April 2021 admission (B Term)

Graduate School of Advanced Science and Engineering

(Master's Course)

Division of Advanced Science and Engineering

General Selection Application Guidebook

Mathematics Program Physics Program Earth and Planetary Systems Science Program Applied Chemistry Program Electrical, Systems, and Control Engineering Program Civil and Environmental Engineering Program Informatics and Data Science Program Smart Innovation Program (Electrical, Systems, and Control Engineering) Quantum Matter Program Transdisciplinary Science and Engineering Program (Environmental and Natural Sciences) Transdisciplinary Science and Engineering Program (Development Science)

November 2020



HIROSHIMA UNIVERSITY

Division of Advanced Science and Engineering of the Graduate School of Advanced Science and Engineering (Master's Course) Admission Policy

The Division of Advanced Science and Engineering of the Graduate School of Advanced Science and Engineering seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- (1) An ambition for the promotion of advanced and high-level academic and inter-disciplinary research;
- ② The will to be engaged in professional occupations such as researchers and engineers in areas related to natural science, engineering, and information science;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to natural science, engineering, and information science as well as a wide range of intelligence; and
- (4) Common sense and ethics required for a member of society.

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I Programs and Number of Students to be Admitted

The Division of Advanced Science and Engineering of Graduate School of Advanced Science and Engineering in Hiroshima University will accept applicants in General Selection for April 2021 admission to the Master's Course as indicated below.

Division	Program	Capacity	Admission capacity	Venue for examination	Contact Submission address for application documents
Division of Advanced Science and Engineering	Program Mathematics Program Physic Program Earth and Planetary Systems Science Program Applied Chemistry Program Electrical, Systems, and Control Engineering Program Civil and Environmental Engineering Program (Sinart Innovation Program (Electrical, Systems, and Control Engineering) Smart Innovation Program (Electrical, Systems, and Control Engineering) Transdisciplinary Science and Engineering Program (Environmental and Natural Sciences)	Capacity 449			Submission address for application

[April 2021 Admission (B Term)]

(Caution)

• The selection for April 2021 admission will be suspended for the following programs:

Basic Chemistry Program, Chemical Engineering Program, Mechanical Engineering Program, Transportation and Environmental Systems Program, and Architecture Program, Smart Innovation Program (Applied Chemistry)

· The specific venue of the entrance examination will be notified after the application.

• Consult with the faculty who is expected to be your academic supervisor about your research theme before applying. For the information regarding faculties of the Graduate School of Advanced Science and Engineering, refer to the following website.

URL https://www.hiroshima-u.ac.jp/en/adse/research



II Outline of Entrance Examination

1. Schedule of the Entrance Examination

(1) Mathematics Program / Physics Program / Earth and Planetary Systems Science Program

Application period	Date of the entrance examination	Examination	Examination result
Application period	Date of the entrance examination	subject	announcement
		Written	
Monday January 1 2021	9:00 -, Friday, January 29, 2021	examination	Diannad to be 12:00
Monday, January 4, 2021 –	5.00°, 1110ay, 5anaary 25, 2021	Oral	Planned to be 12:00 -, Friday, February 19, 2021
Friday, January 8, 2021		examination	Fliday, Febluary 19, 2021
	(Preliminary day: Saturday, January 30, 2021)		

(2) Applied Chemistry Program / Electrical, Systems, and Control Engineering Program / Civil and Environmental Engineering Program / Informatics and Data Science Program / Smart Innovation Program / Quantum Matter Program / Transdisciplinary Science and Engineering Program (Environmental and Natural Sciences) / Transdisciplinary Science and Engineering Program (Development Science)

Application period	Date of the entrance examination	Examination	Examination result
Application period	Date of the entrance examination	subject	announcement
	9:00 -, Thursday, January 28, 2021	Written	
Manday January 4 2021	9.00 -, Thursday, January 28, 2021	examination*	Planned to be 12:00 -,
Monday, January 4, 2021 – Friday, January 8, 2021	9:00 -, Friday, January 29, 2021	Oral	Friday, February 19, 2021
Filday, January 8, 2021	9.00 -, Filday, January 29, 2021	examination	Fliday, February 19, 2021
	(Preliminary day: Saturday, January 30, 2021)		

* Examination of Specialized subjects of Quantum Matter Program are conducted by oral assessment.

(Caution)

For both (1) and (2) above, in the difficult case of carrying out the entrance examination because of bad weather, epidemic, etc., the entrance examination may be held on the preliminary day. Postponement of the examination, extension of the starting time of the examination and so forth will be notified on the website of the Graduate School of Advanced Science and Engineering (https://www.hiroshima-u.ac.jp/adse). Please keep yourself updated.

2. Application Eligibility

Refer to the section "III Application Eligibility" (pages 8 - 10).

3. Required Documents and Selection Process

Refer to the page for each Program listed in the section "IV Required Documents and Selection Process" (page 11) and confirm the required documents and selection process (examination subject, basic policy, and evaluation criteria).

4. Application Procedure

(1) Your application will be accepted via internet during the application period.

Refer to the procedure described in the section "V Application Procedure" (page 29).

(2) Deliver or mail your application documents specified by each Program to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5).

The Support Office is open from 8:30 to 17:00 during the application period for the applicant who delivers the application documents.

In the case of submission via mail, the documents must be sent in a registered mail and reach us no later than 17:00, Friday, January 8. The documents received after this time shall be accepted only when it is postmarked no later than Wednesday, January 6.

5. Result Announcement

We will send the acceptance certificate and the admission guide to the successful applicants by mail.

An announcement will also be made on the website of the Graduate School of Advanced Science and Engineering, Hiroshima University (https://www.hiroshima-u.ac.jp/adse). The announcement on the website is made as part of information provision and does NOT grant admission officially in any way. Only mailing of the acceptance certificate should be regarded as an official announcement of admission. Please also note that an announcement will not be made through posting on the bulletin board on campus.

(We do not answer any inquiry via phone.)

III Application Eligibility

1. Application Eligibility

The applicant must meet either of the following items:

- (1) A person who has graduated from a university or college, or is expected to graduate;
- (2) A person who was conferred a bachelor's degree by the National Institution for Academic Degrees and Quality Enhancement of Higher Education in accordance with the provisions of Item 7 of Article 104 of the School Education Law of Japan (Law No. 26 of 1947), or is expected to be conferred (hereinafter referred to as "expected graduate");
- (3) A person who passed through a 16-year school education program in a foreign country, or is expected to pass through;
- (4) A person who studied class subjects provided by a foreign school as a correspondence course in Japan and passed through a 16-year school education course within the school education system in the concerned foreign country, or is expected to pass through;
- (5) A person who passed through an education course provided by a foreign education institution located in Japan which is established as an undergraduate course (limited to the course whose graduates are regarded as having passed through a 16-year school education course) within the school education system in the concerned foreign country and is approved by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), or is expected to pass through;
- (6) A person who was conferred a degree equivalent to a bachelor's degree, by passing through an education course that requires three years or longer to complete (including the case of the item (5) above), in a university or other school (limited to those institutions whose education and research activities have been certified by the person who has been certified by the concerned foreign country's government or the relevant institutions, or have been separately designated by MEXT as being equivalent to such) in a foreign country;
- (7) A person who passed through, on or after the date specified by MEXT, a postsecondary course (limited to courses whose period is four years or longer and that fulfill other criterias specified by MEXT) of a specialized training college that has been separately designated by MEXT, or is expected to pass through;
- (8) A person who has been designated by MEXT (as defined in the Notification of Ministry of Education, No. 5 of 1953; e.g. a person who graduated from a university established under the University Ordinance in 1886 or a college established under a law stipulated for the concerned government agency regarding its establishment such as the act for establishment, order for organization, and individual law for the Incorporated Administrative Agencies);
- (9) A person who entered a graduate school according to the provisions of Item 2 of Article 102 of the School Education Law of Japan and then has been approved by the Graduate School of Advanced Science and Engineering as having sufficient academic abilities for receiving postgraduate education;
- (10) A person who has been approved by the Graduate School of Advanced Science and Engineering as having academic abilities equivalent or superior to those of bachelor's degree holders according to the result of the admission qualification examination separately conducted, and is 22 years or older at the time of the admission.
- (Caution 1) The Applicant who is expected to meet either of the categories of the item (1) to (8) above must meet the condition specified by the respective item by March 31, 2021.
- (Caution 2) The applicant who falls under the categories of the item (9) or (10) above must undergo a preliminary evaluation of application eligibility (refer to the "2. Prerequisites for Application").

2. Prerequisites for Application

(1) Preliminary Evaluation

The applicant who falls under the categories of the item (9) or (10) must undergo a preliminary evaluation of application eligibility. The concerned applicant must follow the procedures below.

a) Application Period

Monday, December 7, 2020 - 17:00, Friday, December 11, 2020

(In the case of submission via mail, the documents must be sent in a registered mail. Indicate the phrase "Application Form for Preliminary Evaluation is enclosed." in red on the front surface of the envelope.)

b) Application Documents

[The applicant who falls under the category of the item (9) above]

Download the specified forms (a, b, c and g) from the website of the Graduate School of Advanced Science and Engineering.

	Document name	Note		
a	Application Form for Preliminary Evaluation	Use the specified form to prepare.		
b	Record of Application Eligibility Evaluation	Use the specified form to prepare.		
с	Reasons for Application	Use the specified form to prepare.		
d	Research plan	Must use A4 sized paper; free format. Attach a list of research achievements, if any.		
e	Academic transcript	Issued by the president of the university or the dean of the faculty from which the applicant has graduated.		
f	Certificate of student registration or graduation from the graduate school	Issued by the president of the university or the dean of the graduate school from which the applicant has graduated or is currently enrolled in.		
g	Reference for Educational Background	Only for the applicant who has graduated from a foreign university. Use the specified form to prepare. The applicant who has graduated or is expected to graduate from a university in China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain and submit the following document: Graduate Prospective Graduate • 教育部学历证书电子注册备案表* • 教育部学籍在线验证报告* • 学士 (硕士) 学位证书 • 毕业预定证书 * Obtain the document for which the Web authentication will be valid as of Friday, December 25, 2020 via the authentication system of the Ministry Education of China (中国高等教育学历证书查询). The issuance fee must be paid by the applicant. http://www.chsi.com.cn/xlcx/bgys.jsp		
h	Return envelope	Use a standard envelope $(12 \text{ cm} \times 23.5 \text{ cm} \text{ in size})$ and fill out your address and name; affix a 374-yen stamp to the front.		

(Caution) It is required to attach the English or Japanese translation to the application document written in the other language.

[The applicant who falls under the category of the item (10) above] Download the specified forms (a, b, c, g and h) from the website of the Graduate School of Advanced Science and Engineering.

	Document Name	Note		
a	Application Form for Preliminary Evaluation	Use the specified form to prepare.		
b	Record of Application Eligibility Evaluation	Use the specified form to prepare.		
с	Reasons for Application	Use the specified form to prepare.		
d	Research plan	Must use A4 sized paper; free format. Attach a list of research achievements, if any.		
e	Academic transcript	Issued by the president of the university or the dean of the faculty from which the applicant has graduated.		
f	Certificate of graduation	Issued by the president of the university or the dean of the faculty from which the applicant has graduated.		
g	Certificate of Past Research	*Only for those who conducted research as a research student or a researcher for over one year at a research institute (in a university or a joint use facility in Japan or in a foreign country). Use the specified form to prepare.		
h	Reference for Educational Background	Only for the applicant who has graduated from a foreign university. Use the specified form to prepare. The applicant who has graduated or is expected to graduate from a university in China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain and submit the following document:		

		Graduate	Prospective Graduate	
		・教育部学历证书电子注册备案表*	・教育部学籍在线验证报告*	
		・毕业证书	・毕业预定证书	
		・学士(硕士)学位证书		
		* Obtain the document for which the Web authentication will be valid as		
		of Friday, December 25, 2020 v	via the authentication system of the	
		Ministry Education of China (中国高等教育学历证书查询). The		
		issuance fee must be paid by the applicant.		
		http://www.chsi.com.cn/xlcx/bgy	s.jsp	
;	Paturn anvalona	Use a standard envelope (12cm \times	23.5cm in size) and fill out your	
1	Return envelope	address and name; affix a 374-yen st	tamp to the front.	

(Caution) It is required to attach the English or Japanese translation to the application document written in the other language.

- (2) The evaluation results will be notified to the applicant by Monday, December 28, 2020.
- (3) The applicant who has successfully passed a preliminary evaluation must submit the application documents (except the ones which have been already submitted in a preliminary evaluation) specified for each Program. Refer to the page for each Program listed in the section "IV Required Documents and Selection Process" (page 11).

IV Required Documents and Selection Process

Note that the required documents and selection process vary for each program. For the details, refer to the page listed in the table below.

Program	Category	Page(s) to be referred
Mathematics Program		
Physics Program	Science Programs	Pages 12 to 14
Earth and Planetary Systems Science Program		
Applied Chemistry Program		
Electrical, Systems, and Control Engineering Program	Engineering Programs &	
Civil and Environmental Engineering Program	Informatics and Data Science	Pages 15 to 19
Informatics and Data Science Program	Program	
Smart Innovation Program (Electrical, Systems, and Control Engineering)		
Quantum Matter Program	Pages 20 to 22	
Transdisciplinary Science and Engineering Prog (Environmental and Natural Sciences)	Pages 23 to 25	
Transdisciplinary Science and Engineering Prog (Development Science)	Pages 26 to 28	

Science Programs

(Mathematics/Physics/Earth and Planetary Systems Science)

1. Admission Policy

[Mathematics Program]

The mathematics Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① A Strong questing mind for the mathematical truth and An ambition to active promotion of specialized and/or cross-disciplinary research in mathematics with a sense of purpose;
- (2) The will to be engaged in professions that require expertise, such as researchers, educators, and engineers in mathematics areas;
- ③ A zeal for establishing the "science that enables sustainable development" from diversified points of view and solving problems in the local community and the international society, in addition to knowledge and study skills for the academic areas related to mathematics as well as a wide range of intelligence; and
- ④ Common sense and ethics required a member of society.

(Physics Program)

The Physics Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① The will to obtain state-of-the-art knowledge in areas of physics based on the point of view of researchers on a top international level;
- ② The will to obtain fundamental knowledge in contemporary physics to be engaged in researching jobs, educational jobs, and/or advanced engineering jobs related to areas of physics;
- ③ A zeal for establishing the "science that enables sustainable development" from diversified points of view and solving problems in the local community and the international society, in addition to knowledge and study skills for the academic areas related to physics as well as a wide range of intelligence; and
- ④ Common sense and ethics required for a member of society.

[Earth and Planetary Systems Science Program]

The Earth and Planetary Systems Science Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① An ambition for acquiring advanced expertise and research techniques related to the earth and planetary systems science;
- ② The will to be engaged in professions that require expertise such as researchers, educators, and engineers in areas of the earth and planetary systems science;
- ③ A zeal for establishing the "science that enables sustainable development" from diversified points of view and solving problems in the local community and the international society as well as knowledge and study skills for the academic areas related to mathematics as well as a wide range of intelligence, in addition to a strong curiosity about not only the earth and planetary systems science but also for the other areas; and
- 4 Common sense and ethics required for a member of society.

2. Application Documents

After making the application via internet, submit all the documents listed below at once during the application period to the Support Office indicated in the section "IPrograms and Number of Students to be Admitted " (page 5).

1 Academic transcript Issued by the president of the university or the dean of the the applicant has graduated. 1 Issued by the president of the university or the dean of the the applicant has graduated. 1 Issued by the president of the university or the dean of the the applicant has graduated.	-
Image: The applicant has graduated. Image: The applicant has graduated. </td <td>e faculty from which</td>	e faculty from which
	e faculty from which
the applicant has graduated.	
The applicant who has graduated or is expected to graduate	
China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain
and submit the following document:	
	ve Graduate
Certificate of graduation or ·教育部学历证书电子注册备案表* ·教育部学籍在线	验证报告*
2 certificate of expected ·毕业证书 ·毕业预定证书	
graduation ・学士(硕士)学位证书	
* Obtain the document for which the Web authentication	
Friday, January 22, 2021 via the authentication system	tem of the Ministry
Education of China (中国高等教育学历证书查询). T	he issuance fee must
be paid by the applicant.	
http://www.chsi.com.cn/xlcx/bgys.jsp	
Only for the applicant who falls under the category	of the item (2) of
Certificate of expected application eligibility.	
application for the • Expected graduate: Certificate of expected application for	or the conferment of
3 conferment of a bachelor's a bachelor's degree issued by the president of a college of	of technology.
degree or certificate of a • Bachelor's degree holder: Certificate of a bachelor's	degree issued by the
bachelor's degree National Institution for Academic Degrees and Qual	lity Enhancement of
Higher Education.	-
Only for the applicant for Earth and Planetary Systems Sci	ience Program.
Submit the original score certificate of TOEIC® public	lic test, TOEIC®-IP
4 Certificate of English (including College TOEIC®), TOEFL®-CBT,	TOEFL®-PBT, or
-language proficiency TOEFL®-iBT. If you want your certificate to be returned	l, please inform us in
advance at the time of application.	-
5 Determ analysis Use a standard envelope (12cm×23.5cm in size) and fill	out your address and
5 Return envelope 5 Return envelope (12cm/225).5cm in size/ and im name; affix a 94-yen stamp to the front (for sending the Ex	•

(Caution 1) It is required to attach the English or Japanese translation to the application document written in the other language.

(Caution 2) The applicant who has successfully passed a preliminary evaluation of application eligibility need not submit the document No. 1 and 2 above.

3. Selection Process

(1) Basic Policy

OMathematics Program

The written examination (specialized subject) is given to evaluate basic knowledge, the ability to understand, think and self-express, and other abilities while the written examination (foreign-language proficiency) to evaluate the language proficiency required for the Program. Foreign applicants are required to consult with the Support Office in advance about selection process.

OPhysics Program

The written examination (specialized subject) and the oral examination are given to evaluate basic knowledge, the ability to understand, think and self-express, and other abilities.

•Earth and Planetary Systems Science Program

The written examination (specialized subject) and the oral examination are given to evaluate basic knowledge, the ability to understand, think and self-express, and other abilities.

(2) Evaluation Criteria

OMathematics Program

The results of the written examinations (specialized subject and foreign-language proficiency) and the oral

examination and the academic transcript will be comprehensively evaluated.

[Written examination] Specialized subject (max. 400 points); foreign-language proficiency (max. 100 points) [Oral examination] Scale of 1 to 4 (A, B, C, D) [Academic transcript] Scale of 1 to 3 (A, B, C)

Physics Program

The results of the written examination, oral examination and the academic transcript will be comprehensively evaluated.

[Written examination] Scale of 1 to 4 (A, B, C, D)

[Oral examination] Scale of 1 to 4 (A, B, C, D)

[Academic transcript] Scale of 1 to 3 (A, B, C)

•Earth and Planetary Systems Science Program

Foreign-language proficiency, the results of the written examination, oral examination, and the academic transcript will be comprehensively evaluated.

[Written examination] Scale of 1 to 4 (A, B, C, D)

[Foreign-language proficiency] TOEIC® or TOEFL® scores converted to max. 200 points

[Oral examination] Scale of 1 to 4 (A, B, C, D)

[Academic transcript] Scale of 1 to 3 (A, B, C)

(3) Written Examination and Oral Examination Schedule

Program na	me		Written examination	Oral examination
Mathematics Pro	ogram	Friday, January 29	Specialized subject 9 : 00 - 12 : 00 Foreign-language proficiency 13 : 30 - 14 : 30	15:00 -, Friday, January 29

(Caution 1) The written examination in foreign-language proficiency must be English.

(Caution 2) Foreign applicants are required to consult with the Support Office in advance about the examination language for the written examination in specialized subject.

(Caution 3) For contents of the written examination in specialized subject and the use of a dictonary in the written examination in foreign-language proficiency, refer to the "(2) Contents of the Written Examination in Specialized Subject and the Use of a Dictonary in the Written Examination in Foreign-language Proficiency."

(Caution 4) The details of the oral examination will be notified on the examination day.

Program name	Written examination and oral examination
Physics Program	0.00 Thursday January 29
Earth and Planetary Systems Science Program	9:00-, Thursday, January 28

(Caution 1) The details of the written examination in specialized subject and the oral examination will be notified on the examination day.

(Caution 2) The applicants for Physics Program are required to consult with the faculty who is expected to be your academic supervisor in advance.

(Caution 3) For contents of the written examination in specialized subject, refer to the "(2) Contents of Written Examination in Specialized Subject and Use of Dictonary in Written Examination in Foreign-language Proficiency."

(4) Contents of Written Examination in Specialized Subject and Use of Dictionary in Written Examination in Foreign-language Proficiency

Program name	Contents	
Mathematics ProgramBasic questions concerning mathematicsMathematics ProgramThe use of a dictionary will not be allowed during the written examination foreign-language proficiency		
Physics Program	Questions concerning dynamics, electromagnetics, quantum dynamics, and thermal / statistical dynamics	
Earth and PlanetarySystems ScienceProgram		

Engineering Programs & Informatics and Data Science Program

(Applied Chemistry / Electrical, Systems, and Control Engineering / Civil and Environmental Engineering / Informatics and Data Science / Smart Innovation (Electrical, Systems, and Control Engineering))

1. Admission Policy

[Applied Chemistry Program]

The Applied Chemistry Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① An ambition for academic research and inter-disciplinary activities;
- ② The will to be engaged in professional occupations such as researchers and engineers in applied chemistry areas;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to applied chemistry as well as a wide range of intelligence; and
- 4 Common sense and ethics required for a member of society.

[Electrical, Systems, and Control Engineering Program]

The Electrical, Systems, and Control Engineering Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- (1) An ambition for academic research and inter-disciplinary activities;
- ② The will to be engaged in professional occupations such as researchers and engineers in areas related to electrical engineering and systems engineering that constitutes the core of the electrical, systems, and control engineering;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to the electrical, systems, and control engineering as well as a wide range of intelligence; and
- ④ Common sense and ethics required for a member of society.

[Civil and Environmental Engineering Program]

The Civil and Environmental Engineering Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

(1) An ambition for academic research and inter-disciplinary activities;

② The will to work as a high-level engineer or researcher in areas of civil and environmental engineering including disaster prevention and mitigation engineering;

- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to the civil and environmental engineering as well as a wide range of intelligence; and
- ④ Common sense and ethics required for a member of society.

[Informatics and Data Science Program]

The Informatics and Data Science Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- (1) An ambition for academic research and inter-disciplinary activities;
- 2 The will to work as a high-level engineer or researcher in areas of the informatics and data science;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues
- by acquiring knowledge and study skills for the academic areas related to the informatics and data science as well as a wide range of intelligence; and

④ Common sense and ethics required for a member of society.

[Smart Innovation Program]

The Smart Innovation Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- (1) An ambition for academic research and inter-disciplinary activities;
- ② The will to be engaged in professional occupations such as researchers and engineers in areas related to the smart material development, the smart measurement and control, and their fusion technologies;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to the smart material development, the smart measurement and control, and their fusion technologies as well as a wide range of intelligence; and
- ④ Common sense and ethics required for a member of society.

2. Application Documents

After making the application via internet, submit all the documents listed below at once during the application period to the Support Office indicated in the "I Programs and Number of Students to be Admitted" (page 5). Download the specified forms (4, 7, 8 and 10) from the website of the Graduate School of Advanced Science and Engineering.

1 Academic transcript Issued by the president of the university or the dean of the faculty from which the applicant has graduated. The applicant has graduated. The applicant who has graduated or is expected to gnaduate from the advanced course in a college of technology must submit the academic transcript for both the regular and advanced course. 2 Certificate of graduation or certificate of expected graduation Issued by the president of the university or the dean of the faculty from which the applicant has graduated. If the certificate does not indicate that you were conferred a bachelor's degree. submit another document that proves it. 3 Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. 4 List for the Oral Examination 4 List for the Oral Examination 5 Score certificate of expected of English-language proficiency 5 Score certificate of English-language proficiency 6 Score certificate of	No	Document name	Note
2 Certrificate of graduation or certificate of expected graduation the applicant has graduated. If the certificate does not indicate that you were conferred a bachelor's degree, submit another document that proves it. 3 Certificate of expected application for the conferment of a bachelor's degree or certificate of a bachelor's degree or certificate of a bachelor's degree issued by the president of a college of technology. 3 Expected graduate: Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. 4 List for the Oral Examination Use the specified form to prepare. 5 Score certificate of English-language proficiency Submit the original score certificate at hand at the time of application is required to consult with the Support Office in advance. 5 Score certificate of English-language proficiency • TOEFL@-IP (including College TOEIC®) 6 Coreclealing and the import of the scores application is required to consult with the Support Office in advance. 5 Coreclealing and the import office in advance. 6 TOEFL@-IP (including College TOEIC®) 7 TOEFL@-IBT 8 IELTS Academic 9 Coreclealing english Qualifications	1	Academic transcript	the applicant has graduated. The applicant who has graduated or is expected to graduate from the advanced course in a college of technology must submit the academic transcript for both
Certificate of expected application for the conferment of a bachelor's degree or certificate of a bachelor's degree or certificate of a bachelor's degree issued by the president of a college of technology. • Expected graduate: Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. 4 List for the Oral Examination Use the specified form to prepare. 5 Score certificate of English-language proficiency Submit the original score certificate will be returned to the application is required to consult with the Support Office in advance. 5 TOEIC®-IP (including College TOEIC®) • TOEIC®-IP (including College TOEIC®) • TOEFL®-BBT • TOEFL®-ITP • TOEFL®-ITP • TOEFL®-IBT • Centhridge English Qualifications	2	certificate of expected	the applicant has graduated. If the certificate does not indicate that you were conferred a bachelor's degree,
5 Score certificate of English-language proficiency 5 Score certificate of English-language proficiency 5 TOEIC® Public Test • TOEFL®-IPP • TOEFL®-IP • TOEFL®-IP • TOEFL®-IP • TOEFL®-IBT • Cambridge English Qualifications	3	application for the conferment of a bachelor's degree or certificate of a	 Only for the applicant who falls under the category of the item (2) of application eligibility. Expected graduate: Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. Bachelor's degree holder: Certificate of a bachelor's degree issued by the National Institution for Academic Degrees and Quality Enhancement of
 which was held in the period from May 2017 to the time of application. (The submitted score certificate will be returned to the applicant after confirmation). Although there is no minimum standard for the scores, application without submission of the score certificate will not be accepted. The applicant who does not have their score certificate at hand at the time of application is required to consult with the Support Office in advance. Score certificate of English-language proficiency TOEIC®-IP (including College TOEIC®) TOEFL®-ITP TOEFL®-IBT IELTS Academic Cambridge English Qualifications 	4	List for the Oral Examination	Use the specified form to prepare.
	5	English-language	 which was held in the period from May 2017 to the time of application. (The submitted score certificate will be returned to the applicant after confirmation). Although there is no minimum standard for the scores, application without submission of the score certificate will not be accepted. The applicant who does not have their score certificate at hand at the time of application is required to consult with the Support Office in advance. TOEIC® Public Test TOEFL®-IP (including College TOEIC®) TOEFL®-ITP TOEFL®-IBT IELTS Academic
	6	Score certificate of	

	English-language proficiency (copy)	proficiency" (in A4 sized paper)	
7	Registration of selected subject for Applicants of Civil and Environmental Engineering Program	Only for the applicant for Civil and Environmental Engineering Program. Use the specified form to prepare.	
8	Copy of residence card	Only for foreign applicants residing in Ja If your address is written on the back side	
9	Reference for Educational Background	If your address is written on the back side of the card, make a two-sided copy. Only for the applicant who has graduated from a foreign university. Use the specified form to prepare. The applicant who has graduated or is expected to graduate from a university in China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain and submit the following document: Graduate Prospective Graduate 教育部学历证书电子注册备案表* * 教育部学第在线验证报告* 毕业证书 学士 (硕士) 学位证书 * Obtain the document for which the Web authentication will be valid as of Friday, January 22, 2021 via the authentication system of the Ministry Education of China (中国高等教育学历证书查询). The issuance fee must be paid by the applicant. http://www.chsi.com.cn/xlcx/bgys.jsp	
10	Return envelope	Use a standard envelope ($12cm \times 23.5cm$ in size) and fill out your address and name; affix a 94-yen stamp to the front (for sending the Examination Card).	

(Caution 1) It is required to attach the English or Japanese translation to the application document written in the other language.

(Caution 2) The applicant who has successfully passed a preliminary evaluation of application eligibility need not submit the document No. 1, 2 and 10 above.

3. Selection Process

(1) Basic Policy

Academic abilities (based on the written examination and the oral examination), English (based on Score certificate of English-language proficiency; only for Informatics and Data Science Program.), and the academic transcript will be comprehensively evaluated.

(2) Evaluation Criteria

OApplied Chemistry Program, Electrical, Systems, and Control Engineering Program, Civil and Environmental Engineering Program, Smart Innovation Program(Electrical, Systems, and Control Engineering)

[Written examination] Specialized subject (max. 200 points)

Basic academic abilities, thinking abilities, understanding and creativity will be evaluated. [Oral examination] Max. 100 points

[Academic transcript] Scale of 1 to 4

OInformatics and Data Science Program

[Written examination] Specialized subject (max. 600 points)

Basic academic abilities, thinking abilities, understanding and creativity will be evaluated.

[Oral examination] Motivation, aptitude for the desired subject of study and basic academic abilities will be evaluated in scale of 1 to 3.

[English] max. 100 points (Converted from Score certificate of English-language proficiency)

[Academic transcript] Scale of 1 to 4

Program name	Written examination			Oral examination
Applied Chamister Descent			9:00-12:00	
Applied Chemistry Program	Thursday, January 28	Specialized subject II	13:30-15:00	
Electrical, Systems, and Control Engineering	Thursday, January 28	Specialized subject I	9:00~12:00	
Program	Thursday, January 28	Specialized subject II	13:30~14:30	
Civil and Environmental	Thursday January 78	Specialized subject I	9:00~11:30	0.00 Friday January 20
Engineering Program		Specialized subject II	13:30~15:00	9:00-, Friday, January 29
Informatics and Data Science	Thursday, January 28	Specialized subject I	9:00~11:00	
Program	Thursday, January 20	Specialized subject II	13 : 30~15 : 30	
Smart Innovation Program	Thursday January 29	Specialized subject I	9:00~12:00	
(Electrical, Systems, and Control Engineering)	Thursday, January 28	Specialized subject II	13 : 30~14 : 30	

(3) Written Examination and Oral Examination Schedule

(Caution 1) For the contents of the written examination in specialized subject, refer to the table below. (Caution 2) The details of the oral examination will be notified on the examination day.

(4) Contents of Written Examination

Program name	Subject name	Category	Contents
	Applied Chemistry	Written examination (Specialized subject I)	Organic and Polymer Chemistry, Inorganic and Analycical Chemistry, Physical Chemistry
Applied Chemistry Program		Written examination (Specialized subject II)	Essay is given to evaluate your knowledge and problem-solving skills in the area of Applied Chemistry.
		Oral examination (Interview)	Your motivation, aptitude for the desired subject of study, and understanding in the desired specialized field will be evaluated.
	Electrical, Systems, and Control Engineering	Written examination (Specialized subject I)	Select and answer three questions from the following subjects: 1. Linear Algebra, 2. Calculus, 3. Electric Circuit Theory, 4. Linear Programming
Electrical, Systems, and Control Engineering Program		Written examination (Specialized subject II)	Essay is given to evaluate your knowledge and problem-solving skills in the area of Electrical, Systems, and Control Engineering.
		Oral examination (Interview)	Requested to present your past research and a future research plan, and answer questions in the style of interview

			Calast and anomalian and the Calls ' 1' to 37
	Civil and	Written examination (Specialized subject I)	 Select and answer one of the following six subjects (You must select and register the subject at the time of application) Structural Engineering (Strength of Material, Structural Mechanics, Energy Principles) Concrete Engineering (Materials for Concrete, Properties of Fresh and Hardened Concrete, Concrete Structure) Geotechnical Engineering (Soil Mechanics, Design of Earth Structures, Geotechnical Disaster Mitigation) Sanitary and Environmental Engineering (Water Chemistry, Water Supply and Sewerage Systems, Microbial Ecology, Kinetics) Hydraulics (Conservation Laws of Momentum and Energy, Laminar and Turbulent Flows, Flows in Open Channels and Conduits) Infrastructure and Transportation Planning (City Planning and Transportation Demand Forecasting)
Civil and Environmental Engineering Program	Environmental Engineering	Written examination (Specialized subject II)	 and mansportation Demand Polecasting) Essay A: your knowledge and problem-solving skills in the area of Civil and Environmental Engineering will be evaluated. Essay B: Review of previous studies regarding a desired research topic **A list of reviewed papers must be submitted at the examination. The applicants can refer to the list when answering the question(s) of Essay B. The list must be necessarily prepared in advance, according to the format shown at the following URL. Please note that this list cannot be referred to when answering the question(s) if other descriptions than information according to the format are included in the list.
		Oral examination (Interview)	Your motivationand capability for the desired subject of study, as well as your understanding in the desired specialized field will be evaluated.
	Informatics and Data Science	Written examination (Specialized subject I)	Answer four questions about the following subjects: 1. Linear Algebra, 2. Advanced Calculus and Ordinary Differential Eauations, 3. Probability and Statistics, 4. Discrete Mathematics.
Informatics and Data Science Program		Written examination (Specialized subject II)	Select and answer three questions from the following subjects: 1. Information Theory, 2. Algorithms and Data Structures, 3. Programming Language, 4. Computer Architecture and Digital Circuits. Requested to answer the additional problem to evaluate your knowledge and problem solving skills in the area of Informatics and Data Science.
		Oral examination (Interview)	Your motivation, aptitude for the desired subject of study, and basic academic abilities will be evaluated.
	Electrical, Systems, and Control Engineering	Written examination (Specialized subject I)	Select and answer three questions from the following subjects: 1. Linear Algebra, 2. Calculus, 3. Electric Circuit Theory, 4. Linear Programming
Smart Innovation Program (Electrical, Systems, and Control Engineering)		Written examination (Specialized subject II)	Essay is given to evaluate your knowledge and problem solving skills in the area of Electrical, Systems, and Control Engineering.
		Oral examination (Interview)	Requested to present your past research and a future research plan, and answer questions in the style of interview

Quantum Matter Program

1.Admission Policy

[Quantum Matter Program]

The Quantum Matter Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① The will to be engaged in professional occupations such as researchers and engineers in area of the basic materials science, condensed material physics, material science and engineering, and electronic engineering;
- ② An ambition for acquiring knowledge and skills related to areas mentioned above regardless of the experience and background before entering the university;
- ③ A wish to build up new businesses as well as exploring scientific facts and applying scientific findings from the academic point of view;
- ④ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to the basic materials science, condensed material physics, material science and engineering, and electronic engineering as well as a wide range of intelligence; and
- (5) Common sense and ethics required for a member of society.

2. The Supervisors who will Accept Students

The supervisors who will accept students in this entrance examination are as follows.

All applicants are required to be given guidance by his or her preferred supervisor prior to application.

ONIMARU Takahiro, KURIKI Masao, SHIMAHARA Hiroshi, SUZUKI Takashi, MATSUMURA Takeshi, ISHII Isao, UMEO Kazunori, TAKAHASHI Tohru, TANAKA Arata, HIGUCHI Katsuhiko, MIYAOKA Hiroki, YAGI Ryuta, IINUMA Masataka, SHIMURA Yasuyuki, HIGA Nonoka, LIPTAK Zachary John IWASAKA Masakazu, KADOYA Yutaka, KUROKI Shin-Ichiro, TERAMOTO Akinobu, FUJISHIMA Minoru, Holger F. HOFMANN, AMAKAWA Shuhei, KOIDE Tetsushi, SASAKI Mamoru, SUZUKI Hitoshi, NAKAJIMA Anri, NISHIDA Munehiro, MIYAKE Masataka, YOSHIDA Takeshi, SAKAUE Hiroyuki, HANAFUSA Hiroaki

* The applicant must contact in advance the Student Support Office, Graduate School of Science (page 5) when his or her preferred supervisor is in charge of plural programs and takes charge of the Transdisciplinary Science and Engineering Program, including Physics Field of this program. (Please see the Lists of Academic Supervisors (Quantum Matter Program).)

3. Application Documents

After making the application via internet, submit all the documents listed below at once during the application period to the address indicated in the "Submission Address for Application Documents" (page 5). Download the specified forms (7) from the web site of the Graduate School of Advanced Science and Engineering.

No	Document Name	Note
1	Academic transcript	Issued by the president of the university or the dean of the faculty from which the applicant graduated.
2	Certificate of graduation or certificate of expected graduation	Issued by the president of the university or the dean of the faculty from which the applicant graduated. If you are a graduate, make sure that the certificate includes information about your degree. The applicant who has graduated or is expected to graduate from a university in

		China (excluding that in Taiwan Hong	Kong and Macao) is required to obtain	
		China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain and submit the following document:		
		Graduate	Prospective Graduate	
		·教育部学历证书电子注册备案表*	・教育部学籍在线验证报告*	
		・毕业证书	・毕业预定证书	
		・学士(硕士)学位证书		
		* Obtain the document for which the W	eb authentication will be valid as of	
		Friday, January 22, 2021 via the auth		
		Education of China (中国高等教育中	学历证书查询).	
		http://www.chsi.com.cn/xlcx/bgys.jsj	p	
	Certificate of expected	Only for the applicant who falls under the	he category of the item (2) in the section	
	-	"III Application Eligibility" (page 8).		
	application for the	• Expected graduate: Certificate of exp	ected application for the conferment of	
3	conferment of a bachelor's	a bachelor's degree issued by the pres		
	degree or certificate of a	• Bachelor's degree holder: Certificate of a bachelor's degree issued by the		
	bachelor's degree	National Institution for Academic De	grees and Quality Enhancement of	
		Higher Education.		
		Submit the original score certificate of e	either of the following examinations.	
		Refer to Caution 3 below for details.		
		TOEIC® Public Test		
	Certificate of English	・TOEIC®-IP		
4	υ	・TOEFL®-PBT		
	language proficiency	・TOEFL®-iBT		
		・TOEFL®-ITP		
		・IELTS®		
		Cambridge English Qualifications		
_		Only for foreign applicants residing in J	apan.	
5	Copy of residence card	If your address is written on the back side of the card, make a two-sided copy.		
			n in size) and fill out your address and	
6	6 Return envelope	name; affix a 94-yen stamp to the front	-	
	Registration of selected			
7	subject for Applicants of	Use the specified form to prepare.		
	Quantum Matter Program			

(Caution 1) It is required to attach the English or Japanese translation to the application document written in the other language.

(Caution 2) The applicant who has successfully passed a preliminary evaluation of application eligibility need not submit the document No. 1 and 2 above.

(Caution 3)

- ① Quantum Matter Program will use the scores of either of the certificates listed above in place of a written foreign language (English) examination.
- ⁽²⁾ The applicant is required to submit, along with other required documents, the original score certificate of either of these examinations. The score certificate is not allowed to be replaced once it has been submitted. The submitted score certificate will be returned to the applicant after confirmation.
- ③ The applicant who is unable to submit the original score certificate during application period must submit, along with other required documents, a document (no specified form) stating that they will submit their score certificate of English language proficiency later. Subsequently the applicant must submit the score certificate by 13:00, Thursday, January 28, 2021 to the Student Support Office, Graduate School of Science (1st floor of the Advanced Sciences of Matter).
- (4) The applicant who wishes to send their score certificate of TOEIC®-IP collectively conducted for all Hiroshima University undergraduate students and does not have their score certificate at hand must contact the Student Support Office, Graduate School of Science.
- (5) The applicant who does not submit their score certificate of English language proficiency will receive 0 (zero) points for a written foreign language (English) test.

4. Selection Process

(1) Basic Policy

Academic abilities (based on the written examination, oral assessment and the oral examination), English (based on the certificate of English language proficiency), and the academic transcript will be comprehensively evaluated.

(2) Evaluation Criteria

[Written Examination, oral assessment] Basic subject (max. 100 points); specialized subject (max. 400 points)

Questions to measure basic academic abilities and scientific reasoning sufficient to learn in the graduate school.

[Oral Examination] Motivation, aptitude for the desired subject of study and basic academic abilities will be evaluated in three-level evaluation (A, B, C).

[English] max. 100 points (converted from the score certificate of English language proficiency)

(3) Examination Schedule

Thursday, January 28	Friday, January 29
Basic subject 9:00-10:30	Oral Examination 0 + 00
Specialized subject 13:30-	Oral Examination 9:00-

(Caution 1) For the contents of Basic subject and Specialized subject, refer to the table below. (Caution 2) Details of the oral examination will be notified on the day.

(4) Contents of Basic subject and Specialized subject

Field ※	Category	Examination Subjects
	Basic subject (written examination)	Mathematics
		Classical Mechanics
Physics	Specialized subject	Electromagnetism
	(oral assessment)	Quantum Mechanics
	(oral assessment)	Statistical Thermodynamics
		(answer four questions above)
	Basic subject (written examination)	Mathematics
T 1 .	Specialized subject (oral assessment)	Electromagnetism
Electronic		Electronic Circuits
Engineering		Semiconductor Engineering
		Quantum Mechanics
		(answer three out of the above questions)

% Please specify either Physics or Electronic Engineering field on the "Registration of selected subject for Applicants of Quantum Matter Program"

Transdisciplinary Science and Engineering Program (Environmental and Natural Sciences)

1. Admission Policy

[The Transdisciplinary Science and Engineering Program]

The Transdisciplinary Science and Engineering Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- (1) An ambition for the promotion of advanced and high-level academic and inter-disciplinary research;
- 2 Interest in a new academic area in addition to both of the nature-oriented and human-oriented thoughts;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to natural science, engineering, and interdisciplinary areas such as the information science and the international cooperation studies as well as a wide range of intelligence; and
- 4 Common sense and ethics required for a member of society.

2. Application Documents

After making the application via internet, submit all the documents listed below at once during the application period to the address indicated in the "Submission Address for Application Documents" (page 5). Download the specified forms (1, 5, 6 and 7) from the web site of the Graduate School of Advanced Science and Engineering.

No	Document Name	Note		
1	Personal History	Use the specified form to prepare.		
2	Academic transcripts	Issued by the president of the university or the dean of the faculty, the president of the junior college, or the president of the college of technology from which the applicant graduated. The certificate must be the original or the certified photocopy. The uncertified photocopy will not be accepted.		
3	Certificate of graduation or certificate of expected graduation	Issued by the president of the university or the dean of the faculty, the president of the junior college, or the president of the college of technology from which the applicant graduated. The certificate must be the original or the certified photocopy. The uncertified photocopy will not be accepted. If you are a graduate, make sure that the certificate includes information about your degree. The applicant who has graduated or is expected to graduate from a university in China (excluding that in Taiwan, Hong Kong, and Macao) is required to obtain and submit the following document: Graduate Prospective Graduate • 教育部学历证书电子注册备案表* • 教育部学籍在线验证报告* • 学士 (硕士) 学位证书 • 毕业预定证书 * Obtain the document for which the Web authentication will be valid as of Friday, January 22, 2021 via the authentication system of the Ministry Education of China (中国高等教育学历证书查询). http://www.chsi.com.cn/xlcx/bgys.jsp		
4	Certificate of expected application for the conferment of a bachelor's degree or certificate of a bachelor's degree	 Only for the applicant who falls under the category of the item (2) above. Expected graduate: Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. Bachelor's degree holder: Certificate of a bachelor's degree issued by the National Institution for Academic Degrees and Quality Enhancement of Higher Education. 		

5	Copy of graduation thesis	Submit a copy of your graduation thesis. The applicant who is preparing the graduation thesis for graduation is required to submit an abstract (with a length of approximately 2,000 characters) in the specified form. The applicant who is unable to submit either the copy of graduation thesis or the abstract must submit any published thesis which proves your research ability. For the applicant who is unbale to submit either of the above documents, refer to the document No. 6.
6	Research plan	Submit the summary of your past research and future research plan for your master's course (with a length of approximately 2,000 characters) in the specified from. The applicant who is unable to submit the document No. 5 must indicate its reason.
7	Common Issue	Use the specified form to prepare. Pick up any important issue(s) in contemporary society and explain how you expand interdisciplinary and comprehensive research to solve it, in relation to your research plan submitted in the document No. 6, in a way that is easy to understand for those who are not familiar with your specialized field (with a length of approximately 1,500 characters).
8	Score certificate of English language ability examination or Japanese-Language Proficiency Test	 Submit the original score certificate of either of 1 – 4 English language ability examinations below or the original score certificate of Japanese-Language Proficiency Test. The printout from internet is not available. The submitted score certificate will be returned to the applicant after confirmation. The original score certificate of either of the following examinations which was held after April 1, 2017 will be accepted. (*) TOEIC® public test or TOEIC® Institutional Program TOEFL® - PBT TOEFL® - PBT TOEFL® - iBT Jitsuyo Eigo Gino Kentei (Test in Practical English Proficiency) Japanese-Language Proficiency Test (N1) (Only for non-native speakers of Japanese) The applicant who has the scores of a foreign language examination other than English and Japanese can submit the original score certificate of either of 1-5 examinations listed above. Upon consultation with the faculty who is expected to be your advisor, choose one foreign language to be evaluated for the entrance examination. *Applicants who are unable to submit any score certificate due to the suspension of language ability examination because of COVID-19 should contact the corresponding Support Office in advance.
9	Approval Notice of Application Eligibility Evaluation	Only for the applicant who has successfully passed a preliminary evaluation of application eligibility under the category of the item (9) or (10) above. Issued by the dean of the Graduate School of Advanced Science and Engineering, Hiroshima University.
10	Copy of residence card	Only for foreign applicants residing in Japan. If your address is written on the back side of the card, make a two-sided copy.
11	Return envelope	Use standard envelope $(12 \text{ cm} \times 23.5 \text{ cm} \text{ in size})$ and fill out your address and name; affix a 94-yen stamp to the front (for sending the Examination Card). English or Japanese translation to the application document written in the other

(Caution 1) It is required to attach the English or Japanese translation to the application document written in the other language.

(Caution 2) The applicant who has successfully passed a preliminary evaluation of application eligibility need not submit the document No. 1 and 2 above.

3. Selection Process

(1) Basic Policy

Academic abilities (based on the written examination and the oral examination), foreign language, the academic transcript, graduation thesis, and Common Issue will be comprehensively evaluated.

(2) Evaluation Criteria

[Written examination] Specialized subject (max. 100 pints)

 Questions concerning your desired specialized field. Questions concerning a foreign language ability might be asked as well depending on your desired specialized field.

 [Oral Examination] max. 100 points

 Motivation, aspirations, and basic research knowledge will be evaluated in scale assessment. Questions concerning a foreign language ability might be asked as well.

 [Foreign Language] max. 100 points (converted from scores of either the English language ability examination or Japanese-Language Proficiency Test)

(3) Written Examination and Oral Examination Schedule

Written Examination (Specialized Subject)	Oral Examination
Thursday, January 28, 9:00 – 11:00	Friday, January 29, 9:00
	(approximately 30 minutes for each examinee)

(Caution) Details of the oral examination will be notified on the day.

Transdisciplinary Science and Engineering Program (Development Science)

1. Admission Policy

[The Transdisciplinary Science and Engineering Program]

The Transdisciplinary Science and Engineering Program seeks students who have the following aspirations and motivation and have the basic academic abilities necessary for it:

- ① An ambition for the promotion of advanced and high-level academic and inter-disciplinary research;
- 2 Interest in a new academic area in addition to both of the nature-oriented and human-oriented thoughts;
- ③ A zeal for establishing the "science for sustainable development" from a multifaceted perspective and for solving regional and international issues by acquiring knowledge and study skills for the academic areas related to natural science, engineering, and interdisciplinary areas such as the information science and the international cooperation studies as well as a wide range of intelligence; and
- ④ Common sense and ethics required for a member of society.

2. Application Documents

After making the application via internet, submit all the documents listed below at once during the application period to the address indicated in the "Submission Address for Application Documents" (page 5). Download the specified forms (1, 5, 6 and 7) from the web site of the Graduate School of Advanced Science and Engineering.

No	Document Name	No	te
1	Registration of selected subject for Applicants of Transdisciplinary Science and Engineering Program (Development Science)	Use the specified form to prepare.	
2	Academic transcript	Issued by the president of the university or the dean of the faculty from which the applicant graduated. The applicant who is currently enrolled in or graduated from a graduate school must submit the academic transcript for both the faculty and the graduate school. If the certificate does not indicate evaluation criteria of grading, submit another document issued by the university that includes evaluation criteria of grading.	
Certificate of graduation or certificate of expected graduation		the applicant graduated. The applicant who is currently enrolled must submit the academic transcript fo the graduate school. If you are a graduate, make sure that th your degree. The applicant who has graduated or is e	y or the dean of the faculty from which in or graduated from a graduate school r both the undergraduate university and a certificate includes information about expected to graduate from a university in Kong, and Macao) is required to obtain Prospective Graduate · 教育部学籍在线验证报告* · 毕业预定证书
		· 学士(硕士)学位证书 * Obtain the document for which the	Web authentication will be valid as of authentication system of the Ministry 学历证书查询).

4	Certificate of expected application for the conferment of a bachelor's degree or certificate of a bachelor's degree	 Only for the applicant who falls under the category of the item (2) above. Expected graduate: Certificate of expected application for the conferment of a bachelor's degree issued by the president of a college of technology. Bachelor's degree holder: Certificate of a bachelor's degree issued by the National Institution for Academic Degrees and Quality Enhancement of Higher Education. 	
5	Research plan	Use the specified form to	prepare.
6	Reasons for Application	Use the specified form to prepare.	
7	Letter of approval for taking the entrance examination	The applicant who is currently enrolled in a graduate school	Use the specified form to prepare. The applicant who is enrolled in other graduate school must submit a letter of approval for taking the entrance examination issued by the president of the university or the dean of the graduate school
		The applicant who works in private company, international organization, governmental organization, local government, or educational organization	Use the specified form to prepare. The applicant who currently works in private company, international organization, governmental organization, local government, or educational organization and wishes to enroll in our graduate school while in service must submit a letter of approval for taking the entrance examination issued by the organization.
8	Japanese Government (MEXT) Scholarship Certificate	Only for Japanese Government (MEXT) Scholarship recipient's	
9	Certificate of Japanese language ability (The original only)	 The score of one of the following Japanese language tests <u>taken within 2</u> <u>years before the examination date</u>: (1) Japanese Language Proficiency Test, (2) Japanese Examination of Japanese University Admission for International Student (EJU), (3) Final Examination of Preparatory Education for the Foreign Government-sponsored Students granted by the Japanese government in China and Malaysia, or (4)J.Test. Score certificates must be official and original issued by the respective organizations of the examinations. Any other kinds of score documents or photocopy of the certificates are not acceptable. 	
10	Certificate of English language ability (The original only)	 The score certificate of one of English language tests, including TOEIC(L&R), TOEFL-iBT, TOEFL-PBT, TOEFL-CBT, and IELTS. TOEIC-IP(L&R) or TOEFL-ITP results can be accepted if they are held in a university or an equivalent educational institution. For the scores of the tests held by non-educational organizations, please confirm with Student Support office beforehand. Score certificates must be official and original issued by the respective organizations of the examinations. Any other kinds of score documents or photocopy of the certificates are not acceptable. 	
11	Copy of residence card	Only for foreign applicants residing in Japan.	
12	Return envelope If your address is written on the back side of the card, make a two-sided copy. Use standard envelope (12cm×23.5cm in size) and fill out your address and name; affix a 94-yen stamp to the front (for sending the Examination Card). 1) It is required to attach the English or Japanese translation to the application document written in the other		

(Caution 1) It is required to attach the English or Japanese translation to the application document written in the other language.

(Caution 2) The applicant who has successfully passed a preliminary evaluation of application eligibility need not submit the document No. 2, 3, 5 and 6 above.

(Caution 3) The applicant who is unable to submit the original score certificate of either of Japanese or English language ability examinations listed above must submit instead the official document issued by the university that certifies that you have passed through the school education program in the university in a foreign country with English being the medium of instruction.

3. Selection Process

(1) Basic Policy

Academic abilities (based on the written examination and the oral examination), etc., will be comprehensively evaluated.

(2) Evaluation Criteria

[Written examination (Basic subject and specialized subject)]

In principle, the applicant who has marked higher than 60% of the total scores will be accepted.

Point allocation for each subject: Basic subject (max. 100 points); specialized subject (max. 100 points) [Oral examination]

The results of the oral examination in the style of interview will be evaluated in scale of three level (A, B, C), including foreign language, the academic transcript, Reasons for Application, and a published thesis about international cooperation.

(3) Written Examination and Oral Examination Schedule

Written Examination	Oral Examination
Thursday, January 28, 9:00 – 11:00	Friday, January 29, 9:00 -

(Caution) Details of the oral examination will be notified on the day.

(4) Subjects of Written Examination

Select one subject from both Basic subject and specialized subject respectively at the time of application.

Subject	Scope and Subject Name
Pagia gubiagt	Questions concerning basic fields of Engineering, Science and Agriculture
Basic subject	○ Transdisciplinary Science and Engineering (Development Science)
	\bigcirc Transportation and Urban Planning
	\bigcirc Urban and Building Environment
	\bigcirc Environmental Physics for Sustainable Architecture
Specialized	\bigcirc Functional Plant Sciences
subject	\bigcirc Energy Science and Technology
	\bigcirc Ecology
	\bigcirc Environmental Health Science
	\bigcirc Urban Environmental Science

V Application procedure

(1) Application method

Apply via internet and submit the application documents.

① Input the information regarding the application on the website.

② Pay the entrance examination fee of 30,000 yen.

③ Deliver or mail the application documents.

(Caution)

The application via internet will not be completed when only the input of the information on the website and the payment of the entrance examination fee are done. It is required to deliver or mail the application documents to be received before the deadline. The application will not be accepted when the applicant only sends the application documents.

(2) Application period

The applicant must complete all the processes of (1), (2), and (3) listed in the "(1) Application method" during the application period.

Monday, January 4, 2021 - 17:00, Friday, January 8, 2021

In the case of ③ (submission via mail), the documents must be sent in a registered mail and reach us no later than 17:00, Friday, January 8. The documents received after this time shall be accepted only when it is postmarked no later than Wednesday, January 6.

(3) Application via internet

◆ Inquiry regarding the system

Internet application help desk (only Japanese language available)	
Open: 10:00 - 18:00 (closed on Saturday, Sunday, and national holidays)	
Tel: 0570-06-5124	
UCARO Office (only Japanese language available)	
Open: 10:00 - 18:00 (closed in the period from December 30 to January 3)	
Tel: 0570-06-5524	

 \bigcirc For inquiries regarding the entrance examination, refer to the respective Support Office listed in the section "I

Programs and Number of Students to be Admitted" (page 5).

Open: 8:30 - 17:00 (closed on Saturday, Sunday, and national holidays)

* Please note that it is required to include the area code to dial if you call from the following areas, even when you call from an area of the same area code as that of the inquiry contact.

(Areas in Hiroshima City, Fuchu Town, Kaita Town, and Saka Town)

Complete the following 8 steps during the application period.

Step 1: Access the Online Application System.

Access the following website:

Hiroshima University's Admission Information https://www.hiroshima-u.ac.jp/en/nyugaku



Step 2: Select the item "Registration for UCARO" on the login screen of UCARO.

Account registration for UCARO system is required for application (free of charge). Hiroshima University uses the system of UCARO for checking the applicant's number and processing a part of admission procedure for the applicant who will pass the entrance examination.

Step 3: Input your account information (applicable to the admission examination category for which it is required).

The applicant who applies for exemption from the entrance examination fee must consult in advance with the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5) to obtain the alphanumeric characters of eight or more digits and input them.

Step 4: Input the information regarding the application in the Internet Application System.

Follow the instruction shown on the screen to input your name, address, etc.

Step 5: Upload your photograph.

Follow the instruction shown on the screen to upload the digital data of your photograph (File format: JPEG). It is not allowed to submit the photograph via mail.

Step 6: Pay the entrance examination fee of 30,000 yen.

Select either of the following payment methods on the "Input Payment Information" screen:

- 1. Credit card: VISA, MasterCard, JCB, AMERICAN EXPRESS, Diners Club
- 2. Convenience store: 7-ELEVEN, Lauson, MINISTOP, FamilyMart, Daily Yamazaki, and Seicomart
- 3. ATM of a financial institution [Pay-easy]
- 4. Net banking

(Caution)

- The applicant has to pay the charge for use of the Internet Application System (650 yen per application) in addition to the entrance examination fee.
- MEXT Scholarship students who have applied for (or intend to apply for) extension of scholarship payment period are exempted from the entrance examination fee. Those students who are enrolled in the university other than Hiroshima University at the time of application are required to submit the following two documents; (1) MEXT Scholarship Certificate
 - (2) The document which proves that the applicant has applied for (or intends to apply for) extension of scholarship payment period (must be issued by the university the applicant is enrolled in).

• The entrance examination fee once paid will not be returned for any reason after the application is accepted except for the following cases of (1) or (2).

In either case of (1) or (2), the entrance examination fee once paid will be returned after deducting the transfer fee from it. "Refunded Invoice for Entrance Examination Fee" will be sent to you. Fill in the required information, put your personal seal, and mail it back to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5) before Friday, February 26, 2021.

The charge for use of the Internet Application System will not be repaid for any case.

(1) The applicant does not submit the application documents or the application documents are not accepted.

(2) The payment of the examination fee is duplicated.

Step 7: Complete the registration of the application information.

Write down the application number of six digits shown on the screen.

Step 8: Deliver or mail the application documents.

Deliver or mail your application documents specified by the Program to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5).

The Support Office is open from 8:30 to 17:00 during the application period (except for Saturday, Sunday and national holidays) for the applicant who delivers the application documents.

In the case of submission via mail, the documents must be sent in a registered mail and reach us no later than Friday, January 8. The documents received after this time shall be accepted only when it is postmarked no later than Wednesday, January 6.

Indicate the phrase "Application Documents for ** Program in the Graduate School of Advanced Science and Engineering is enclosed." in red on the front surface of the envelope.

(4) Application documents

Required application documents vary for each Program.

Refer to the page for each Program listed in the section "IV Required Documents and Selection Process" (page 11).

(5) Submission address for application documents

Refer to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5).

VI Miscellaneous

1. Instruction for Application

(1) Consult with the faculty who is expected to be your academic supervisor about your research theme before applying.

For the information regarding faculties of the Graduate School of Advanced Science and Engineering, refer to the following website.

URL https://www.hiroshima-u.ac.jp/en/adse/research



The consultation is held as part of information provision from the Graduate School and does not affect the result of the selection in any way.

- (2) The application documents with a defect might be rejected. After the application documents are accepted, they shall not be returned and it is not allowed to amend the information described in them for any reason.
- (3) For the certificates, it is required to submit the original or a copy with the original certification. Any copy without the original certification will not be accepted as the valid certificate.
- (4) The score certificate of English-language proficiency submitted for the application for Earth and Planetary Systems Science Program in Science Programs, Engineering Programs & Informatics an Data Science Program, and Quantum Matter Program will be used for the following purposes.
 - ① Entrance examination
 - ② Statistics and analysis of English-language proficiency of applicants
- (5) The admission approval shall be withdrawn when it is found that the submitted documents contain any false indication.
- (6) The admission approval shall be withdrawn when the applicant who was expected to meet any of the application eligibilities at the time of application has failed to earn the expected degree or complete the expected school before the date of admission.

2. Consultation with the Applicant who Needs Special Consideration for the Entrance Examination and/or Education in the Graduate School

The applicant who needs special consideration for the entrance examination and/or education in the Graduate School is required to submit the application form (in free format) which contains the following information to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5) to arrange a consultation.

A. Period for the consultation: Monday, December 7 - Friday, December 11, 2020

- B. Information to be described in the application
 - ① Name & address of the applicant (the phone number must be included.)
 - ② Name of the university from which the applicant has graduated, Program for which the applicant will apply, and the name of the faculty who is expected to be the applicant's academic supervisor.
 - ③ Type and severity of the disability (submit a medical certificate issued by a doctor if the applicant is in treatment)
 - ④ Measures to be taken for the entrance examination.
 - (5) Measures to be taken for education in the Graduate School
 - (6) Specific measures that were taken in the university from which the applicant has graduated
 - \bigcirc Conditions of the daily life

3. Handling of Personal Information

The personal information obtained via the admission selection process (name, birth date, gender, and the other personal information) is used for the selection of entrants, notification to the successful applicants, and admission procedures. After the enrollment, Hiroshima University will manage the information for the purposes of student support (e.g. application for scholarship and tuition exemption) and investigation & research activities (e.g. improvement of the entrance examination system, investigation and analysis on the trend of application). We neither

use the information for the other purpose nor provide it to the person other than our concerned faculties and the staff.

4. Admission Procedure

- (1) Documents for admission procedure
 - The documents will be sent after the selection result is announced.
 - UCARO system is used as a part of the admission procedures.

(2) Fee

A: Enrollment fee: 282,000 yen

- B: Tuition (per year): 535,800 yen
 - 1 The enrollment fee once paid will not be returned for any reason.
 - ② The amounts listed above are as of April 2020. When the amount is revised at the time of admission or while the student is enrolled in the university, it is required to pay the revised amount.

5. Application for Disclosure of Examination Results

(1) The information regarding the result of the entrance examination for the Graduate School of Advanced Science and Engineering listed below is disclosed only to the person who has applied for the entrance examination (hereinafter referred to as the "applicant for disclosure").

Item	Disclosed information	
Examination	Points for each subject	
score	Evaluation for each subject (including the results of the scale assessment)	

- (2) The examination result (personal information) will be delivered on the respective Support Office or be sent via mail to the applicant for disclosure.
- (3) The applicant for disclosure is required to download the form of "Application for Entrance Examination Result Disclosure" from the website of the Graduate School of Advanced Science and Engineering, fill in the required information, and directly submit or mail it to the respective Support Office.
 - It is also required to submit the admission ticket for identification.
- (4) The Application for Entrance Examination Result Disclosure will be accepted during the period from April 1, 2021 to May 31, 2021.
- (5) The result of the application shall be notified within 30 days after the Application for Entrance Examination Result Disclosure is received.

6. Others

- (1) Smoking has been prohibited entirely in all Hiroshima University campuses from January, 2020.
- (2) Hiroshima University has established the university's Rules on Security Export Control in accordance with the Foreign Exchange and Foreign Trade Act, and conducts strict examinations for acceptance of international students, etc. Therefore, please be advised that international applicants may be unable to receive their desired education or conduct their desired research due to the restriction by the above regulations.

Special Measure of Exemption from the Entrance Examination Fee for the Applicant

Hiroshima University has decided to implement a special measure of exemption from the entrance examination fee for the entrance examinations in the 2020 academic year, to alleviate the economic burden on and to secure educational opportunities for the applicants affected by the disasters.

The applicant who wishes to be exempted from the entrance examination fee must contact in advance the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5).

1 Examinations to which the Special Measure is Applied

The entrance examinations held in the 2020 academic year (including selections of re-admission, transfers, and mid-course entry admission).

2 Special Measure

Exemption from the entrance examination fees *Fees for the entrance examination result disclosure will be covered as well.

3 Disasters to which the Special Measure is Applied

- (1) The 2016 Kumamoto Earthquake
- (2) The Heavy Rain Event of July 2018
- (3) Any disasters covered by the Disaster Relief Act after August 28, 2019

4 The Applicant Eligible for Exemption

The applicant who was affected by the disaster specified in the "3 Disasters to which the Special Measure is Applied" in the areas covered by the Disaster Relief Act, and who falls under either of the following conditions.

- (1) The house in which the family's chief provider bearing the applicant's school expenses resides was completely destroyed, largely destroyed, or half-destroyed.
- (2) The family's chief provider bearing the applicant's school expenses died or was listed as missing in the disaster (Caution) For the details of the areas covered by the Disaster Relief Act, refer to the following website. http://www.bousai.go.jp/taisaku/kyuujo/tekiyou.html

5 Application

The applicant must contact in advance the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5), and subsequently submit the specified application documents for exemption along with other required documents for admission.

In this case, do not pay the entrance examination fee at the time of application.

6 Application Documents

(1) Application form for exemption from the entrance examination fee (Download the form from the following website)

https://www.hiroshima-u.ac.jp/nyushi/news/1058

- (2) Disaster victim certificate (a copy is acceptable) (For the applicant who falls under the condition of the item (1) of the "4 The Applicant Eligible for Exemption" above)
- (3) Document that proves the death or missing status of the family's chief provider (a copy is acceptable) (For the applicant who falls under the condition of the item (2) of the "4 The Applicant Eligible for Exemption" above)

7 Application Process (Internet Application)

Refer to the PDF file available in the following website. https://www.hiroshima-u.ac.jp/system/files/130094/menjo_r2.pdf

8 Contact

Refer to the respective Support Office listed in the section "I Programs and Number of Students to be Admitted" (page 5).