

2020 年度

広島大学大学院先端物質科学研究科

(博士課程前期)

学 生 募 集 要 項

Application for General Admission to  
Master's Program,  
Graduate School of Advanced Sciences of Matter,  
Hiroshima University

April 2020 Enrollment

2019 年 4 月

April 2019

広 島 大 学

Hiroshima University

## AdSM's Admission Policy

The Graduate School of Advanced Sciences of Matter (AdSM) welcomes students with sufficient fundamental academic knowledge, strong interest in education and research offered by our courses, and high motivation to study:

- 1. Those who are eager to step forward in the new field of integrated science and engineering, and aim at being a researcher or a sophisticated professional engineer in new fields.**
- 2. Those who aim at being a researcher or an engineer in professional fields be they in science or in technology.**
- 3. Those who are eager to learn from a broad range of intellectual fields, regardless of which university or department they are from.**
- 4. Those who can master not only academic fundamentals and applied research, but also practical skills and business sense, and aim at being an entrepreneur.**

## AdSM's Educational and Research Targets

AdSM promotes a new educational and research field by integrating the fields of science and technology. In addition to systematic education, we provide our students with interdisciplinary and comprehensive education and research in order to foster professional engineers and researchers who have a wide range of academic knowledge and practical skills sufficient to play an active role in international society.

### Our Departments' Educational and Research Targets

Quantum Matter	Considering materials to be where various quantum phenomena emerge, we provide education and research on the fundamentals of quantum physics and the application of quantum behavior, and aim at fostering advanced researchers/professional engineers in the field of material science.
Semiconductor Electronics and Integration Science	In order to foster far-sighted researchers and professional engineers, we conduct the world's most advanced research and practical education on nanodevices, nanotechnology, device modeling, and circuits/architectures designs which are the fundamental technologies in this information society.

**The Graduate School of Advanced Sciences of Matter (AdSM), Hiroshima University, is seeking new students for its master's program to be enrolled in April 2020.**

### **1. Number of Students to be Admitted and Examination Information**

Department	Number of Students Admitted	Application Documents to be Submitted to:	Examination Location
Quantum Matter	25	Admission Service, Student Support Office, Graduate School of Advanced Sciences of Matter,	Graduate School of Advanced Sciences of Matter, Hiroshima University
Semiconductor Electronics and Integration Science	15	Hiroshima University, 1-3-1 Kagamiyama, Higashi-Hiroshima City, Japan postal code: 739-8530	

### **2. Application Qualifications**

Applicants must meet one of the following qualifications:

- (1) Those who have graduated from a Japanese university or college, or are expected to graduate on or before March 31, 2020
- (2) Those who have been awarded a bachelor's degree by National Institution for Academic Degrees and Quality Enhancement of Higher Education according to Article 104, Section 7 of the School Education Law (Law No.26 of 1947) or who are expected to be awarded on or before March 31, 2020 <Note 1>
- (3) Those who have successfully completed 16 years of formal education abroad or are expected to complete on or before March 31, 2020
- (4) Those who have taken a correspondence course from an overseas educational institution in Japan and completed 16 years of formal education or are expected to complete on or before March 31, 2020
- (5) Those who have completed an undergraduate program of an overseas-based educational institute located in Japan that has been approved by the Minister of Education, Culture, Sports, Science and Technology (MEXT), whose graduates are regarded as having completed 16 years of formal education, or are expected to complete on or before March 31, 2020
- (6) Those who have been conferred, or expect to be conferred by March 31, 2020, a degree equivalent to a bachelor's degree through attending an overseas university or other overseas school (limited to those whose education and research activities have been evaluated by persons who have been certified by the relevant country's government or a related institution, or have been separately designated by the Ministry of Education, Culture, Sports, Science and Technology as being equivalent to such) and graduated from a program that requires 3 or more years to complete (Includes graduating from a program implemented by the relevant overseas school while living in Japan through distance learning, as well as graduating from a program implemented by an educational facility established with the relevant overseas country's school education system and has received the designation mentioned above).

- (7) Those who have completed a four-year or longer professional program approved by MEXT, conducted by a vocational school, after the date set by MEXT, or are expected to complete on or before March 31, 2020
- (8) Those who are deemed eligible by MEXT
- (9) Those who have been enrolled in a graduate school according to Article 102, Section 2 of the School Education Law and have been recognized by Hiroshima University Graduate School as having appropriate academic ability to receive graduate education <Note 2> <Note 3>
- (10) Those who are 22 years old or older at the time of March 31, 2020, and recognized in the preliminary selection by Hiroshima University Graduate School as having equal to or higher academic ability than persons who are graduates of a university or college <Note 3>

<Note 1> Those who are enrolled in an advanced course in junior college or a specialized vocational high school which has been approved as satisfying the requirements designated by National Institution for Academic Degrees and Quality Enhancement of Higher Education according to Clause No. 1, Article 6 of the regulation of degree, and who are able to be certified by a president that they are expected to complete the course and are expected to apply for a conferment of a bachelor's degree.

<Note 2> Article 102, Section 2 of the School Education Law is the regulation of early admission entrance to graduate schools, which stipulates that a graduate school is allowed to accept those who have been enrolled in a university or college of the aforementioned graduate school for more years than designated by MEXT, including those who have been approved by MEXT as equivalent, and have been recognized as having earned specified credits with excellent grades.

<Note 3> Applicants who satisfy (9) or (10) need to be authorized for qualification prior to application procedures. Refer to "7. Authorization for Qualified Applicants".

### 3. Application Procedures

#### (1) Application Period

Application documents will be accepted from Tuesday, July 23, 2019 through Monday, July 29, 2019.

Application documents must be submitted to AdSM Student Support Office from 8:30 to 12:00, and from 13:00 to 17:15 except Saturday, Sunday and Holidays.

If sent by mail, the documents must be sent by registered mail to arrive by 17:15, Monday, July 29, 2019.

#### (2) Application Documents

\* English or Japanese translation should be attached if the following documents are written in other languages.

\* The certificates to be submitted must be the originals or certified photocopies. Uncertified photocopies would not be recognized as official certificates.

No.	Application Documents	Notes
1	Application form, examination card	Use the prescribed forms
2	Academic transcript	Must be issued by a university or college president or dean

3	Certificate of graduation, or certificate of expected graduation	<p>Must be issued by a university or college president or dean</p> <p>If you are a university graduate, please make sure that the certificate includes information about your degree.</p> <p>*Applicants who are graduates or current students of a university in China (excluding Taiwan, Hong Kong and Macau) need to submit additional documents. Refer to (3) for details.</p>
4	TOEIC® or TOEFL® score certificate	<p>An original score certificate of TOEIC®, TOEIC® IP, TOEFL PBT®, TOEFL iBT® or TOEFL ITP® test</p> <p>Refer to (4) for details.</p>
5	application fee Receipt of application fee payment	<p>30,000 Japanese yen</p> <p>Fill out your name and address on the prescribed payment form and pay the application fee at a bank in Japan (If you want to pay at Japan Post Network (JPN) or Japan Post Banks (JPB), some other procedures will be required. Please show the payment form at a window of JPN or JPB for necessary procedures. You cannot pay from ATMs of each bank, JPN and JPB). A processing fee will be charged, and receipts of payment with a bank stamp dated on and before July 29, 2019 only shall be recognized as valid as an application document. The receipt of bank payment must be attached to the prescribed sheet.</p>
6	Return envelope for sending examination card	<p>Fill out your name, address, and postal code on an envelope and affix an 82-Japanese yen stamp (12cm wide × 23.5cm high).</p>
7	Name and address seal	<p>Use the prescribed form</p>
8	A copy of resident card	<p>Required for foreign applicants residing in Japan only.</p> <p>If applicant's address is written on the back side of the card, please make a both sided copy.</p>
9	Other certificates	<p>Applicants who satisfy application qualification (2) are required to submit the following certificates:</p> <ul style="list-style-type: none"> <li>○ Those who have been awarded a bachelor's degree: <ul style="list-style-type: none"> <li>• Certificate of a bachelor's degree issued by the National Institution for Academic Degrees and Quality Enhancement of Higher Education</li> </ul> </li> <li>○ Those who are expected to be awarded a bachelor's degree: <ul style="list-style-type: none"> <li>• Certificate of expected completion of advanced course of the junior college or specialized vocational high school in which the applicant is enrolled</li> <li>• Certificate which states that the applicant is expected to apply for a conferment of a bachelor's degree (Issued by the president of the junior college or specialized vocational high school.)</li> </ul> </li> </ul>

<Note > Precautions Concerning application Fees

Please note that application fees are non-refundable for any reason after the application forms have been accepted.

However, in the following ① and ② cases, the application fees are refundable after deducting the processing fees. Therefore in such cases, please state the “reason of demand for return”, “name”, “postal code”, “address” and “contact telephone number” in writing (in any format) and send it surely with the attachment of the “proof of payment of the application fee” to the address mentioned below by mail or fax by Friday, February 28th, 2020.

Then, we will send you by mail a “demand for return” form used for demand for the refund of the application fee. Please write the necessary information and put your seal on the form, and send it by mail to the address mentioned below.

- ① If the application documents have not been submitted, or they have not been accepted
- ② If duplicate payments of the application fee have been made by error

Address: 3-2, Kagamiyama 1 Chome, Higashi-Hiroshima, Japan 739-8511  
Accounting Group, Hiroshima University (TEL)082-424-7811 (FAX) 082-424-6962

(3) If you are a graduate or a current student of a university in China (excluding Taiwan, Hong Kong and Macau), please obtain the following document by requesting it at “中国高等教育学历证书查询 (CHSI)” (<http://www.chsi.com.cn/xlcx/bgys.jsp>), and submit it to us together with “毕业证书 (Certificate of Graduation)” and “学士学位证书 (Bachelor)”.

- Graduates: Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表)

- Expected Graduates: Online Verification Report of Student Record (教育部学籍在线验证报告)

Please note that applicants must pay the issuing fee for the Online Verification Report (2元/certificate) by themselves. Also be sure that there are 15 or more days left until the expiration date of the online verification at the time of its submission.

(4) TOEIC® or TOEFL® Score Used for Foreign Language Evaluation

AdSM uses the score from the following five kinds of tests to evaluate the applicant’s English ability.

There is no English examination separately conducted by AdSM as part of the entrance examination.

A score certificate from one of the five tests, conducted **within two years before the date of this entrance examination**, must be submitted together with other application documents during the designated application period. The score certificate is not allowed to be replaced after submitted. It will be returned to the applicant after confirmation.

Should an applicant be unable to submit a score certificate during application period, he or she will be allowed to submit it to the AdSM Student Support Office, but must do so by 13:00, Monday, August 26, 2019.

Should an applicant fail to submit a score certificate, the application to the entrance examination will be accepted with no English examination score.

Valid English Test	Score Certificate to be Submitted (Original Certificate Only)
TOEIC® Official Test	Official Score Certificate
TOEIC® IP	Score Report
TOEFL PBT®	Examinee’s Score Record
TOEFL iBT®	
TOEFL ITP®	Score Report

\*If you want to use the results of the TOEIC® IP conducted for Hiroshima University students and do not have the score report, please contact the AdSM Student Support Office.

(5) Application Method

Applicants must submit all application documents mentioned above (2) during the designated application period. Should an applicant wish to submit a TOEIC® or TOEFL® score certificate after the designated application period, a paper stating that he or she will submit it later must be included in the application documents (no prescribed form). Applications will not be accepted should any application documents be missing.

(6) Advance Consultation for Considerations for Taking the Examination or Studying

Applicants with physical disabilities, etc. who require considerations for taking the examination or studying must submit an application form for advance consultation (no prescribed form), containing the following information to the AdSM Student Support Office (Admission Service).

Should the applicant be considered to require a health exam as a result of advance consultation, the exam shall be conducted at Hiroshima University.

a. Consultation period

Should special preparations for taking the exam (e.g. Braille) be necessary, applicants must submit an application form by Friday, May 24, 2019. Other consultation, in principle, must be carried out by Friday, May 31, 2019.

Depending on the details of the consultation, preparations may require substantial time. Therefore, we ask you to make your consultation as early as possible.

b. Application form for advance consultation must contain the following information:

	Contents	Note
①	Name, address, and telephone number	
②	Name of applicant's university or college graduated	
③	Name of preferred Department	
④	Type and degree of disability	A doctor's statement or a copy of physical disability certificate will be required
⑤	Considerations necessary for taking the examination	
⑥	Considerations necessary for studying after admission	
⑦	Considerations given to the applicant at the university or college graduated	
⑧	Current situation of daily life	

## 4. Method of Selection

The results of the academic ability examinations (written and oral examination), English score (evaluated by TOEIC® or TOEFL® score), and the academic transcript will be evaluated totally to determine successful applicants.

For foreign applicants, the written examination is available in either Japanese or English. Foreign applicants need to indicate their choice of written examination language on the application form. On test day, the examination papers written in the language you choose is distributed.

### Academic Ability Examinations and Examination Subjects Schedule

#### Department of Quantum Matter

Date	Exam Subject	Basic Subject	Major Subject	
	Time	10:30 – 12:00	13:00 – 16:00	
Monday, August 26	• Mathematics		Choose problems from the engineering or science field <Note 1>	
			Engineering Field Problems	Science Field Problems
			<ul style="list-style-type: none"> <li>• Electromagnetism</li> <li>• Quantum Mechanics</li> <li>• Semiconductor Engineering</li> </ul>	<ul style="list-style-type: none"> <li>• Classical Mechanics</li> <li>• Electromagnetism</li> <li>• Quantum Mechanics</li> <li>• Statistical Thermodynamics</li> </ul> <p>(problems are asked from the above four subjects)</p>
Tuesday, August 27	Oral Examination 13:00 -			
	Oral examination details will be announced on test day. Selection of examinees may be conducted according to the number of applicants, evaluation of English ability, or the results of academic ability examination. In this case, the ID numbers of those who are able to take oral examination will be announced at 12:00 (expected) on the oral test day.			

<Note 1> Whether the applicant is suitable for his/her preferred research field will be determined by the oral examination. Applicants are allowed to choose either field of major subject problems (engineering or science), regardless of his/her preferred academic supervisor. At the time of application, applicants must specify either engineering or science on the application form.



## Department of Semiconductor Electronics and Integration Science

Exam Subject		Basic Subject	Major Subject
Date	Time	10:30 – 12:00	13:00 – 16:00
Monday, August 26		• Mathematics	<ul style="list-style-type: none"> <li>• Electromagnetism</li> <li>• Electronic Circuits</li> <li>• Semiconductor Engineering</li> <li>• Quantum Mechanics</li> </ul> (answer three out of the above subjects)
Tuesday, August 27	Oral examination 13:00 -		
	Oral examination details will be announced on test day. Selection of oral examination examinees may be conducted according to the number of applicants, evaluation of English ability, or the results of academic ability examination. In this case, the ID numbers of those who are able to take oral examination will be announced at 12:00 (expected) on the oral test day.		

## 5. Announcement of Admission

**13:00 (expected), Tuesday, September 10, 2019**

A list of the ID numbers of accepted applicants will be posted at the entrance of the Graduate School of Advanced Sciences of Matter and notification of admission will also be sent to accepted applicants by mail.

In addition, an announcement will be made on the Graduate School website (<https://www.hiroshima-u.ac.jp/en/adsm>).

(No telephone enquiries regarding admission shall be accepted.)

## 6. Fees

Enrollment fee                      282,000 Japanese yen

Tuition fee                            535,800 Japanese yen (one year)    (267,900 Japanese yen for one semester)

<Note>

- Enrollment fees will not be returned for any reason after payment.
- Enrollment and tuition fee amounts are shown as of April 2019. Should the amount be revised at the time of or after enrollment, students will be required to pay the revised fee.
- The AdSM Student Support Office will inform accepted applicants separately of the details of enrollment procedures which are required during the designated period in mid-March 2020. Detailed information on how and when to pay enrollment and tuition fees and our exemption system of these fees will be also informed together with enrollment procedure details.

## 7. Authorization for Qualified Applicants

- (1) Applicants who satisfy application qualification (9) or (10) need to be authorized by AdSM for qualification prior to application procedures. If an applicant needs to be authorized as a qualified

applicant, he or she must submit the documents in the table below between Wednesday, May 29, 2019 and Wednesday, June 5, 2019 to Admission Service, AdSM Student Support Office.

(If sending the documents by mail, use registered mail and write “Application Documents for Preliminary Authorization of Entrance Examination Qualification” in red on the envelope.)

**If applying under Application Qualification (9):**

No.	Documents to be Submitted	Notes
1	Application form for preliminary authorization of entrance examination qualification	Use the prescribed form
2	Statement for preliminary authorization of entrance examination qualification (For Japanese Applicant)	Use the prescribed form. Required for Japanese Applicants.
3	Statement for preliminary authorization of entrance examination qualification (For Foreign Applicant)	Use the prescribed form. Required for foreign Applicants.
4	Statement stating the applicant’s reasons for applying for admission	Use A4 size paper with approximately 400 Japanese characters or 100 English words
5	Research plan	Details about the applicant’s research plan at our graduate school -- A4 size paper; approximately 400 Japanese characters or 100 English words
6	Certificate of student registration from your current graduate school or certificate of graduation	
7	Academic transcript from your previous university or college	
8	Return Envelope	Write your address, name, and postal code and affix 362 Japanese yen worth of stamps on an envelope (12cm wide × 23.5cm high)

**If applying under Application Qualification (10):**

No.	Documents to be Submitted	Notes
1	Application form for preliminary authorization of entrance examination qualification	Use the prescribed form
2	Statement for preliminary authorization of entrance examination qualification (For Japanese Applicant)	Use the prescribed form. Required for Japanese Applicants.
3	Statement for preliminary authorization of entrance examination qualification (For Foreign Applicant)	Use the prescribed form. Required for foreign Applicants.
4	Statement stating the applicant’s reasons for applying for admission	Use A4 size paper with approximately 400 Japanese characters or 100 English words

5	Research Plan	Details about the applicant's research plan at our graduate school -- A4 size paper; approximately 400 Japanese characters or 100 English words
6	Certificate of graduation from the last school attended	Applicants who are graduates of a university in China (excluding Taiwan, Hong Kong and Macau) need to submit additional documents. Refer to 3. Application Procedures (3) for details.
7	Academic transcript from the last school attended	
8	Return Envelope	Write your address, name, and postal code and affix 362 Japanese yen worth of stamps on an envelope (12cm wide × 23.5cm high)

(2) Results of application for authorization will be sent to the applicant by Monday, July 22, 2019.

(3) Authorized applicants are not required to submit documents 2 and 3 written in “3. Application Procedures, (2) Application Documents”.

## 8. Disclosure of Examination Results

Disclosure regarding entrance examination for Master's program is stipulated in “Graduate School of Advanced Sciences of Matter, Hiroshima University Guideline for Disclosure of Examination Results”.

(1) How to apply

- Please submit an application form to the AdSM student support office. Application form is available at the following URL (<https://www.hiroshima-u.ac.jp/adsm/admission/disclosure>)

(2) Application Period

- Disclosure of Information about examination held in August and September  
-Application form will be accepted from October 1 to November 30.

(3) Procedure of Disclosure

- The results of examination will be disclosed at the AdSM Student Support Office.
- The result of the application will be notified within 30 days after the receipt of application.
- The presentation of the examination card will be requested. In case it is lost, please show your ID card.

(4) Items of Disclosure

Items	Contents of Disclosure
1. Test results (Individual record)	<ul style="list-style-type: none"> <li>• Score of written examination (basic subject, major subject) and foreign language</li> <li>• Evaluation of oral examination and academic transcript</li> </ul>
2. Test results (Candidates statistics)	<ul style="list-style-type: none"> <li>• Highest score, lowest score and the average score of written examination (basic subject, major subject) and foreign language for each department (Regarding major subject of Department of Quantum Matter, those scores are offered by fields; Engineering Field problems or Science Field problems)</li> </ul>

<p>3 . Test results (Successful candidates statistics)</p>	<p>• Highest score, lowest score and the average score of written examination (basic subject, major subject) and foreign language for each department (Regarding major subject of Department of Quantum Matter, those scores are offered by fields; Engineering Field problems or Science Field problems)</p>
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## 9. Notes

- (1) If an applicant would like to receive the application forms by mail, please send a return envelope (24cm wide × 33.2 cm high) with your postal code, address, and name with 250 Japanese yen worth of stamps to the AdSM Student Support Office (Admission Service). Please write “Request for application forms for the Department of Quantum Matter (or Semiconductor Electronics and Integration Science), AdSM Master’s Program” in red on the envelope.
- (2) If sending application documents by mail, please use registered mail and write “Application documents for AdSM Master’s Program” in red on the envelope.
- (3) Documents and application fees will not be returned for any reason after application.
- (4) Any forgery or falsification of the documents and/or academic fraud would result in cancellation of acceptance even after passing examination or admission.
- (5) If an applicant could not graduate from the university or be awarded Bachelor’s degree before the admission date, he/she would lose the eligibility to enter our graduate school in this session.
- (6) All personal data contained in the application documents, including name, date of birth, gender, and any other personal information, will be used for selection, result notification, and enrollment formalities only. After enrollment, the data will be under the control of Hiroshima University and will be used for student supports, such as application for scholarships and exemption from tuitions. It will not be used for any other purposes and will be provided only to the University faculty members concerned.
- (7) In the difficult case of carrying out the entrance examination because of bad weather, epidemic, etc, please make sure to visit the website of Graduate School of AdSM, Hiroshima University. (<https://www.hiroshima-u.ac.jp/en/adsm>) We will notify you of postponement of the examination, extension of the starting time of the examination and so forth on the website.
- (8) For inquiries, please contact:

Admission Service, AdSM Student Support Office, Hiroshima University  
Address 1-3-1 Kagamiyama Higashi-Hiroshima, Japan 739-8530  
TEL 082-424-7008,7009 (Inside Japan) +81-82-424-7008,7009 (Outside Japan)  
E-mail [sentan-gaku-sien@office.hiroshima-u.ac.jp](mailto:sentan-gaku-sien@office.hiroshima-u.ac.jp)  
URL <https://www.hiroshima-u.ac.jp/adsm> (Japanese)  
<https://www.hiroshima-u.ac.jp/en/adsm> (English)

\*For telephone inquiries, please dial area code “082” if you are calling from Hiroshima City, Fuchu-cho, Kaita-cho, Kumano-cho, or Saka-cho of Aki-Ward, which have same area code.

## Score Evaluation and Admission Criteria

### (1) Admission

Accepted applicants from each department will be determined through a comprehensive evaluation of the results of the written and oral examinations, English score certificate, and academic transcript.

### (2) Written Examination

The written examination for each department consists of problems which test applicants' fundamental academic abilities and scientific thinking abilities necessary for study in the graduate school. Point allocation for each subject and department is shown below:

1. Basic Subject	Dept. of Quantum Matter	100 points
	Dept. of Semiconductor Electronics and Integration Science	100 points
2. Major Subject	Dept. of Quantum Matter	400 points
	Dept. of Semiconductor Electronics and Integration Science	400 points

### (3) Oral Examination

The oral examination for each department consists of questions which test the applicant's eligibility for his or her preferred research field and fundamental academic abilities, including a question about why he or she wants to be admitted. The result of the oral examination will be rated on three scales.

### (4) English Score

Applicants' English score will be evaluated by converting his or her submitted TOEIC® or TOEFL® score. Point allocation for each department is shown below:

English Score	Dept. of Quantum Matter	100 points
	Dept. of Semiconductor Electronics and Integration Science	100 points

## Completion of Master's Program and Degree Conferment

The standard term of study is two years. Those who have acquired the credits required for completion of master's program and successfully passed the master's thesis evaluation and final examination shall be conferred a Master's Degree of Science (*rigaku*), Engineering (*kougaku*), or Science (*gakujutsu*).