Book  
Practice: Illustration

#### Problem-solving type courses...hands-on experience in society as a connected field

We offer problem-solving type classes through art and design in the local community. Students will actually organize a project using art and design, and learn what art and design can do for society.

Workshops on Art & Design Produce Studio. (1, 2, 3)

## Standards that should be achieved

### Understanding and deepening of art culture

Artistic expression is heavily influenced by the era and social context in which it is created. Students will understand regions that are receptive to artists, and understand culture as the soil in which people are nurtured and art is nurtured, and understand the depth of expression that cannot be obtained only through evaluation by the senses.

### Practical Experience with Techniques and Materials

Students will strive to discover the possibilities of expression through observation of subjects and understanding of materials. Students will understand that they can express their inner thoughts and ideas through expressive activities, and that communication can be achieved through the medium of artwork.

### Acquire methods to materialize one's intent

In problem-solving type classes, students will understand that practical planning for realizing expressions and attempts in hands-on experiences in society will lead to the utilization of art and design.

## Guaranteeing the quality of education

We guarantee the quality of education through the provision of a forum for objective and relative self-evaluation as well as a sense of one's own achievement. As well as self-evaluation of their works, which are the tangible results of the class, the faculty member in charge will provide specific criticism in critique sessions, etc., and encourage each student to clarify their specific issues and establish their next goals.

While making efforts to understand the current situation by conducting class questionnaires, etc. for each subject, we will also keep an eye on the trial process of individual students and provide a forum for answering their questions.

The Curriculum Committee of the School of Art and Design will discuss the improvement of classes while referring to the questionnaires, etc., and provide feedback to the class instructors.