12 Implementation of Educational Projects (Special Expenditures, etc.)

Educational Reform Initiatives

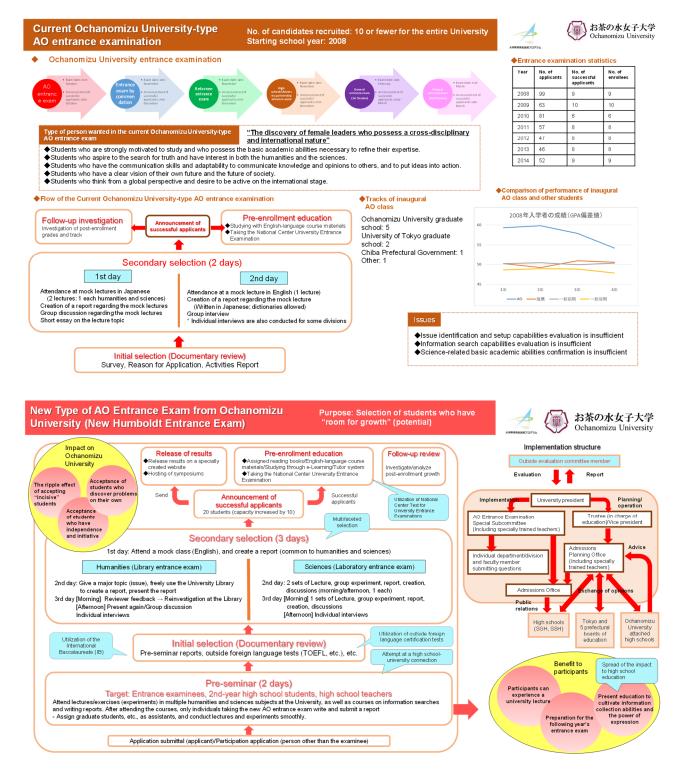
- This year is the 140th anniversary of the founding of Ochanomizu University. As each era has passed—Meiji, Taisho, Showa, and now Heisei—the University has worked to develop female human resources who will always create universal academic value and carry the responsibility for the future. In addition, our alumni have given bloom to their abundant talents in a variety of fields, led society, and created a new era.
- As an international education and research institute, Ochanomizu University believes that it is necessary to continue its mission to be a place for women to achieve their most heartfelt dreams, and to support the diverse activities of women both inside and outside Japan.
- Ochanomizu University has 140 years of history and tradition in its pace-setting women's education. Today, the University stands on that foundation as it molds liberal arts education, global education, and leadership education, etc., into its unique system of education. Further, our teaching staff and other staff members strive each day toward mastery to enable students to develop autonomy and cooperativeness, and to acquire the capacity to think logically and a creative spirit of inquiry.
- Liberal arts are the foundation of an education. One of the characteristics of Ochanomizu University is our "Liberal Arts in the 21st Century." This program enables students to discover, analyze, and consider issues themselves, and find solutions. Teaching staff members in a variety of disciplines collaborate to provide a broad range of knowledge and techniques that extend beyond the boundaries of existing academic disciplines.
- In addition, we have carried out initiatives in specialized education, such as "21st Century Center of Excellence (COE) Program" and "Global COE," end implemented activities that contribute to high-level education and research. Currently, the "Program for Leading Graduate Schools" is being implemented to develop female human resources who have doctorates and are able to play an active role globally.
- As a high-level education and research institute with the ability to develop the next generation of excellent human resources and create an abundant future, Ochanomizu University will utilize these education and research activities diligently in an effort to lead not only Japan but the international community as well, and build the future.

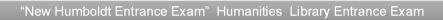
Kimiko Murofushi, President, Ochanomizu University

New Type of AO Entrance Exam from Ochanomizu University (New Humboldt entrance exam)

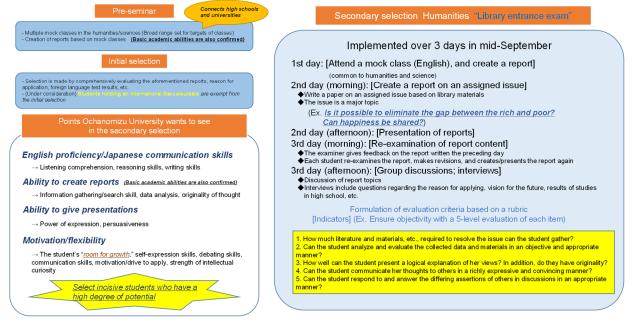
2014 Academic Year "Program to Accelerate the Revitalization of University Education" Selection Efforts Beginning in the 2014 academic year

The purpose of this initiative is to fundamentally reform special entrance examinations, in particular the current AO entrance exam, and create an entrance exam that identifies the motivation, aptitude, abilities, and basic academic abilities of applicants in a multifaceted and comprehensive manner. We will double the number of applications accepted currently, increasing the number of applicants to a combined humanities and sciences total of 20 for the entire University, and take time to carefully implement Ochanomizu University's unique new Humboldt entrance exam. We will identify the potential of examinees while verifying their basic academic skills, through pre-seminars that have the element of a connection between high schools and universities, as well as the main exam, which is administered over a period of three days. Rather than selecting students who reach their intellectual peak at the time they enroll in the University, we will select students who have "room for growth," enabling them to significantly increase their abilities in their studies after enrollment, advance to graduate school, then go out into society and play a role as a leader.









"New Humboldt Entrance Exam" Humanities Library Entrance Exam



| AMMARAMEZOTA Chanomizu Universi | |
|---|---|
| Pre-seminar Connects high schools and universities | Secondary selection Sciences "Laboratory entrance exam" |
| - Multiple mock classes in the humanities/sciences (Broad range set for targets of classes) - Creation of reports based on mock classes [Basic academic abilities are also confirmed] | Implemented over 3 days in mid-September |
| Initial selection | 1st day: [Attend a mock class (English), and create a report] (common to humanities and science) 2nd day (morning): [Lecture, group experiment, report creation] ● Experiment topics given in the laboratory (Experiments that can be done safely in a short period of time) |
| Selection is made by comprehensively evaluating the aforementioned reports, reason for application, foreign language test results, etc. (Under consideration) Social and Social an | Experiment copics given in the laboratory (Experiments that can be done safety in a short period on line) Before the experiment, a lecture is given on the basic matters required to make observations, as well as safety matters Ex. * Lecture (1 hour) Exercises (1 hour) Group discussion based on results (1 hour) Afternoon: "How does the color of a pigment change with a solvent? Observe the energy structure of the substance." * Conduct an experiment related to "Energy of the substance = color" in light of the morning's results. Test samples and laboratory instruments/lab coats, etc., are provided in the laboratory; no Internet connection is available Lecture (0.5 hour) Experiment (2.5 hours; including group discussion) Report (1 hour) |
| Points Ochanomizu University wants to see in the secondary selection | |
| English proficiency/Japanese communication skills → Listening comprehension, reasoning skills, writing skills Ability to create reports (Basic academic abilities are also confirmed) → Information gathering/search skill, data analysis, originality of thought | Strict day: [Lecture, group discussion, interviews] Conduct an experiment (1 set) in the same manner as the preceding day. (Change group members so that they are not the same as the previous day) Ex.* Lecture (1 hour) → Experiment (2 hours) → Group discussion based on results (1 hour) "Photosynthesis/solar cells: Apply the energy structure of the substance." Interviews include questions regarding the reason for applying, vision for the future, results of studies in high school, etc. |
| Ability to give presentations → Power of expression, persuasiveness Motivation/flexibility | Formulation of evaluation criteria based on a rubit: [Indicators] [E], Ensure objectivity with a Selevel evaluation of each item) 1. Can the student understand the content of the experiment topic accurately in accordance with the given guidelines? 2. How are the student "a actual work skills? (Use of a balance, reading data values in light of significant figures, establishing a division of roles within the group, |
| → The student's "room for growth," self-expression skills, debating skills, communication skills, motivation/drive to apply, strength of intellectual curiosity <u>Select incisive students who have a high degree of potential</u> | etc.) 3. Can the student modify methods, etc., independently when conducting experiments? (For example, devising means to dissolve something quickly, determining which test sample would enable a high leve of efficiency in measurement, etc.) 4. Can the student process experimental data correctly? (For example, did the student determine the reproducibility rather than only taking a single measurement in statistical processing, etc.?) 5. Can the student reference data correctly? 6. Can the student consider issues in a logical manner, based on the obtained data? |

Fostering long-term creativity and innovation with science and technology disciplines based on Ochanomizu spirit "Migakazuba" in the next generation of global leaders, Ochanomizu University

Program for Leading Graduate Schools Beginning in the 2013 academic year

It is absolutely critical to continue creating innovation in order for Japan to achieve sustained development. Meanwhile, it has been said that "the utilization of women will be at the core of growth strategy" in a society experiencing a low birthrate and an aging population. In such circumstances, this program consists of collaboration between government, industry, and academia to develop female human resources who are able to play an active role on the global stage, women who have a foundational understanding of physics, mathematics, and information in science and technology (physical, information, etc.), which have a particular lack of female human resources, giving them the ability to respond immediately to changes in the form and needs of society, and who have a high level of flexibility that enables them to continue creating the necessary innovation.

The two educational targets of the program are "acquisition of solid basic abilities" and "cultivation of R&D innovation in the real world and leadership in collaboration between differing fields." In the case of the latter, the educational technique Project Based Team Study (PBTS), in which achievements are made in a practical manner through effective project management and teamwork research, is established as the backbone of the program.

Further, the following will be increased over a period of 5 years through the program's unique coursework, to enable students to display soft leadership in global community in which multiple cultures coexist.

I. The ability to consolidate and analyze comprehensively

II. Human power

III. The ability to show appeal and language skills/bargaining strength

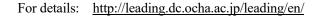
IV. Understanding of other cultures and identity as a Japanese person

V. Crucial IT technology, etc., for information transmission and gathering

The program will be implemented through collaboration between Advanced Sciences and Life Sciences, and new establishment of the Minor Course "Science and Technology for Global Leaders."

Fostering long-term creativity and innovation with science and technology disciplines based on Ochanomizu

spirit"Migakazuba" in the next generation of global leaders Personal Growth Image of study Commons Educational Reform in School Song : Migakazuba University PBTS Change in Industry siness Mindse Practice of Compute Biology 1 Profess of Sec. Newborn Engineering NGO Ochanomizu NWF Ja University ESPCI, CERN, NGO IMS, RIKEN, NIMS, AIST, JAEA Pri Laboratory Rotation Re Image of Portfolio System Taking a Role of Hub for Strong Cooperation Between Industry titutes **Overseas Research Institut** nd Governmen



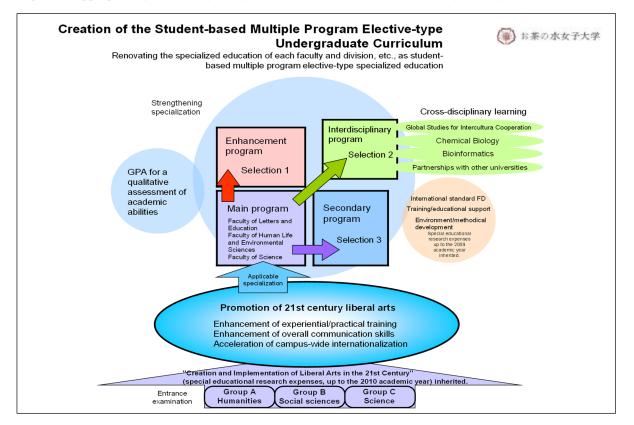
Creation of a New Student-based Undergraduate Curriculum (MEXT Special Expenditure Project; Started in the 2010 academic year)

--Liberal Arts in the 21st Century and Multiple Program Elective Course System Specialized Education--

The education provided by Ochanomizu University utilizes a new undergraduate curriculum to develop people who possess fundamental specialized skills that have both creativity and practicality. The curriculum takes a broad perspective that is based on a foundation of liberal arts in the 21st century (acquisition of a cross-disciplinary perspective that includes both the humanities and the sciences, and learning of skills that they can use freely). The University will implement a student-based multiple program elective-type specialized education curriculum on the foundation of a "21st century liberal arts education integrating the humanities and sciences" (LA, general education curriculum) that deepens students' overall understanding of the natural sciences, arts and humanities, and social sciences. This will create an undergraduate curriculum to develop female leaders who have the learning and specialization that are needed in 21st-century society, and who have a deep spirit of independence and self-reliance. Specifically, the curriculum does not implement isolated specialized education within the framework of the specialization of the usual divisions and departments, but instead uses the Multiple Program Elective Course System that crosses the boundaries of faculties, divisions, and other educational organizations, as well as a combination of main programs and elective programs, to foster fundamental specialized skills with diverse possibilities, in accordance with the individual attributes and orientation of each student. (Figure 1)

In addition, the University implements three integrated operations to promote the guarantee of the quality of a solid and effective education for students. (Figures 2 and 3)

- (1) By utilizing the Color Code Benchmark System to categorize all courses by color according to their level, we have made it possible to provide appropriate guidance about courses, and understand the structure intuitively as well.
- (2) We have developed and implemented a mechanism to implement strict assessment and clarify the guarantee of quality of the results of education by implementing the functional GPA system, and evaluated superior results as accurately as possible. In addition, we adopted the functional grade point average (fGPA) to calculate grade points directly, in order to ensure the quality of the results of education, and are linking it to the improvement of performance.
- (3) We have established a detailed learning support system (organizational + informational infrastructure) to provide appropriate guidance regarding the ideal nature of the diverse learning that is generated in (1) and (2).



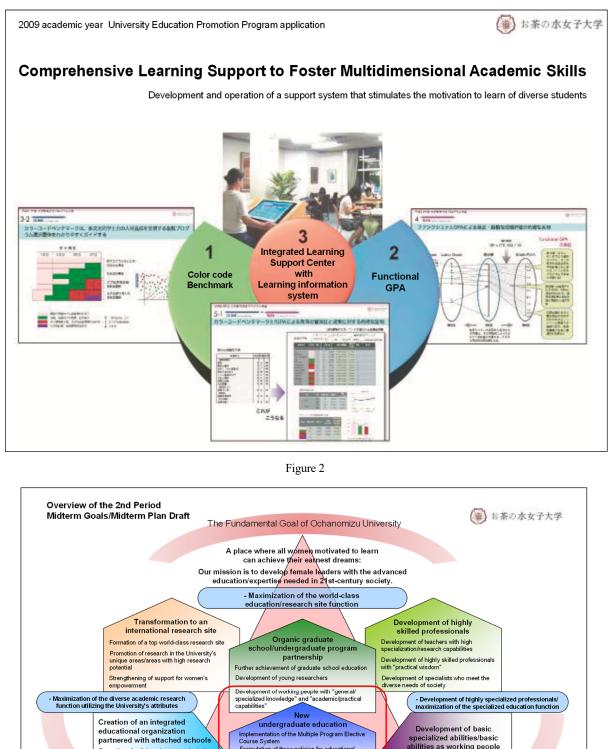


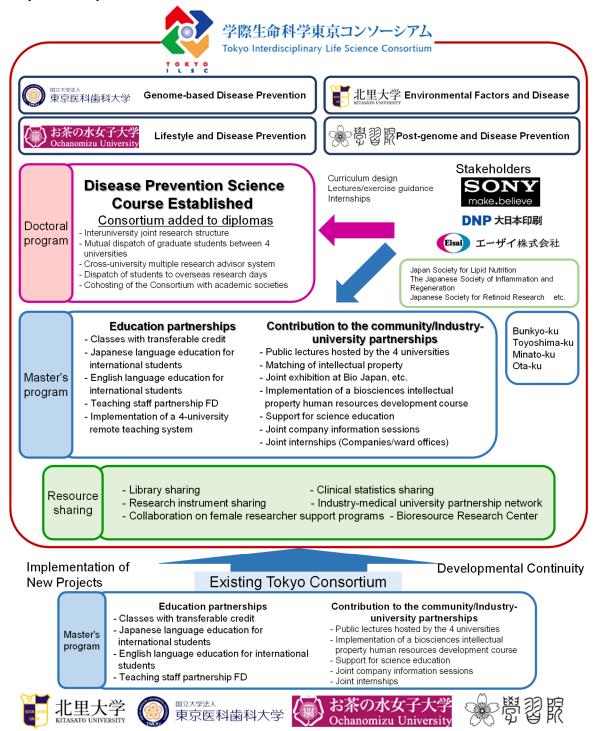


Figure 3

For details: <u>http://www.ocha.ac.jp/nsep/</u> (Creation of a New Student-based Undergraduate Curriculum)

Establishing a Disease Prevention Course in Graduate Schools Based on the Tokyo Consortium. Partner Universities: Tokyo Medical and Dental University, Ochanomizu University, Gakushuin University, and Kitasato University (Program for Promoting Inter-University Collaborative Education, MEXT) (Started in the 2012 academic year)

In the field of biological science, which makes progress rapidly, graduate education needs the cultivation and produccion of human resource that aquire advanced and specialized knowledge and versatile ability that can meet social requirements and become opinion leaders. In this project, four universities, Tokyo Medical and Dental University, Ochanomizu University, Gakushuin University, and Kitasato University, which have complementary characteristics in education and research in biological science, mainly organize the curriculum of graduate education for cultivating human resource in the field of biological science in collaboration with related academic societies and stakeholders such as industries. The project aims to be the Center of Knowledge in the biological science in the Tokyo prefecture by establishing a disease prevention course in doctoral course, increasingly improving the level of education and research by the development of collaborative curriculum, implementing the joint projects for studpent support (internship and externship) and for internationalization, and promoting joint research systems and partnerships of industry, academia, and local areas.



Quality Assurance of Undergraduate Education through the IR Network (s Started in the 2012 academic year) Partner Universities: Hokkaido University, Ochanomizu University, University of the Ryukyus, Osaka Prefecture University, Tamagawa University, Doshisha University, Kwansei Gakuin University, and Konan University.

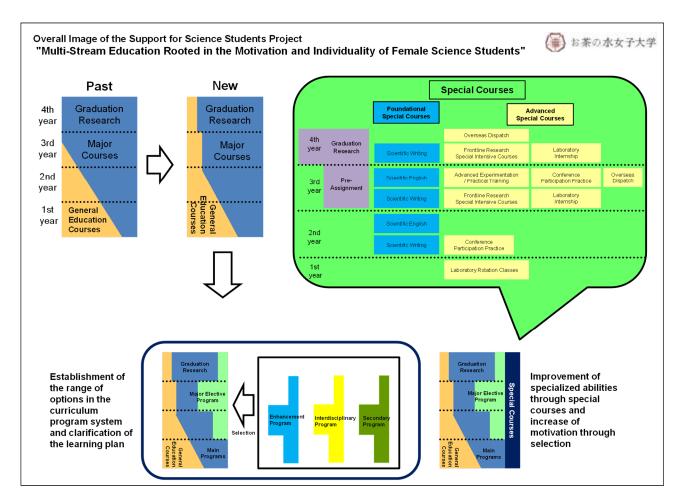
Through the network of national, public, and private universities, this project aims to create quality assurance systems and improve the IR support systems, which try to link the results of mutual evaluation and on-campus survey data to the improvement of undergraduate education based on the analyses of national-wide student surveys. In other words, we conduct surveys such as student and graduate surveys, construct the IR evaluation system, and perform an assessment. Through conducting the surveys of English skill and graduates simultaneously, we try to promote university reform and eliminate mismatches between jobseekers and employers. Furthermore, we develop workshop projects for cultivating human resource for the IR. Through these projects, the new model of IR support systems for the quality assurance of undergraduate education will be constructed. Through sharing the know-how of the IR evaluation, human resource cultivation and the Japanese version of the IR evaluation model will be also constructed.



Teaching/learning evaluation system development network Teaching/Learning Evaluation Structure Research Committee/Alumni Research Committee/English Proficiency Evaluation Research Committee/IR System Development Committee

Multi-Stream Education Rooted in the Motivation and Individuality of Female Science Students (MEXT-selected Support for Science Students Project; Started in the 2009 academic year)

Ochanomizu University takes a variety of approaches to increasing the individuality and abilities of each student, through measures that enable students to conduct graduation research under the direction of faculty members from other divisions in related or adjacent fields, the establishment of minors in interdisciplinary fields, and adoption of the Multiple Program Elective Course System, etc., in order to inspire motivation and a sense of purpose toward learning rooted in the major field of "science," or to foster a broad perspective regarding science.



For details: http://www.sci.ocha.ac.jp/risuouen/

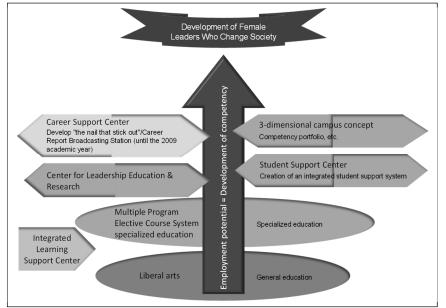
Support for Science Students Project Multi-Stream Education Rooted in the Motivation and Individuality of Female Science Students

Development of Competency for Female Leaders - Creating Yourself, Growing with Colleagues <Leadership Abilities that Change Society> -

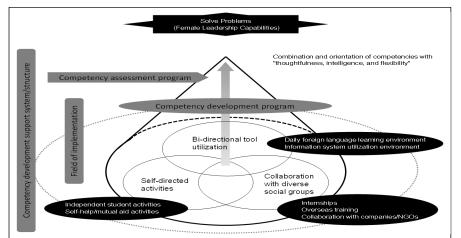
(MEXT-selected University Student Employment Potential Development Support Project; 2010 to 2011 academic years)

In the project, we create a mechanism to understand "female leadership skills" as a high level of employment potential within the framework of competency (comprehensive ability to generate a high level of performance) and enable students to independently, or with colleagues, expand them and utilize them as a high level of employment potential that contributes to the improvement of the status of women and resolution of other societal issues, and create the conceptual framework for the core competencies needed by people today. (Figure 1)

On this foundation, we make it possible to create a learning plan to enable students to measure their employment potential with objective standards in accordance with their own aims and independently increase that potential, by acquiring competency in the three areas of <utilization of bidirectional tools>, <independent activity>, and <collaboration in diverse social groups>, and the thinking/behavioral attributes <thoughtfulness, intelligence, and flexibility> that the University has considered to be the core attributes of female leaders. (Figure 2)



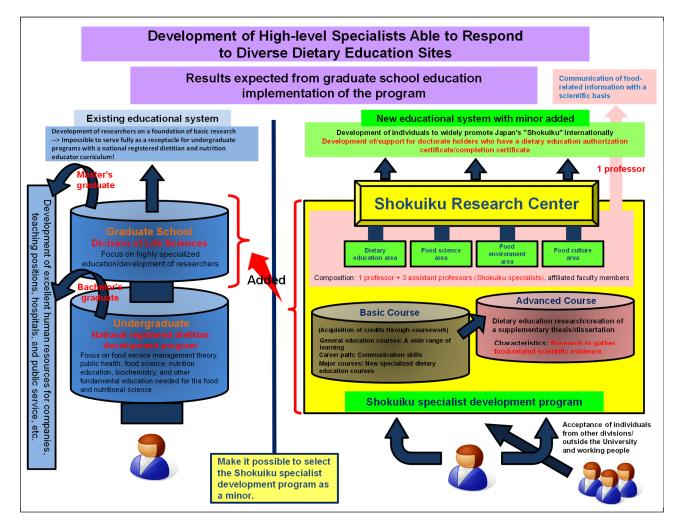
Overall Image of Career Development Support at Ochanomizu University (Figure 1)



Development of Problem Solving-type Employment Potential through Development of Competencies (Figure 2) For details: <u>http://www.cf.ocha.ac.jp/careerdesign/</u> Development of Competency for Female Leaders

Development of High-level Specialists with the Ability to Respond to Diverse Dietary Education Sites (MEXT Special Expenditure Project; Started in the 2010 academic year)

We develop high-level specialists who have a broad range of interdisciplinary learning that crosses the boundaries of conventional dietary education and who are able to correctly communicate information based on scientific evidence in accordance with a variety of contexts and levels, in order to communicate Japan's own "Shokuiku" overseas as a new concept, in response to the increased sophistication and diversification of dietary education.



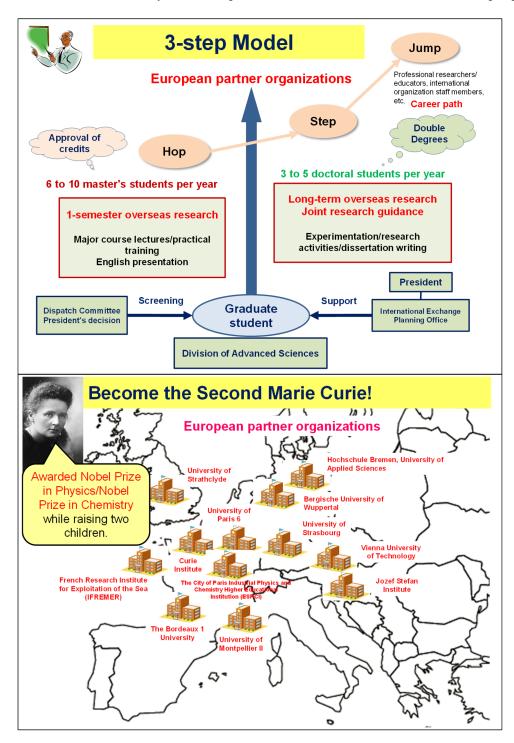
For details:<u>http://www.cf.ocha.ac.jp/ochashoku/</u> Development of High-level Specialists with the Ability to Respond to Diverse Dietary Education Sites

(Related activities) <u>http://www.cf.ocha.ac.jp/shokuiku/index.html</u> Implementation and Training on Dietary Education with a View Toward Children's Development/Growth Process (2007 to 2009 academic years)

Fostering of Advanced Female Scientists at Ochanomizu University: Be the Next Marie Curie (Started in the 2008 academic year)

(Japan Society for the Promotion of Science (JSPS)-selected International Training Program (ITP))

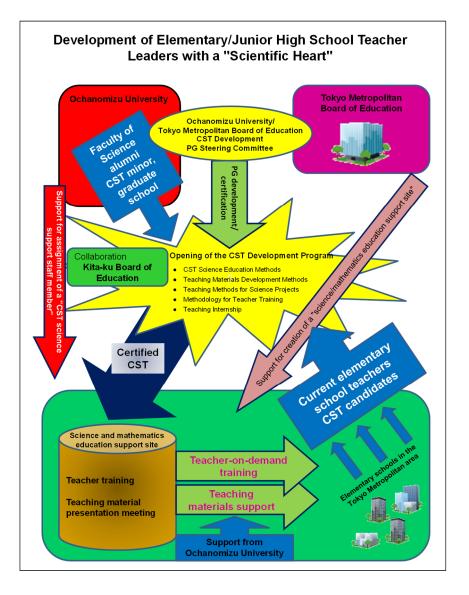
We dispatch graduate students majoring in science to European research institutes that have fertile soil for the development of female human resources. We will establish the "Hop-Step-Jump Model," a three-stage process that allows students to launch out into society, and develop female researchers who have an international perspective.



Development of Elementary/Junior High School Teacher Leaders with a "Scientific Heart" (Started in the 2009 academic year)

(Japan Science and Technology Agency (JST)-selected Mathematics and Science Teacher (Core Science Teacher) Training Site Construction Project)

The purpose is to transform elementary school teachers who enjoy and are good at science and graduate students who graduated from the Faculty of Science into elementary and junior high school teachers who have excellent teaching skills and ability to develop teaching materials. Subjects include "CST Science Education" to connect science and cutting-edge research with an awareness of the transition from elementary school to junior high school, "Teaching Materials Development" to transform local educational resources into teaching materials, summer break "Teaching Methods for Science Projects," and "Methodology for Teacher Training." Students gain experiential learning at educational sites through teaching internships. Students who pass all of these courses are certified as CSTs, and utilize the science and mathematics education support sites and CST science support staff members in each municipal district to promote local science and mathematics education.



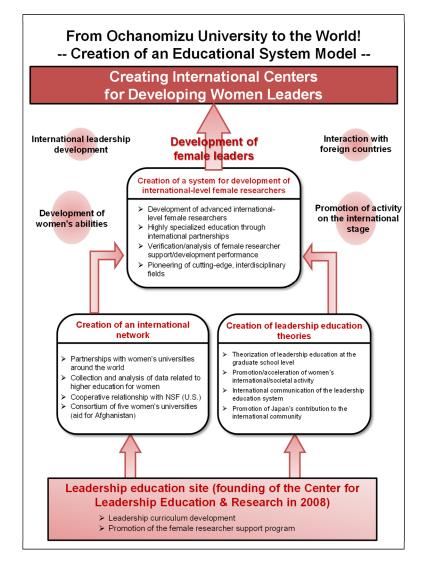
For details: <u>http://www.ocha.ac.jp/topics/h210928.htmlhttp//</u> (NEWS & INFO > Mathematics and Science Teacher Training Site Construction Project)

Creating International Centers for Developing Women Leaders (MEXT Special Expenditure Project; Started in the 2010 academic year)

- Full enhancement of the function as a world-class educational research site -

On the foundation of the achievements of the "Female Leader Development Program" that the University has been conducting, this Project aims to form international centers for the development of female researchers who will pioneer cutting-edge, interdisciplinary fields. To accomplish this, the University conducts the following activities.

- (1) Creation of leadership education theories
- (2) Creation of an international network to develop the abilities of women
- (3) Creation of a system for the development of international-level female researchers



For details: <u>http://www.cf.ocha.ac.jp/leader/index.html</u> Creating International Centers for Developing Women Leaders

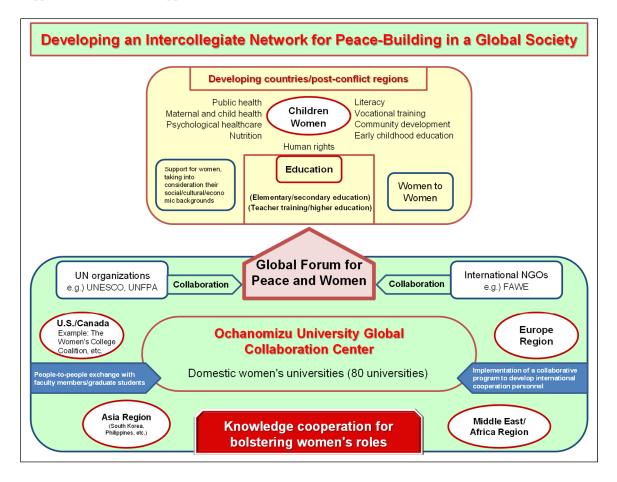
(Related activities) Female Leader Development Program (2006 to 2009 academic years) Career Opportunity Support Model from Ochanomizu Scientists (COSMOS) (2006 to 2008 academic years)

Developing an Intercollegiate Network for Peace-Building in a Global Society

- International Knowledge Cooperation for Bolstering Women's Roles - (MEXT Special Expenditure Project; Started in the 2010 academic year)

This project aims to form an international network between universities and research institutes in developed as well as developing countries, in an effort toward peace-building in a global society. The network is an international intellectual partnership that considers the roles of women, and aims to achieve the empowerment of women and children in Asia, the Middle East, and Africa, particularly in post-conflict countries and regions. To accomplish this, the University conducts the following activities. (Figure 12)

- (1) Formation of a network with (women's) universities in each region around the world for international cooperation related to the support of women and children
- (2) Collaboration with projects related to the support of women and children conducted by international organizations, international NGOs, and aid organizations
- (3) International cooperation activities for women and children through cooperation and interaction with teachers and students (graduate students), and through alumni associations
- (4) Development of programs to develop human resources for international cooperation on peace-building, people-to-people exchange
- (5) Leadership of Japan's (women's) universities in international contribution (in the areas of peace-building, support for women, and support for children)



Details TBD Developing an Intercollegiate Network for Peace-Building in a Global Society

(Related activities)

Consortium of five women's universities (2006 to 2009 academic years)

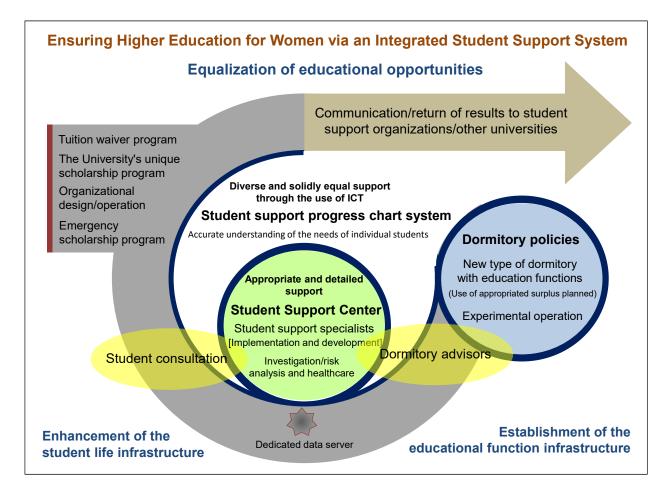
Develop human resources for international cooperation (2006 to 2009 academic years)

Creation of a model for support for women's education in developing countries (2002 academic year),

International educational cooperation initiative (2006 academic year)

Ensuring Higher Education for Women through Creation of an Integrated Student Support System(MEXT Special Expenditure Project; Started in the 2010 academic year)

The University will review the tuition waiver policies, student dormitory policies, and University scholarship policies that have been implemented individually from the viewpoint of the supporting parties, gain an understanding of the diverse needs of the individual students who are the recipients of that support, create a detailed and effective integrated student support system, and enhance support for international students. Specifically, we implement plans to (i) create a student support progress chart system, (ii) establish a new dormitory ("Ochanomizu University Students Community Commons" (SCC)) and dormitory functions, and (iii) design the University's own scholarship system. Through these efforts, we strive for equality of opportunities for higher education for women, and establish the infrastructure for the University's educational functions.

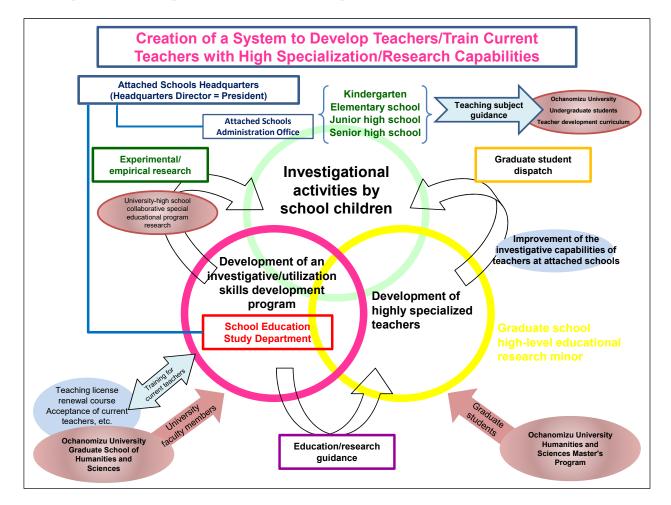


For details:<u>http://www.ocha.ac.jp/gss/index.html</u> Ensuring Higher Education for Women through Creation of an Integrated Student Support System

Investigative Research on the Design of a New School Education System Utilizing Attached Schools (MEXT Special Expenditure Project)

- Creation of a System to Develop Teachers/Train Current Teachers with a High Level of Specialization and Research Capabilities and Development of a New School System for the Period of Transition from Early Childhood to Elementary School - (Started in the 2010 academic year)

In addition to studying and developing new school systems and educational curriculum aimed toward the development of "investigative/utilization skills" in infants/children, we will utilize attached schools to develop graduate students who will become "core teachers" and develop/spread a teacher training/current teacher training system to promote the concept that a teacher's research is equivalent to the formation of investigative skills.

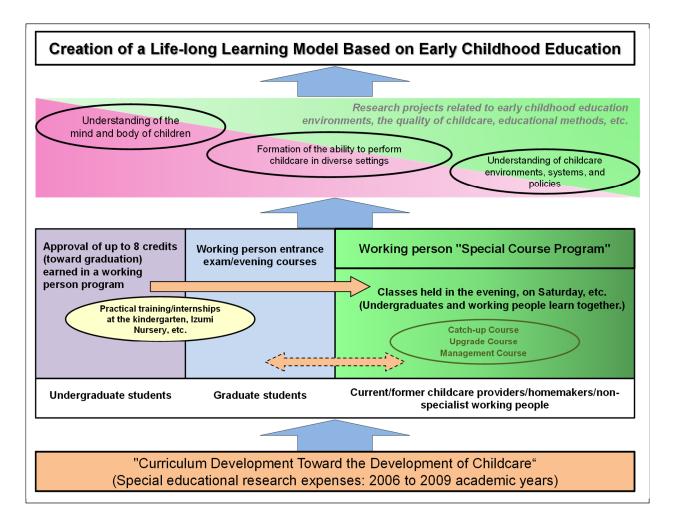


For details: http://www.cf.ocha.ac.jp/sesd/

Investigative Research on the Design of a New School Education System Utilizing Attached Schools

Creation of a Life-long Learning Model Founded on Early Childhood Education (MEXT Special Expenditure Project; Started in the 2010 academic year)

In collaboration with University resources in teacher training/early childhood education, we newly create a place for women and working people who are interested in early childhood education to relearn, and communicate a social contribution model for human resources who have qualities suited to caregiving and the ability to support childcare strategically.

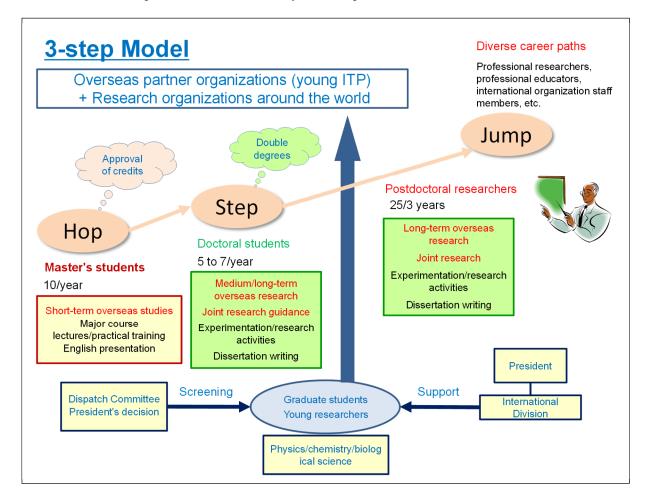


For details: http://www.cf.ocha.ac.jp/nyuyoji/index.html Creation of a Life-long Learning Model Founded on Early Childhood Education

(Related activities) --> Curriculum Development Toward the Development of Childcare (2006 to 2009 academic years)

Fostering Female Scientists to International Standards - A Three-Step Model of Ochanomizu University (Japan Society for the Promotion of Science Researcher Overseas Visit Fund [JSPS Institutional Program for Young Researcher Overseas Visits]; Started in the 2010 academic year)

We work to develop female scientists who are able to develop leader-type women and female researchers, and conduct a high level of research that will be recognized internationally through international exchange. The target is to provide postdoctoral researchers and young researchers with the opportunity for overseas research, and increase the breadth of resources that enable overseas research, to increase research capabilities and accelerate international-level development that leads to a variety of career paths.



Details TBD

Fostering Female Scientists to International Standards - A Three-Step Model of Ochanomizu University