Entrepreneurship Courses

Master's Students

1) **Entrepreneurship Education Core (Required) for Master's Students About**

Entrepreneurship education at our institute
The world of today is called the "era of VUCA" (volatility, uncertainty, complexity, and ambiguity), where our current society is facing complicated challenges related to globalization, environment due to the rapid development of science and technology. In order to live in a global society in such an era, along with one's field of expertise, it is necessary to have the mindset and skills to develop and create new values and then to implement them in the real world, which is defined as 'entrepreneurship' at our institute. Entrepreneurship is like a computer's operating system: students are encouraged to participate in the curriculum and acquire a 'system of actions' which is essential regardless of the student's career path.

Learning goals
In this curriculum, students are expected to acquire abilities, knowledge, and skills related to the five elements below through the master's 400- and 500-level courses.

(1) Foresight
   Ability to have a clear vision of a better future for society based on scientific and technological developments.

(2) Global competencies
   Ability to understand the nature of global issues and their relation to oneself and suggest solutions based on the process of information gathering, analysis, and examination; ability to collaborate with individuals from different backgrounds, culture, customs, language, and values, and work together as a group, based on mutual understanding and respect to each other.

(3) Leadership
   Ability to demonstrate leadership in building consensus among different stakeholders by recognizing perception, respecting diversity, and expressing subjective opinions based on one's own values.

(4) Value Creation
   Having **a)** creativity to bring about new values by repeating the problem-solving cycle (planning, doing, and checking from multiple viewpoints) based on the insights into the fundamental challenges in their specialized fields; **b)** applied skills to be able to increase the probability of social implementation of the ideas; and **c)** ability to purposefully take action to achieve the goals

(5) Career Development
   Ability to find role models as references for their future, and develop their own future careers:
   Basic knowledge required for success in society, such as industry and company analysis, money flow, laws, standards and other rules, entrepreneurship, ethics and SDGs; social skills such as self-understanding and self-presentation, communication, critical thinking, writing, problem-solving and leadership.

Available courses, related courses, and Graduate Attributes (GA)
Entrepreneurship courses are structured combining the above five elements. Entrepreneurship courses are assigned Graduate Attributes (GAs), which represent the knowledge and competencies that students are expected to acquire by the time they complete their degree program. Entrepreneurship courses at Science Tokyo offer two levels of GAs (GA0M and GA1M) in the master's degree program. The definitions of the two levels of GA are shown in Table M-1. Master's students are required to earn at least two credits from the courses in Tables M-2 and M-3 below, and are, in principle, expected to fulfill the GAs at both levels by the time of completion.

Table M-2 summarizes the entrepreneurship courses assigned GAs (400-/500-level) offered by the Center for Entrepreneurship Education (CEE), and Table M-3 summarizes the institute-wide courses that can be regarded as entrepreneurship courses (400-/500-level) assigned GAs, hereinafter referred to as "entrepreneurship-deemed courses".

Entrepreneurship courses and entrepreneurship-deemed courses assigned GAs are also offered in respective graduate majors and the Center of Data Science and Artificial Intelligence (DSAI). Students must refer to the study guide of each graduate major and the Center of DSAI to check eligibility if they are interested in the courses.

Whether a student has satisfied the GA and credit requirements will be judged at the completion of the degree program based on completion requirements set for each graduate major. Students are advised to appropriately plan and take their entrepreneurship courses. When a course is assigned more than one GA, earning credit in that course will fulfill all the GAs assigned. Even if a student does not officially count an entrepreneurship-deemed course as an entrepreneurship course, the assigned GA(s) will still be fulfilled.

Important points to note:
As explained above, students are required to select courses from Table M-2 and Table M-3 to fulfill the two GAs (GA0M and GA1M) specified in Table M-1 and earn at least two credits in this curriculum. Students are encouraged to plan their course registration to be able to cover as many of the five elements (shown in the course category column) as possible. The "foresight" component, however, is not listed in Tables M-2 and M-3 because it is integrated across many of the courses. Table M-4 shows

institute-wide courses related to entrepreneurship. In addition to the two credits required in the Entrepreneurship Education Core (master's degree program) in Tables M-2 and M-3, students who wish to further study entrepreneurship are encouraged to take the courses in Table M-4 as well. Please note that these courses are not assigned any GAs.

Table M-1: Graduate Attributes (GA) required for entrepreneurship courses in master's degree program

GA0M	You can clearly plan your own career and recognize the abilities necessary for realizing it while considering ethics and relevance to societal problems.
GA1M	You can acquire the knowledge, skills, ethics, and entrepreneurship necessary for realizing your planned career and contribute to societal problem-solving while collaborating with other experts.

Table M-2: Entrepreneurship courses assigned GAs offered for master's degree program by the Center for Entrepreneurship Education (CEE)

Course category	---	Course number	Course title	Credits	Applicable quarters	Comments
Global Competencies	400	ENT.G405	Advanced Multicultural Groupwork Study Abroad 2	0-0-2	1-2Q/3-4Q	English-Japanese combined use GA1M
	400	ENT.G453	Technology and Product in Context	0-1-0	4Q	in English GA1M
	400	ENT.G454	Our Sustainable Energy Future: Role of Business and Technology	0.5-0.5-0	3Q	in English GA1M
Leadership	400	ENT.L456	Effective Teamwork in Global Companies	0-1-0	4Q	in English GA1M
	400	ENT.L457	Global Leadership Practice	0-2-0	2Q	in English GA1M
Value Creation	400	ENT.V401	Master's Introduction to Entrepreneurship 1	1-0-0	3Q	in English GA0M
	400	ENT.V402	Master's Introduction to Entrepreneurship 2	1-0-0	4Q	in English GA1M
Career Development	400	ENT.C401	Master's Career Development Basics	1-0-0	1Q/2Q/3Q	GA0M
	400	ENT.C406	Master's Global Career Development Literacy	1-0-0	1Q/3Q	in English GA0M
	400	ENT.C413	Master's Career Design Practice	0-1-0	1Q/2Q/3Q/4Q	GA0M
	400	ENT.C448	Master's Critical Thinking	1-0-0	4Q	in English GA1M
	500	ENT.C511	Master's Career Development Role Models	1-0-0	3Q/4Q	GA1M
	500	ENT.C527	Master's Social and Business Rules and Ethics	1-0-0	2Q/3Q	GA1M
	500	ENT.C537	Master's Contributions to the Society through Research	1-0-0	3Q	GA1M
	500	ENT.C540	Master's Start-up Strategy Planning Program	0-1-0	4Q	GA1M
	500	ENT.C562	Master's Scientific Communication	1-0-0	2Q	in English GA1M

Table M-3: Entrepreneurship-deemed courses assigned GAs offered for master's degree program on an institute-wide basis

The entrepreneurship-deemed courses in this table can be regarded as equivalent to the entrepreneurship courses in Table M-2.

Course category	---	Course number	Course title	Credits	Applicable quarters	Academic unit or major	Comments
Global competencies	400	LAW.X416	Modern Japan	1-1-0	2Q	Breadth Courses	in English GA0M, GA1M
Leadership	400	TAL.W401	Introduction to Leadership	0-1-0	1Q/2Q/3Q/ 4Q	ToTAL	in English GA0M
Leadership	500	TAL.W502	Fundamental Group Work for Leadership I	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0M, GA1M
Leadership	500	TAL.W503	Fundamental Group Work for Leadership II	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0M, GA1M
Value Creation	400	LAW.X418	Study on Japanese Companies and Industries I	0-1-0	3Q	Breadth Courses	in English GA0M, GA1
Value Creation	400	LAW.X419	Study on Japanese Companies and Industries II	0-1-0	1Q	Breadth Courses	in English GA0M, GA1
Value Creation	500	TAL.A501	Master's Essential Course of Group Work for Leadership	0-1-0	1-2Q/3-4Q	ToTAL	in English GA1M
Value Creation	500	TAL.S502	Professionals and Value Creation A	0-1-0	2Q	ToTAL	GA0M
Value Creation	500	TAL.S503	Professionals and Value Creation B	0-1-0	4Q	ToTAL	GA0M
Value Creation	500	TAL.S505	Recognition of Social Issues Workshop A	0-1-0	2Q	ToTAL	in English GA1M
Value Creation	500	TAL.S506	Recognition of Social Issues Workshop B	0-1-0	4Q	ToTAL	in English GA1M
Value Creation	500	TAL.S507	Professionals and Value Creation C	0-1-0	2Q	ToTAL	GA0M
Value Creation	500	TAL.S508	Professionals and Value Creation D	0-1-0	4Q	ToTAL	GA0M
Value Creation	500	TAL.S509	Recognition of Social Issues Workshop C	0-1-0	2Q	ToTAL	in English GA1M
Value Creation	500	TAL.S510	Recognition of Social Issues Workshop D	0-1-0	4Q	ToTAL	in English GA1M
Value Creation	500	TAL.W504	Master's Practical Group Work for Leadership I	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0M, GA1M
Value Creation	500	TAL.W505	Master's Practical Group Work for Leadership II	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0M, GA1M
Career Development	400	TAL.S406	Introduction to Work Rules I produced by JTUC-RENGO	1-0-0	3Q	ToTAL	GA0M
Career Development	500	TAL.S504	Introduction to Work Rules II produced by JTUC- RENGO	1-0-0	4Q	ToTAL	GA1M

Table M-4: Entrepreneurship-related courses not assigned GAs offered for master's degree program on an institute-wide basis
Entrepreneurship-related courses are not eligible for credit toward the required Entrepreneurship Education Core because these courses are not assigned GAs.

Course category	---	Course number	Course title	Credits	Applicable quarters	Academic unit or major	Comments
	400	LAW.X415	High Tech Japan	1-0-0	2Q	Breadth Courses	In English No GA assigned
	400	LAW.X442	CAMPUS Asia Plus Spring Semester Program Research Exchange Project	0-0-2	1-2Q	Breadth Courses	In English No GA assigned
	400	LAW.X443	CAMPUS Asia Plus Fall Semester & Fall-Winter Program Research Exchange Project	0-0-2	3-4Q	Breadth Courses	In English No GA assigned
	400	TAL.C402	Global Communication	1-0-0	2Q/4Q	ToTAL	In English No GA assigned
	500	TAL.C502	Multicultural Collaborative Leadership	0-1-0	2Q/4Q	ToTAL	Japanese Students /Alias for Japanese language courses at ILA
	500	TAL.C503	Multicultural Business Leadership	0-1-0	1Q/3Q	ToTAL	Japanese Students /Alias for Japanese language courses at ILA
Leadership	400	TAL.L442	Graduate Seminar in Liberal Arts	0-1-0	3Q	ToTAL	In English No GA assigned
	400	TAL.L443	Mindfulness for Leadership	0-1-0	3Q	ToTAL	No GA assigned

2) Global Education Option (GEO) for master's students

For students who wish to gain international experience, such as studying abroad, which is strongly recommended by Science Tokyo, and for those who seek to further improve their foreign language communication skills, the CEE offers a Global Education Option (GEO) in addition to the required Entrepreneurship Education Core (master's degree program).

Global competencies are one of the five elements (skills and mindset) to be developed through our entrepreneurship education. For this specific element, we aim to develop talented individuals who are able to understand the nature of global issues and their relation to oneself and suggest solutions based on the process of information gathering, analysis, and examination; able to collaborate with individuals from different backgrounds, culture, customs, language, and values, and work together as a group, based on mutual understanding and respect to each other.

The Global Education Option (GEO) is a program designed to organically integrate global education with the key elements of foresight, leadership, value creation, and career development, thereby helping students acquire advanced global competencies. The curriculum emphasizes exercises and practices, such as problem-based learning in collaboration with international students, gaining international experience including study abroad, and developing foreign language communication skills.

Students participating in the Entrepreneurship Education Core can take the GEO simultaneously. Students participating in this option must acquire five or more credits in total including the two credits required in the Entrepreneurship Education Core satisfying the two GAs. The following criteria must also be met.

(1) At least one credit is required from the courses listed below.

Course category	---	Course number	Course title	Credits	Applicable quarters	Comments
Global competencies	400	ENT.G401	Advanced Global Problem Based Co-Learning	1-1-0	4Q	in English No GA assigned
	400	ENT.G404	Advanced Multicultural Groupwork Practice	1-1-0	3-4Q	in English No GA assigned
	400	ENT.G405	Advanced Multicultural Groupwork Study Abroad 2	0-0-2	1-2Q/3-4Q	English-Japanese combined use GA1M
	400	ENT.G451	Advanced Course of Traditional Technology and Intercultural Collaboration	0.5-0-0.5	1-2Q	in English No GA assigned
	400	ENT.G452	Advanced Course of Innovative Product Design with Traditional Technologies	0-1-0	3-4Q	in English No GA assigned
	400	ENT.G453	Technology and Product in Context	0-1-0	4Q	in English GA1M
	400	ENT.G454	Our Sustainable Energy Future: Role of Business and Technology	0.5-0.5-0	3Q	in English GA1M
	400	ENT.G456	Free your Creativity through Art (for graduate)	0-1-0	4Q	in English No GA assigned
Leadership	400	ENT.L456	Effective Teamwork in Global Companies	0-1-0	4Q	in English GA1M
	400	ENT.L457	Global Leadership Practice	0-2-0	2Q	in English GA1M
	400	ENT.L458	Global Leadership Training Study Abroad	0-0-1	4Q	in English No GA assigned

(2) At least one credit is required from the "courses certified for international experience" (study-abroad programs for one month or longer is recommended).

Please check from 〔【Students enrolled in or after 2024】Courses certified for international experiences" below.
https://www.titech.ac.jp/international-student-exchange/pdf/ninteikamoku-2024.pdf

(3) At least one credit is required from the GEO communication courses and courses listed in Tables M-2 , M-3 and M-4.

Course number	Course title	Credits	Applicable quarters
LAE.E401	Study Abroad Program in English IIA 1・2	0-2-0	1-4Q
LAE.E402	Study Abroad Program in English IIB 1・2	0-2-0	1-4Q
LAE.E431	Oral Expression in English 13	0-1-0	1Q
LAE.E432	Oral Expression in English 14	0-1-0	2Q
LAE.E433	Oral Expression in English 15	0-1-0	3Q
LAE.E434	Oral Expression in English 16	0-1-0	4Q
LAE.E435	Oral Expression in English GIII	0-2-0	2Q
LAE.E436	Oral Expression in English GIV	0-2-0	4Q
LAE.E441	Academic Presentation in English 13	0-1-0	1Q
LAE.E442	Academic Presentation in English 14	0-1-0	2Q
LAE.E443	Academic Presentation in English 15	0-1-0	3Q
LAE.E444	Academic Presentation in English 16	0-1-0	4Q

LAE.E451	TOEFL Seminar 13	0-1-0	1Q
LAE.E452	TOEFL Seminar 14	0-1-0	2Q
LAE.E453	TOEFL Seminar 15	0-1-0	3Q
LAE.E454	TOEFL Seminar 16	0-1-0	4Q
LAE.E461	Academic Writing in English 13	0-1-0	1Q
LAE.E462	Academic Writing in English 14	0-1-0	2Q
LAE.E463	Academic Writing in English 15	0-1-0	3Q
LAE.E464	Academic Writing in English 16	0-1-0	4Q
LAE.E471	English Speech Seminar 13	0-1-0	1Q（Course closed in FY2025）
LAE.E472	English Speech Seminar 14	0-1-0	2Q（Course closed in FY2025）
LAE.E481	English Language and Cultures 13	0-1-0	1Q（Course closed in FY2025）
LAE.E482	English Language and Cultures 14	0-1-0	2Q（Course closed in FY2025）
LAE.E483	English Language and Cultures 15	0-1-0	3Q（Course closed in FY2025）
LAE.E484	English Language and Cultures 16	0-1-0	4Q（Course closed in FY2025）
LAE.E491	Scientific Technical English Study Abroad Practicum III	0-2-0	2Q/4Q
LAL.C431	Chinese Seminar: Culture and Society 1	0-1-0	1Q
LAL.C432	Chinese Seminar: Culture and Society 2	0-1-0	2Q
LAL.C433	Chinese Seminar: Culture and Society 3	0-1-0	3Q
LAL.C434	Chinese Seminar: Culture and Society 4	0-1-0	4Q
LAL.F431	French Seminar: Culture and Society 1	0-1-0	1Q
LAL.F432	French Seminar: Culture and Society 2	0-1-0	2Q
LAL.F433	French Seminar: Culture and Society 3	0-1-0	3Q
LAL.F434	French Seminar: Culture and Society 4	0-1-0	4Q
LAL.G431	German Seminar: Culture and Society 1	0-1-0	1Q
LAL.G432	German Seminar: Culture and Society 2	0-1-0	2Q
LAL.G433	German Seminar: Culture and Society 3	0-1-0	3Q
LAL.G434	German Seminar: Culture and Society 4	0-1-0	4Q
LAL.R431	Russian Seminar: Culture and Society 1	0-1-0	1Q
LAL.R432	Russian Seminar: Culture and Society 2	0-1-0	2Q
LAL.R433	Russian Seminar: Culture and Society 3	0-1-0	3Q
LAL.R434	Russian Seminar: Culture and Society 4	0-1-0	4Q
LAL.S431	Spanish Seminar: Culture and Society 1	0-1-0	1Q
LAL.S432	Spanish Seminar: Culture and Society 2	0-1-0	2Q
LAL.S433	Spanish Seminar: Culture and Society 3	0-1-0	3Q
LAL.S434	Spanish Seminar: Culture and Society 4	0-1-0	4Q
LAL.Z401	Study Abroad Program in Second Foreign Languages IIA 1・2	0-2-0	1-4Q
LAL.Z402	Study Abroad Program in Second Foreign Languages IIB 1・2	0-2-0	1-4Q

Those having satisfied the above completion requirements will be issued a certificate of completion for GEO, as a proof that the individual has acquired the qualities specified in our institute's Code of International Experience.

Summary of Master's Study Models

Elements	Master's Degree Program	
	Core (Required)	Global Education Option
Global Competencies	2 (GA0M and GA1M)	3 ⇧ From courses specified by 'Option'
Leadership		
Value Creation		
Career Development		
Total Credits	2	2+3

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Certificate of Completiom for Option

· Credits for Entrepreneurship-deemed courses offered in graduate majors cannot be counted more than once towards degree program completion requirements as graduate majors or entrepreneurship courses.

· You can follow the regular course registration process for Core and Option study models.

Doctoral students

1) Entrepreneurship Education Core (Required) for Doctoral Students About

Entrepreneurship education at our institute

The world of today is called the "era of VUCA" (volatility, uncertainty, complexity, and ambiguity), where our current society is facing complicated challenges related to globalization, environment due to the rapid development of science and technology. In order to live in a global society in such an era, along with one's field of expertise, it is necessary to have the mindset and skills to develop and create new values and then to implement them in the real world, which is defined as 'entrepreneurship' at our institute. Entrepreneurship is like a computer's operating system: students are encouraged to participate in the curriculum and acquire a 'system of actions' which is essential regardless of the student's career path.

Learning goals

In this curriculum, students are expected to acquire abilities, knowledge, and skills related to the five elements below through the 600-level doctoral courses.

(1) Foresight
   Ability to have a clear vision of a better future for society based on scientific and technological developments.

(2) Global competencies
   Ability to understand the nature of global issues and their relation to oneself and suggest solutions based on the process of information gathering, analysis, and examination; ability to collaborate with individuals from different backgrounds, culture, customs, language, and values, and work together as a group, based on mutual understanding and respect to each other.

(3) Leadership
   Ability to demonstrate leadership in building consensus among different stakeholders by recognizing perception, respecting diversity, and expressing subjective opinions based on one's own values.

(4) Value Creation
   Having **a)** creativity to bring about new values by repeating the problem-solving cycle (planning, doing, and checking from multiple viewpoints) based on the insights into the fundamental challenges in their specialized fields; **b)** applied skills to be able to increase the probability of social implementation of the ideas; and **c)** ability to purposefully take action to achieve the goals

(5) Career Development
   Ability to find role models as references for their future, and develop their own future careers:
   Basic knowledge required for success in society, such as industry and company analysis, money flow, laws, standards and other rules, entrepreneurship, ethics and SDGs; social skills such as self- understanding and self-presentation, communication, critical thinking, writing, problem-solving and leadership.

Available courses, related courses, and Graduate Attributes (GA)

Entrepreneurship courses are structured combining the above five elements. Entrepreneurship courses are assigned Graduate Attributes (GAs), which represent the knowledge and competencies that students are expected to acquire upon completion of their degree program. Entrepreneurship courses at Science Tokyo offer two levels of GAs (GA0D and GA1D) in the doctoral degree program. The definitions of the two levels of GA are shown in Table D-1. Doctoral students are required to earn at least four credits from the courses in Tables D-2 and D-3 and, in principle, are expected to fulfill the GAs at both levels by the time of completion.

Table D-2 summarizes the 600-level entrepreneurship courses offered by the Center for Entrepreneurship Education (CEE) that are assigned GAs, and Table D-3 summarizes the institute-wide courses that can be regarded as entrepreneurship courses assigned GAs in the 600-level courses, hereinafter referred to as "entrepreneurship-deemed courses".

Entrepreneurship courses and entrepreneurship-deemed courses assigned GAs are also offered in respective graduate majors and the Center of Data Science and Artificial Intelligence (DSAI). Students must refer to the study guide of each graduate major and the Center of DSAI to check eligibility if they are interested in the courses.

Whether a student has satisfied the GA and credit requirements will be judged at the completion of the degree program based on completion requirements set for each graduate major. Students are advised to appropriately plan and take entrepreneurship courses. If a course is assigned more than one GA, earning credit in that course will fulfill all the GAs assigned. Even if a student does not officially count an entrepreneurship-deemed course as an entrepreneurship course, the GA(s) assigned to the course will still be fulfilled.

Table D-1: Graduate Attributes (GA) required for entrepreneurship courses in the doctoral degree program

GA0D	You can clearly design your own career and contribute to realizing scientific, technological, or social innovation through a comprehensive understanding of the knowledge, skills, social responsibilities and ethics required to become an active member of academia and/or industry.
GA1D	You can lead in realizing scientific, technological, or social innovation by acquiring advanced leadership skills, entrepreneurship, knowledge and expertise, and by developing social responsibility necessary for materializing your designed career.

Table D-2: Entrepreneurship courses assigned GAs offered for the doctoral degree program by the Center for Entrepreneurship Education (CEE)

Course category	---	Course number	Course title	Credits	Applicable quarters	Comments
Value Creation	600	ENT.V601	Doctoral Introduction to Entrepreneurship 1	1-0-0	3Q	In English GA0D
	600	ENT.V602	Doctoral Introduction to Entrepreneurship 2	1-0-0	4Q	In English GA1D
Career Development	600	ENT.A621	Doctoral Academic Literacy	1-0-0	1Q/2Q/3Q/4Q	GA1D/Course enrollment unable in principle during the first 6 months of the doctoral program
	600	ENT.A631	Doctoral Academic Teaching Practice	0.5-0.5-0	2Q/3Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program
	600	ENT.A635	Doctoral Academic Overseas Training	0-0-1	1Q/2Q/3Q/4Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program. Application form must be submitted.
	600	ENT.A639	Doctoral Academic Domestic Training	0-0-1	1Q/2Q/3Q/4Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program. Application form must be submitted.
	600	ENT.A641	Doctoral Academic Presentation I	0.5-0.5-0	2Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program
	600	ENT.A642	Doctoral Academic Presentation II	0.5-0.5-0	2Q/4Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program
	600	ENT.A643	Doctoral Academic Presentation III	0.5-0.5-0	3Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program
	600	ENT.A645	Doctoral Academic Presentation V	0.5-0.5-0	4Q	GA1D/Course enrollment unable during the first 6 months of the doctoral program
	600	ENT.C601	Doctoral Career Design	1-0-0	1Q/3Q	GA0D

	600	ENT.C603	Doctoral Strategy for Balancing Career, Personality and Lifestyle	1-0-0	2Q/3Q	in English GA0D
	600	ENT.C620	Doctoral Social and Business Rules and Ethics	1-0-0	2Q/4Q	GA1D
	600	ENT.C621	Doctoral Ethics of Scientists and Engineers	1-0-0	3Q	GA1D
	600	ENT.C643	Doctoral Developing Career Adaptability for Global Competitiveness	1-0-0	3Q	in English GA0D
	600	ENT.C651	Doctoral Technical Discussion	0-1-0	1Q/2Q/4Q	in English GA1D
	600	ENT.C657	Doctoral Technical Writing	0-1-0	1Q/3Q	in English GA1D
	600	ENT.C663	Doctoral R&D and Business Strategies of Global Companies	1-0-0	3Q/4Q	in English GA1D
	600	ENT.P632	Doctoral Research Internship in Private Companies 1	0-0-1	1Q/2Q/3Q/4Q	GA1D Application form must be submitted.
	600	ENT.P633	Doctoral Research Internship in Private Companies 2	0-0-2	1Q/2Q/3Q/4Q	GA1D Application form must be submitted.
	600	ENT.P634	Doctoral Research Internship in Private Companies 4	0-0-4	1Q/2Q/3Q/4Q	GA1D Application form must be submitted.
	600	ENT.P642	Doctoral Corporate Business/R&D Strategy Planning Program	0-1-0	4Q	GA1D
	600	ENT.P651	Doctoral Case Studies on Corporate Management Strategies and Business Models	1-0-0	4Q	GA1D

Table D-3: Entrepreneurship-deemed courses assigned GAs offered for the doctoral degree program on an institute-wide basis
The entrepreneurship-deemed courses in this table can be regarded as equivalent to the entrepreneurship courses in Table D-2.

Course category	---	Course number	Course title	Credits	Applicable quarters	Academic unit or major	Comments
Leadership	600	TAL.C603	The Psychology of Leadership	1-0-0	4Q	ToTAL	in English GA0D
Leadership	600	TAL.S603	Leadership Facilitation Practicum	0-1-0	1-2Q	ToTAL	in English GA1D
Value Creation	600	TAL.A601	Doctoral Essential Course of Group Work for Leadership	0-1-0	1-2Q/3-4Q	ToTAL	in English GA1D
Value Creation	600	TAL.I601	Leadership Off-Campus Project	0-0-4	1Q/2Q/3Q/4Q	ToTAL	GA0D, GA1D
Value Creation	600	TAL.I602	Leadership Interdisciplinary Research Project	0-0-4	1Q/2Q/3Q/4Q	ToTAL	GA0D, GA1D
Value Creation	600	TAL.W602	Doctoral Practical Group Work for Leadership I	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0D, GA1D

600	TAL.W603	Doctoral Practical Group Work for Leadership II	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0D, GA1D
600	TAL.W612	Advanced Group Work for Leadership I	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0D, GA1D
600	TAL.W613	Advanced Group Work for Leadership II	0-2-0	1-2Q/3-4Q	ToTAL	in English GA0D, GA1D

*Those participating in this study model must fulfill both of the GAs (GA0D, GA1D) shown in Table D-1 by acquiring four or more credits from relevant courses. Students are encouraged to plan their course registration to be able to cover as many of the five elements (shown in the course category column) as possible.

2) Entrepreneurship Education Plus for Doctoral Students

In addition to the four credits required for the Entrepreneurship Education Core (doctoral degree program), students who have earned at least two credits from the entrepreneurship courses and the entrepreneurship-deemed courses will be awarded a certificate of completion for Entrepreneurship Education Plus (doctoral degree program). Note that the additional two credits for Entrepreneurship Education Plus can be obtained from the courses in Table D-4 below as well, which are not assigned GAs.

Table D-4: Entrepreneurship-related courses not assigned GAs offered for doctoral degree program on an institute-wide basis.

These entrepreneurship-related courses are not eligible for credit toward the required Entrepreneurship Education Core because they are not assigned GAs. Credits earned through these courses are, however, valid toward the non-compulsory credit portion of the Entrepreneurship Education Plus for doctoral students.

Course category	---	Course number	Course title	Credits	Applicable quarters	Academic unit or major	Comments
Global competencies	600	ENT.G601	Advanced International Experience 1AB for Doctoral course	0-0-1	1-2Q		in English No GA assigned
	600	ENT.G602	Advanced International Experience 1CD for doctoral course	0-0-1	3-4Q		in English No GA assigned
	600	ENT.G603	Advanced International Experience 2AB for doctoral course	0-0-2	1-2Q		in English No GA assigned
	600	ENT.G604	Advanced International Experience 2CD for doctoral course	0-0-2	3-4Q		in English No GA assigned
	600	ENT.G605	Advanced International Experience 3AB for doctoral course	0-0-3	1-2Q		in English No GA assigned
	600	ENT.G606	Advanced International Experience 2CD for doctoral course	0-0-3	3-4Q		in English No GA assigned
	600	ENT.G607	Advanced International Experience 4AB for doctoral course	0-0-4	1-2Q		in English No GA assigned
	600	ENT.G608	Advanced International Experience 4CD for doctoral course	0-0-4	3-4Q		in English No GA assigned
	600	TAL.C601	Strategic Debate	1-0-0	1Q/3Q	ToTAL	in English No GA assigned

	600	TAL.C602	Leadership in Conflict	1-0-0	2Q	ToTAL	in English No GA assigned

Summary of Doctoral Study Models

Elements	Doctoral Degree Program	
	Core (Required)	Plus
Global Competencies	4 (GA0D and GA1D)	2
Leadership		
Value Creation		
Career Development		
Total Credits	4	4+2

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Certificate of Completiom for Plus

· Credits for Entrepreneurship-deemed courses offered in graduate majors cannot be counted more than once towards degree program completion requirements as graduate majors or entrepreneurship courses.

· You can follow the regular course registration process for Core and Plus study models.