

## Career development courses

### **【Master's Student】**

Master's students are required to acquire the necessary credits in the career development courses with fulfilling all the Graduate Attributes (GA) shown in Table MA-1 by the end of your master's degree program. In addition to the career development courses each course offers for acquisition of GA, career development courses are offered which are in the 400s and 500s as shown in Table 1. Take appropriate courses according to the completion requirements of your master's degree program. As to the courses with more than one GA, the number of GA stipulated for the courses is considered to be acquired regardless of the credits received for the courses.

Table MA-1 Master's Degree Program Graduate Attributes

COM	You will be able to delineate your career plan clearly and recognize the skills necessary to materialize that plan, taking into account its relation to society
C1M	You will be able to understand academic integrity, utilize your own expertise for the development of academia and technology, and work with others with different expertise to contribute to problem-solving

Table 1: Master's Degree Program courses (400 and 500 levels)

Course category	Course number	Course title	Credits	GA*	Comments
400 level	LAC.M401	Master's Career Design	1-0-0	COM	
	LAC.M402	Master's Career Plan	1-0-0	COM	
	LAC.M403	★ Strategies for Balancing Career, Personality and Lifestyle (Master Course)	1-0-0	COM	
	LAC.M413	Master's Career Design Practice	0-1-0	COM	
	LAC.M443	★ Master's Developing Career Adaptability for Global Competitiveness	1-0-0	C1M	
	LAC.M448	★ Master's Critical Thinking	1-0-0	C1M	
	LAC.M451	★ Master's Technical Discussion	0-1-0	C1M	Cancelled in 2019 AY
	LAC.M457	★ Master's Technical Writing	0-1-0	C1M	Cancelled in 2019 AY
500 level	LAC.M511	Smart Business Career Development	1-0-0	C1M	

LAC.M521			Ethics of Scientists (Master Course)	1-0-0	COM, C1M	
LAC.M525			Ethics of Engineers (Master Course)	1-0-0	COM, C1M	
LAC.M531			Pre ALP Practice	1-0-0	C1M	Refer to the syllabus for details
LAC.M533			Outline of Technology Management	1-0-0	C1M	
LAC.M537			Social Contributions through Research	1-0-0	C1M	
LAC.M538			Master's Research Internship	0-0-1	C1M	
LAC.M562		★	Master's Scientific Communication	1-0-0	C1M	

Note:

- ★: offered in English in principle

**\*GA: Graduate Attributes**

- The character preceding the three digits in the course number denotes the course's subdiscipline (i.e., "D" represents the subdiscipline code in the course number ABC.D400.R): M (Master's degree program)

## 【Graduate Attributes (GA) Table】

COM : You will be able to delineate your career plan clearly and recognize the skills necessary to materialize that plan, taking into account its relation to society	CIM : You will be able to understand academic integrity, utilize your own expertise for the development of academia and technology, and work with others with different expertise to contribute to problem-solving
<ul style="list-style-type: none"> <li>• Master's Career Design</li> <li>• Master's Career Plan</li> <li>• Strategies for Balancing Career, Personality and Lifestyle</li> <li>• Master's Career Design Practice</li> <li>• Ethics of Scientists</li> <li>• Ethics of Engineers</li> </ul>	<ul style="list-style-type: none"> <li>• Master's Developing Career Adaptability for Global Competitiveness</li> <li>• Master's Critical Thinking</li> <li>• Master's Technical Discussion</li> <li>• Master's Technical Writing</li> <li>• Smart Business Career Development</li> <li>• Ethics of Scientists</li> <li>• Ethics of Engineers</li> <li>• Pre ALP Practice</li> <li>• Outline of Technology Management</li> <li>• Social Contributions through Research</li> <li>• Master's Research Internship</li> <li>• Master's Scientific Communication</li> </ul>

## 【Doctoral Student】

Doctoral degree program students are required to fulfill the following conditions;

- Register in either the Academic Leader Program (ALP) or the Productive Leader Program (PLP) based on their individual career plans. IIDP will ask you the registration of the programs 6 months after your doctoral degree program started.
- Each program will require the acquisition of Graduate Attributes (GA) shown below. Through career development courses established by the IIDP, or equivalent courses specified by your department, the students are required to earn 4 credits which should meet the 4 Graduate Attributes (GAs).
- As to the courses with more than one GA, the number of GA stipulated for the courses is considered to be acquired regardless of the credits received for the courses.

Students enrolled in the educational program for leading graduate schools or in the Tokyo Tech Academy for Leadership (ToTAL) may be offered courses recognized as equivalent to Career Development Courses besides those listed here. For details about available courses or completion requirements, please refer to the Study Guide of the Academy that offers the relevant program.

(※1) In addition, when making a change in registration from the curriculum to ALP or PLP, GAs attained as career skills in the educational program can be carried over to ALP or PLP.

Table A-1 Academic Leader Program (ALP) Graduate Attributes

A0D	You will be able to precisely define your own career plan and train yourself to acquire the skills required for attaining your goals in academia
A1D	You will be able to ascertain the true nature of phenomena, master the secret of learning, and lead the vanguard of a new academic discipline or research area
A2D	You will be able to understand the position of academia in society as well as the notion of responsible conduct of research, and adequately explain academic progress to members of society, who are our stakeholders
A3D	With the understanding of the social roles and responsibilities of researchers, you will be able to nurture next-generation experts in educational institutions, instilling in them an interest in academia and enabling them to later join in the pioneering of new academic disciplines or research areas

Table A-2 Productive Leader Program (PLP) Graduate Attributes

P0D	You will be able to precisely plot your own career plan and train yourself to acquire the skills required for attaining your goals in industry, etc.
P1D	You will be able to precisely grasp the needs of society and detect its problems, comprehend relevant laws, regulations, or guidelines for responsible conduct of research, and lead future developments in science and technology
P2D	While leading teams consisting of members with varied specialties and value systems, you will be able to create products and enterprises that bring forth new values in society

P3D	With the understanding of the social roles and responsibilities of engineers, you will be able to nurture next-generation experts through the project, enabling them to help drive future development of society and industry
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(※1) Updated in October, 2018

**Table 2: Doctoral Degree Program courses (600 level)**

Course category	Course number	Course title	Credits	GA*	Comments
600 level	LAC.A621	ALP Introduction	1-0-0	A1D	
	LAC.A631	ALP Practice I (Teaching Practice)	0.5-0-0.5	A2D, A3D	Offered in English as needed The application document for this course is necessary.
	LAC.A635	ALP Practice II (Overseas Training)	0-0-1	A2D, A3D	Offered in English as needed The application document for this course is necessary.
	LAC.A639	ALP Practice III (Domestic Training)	0-0-1	A2D, A3D	Offered in English as needed The application document for this course is necessary
	LAC.A641	ALP Advanced Practice I	0-0-1	A1D, A2D, A3D	Refer to OCW-i for details
	LAC.A642	ALP Advanced Practice II	0-0-1	A1D, A2D, A3D	Refer to OCW-i for details
	LAC.A643	ALP Advanced Practice III	0-0-1	A1D, A2D, A3D	Refer to OCW-i for details
	LAC.A644	ALP Advanced Practice IV	0-0-1	A1D, A2D, A3D	Refer to OCW-i for details
	LAC.A645	ALP Advanced Practice V	0-0-1	A1D, A2D, A3D	Refer to OCW-i for details

LAC.C601			Doctoral Career Design	1-0-0	A0D, P0D	
LAC.C602			Doctoral Career Plan	1-0-0	A0D, P0D	
LAC.C603		★	Strategies for Balancing Career, Personality and Lifestyle	1-0-0	A0D, P0D	
LAC.C621			Ethics of Scientists and Engineers	1-0-0	A2D, A3D, P1D, P3D	
LAC.C643		★	Developing Career Adaptability for Global Competitiveness	1-0-0	A0D, A2D, A3D, P0D, P2D, P3D	
LAC.C648		★	Critical Thinking	1-0-0	A1D, A2D, A3D, P1D, P2D, P3D	Addition of GA (A1D, P1D), effective from 2019 AY
LAC.C651		★	Technical Discussion	0-1-0	A2D, A3D, P2D, P3D	
LAC.C657		★	Technical Writing	0-1-0	A1D, P1D	
LAC.C662		★	Scientific Communication	1-0-0	A2D, A3D, P2D, P3D	Cancelled in 2019 AY
LAC.C663		★	R&D Activities of Global companies	1-0-0	A1D, P1D	Creation of new course, effective from 2019 AY Offered to students who have taken neither "R&D Activities of Global

						companies I” nor “R&D Activities of Global companies II”
LAC.P622			PLP Introduction	1-0-0	P1D	
LAC.P632			PLP Practice 1	0-0-1	P2D, P3D	Offered in English as needed Refer to the IIDP website for details
LAC.P633			PLP Practice 2	0-0-2	P2D, P3D	Offered in English as needed Refer to the IIDP website for details
LAC.P634			PLP Practice 4	0-0-4	P2D, P3D	Offered in English as needed Refer to the IIDP website for details
LAC.P642			PLP Advanced Practice	0-1-0	P1D, P2D, P3D	Refer to the IIDP website for details
LAC.P657			Technology Management Practice	1-0-0	P1D	Cancelled in 2019 AY
LAC.P661			Recurrent Program Advanced Practice 1	0-0-1	P0D, P1D, P2D, P3D	Offered in English as needed
LAC.P662			Recurrent Program Advanced Practice 2-1	0-0-2	P0D, P1D, P2D, P3D	Offered in English as needed
LAC.P665			Recurrent Program Advanced Practice 2-2	0-0-2	P0D, P1D, P2D, P3D	Offered in English as needed
LAC.P663			Recurrent Program Advanced Practice 3	0-0-3	P0D, P1D, P2D, P3D	Offered in English as needed

	LAC.P664			Recurrent Program Advanced Practice 4	0-0-4	P0D, P1D, P2D, P3D	Offered in English as needed
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Note:

- **★: offered in English in principle**
- **\*GA: Graduate Attributes**
- The character preceding the three digits in the course number denotes the course's subdiscipline (i.e., "D" represents the subdiscipline code in the course number ABC.D600.R): A (Academic Leader Program), P (Productive Leader Program), C (Common for both programs)

## 【Graduate Attributes (GA) Table】

### Academic Leader Program (ALP)

<p>A0D: You will be able to precisely define your own career plan and train yourself to acquire the skills required for attaining your goals in academic</p>	<p>A1D: You will be able to ascertain the true nature of phenomena, master the secret of learning, and lead the vanguard of a new academic discipline or research area</p>	<p>A2D: You will be able to understand the position of academia in society as well as the notion of responsible conduct of research, and adequately explain academic progress to members of society, who are our stakeholders</p>	<p>A3D: With the understanding of the social roles and responsibilities of researchers, you will be able to nurture junior students in educational institutions, instilling in them an interest in academics and enabling them to later join in the pioneering of new academic disciplines or research areas</p>
<ul style="list-style-type: none"> <li>• Doctoral Career Design</li> <li>• Doctoral Career Plan</li> <li>• Strategies for Balancing Career, Personality and Lifestyle</li> <li>• Developing Career Adaptability for Global Competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>• ALP Introduction</li> <li>• ALP Advanced Practice I</li> <li>• ALP Advanced Practice II</li> <li>• ALP Advanced Practice III</li> <li>• ALP Advanced Practice IV</li> <li>• ALP Advanced Practice V</li> <li>• Critical Thinking</li> <li>• Technical Writing</li> <li>• R&amp;D Activities of Global companies</li> </ul>	<ul style="list-style-type: none"> <li>• ALP Practice I(Teaching Practice)</li> <li>• ALP Practice II(Overseas Training)</li> <li>• ALP Practice III(Domestic Training)</li> <li>• ALP Advanced Practice I</li> <li>• ALP Advanced Practice II</li> <li>• ALP Advanced Practice III</li> <li>• ALP Advanced Practice IV</li> <li>• ALP Advanced Practice V</li> <li>• Ethics of Scientists and Engineers</li> <li>• Developing Career Adaptability for Global Competitiveness</li> <li>• Critical Thinking</li> <li>• Technical Discussion</li> <li>• Scientific Communication</li> </ul>	<ul style="list-style-type: none"> <li>• ALP Practice I(Teaching Practice)</li> <li>• ALP Practice II(Overseas Training)</li> <li>• ALP Practice III(Domestic Training)</li> <li>• ALP Advanced Practice I</li> <li>• ALP Advanced Practice II</li> <li>• ALP Advanced Practice III</li> <li>• ALP Advanced Practice IV</li> <li>• ALP Advanced Practice V</li> <li>• Ethics of Scientists and Engineers</li> <li>• Developing Career Adaptability for Global Competitiveness</li> <li>• Critical Thinking</li> <li>• Technical Discussion</li> <li>• Scientific Communication</li> </ul>

### Productive Leader Program (PLP)

<p>P0D: You will be able to precisely plot your own career plan and train yourself to acquire the skills required for attaining your goals in industry, etc.</p>	<p>P1D: You will be able to precisely grasp the needs of society and detect its problems, comprehend relevant laws, regulations, or guidelines for responsible conduct of research, and lead future developments in science and technology</p>	<p>P2D: While leading teams consisting of members with varied specialties and value systems, you will be able to create products and enterprises that bring forth new values in society</p>	<p>P3D: With the understanding of the social roles and responsibilities of engineers, you will be able to nurture junior students through the project, enabling them to later join in the development of next-generation society and industry</p>
<ul style="list-style-type: none"> <li>• Doctoral Career Design</li> <li>• Doctoral Career Plan</li> <li>• Strategies for Balancing Career, Personality and Lifestyle</li> <li>• Developing Career Adaptability for Global Competitiveness</li> <li>• Recurrent Program Advanced Practice 1</li> <li>• Recurrent Program Advanced Practice 2-1</li> <li>• Recurrent Program Advanced Practice 2-2</li> <li>• Recurrent Program Advanced Practice 3</li> <li>• Recurrent Program Advanced Practice 4</li> </ul>	<ul style="list-style-type: none"> <li>• Ethics of Scientists and Engineers</li> <li>• Critical Thinking</li> <li>• Technical Writing</li> <li>• PLP Introduction</li> <li>• PLP Advanced Practice</li> <li>• R&amp;D Activities of Global companies</li> <li>• Technology Management Practice</li> <li>• Recurrent Program Advanced Practice 1</li> <li>• Recurrent Program Advanced Practice 2-1</li> <li>• Recurrent Program Advanced Practice 2-2</li> <li>• Recurrent Program Advanced Practice 3</li> <li>• Recurrent Program Advanced Practice 4</li> </ul>	<ul style="list-style-type: none"> <li>• Developing Career Adaptability for Global Competitiveness</li> <li>• Critical Thinking</li> <li>• Technical Discussion</li> <li>• Scientific Communication</li> <li>• PLP Practice 1</li> <li>• PLP Practice 2</li> <li>• PLP Practice 4</li> <li>• PLP Advanced Practice</li> <li>• Recurrent Program Advanced Practice 1</li> <li>• Recurrent Program Advanced Practice 2-1</li> <li>• Recurrent Program Advanced Practice 2-2</li> <li>• Recurrent Program Advanced Practice 3</li> <li>• Recurrent Program Advanced Practice 4</li> </ul>	<ul style="list-style-type: none"> <li>• Ethics of Scientists and Engineers</li> <li>• Developing Career Adaptability for Global Competitiveness</li> <li>• Critical Thinking</li> <li>• Technical Discussion</li> <li>• Scientific Communication</li> <li>• PLP Practice 1</li> <li>• PLP Practice 2</li> <li>• PLP Practice 4</li> <li>• PLP Advanced Practice</li> <li>• Recurrent Program Advanced Practice 1</li> <li>• Recurrent Program Advanced Practice 2-1</li> <li>• Recurrent Program Advanced Practice 2-2</li> <li>• Recurrent Program Advanced Practice 3</li> <li>• Recurrent Program Advanced Practice 4</li> </ul>



**Reference: Tokyo Tech Academy for Leadership (ToTAL)**

A0D/P0D	A1D•A2D•A3D/P1D•P2D•P3D	A0D•A3D/P0D•P3D
•Policy-making Workshop	•Leadership Off-Campus Project	•Practical Group Work for Leadership •Advanced Group Work for Leadership