Doctoral Program

Tokyo Metropolitan University

Graduate School of Science

Application Guidelines for 2022 Doctoral Program

<April Enrollment>

Examination: **February 7 (Mon), 2022**

Administrative affairs concerning entrance examinations to the Graduate School of Science are handled by the following office:

Academic Affairs Section of Science

Academic and Student Affairs Division of Sciences

Administrative Affairs Department of Tokyo Metropolitan University

1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397

Tel: 042-677-1111 (Rep.) ext. 3021

http://www.se.tmu.ac.jp/

Information in these Guidelines is subject to change due to the influence of the novel coronavirus (COVID-19). Please confirm the latest information on the website of the Graduate School of Science regularly. (http://www.se.tmu.ac.jp/en/index.html)

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Admissions Policies of the Graduate School of Science
Tokyo Metropolitan University

Graduate School of Science seeks individuals who acquire basic knowledge of and attitudes towards natural science and enthusiastically aim to become researchers/educators/engineers with creativity and applied skills. Such individuals who have the ability and motivation to deliver their research outcomes to the world are highly welcomed, especially in the Doctoral program.

Department of Mathematical Sciences

[Master's program]

1. Policy

Mathematics has been provided the basis of natural science and played a fundamental role in its development, whose significance is more widely recognized in the present day. The department intends to undertake education and research in the 4 areas of mathematical sciences, including algebra, geometry, analysis (main fields of mathematics) plus applied mathematics, from an extended position not bound by the field framework.

2. Ideal students

(1) Individuals with a basic understanding and awareness of various issues in mathematical sciences

(2) Individuals capable of acquiring knowledge from a global perspective and willingly taking on challenges in research tasks

(3) Individuals who are motivated to attain various abilities to solve problems

3. Ability required for students

(1) Fundamental academic ability of mathematical sciences and spirit of inquiry for the desired field

(2) Fundamental ability to discover and solve problems on their initiative in the field of their choice

[Doctoral program]

1. Policy

Mathematics has been provided the basis of natural science and played a fundamental role in its development, whose significance is more widely recognized in the present day. The department intends to undertake education and research in the 4 areas of mathematical sciences, including algebra, geometry, and analysis (main fields of mathematics) plus applied mathematics, from an extended position not bound by the field framework.

2. Ideal students

(1) Individuals having deep and extensive specialized knowledge for their research in mathematical sciences

(2) Individuals capable of carrying out ingenious and international research activities as an independent researcher

(3) Individuals having the ability to evaluate the significance of their research and their positioning in society objectively

3. Ability required for students

(1) Specialized knowledge in the field of their choice and academic ability to carry out their research

(2) Ability to discover and solve problems on their initiative in the field of their choice

Department of Physics

[Master's program]

1. Policy

The Department aims to develop persons with basic knowledge and research skills in physics, which covers a wide range of phenomena in the natural world from elementary particles/nuclei and atomic molecules, substances with diverse structures, and the universe. It also aims to develop those who can drive leading-edge scientific research in the next generation with a keen awareness of the social responsibilities involved in their research and those who can solve various social and environmental problems based on science fundamentals.

2. Ideal students

(1) Individuals who are curious about acquiring basic knowledge in the expertise field, logical thinking skills, and practical research approaches

(2) Individuals who are eager to acquire the necessary abilities to solve problems, conduct research, hold discussions, present research results, etc.

(3) Individuals aiming to become researchers, professional engineers, or educators in physics

3. Ability required for students

(1) Specialized knowledge in the field of their choice and extensive knowledge of physics

(2) Ability to discover and solve problems on their initiative in the field of their choice

[Doctoral program]

1. Policy

The Department aims to develop persons with deep specialized knowledge and excellent research skills in physics, which covers a wide range of phenomena in the natural world from elementary particles/nuclei and atomic molecules, substances with diverse structures, and the universe. It also aims to develop those who can drive leading-edge scientific research in the next generation with a keen awareness of the social responsibilities involved in their research and those who can solve various social and environmental problems based on science fundamentals.

2. Ideal students

(1) Individuals who are curious about acquiring deep and extensive knowledge of basic and advanced physics

(2) Individuals aiming to become independent researchers or educators capable of carrying out international and distinguished research activities, with a keen awareness of the social responsibilities involved in their research

(3) Individuals who are eager to attain abilities to conduct research by formulating ingenious research plans, presenting the original treatises in international academic journals, participating in international research

discussions, and reporting research results and their significances

3. Ability required for students

(1) Deep specialized knowledge in the field of their choice

(2) Ability to contribute to academic development through the studies of physics

(3) Excellent research skills capable of setting pioneering research tasks on their own and solving them in the field of their choice

Department of Chemistry

[Master's program]

1. Policy

The Department aims to develop persons who understand the structure, nature, and the reaction of substances at the atomic and molecular levels, and acquire the basic knowledge of as well as fundamental research skills of chemistry, which pursues to create a new substance by carrying out the structural conversion of the molecule. It also aims to develop those who can drive leading-edge scientific research in the next generation with a keen awareness of the social responsibilities involved in their research and those who can solve various social and environmental problems based on science fundamentals.

2. Ideal students

(1) Individuals who are keen to work on research towards the elucidation of the structures, reactions, functions, and circulations of atom/molecule and its compound/assembly as well as the synthesis of a new substance

(2) Individuals who wish to deepen their understanding of chemistry

(3) Individuals who have a desire to improve research skills

(4) Individuals who wish to develop global awareness through research to be able to perform internationally

(5) Individuals who have a passion for working as a chemistry expert in the future

3. Ability required for students

(1) A broad range of knowledge of chemistry

(2) Motivation for research towards the elucidation of the structures, reactions, functions, and circulations of atom/molecule and its compound/assembly as well as the synthesis of a new substance, and the ability to pursue it

(3) Ability to discover and solve problems on their initiative in the field of their choice

(4) Ability of foreign language required to promote their research

[Doctoral program]

1. Policy

The Department aims to develop persons who understand the structure, nature, and the reaction of substances at the atomic and molecular levels, and acquire the deep knowledge of as well as excellent research skills of chemistry, which pursues to create a new substance by carrying out the structural conversion of the molecule. It also aims to

develop those who can drive leading-edge scientific research in the next generation with a keen awareness of the social responsibilities involved in their research and those who can solve various social and environmental problems based on science fundamentals.

2. Ideal students

(1) Individuals who show enthusiasm in contributing to deepening the human knowledge of chemistry
(2) Individuals who are curious about acquiring deep and extensive knowledge of basic and advanced chemistry
(3) Individuals aiming to become independent researchers or educators capable of carrying out international and distinguished research activities, with a keen awareness of the social responsibilities involved in their research
(4) Individuals who are eager to attain abilities to conduct research by formulating ingenious research plans, presenting the original treatises in international academic journals, participating in international research discussions, and reporting research results and their significances
(5) Individuals who wish to develop global awareness through research to be able to perform internationally
(6) Individuals who have a passion for working as a highly specialized chemical expert in the future

3. Ability required for students

(1) Deep specialized knowledge in the field of their choice
(2) Motivation for research towards the elucidation of the structures, reactions, functions, and circulations of atom/molecule and its compound/assembly as well as the synthesis of a new substance, and the ability to advance it
(3) Ability of foreign language required to promote their research

Department of Biological Sciences

[Master's program]

1. Policy

Department aims to develop students who attain basic skills to independently set and execute objectives, methods, and problems to elucidate fundamental mechanisms of biological growth and its higher-order structure, behavior, and ecology. It also aims to develop an integrated view of international perspective and communication skills to become researchers, educators, and developers capable of playing an active role domestically and internationally.

2. Ideal students

(1) Individuals who show a keen interest in biology and biological sciences and are eager to take the initiative in research and acquisition of specialized knowledge
(2) Individuals who have a desire to attain research skills, planning ability, and performance capability through the study of biological science
(3) Individuals who have a passion for contributing to society as researchers, educators, and developers equipped with international perspective and communication ability

3. Ability required for students

(1) A broad range of interests in biology and biological sciences, regardless of the university, faculty, or department they are from

(2) Potential capacity to take the initiative in discovering and solving problems in biology, biological sciences, or another field

[Doctoral program]

1. Policy

Department aims to develop students who attain basic and advanced skills to independently set and execute objectives, methods, and problems to elucidate fundamental mechanisms of biological growth and its higher-order structure, behavior, and ecology. It also aims to develop an integrated view of both high international perspective and communication skills to become researchers, educators, and developers capable of playing an active and leading role domestically and internationally.

2. Ideal students

(1) Individuals who pursue ingenious and leading-edge research in the fields of biological sciences

(2) Individuals who are curious about acquiring specialized knowledge of biological sciences and attain research skills, planning ability, and performance capability to be able to be active in the front lines

(3) Individuals who have a passion for contributing to society as researchers, educators, and developers who can play an active and leading role in the expertise field internationally

3. Ability required for students

(1) Specialized knowledge in the field of their choice and a broad range of interests in biology and biological sciences, regardless of the university, faculty, or department they are from

(2) Ability to take the initiative in discovering and solving problems in biology, biological sciences, or another field

1. Number of Students to be Accepted

Department	Number of students to be accepted
Mathematical Sciences	8
Physics	10
Chemistry	9
Biological Sciences	16

2. Qualification *

(1) Individuals who possess a master's degree or are expected to receive one by March 31, 2022

(2) Individuals who possess a professional degree (professional degree as defined in Article 5-2 of the Degree Regulations [1953 Ordinance no. 9 of the Ministry of Education] under Article 104 Paragraph 1 of the School Education Act of Japan. The same applies to the following.) or who are expected to receive one by March 31, 2022

(3) Individuals who, in a foreign country, have been conferred a master's degree or any other degree equivalent to a professional degree or are expected to receive one by March 31, 2022

(4) Individuals who have been conferred a master's degree or any other degree equivalent to a professional degree by completing a prescribed course of a foreign school via distant learning in Japan

(5) Individuals who have been conferred a master's degree or any other degree equivalent to a Professional degree by completing a prescribed course of a study at an educational institution located in Japan that is positioned as the one offering foreign graduate courses under the educational system of the said country and separately designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology

(6) Individuals who are appointed by the Minister of Education, Culture, Sports, Science, and Technology (1989 Ministry of Education Notification No. 118) **(Note)**

(7) Individuals who do not fall under any of (1) to (6) above, but are recognized based on the individual qualification screening as having an academic ability equal or superior to that of a master's or professional degree holder

***** Those applying under the above (6) or (7) must undergo the application qualification screening. Please send an application following the rules stated on pages 7 - 8 of these Guidelines.

(Note) The above qualification (6) refers to those who satisfy one of the following requirements.

(1) Individuals who have engaged in research activity for two years or more at a university, research institute, etc. after graduating from a university and are recognized by the Graduate School based on their research performance as having academic ability equal or superior to that of a master's degree holder

(2) Individuals who have engaged in research activity for two years or more at a university or research institute, etc. after completing 16 years of school education in a foreign country or 16 years of school education offered by a foreign school via distant learning in Japan, and are recognized by the Graduate School based on their research performance as having academic ability equal to or superior to that of a master's degree holder

3. Application Qualification Screening

Applicants who fall under the following must undergo the application qualification screening.

- Those who apply under the qualification (6) or (7)

<Application period>

November 11 (Thurs) to 18 (Thurs), 2021

The Academic Affairs Section of Science reception is available to receive the application documents on weekdays from 10:00 am to 12:00 pm and 2:00 pm to 4:00 pm only (excluding national holidays).

If you send the documents by post, they must arrive by the last day of the application period.

<Documents to be submitted>

- Confirmation of qualification (Designated form by the Graduate School)
- Certificate of (expected) completion of the last educational institution
- Academic transcript of the last educational institution
- A self-addressed return envelope* (for notification of application approval/rejection purpose)
  * Standard-size, with 374-yen postage stamps affixed (express delivery fee included)
- Statement of purpose (A4, 1 page)
- Confirmation of educational background (Designated form by the Graduate School)

(Notes)

- In the "Statement of purpose", please write about your career and research experiences after the last educational institution attended. If there are any documents proving your engagement in research activity, attach them as well. (Examples: an academic paper, a summary of a presentation at an academic meeting, a certificate of research participation issued by a research institute, a certificate issued by a thesis adviser, etc.)
- Resubmission of both "Certificate of (expected) graduation" and "Academic transcript" from the last educational institution will not be required at the time of formal application.

<Designated form>

Please download the designated forms from the website of the Graduate School of Science (http://www.se.tmu.ac.jp/en/entrance_exam.html) or send a letter of request with a self-addressed return envelope (12 cm×23.5 cm size, with an 84-yen postage stamp affixed) to the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University. Please **write down in red "Request for application forms for qualification screening to the Doctoral program"** on the front left side of the envelope.

<Place for submission>

Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University

(Please **write down in red "Qualification screening documents to the Doctoral program enclosed"** on the front left side of the envelope and send **by registered express mail**.)

<Notice of result>

A notification will be sent out on **December 3 (Fri), 2021.**

<Application procedure>

Individuals who are admitted to undergoing application may proceed with the application procedure following these Guidelines.

4. Request for Special Consideration or Arrangement Related to Physical Disability

Please notify us in advance if you would like to request special consideration or arrangement related to physical disability at the time of examination or during school attendance. Please download the designated request form from the website of the Graduate School of Science (http://www.se.tmu.ac.jp/en/entrance_exam.html) or send a letter of request with a self-addressed return envelope (12 cm×23.5 cm size, with an 84-yen postage stamp affixed) to the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University.

<Request acceptance period>

November 11 (Thurs) – 18 (Thurs), 2021

The Academic Affairs Section of Science reception is available to receive the form on weekdays from 10:00 am to 12:00 pm and 2:00 pm to 4:00 pm only (excluding national holidays).

If you send the form by post, it must arrive by the last day of the above period.

<Documents to be submitted>

Request for consultation regarding entrance examination to the Doctoral program at the Graduate School of Science (Designated form by the Graduate School)

<Place for submission>

Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University

(Please **write down in red "Request for consultation regarding entrance examination to the Doctoral program enclosed"** on the front left side of the envelope and send by **registered express mail**.)

5. Request for Adult Working Student Enrollment

Program suitable for adult working students is available to individuals who fall under any of the items listed in "2 Qualification" on page 6 of these Guidelines and have worked at the same company or research/ educational institution for more than one year by the time of enrollment. The applicant must continue working for their current employer with a manager's approval after the enrollment in the Doctoral program. If you wish to enroll as an adult working student, notify us in advance in the way explained below. It is still possible to apply for the Doctoral program as a general student without using this system.

<Request acceptance period>

November 11 (Thurs) – 18, 2021

The Academic Affairs Section of Science reception is available to receive the request on weekdays from 10:00 am to 12:00 pm and 2:00 pm to 4:00 pm only (excluding national holidays).

If you send the documents by post, they must arrive by the last day of the above period.

<Documents to be submitted>

- Curriculum vitae (Designated form by the Graduate School)
- Certificate of approval for application (signed by applicant's manager) (Designated form by the Graduate School)
- Research interest information sheet (Designated form by the Graduate School or a form created in accordance with it)
- Certificate of completion of the last educational institution or Certificate of expected completion of the Master's program
- A self-addressed return envelope* (for notification of application approval/rejection purpose)

  * Standard-size, with 374-yen postage stamps affixed (express delivery fee included)

[Note]

- Resubmission of "Certificate of (expected) completion of the last educational institution" will not be required at the time of formal application.

<Designated form>

Please download the designated form from the website of the Graduate School of Science (http://www.se.tmu.ac.jp/en/entrance_exam.html) or send a letter of request with a self-addressed return envelope (12 cm×23.5 cm size, with an 84-yen postage stamp affixed) to the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University. Please write down **in red "Request for forms for consultation regarding adult working student to the Doctoral program (October Enrollment)"** on the front left side of the envelope.

<Place for submission>

Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University

<Notice of results>

A notification will be sent out on **December 3 (Fri), 2021.**

[Note)] Applicants who are required an interview will be notified separately.

<Application procedure>

Individuals who are admitted to undergoing application may proceed with the application procedure following these Guidelines.

(Graduate School of Science adopts the Special Provision on Educational Method stipulated in Article 14 of the Standards for Establishment of Graduate Schools.)

6. Long-Term Study System

Graduate School of Science has a system in which students may complete the program on a pre-planned basis during a fixed period exceeding the standard study duration (three years for the Doctoral program) under such circumstances of occupation, childbirth, childcare, nursing needs, etc. The students pay the same amount of tuition fees as regular students in installments over the period permitted for their long-term study.

<Qualification criteria>

Students who have difficulty completing their course within the standard study duration due to any of the following reasons:

(1) Occupation as a full-time employee

(2) Childbirth, childcare, or nursing needs

(3) Other reasons approved as exceptional circumstances

<Application procedure>

Application Information and forms are available to download from the website of the Graduate School of Science (http://www.se.tmu.ac.jp/en/entrance_exam.html). Send the forms together with other required application documents. For details, please confirm with the Application Information.

A notification of approval/rejection for the Long-term study system is scheduled to be sent out on **February 21 (Mon), 2022.**

For further details, please contact the Academic Affairs Section of Science.

7. Application Procedure

Before making an application, make sure to obtain approval from your desired thesis advisor.

If your desired thesis advisor plans to retire while you are in the program, please confirm with him/her in advance who will be responsible for your guidance and supervision afterward.

(1) **Application period**

[Bringing in] Date: **January 13 (Thurs), 2022** (10:00 am - 12:00 pm and 2:00 pm - 3:30 pm)

Place: Middle conference room in Building No. 8, Minami-Osawa Campus

[Sending by post] Period: **January 5 (Wed) – 12 (Wed), 2022** (requisite arrival)

(Notes)

- **Write down in red "Application forms to the Doctoral program enclosed"** on the front side of the envelope and send it **by registered express mail**.
- Send the application well in advance, considering the days for mailing.
- Contact the Academic Affairs Section of Science if you do not receive your exam admission card by **January 25 (Tue), 2022**.

(2) **Documents to submit**

Application documentation	Remarks
(1) Application form Exam admission card Photo card	Use the designated form by the Graduate School. (Reverse side must also be filled in.) • Affix your photo (4 cm in height×3 cm in width, upper-body, frontal and bare head, taken within the last three months of application) in the specified space.
(2) Academic transcript of the Master's program	Issued by the president/dean of the university attended (Original hard copy) **[*Note]**
(3) Certificate of (expected) completion of the Master's program	Issued by the president/dean of the university attended (Original hard copy) **[*Note]**
(4) Master's thesis or an equivalent work	Submit a thesis abstract alternatively if you can't submit a master's thesis by the application due date.
(5) Payment receipt (A part), Payment certificate or Printout of the "Results page"	• 30,000 Japanese yen (Entrance examination fee) • **The entrance examination fee will not be refunded for any reason once the application is processed.** • Applicants who completed a Master's program at Tokyo Metropolitan University in September 2021 or are expected to complete it in March 2022 are exempted from paying the entrance examination fee. **【Payment using the Transfer request form (Payment slip)】** After paying the entrance examination fee, confirm the bank receipt seal on the "payment receipt (A part)" and paste it on the "Certificate for a Fee Payment by Using Payment Slip or Online Payment System" provided in these Guidelines. **【Online payment (e-payment site)】** [Payment on the Japanese website] Paste the "Payment certificate" portion of the "Handling statement of entrance exam/screening fee" on the "Certificate for a Fee Payment by Using Payment Slip or Online Payment System" provided in these Guidelines. [Payment on the English website] Submit a printout of the "Results page." Note: For the payment made at a convenience store or Pay-easy ATM in Japan, submit the **original** payment certificate. For the payment using an electronic payment method such as credit card, internet banking, Alipay, and UnionPay service, submit a printout of the payment certificate or the "Result page."

(6) Return-mail envelope	【Applicants who send the application by post only】 Write down your address, name, and postal code and affix 374-yen postage stamps (express delivery fee included) on a return envelope (12 cm×23.5 cm size).
(7) Return address label sticker	It will be used when the university sends you the admission documents after passing the entrance examination. Write your name and address clearly in block letters so that the mail surely reaches you. If your address has been changed after applying to the Graduate school, make sure to promptly report it to the Academic Affairs Section of Science and apply for the mail forwarding service at a post office.
(8) Student visa support request form	When any support is necessary for the acquisition/renewal of the visa, fill out the "Request for support regarding acquisition/renewal of student visa" and submit it together with the application documents. Please note that support will be provided only for visa acquisition/renewal at the time of enrollment, not the entrance examination.
(9) Certificate of receipt of the government-financed scholarship	Government-financed international students (through Embassy recommendation or Domestic selection) who are currently enrolled at another university but wish to enter this University must submit the certificate of receipt of the government-financed scholarship. Note: For information on the scholarship period extension for a high-ranking academic program (including this Doctoral program), please confirm with the university currently attending.
(10) Application form for the long-term study system	If you wish to have the long-term study system applicable upon enrollment, obtain the Application Information and forms on the website of the Graduate School of Science (http://www.se.tmu.ac.jp/en/entrance_exam.html). Submit the completed forms together with other required application documents.

[*Note]

Applicants who completed a Master's program at Tokyo Metropolitan University in September 2021 or are expected to complete it in March 2022 are not required to submit documents (2) and (3).

8. Screening Method for Applicants

Successful applicants will be selected comprehensively based on the oral examination results, the contents of the master's thesis (or an equivalent work providing an outline of recent research), and the academic transcript from the university.

(1) Examination date: **February 7 (Mon), 2022**

(2) Examination venue: Building No. 8, Minami-Osawa Campus, Tokyo Metropolitan University
Details will be posted in front of the Science Office (2nd floor in Building No.8).

(3) Examination subjects (oral examination): Specialized subjects mainly in the form of oral examination

Department	Subject
Mathematical Sciences	Math
Physics	Physics
Chemistry	Chemistry
Biological Sciences	Biology

See page 18 for the examination timetable.

9. Announcement of Result

Date & Time: **February 21 (Mon), 2022 at 2:00 pm**

Place: In front of the **Science Office, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University**

Exam admission card numbers of the successful applicants will also be posted on the Graduate School of Science website for reference purposes. Therefore, make sure to confirm the result by checking the announcement posted in front of the Science Office. Please note that telephone inquiries are not accepted.

Graduate School of Science website: http://www.se.tmu.ac.jp/index.html

(1) A Letter of acceptance and other documents will be provided to the successful applicants in exchange for their Exam admission card at the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University on the dates below.

- **February 21 (Mon), 2022 from 2:00 pm to 5:00 pm**
- **February 22 (Tue), 2022 from 10:00 am to 12:00 pm and 2:00 pm to 5:00 pm**
- **February 24 (Thurs), 2022 from 10:00 am to 12:00 pm and 2:00 pm to 5:00 pm**
- **February 28 (Mon), 2022 from 10:00 am to 12:00 pm and 2:00 pm to 5:00 pm**

(2) If you wish to have the result sent to you by post, please submit, after the oral examination, your Exam admission card and a self-addressed return-mail envelope (24 cm×33.2 cm, with your exam admission card number written and 750-yen postage stamps affixed) to the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University.

10. Admission Procedure

Admission documents are scheduled to be sent out in **late February 2022**. Successful applicants are requested to complete the admission procedure on the day specified. Details will be notified after the announcement of the final result.

11. Admission Fees, Tuition Fees, and Scholarships

(1) Admission fee

Residents of Tokyo: 141,000 Japanese yen (tentative amount)

Others: 282,000 Japanese yen (tentative amount)

Notes:

- If the admission fee is revised, the new price shall apply.
- **If you have completed a Master's program at Tokyo Metropolitan University in September 2021 or are expected to complete it in March 2022, you will be exempted from paying the admission fee.**
- **To be eligible for the resident classification, you as an applicant or your spouse or relative of the first degree must have resided in Tokyo continuously for over one year before the date of enrollment (from April 1, 2021 to April 1, 2022). The decision on granting of the eligibility requires your "Certificate of items stated in resident register 住民票記載事項証明書" (if you are a Tokyo resident) or "Certificate of items stated in resident register 住民票記載事項証明書" and "Extract of family register 戸籍抄本" of your spouse or relative to prove the kinship (if they a Tokyo resident).**

(2) Tuition fee

Annual amount: 520,800 Japanese yen (tentative amount)

Notes:

- The tuition fee should be paid by account transfer. Half of the annual amount (260,400 Japanese yen) is charged from the bank account in late April and October.
- If the tuition fee is revised during the Academic Year 2021, the new price shall apply.
- The tuition fee waiver is available.

(3) Scholarships available

- **Scholarship by the Japan Students Services Organization (JASSO)**

  Scholarship loan is available after enrollment to those whose application is successfully accepted by JASSO.

- **Benefit type of scholarships**

  Benefit-type scholarships are available to those enrolled in the Doctoral program of Tokyo Metropolitan University. Details can be confirmed on the website of the Student Affairs Division (https://gs.tmu.ac.jp/scholarship/) (Japanese site).

  If you wish to apply, please contact the Academic Affairs Section of Science before the application period starts. An individual application is not required because the university selects the candidates after screening. Please note that a scholarship will not be provided to all applicants due to budgetary limits. This information is as of the academic year 2021 and may change in the future.

12. Opportunities to Participate in Education and Training

There are a teaching assistant/ research assistant system and financial support system for the domestic/international academic conference participation available to graduate students.

13. Important Reminders

(1) Incomplete application documents will not be accepted.
(2) No documents submitted will be returned, nor will the entrance examination fee be refunded for any reason after the application has been processed.
(3) Make sure to bring the Exam admission card on the day of the examination.
(4) If any fraud or other act of dishonesty is found during the entrance examination or in the application procedure, enrollment will be rescinded even after admission has been granted.
(5) We do not recommend or introduce accommodations to examinees.

14. Payment of Entrance Examination Fee

(1) Payment using the Transfer request form (Payment slip)

A) Pay the entrance examination fee (30,000 Japanese yen) by bank transfer (wire) using the transfer request form provided in these Guidelines.
- The transfer cannot be made at a post office and Japan post bank.
- Enclosing the postal money order or cash in the Application form envelope is not acceptable.
- The entrance examination fee cannot be paid through an ATM (automatic teller machine).

B) Fill in the necessary information on the "Transfer request form for entrance examination fee" and submit it to a financial institution counter together with the entrance examination fee. The service charge should be shouldered by the remitter. No service charge is required for the payment made at the head or a branch office of Mizuho Bank.

C) After the transfer, paste the "Payment receipt (A part)" (invalid without the receipt seal of the financial institution) on the "Certificate for a Fee Payment by Using Payment Slip or Online Payment System" and submit it together with other application documents.

(2) Online payment (e-shiharai.net)

Register for e-shiharai.net (https://e-shiharai.net/) in advance and pay either at a convenience store, through Pay-easy ATM/Internet Banking, by credit card, through Alipay international settlement service or UnionPay service. (In the case of payment made outside Japan, credit card, Alipay international settlement service, and UnionPay service are acceptable.)

For the payment method details, please refer to a separate sheet titled "How to Pay the Entrance Examination Fee to the Graduate School of Science of Tokyo Metropolitan University (Application from within and outside Japan)."

The service charge should be shouldered by the remitter.

[Payment made on the Japanese website]

After the payment, detach the "Payment certificate" portion of the "Handling statement of entrance exam/screening fee," paste it on the "Certificate for a Fee Payment by Using Payment Slip or Online Payment System," and submit it together with other application documents.

[Payment made on English website]

After the payment, submit a printout of the "Results page" together with other application documents.

[Note] For the payment made at a convenience store or Pay-easy ATM in Japan, submit the original payment certificate. For the payment using an electronic payment method such as credit card, internet banking, Alipay, and UnionPay service, submit a printout of the payment certificate or the "Result page."

<Payment period>

December 28 (Tue), 2021 – January 13 (Thurs), 2022

[Note] For questions concerning the procedures of e-shiharai.net, please refer to "Frequently Asked Questions" on the website (https://e-shiharai.net/ecard/sss/FAQ.html) and contact the e-Service Support Center.

◆ **Entrance examination fee exemption to the persons affected by the natural disaster** ◆

Applicants affected by any of the following natural disasters will be exempted from paying the entrance examination fee. Please consult with the Academic Affairs Section of Science, Administrative and Student Affairs Division of Sciences **before making a bank transfer**.

1. Great East Japan Earthquake
2. Kumamoto earthquakes in 2016
3. Torrential rain in Northern Kyushu district in 2017
4. Torrential rain in July 2018
5. Hokkaido Eastern Iburi earthquake in 2018
6. Heavy rain from the storm front in August 2019
7. Typhoon No. 15 in 2019
8. Typhoon No. 19 in 2019
9. Torrential rain in July 2020

◆ **Refund of the entrance examination fee** ◆

A refund can be requested only when an applicant paid the entrance examination fee but didn't send the application documents or paid the fee twice by mistake. For details, please see the following University's website.

http://www.tmu.ac.jp/campus_life/tuition/expenses.html (Japanese site)

15. Handling of Personal Information

Please acknowledge beforehand that Tokyo Metropolitan University handles personal information strictly following laws and regulations as follows.

(1) Personal information obtained through the admission selection, including applicants' names and addresses, etc., shall be used for screening (processing applications, conducting selection, and announcing successful applicants) and admission procedures. Additionally, personal information of enrolled students will be used for the procedures concerning 1) academic affairs (school register, educational guidance, etc.), 2) student support service (healthcare, employment support, tuition fee reduction/exemption, scholarship application, etc.), and 3) clerical work for tuition collection.

(2) Examination results gained through this admission selection will be used for our future admission selection procedures.

For any inquiries, please contact the Academic Affairs Section of Science, Academic and Student Affairs Division of Sciences, Administrative Affairs Department of Tokyo Metropolitan University.

Tel: 042-677-1111 ext. 3022 Email: rikou.r@jmj.tmu.ac.jp

16. Timetable for 2022 Entrance Examination to the Graduate School Doctoral Program

Department	February 7 (Mon), 2022		Remarks
Mathematical Sciences	10:00 am – 12:00 pm Math (Oral examination)	1:00 pm – 5:00 pm Math (Oral examination)	The oral examination consists of a presentation of the master's thesis (approximately 15-minute long). Own laptop PC can be used for the presentation.
Physics	9:00 am – 12:00 pm Physics (Oral examination)	1:00 pm – 5:00 pm Physics (Oral examination)	The oral examination consists of a presentation of the master's thesis.
Chemistry	10:00 am – 12:00 pm Chemistry (Oral examination)	1:00 pm – 5:00 pm Chemistry (Oral examination)	The oral examination consists of a presentation of the master's thesis.
Biological Sciences	9:00 am – 12:00 pm Biology (Oral examination)	1:00 pm – 5:00 pm Biology (Oral examination)	The oral examination consists of a presentation of the master's thesis.

Precautions for taking the entrance examination:

1. Please make sure to arrive at the waiting room 10 minutes before the specified examination time. Follow the instructions of the examiners.
2. The waiting and examination rooms will be indicated on the bulletin board, etc., on the examination day.

17 Introduction of Thesis Advisors, Visiting Professors from Partner Institutions, and Study Fields of the Graduate School of Science

(1) Professors whose names are marked with "*" are scheduled to retire in March 2023.Those marked with "**," in March 2024.
(2) Numbers (1), (2), …on the rightmost column should correspond to the field number written down in the "application field" of the Application Form.
In the case of applicants of the Department of Physics, however, enter only the field number in the first choice column under "application field" of the Application Form and enter only group numbers A to D in the second choice column. (For details, refer to "Important Reminders for Applicants of the Department of Physics.)
Further, in the case of applicants of the Department of Chemistry, enter at most 4 field numbers from the second choice to the fifth one in the second choice column under "application field" of the Application Form, from the left in the order of preference. (For details, refer to "Important Reminders for Applicants of the Department of Chemistry.)

(3) The Graduate School of Science and engineering has concluded an agreement on a joint graduate school program with research institutes operated by the Tokyo Metropolitan Government, the Institute of Physical and Chemical Research ("RIKEN," a national research and development agency), the National Institute of Advanced Industrial Science and Technology ("AIST," a national research and development agency), and Japan Aerospace Exploration Agency ("JAXA," also a national research and development agency), based on which students can receive research guidance from visiting professors from the partner institutes. The names, study fields, and study descriptions of visiting professors are mentioned separately after the list of this University's faculty members in each Department. For details, please contact a university faculty member who has the same field number as the visiting professor from a partner institute.

As of April, 2022 (Scheduled)

Mathematical Sciences

Research Field	Thesis Advisor		Research Subject	Field Number
Analysis	Professor	KURATA Kazuhiro	Partial Differential Equations, Nonlinear Variational Problems	1
Algebra	Professor	KURODA Shigeru	Affine Algebraic Geometry, Polynomial Ring Theory	2
Geometry	Associate Professor	HISAMOTO Tomoyuki	Geometric Complex Analysis	3
Analysis	Associate Professor	SHIMOJO Masahiko	Reaction Diffusion Equations, Dynamical Systems	4
Analysis	Professor	YOSHITOMI Kazushi	Partial Differential Equations, Pseudo-Differential operators	5
Geometry	Associate Professor	TAKATSU Asuka	Differential Geometry, Geometric Analysis	6
Geometry	Associate Professor	FUKAYA Tomohiro	Geometric Group Theory, Coarse Geometry	7
Analysis, Applied Mathematics	Professor	TAKAKUWA Shoichiro *	Global Analysis, Partial Differential Equations	8
Algebra	Professor	TSUMURA Hirofumi	Number Theory	9
Algebra, Geometry	Professor	TOKUNAGA Hiro-o	Algebraic geometry, Topology of algebraic curves and surfaces, The Arithmetic of Branched Covers	10
Geometry	Professor	YOKOTA Yoshiyuki	Knot, 3-Manifold, Quantum Invariant	11
Geometry	Associate Professor	AKAHO Manabu	Symplectic Geometry, Floer Theory, Morse Theory	12
Algebra, Geometry	Associate Professor	UEHARA Hokuto	Algebraic Geometry, Classification Theory of Higher Dimensional Varieties, Derived Categories of Coherent Sheaves	13
Algebra, Geometry, Applied Mathematics	Associate Professor	KOBAYASHI Masanori	Algebraic Geometry, Mirror Symmetry, Related Mathematical Sciences	14
Geometry	Professor	SAKAI Takashi	Differential Geometry, Submanifold Theory	15
Applied Mathematics, Algebra	Professor	UCHIYAMA Shigenori	Cryptography, Algorithmic Number Theory	16
Applied Mathematics, Algebra	Associate Professor	YOKOYAMA Shun-ichi	Symbolic Computation, Computational Number Theory, Cryptography	17
Applied Mathematics, Analysis	Associate Professor	ISHITANI Kensuke	Probability Theory, Mathematical Finance	18
Applied Mathematics, Algebra	Associate Professor	UCHIDA Yukihiro	Algorithmic Number Theory, Arithmetic Geometry, Cryptography	19
Applied Mathematics	Associate Professor	SUZUKI Toshio	Theory of Computing, Mathematical Logic	20

Physics

Research Field	Thesis Adviser		Research Subject	Field Number	Group
Particle Theory	Professor	YASUDA Osamu	Physics beyond the Standard Model, Neutrino Physics	1	A
High-Energy Theoretical Physics	Associate Professor	KETOV Serguei	Quantum Field Theory, Theoretical High Energy Physics, Cosmology	2	
Nuclear Hadron Physics	Associate Professor	HYODO Tetsuo	Hadron Physics, Etoxic Hadrons, Theory of Resonances	3	
Theoretical Astrophysics	Professor	FUJITA Yutaka	High-Energy Astrophysics, Cosmology	4	
Nonlinear Physics	Professor	SHUDO Akira	Nonlinear Dynamics, Classical and Quantum Chaos	5	B
Quantum Condensed Matter Theory	Professor Associate Professor	MORI Hiroyuki ARAHATA Emiko	Low-Dimensional Systems, Cold Atoms, Quantum Phenomena Quantum Gases, Superconductivity, Superfluidity	6	
Strongly Correlated Electron Theory	Professor Associate Professor	HOTTA Takashi HATTORI Kazumasa	Theory of Magnetism and Superconductivity in Strongly Correlated Electron Systems Condensed Matter Theory, Strongly Correlated Electron Systems, Quantum Critical Phenomena	7	
Experimental High Energy Physics	Professor	KAKUNO Hidekazu	Experimental High Energy Physics, Experimental Neutrino Physics	8	C
Atomic Physics	Professor	TANUMA Hajime	Atomic Collisions and Spectroscopy, Electrostatic Ion Storage Ring, Highly Charged Ions, Ion Mobility in Gases, Laboratory Astrophysics	9	
Experimental Astrophysics	Associate Professor Associate Professor	ISHISAKI Yoshitaka EZOE Yuichiro	X-ray Astronomy, Observations and Instrumentation	10	
Soft Matter Physics	Professor	KURITA Rei	Soft Matter, Phase Transition, Non Equilibrium	11	D
Neutron Scattering and Magnetism	Associate Professor	KADOWAKI Hiroaki*	Quantum State of Matter, Neutron Scattering	12	
Correlated Electron Physics	Professor Professor	AOKI Yuji MATSUDA Tatsuma	Topological and Strongly-Correlated Electron Systems, Superconductivity and Magnetism	13	
Superconducting Material	Associate Professor	MIZUGUCHI Yoshikazu	Condensed Matter Physics, Superconductivity, Functional Materials	14	
Surface and Interface Physics	Professor	YANAGI Kazuhiro	Condensed Matter Physics in Nano Materials, Material Science	15	
Nano-science Research	Associate Professor	MIYATA Yasumitsu	Synthesis of Nanoscale Materials, Electrical and Optical Properties	16	

Affiliated graduate school

Research Field	Guest teacher	Affiliation	Research Subject
Strongly Correlated Electron Theory (Field 7)	KUBO Katsunori	JAEA	Theory of Superconductivity and Multipole Ordering Emerging from Multiple Degrees of Freedom
Experimental High Energy Physics (Field 8)	ADACHI Ichiro NISHIDA Shohei	KEK	High Energy Physics using SuperKEKB collider and Belle II detector, Search for New Physics beyond the Standard Model
Atomic Physics (Field 9)	AZUMA Toshiyuki	RIKEN	Atomic and Molecular Physics using an Electrostatic Ion Storage Ring, Resonance Coherent Excitation of Highly Charged Heavy Ions
Astrophysics (Field 10)	ISHIDA Manabu	JAXA	X-ray Astronomy, Observations and Instrumentation

Chemistry

Research Field	Thesis Adviser		Research Subject	Field Number
Coordination Chemistry	Professor	SUGIURA Ken-ichi	Synthetic Chemistry	1
	Associate Professor	NISHINAGA Tohru	Physical Organic Chemistry, π-Conjugated Molecules, Organic Semiconductors	
Environmental and Analytical Chemistry	Professor	TAKEGAWA Nobuyuki	Atmospheric Chemistry, Aerosol, Online Particle Analysis	2
Inorganic Chemistry	Professor	YAMAZOE Seiji	Functional Materials Chemistry, Catalytic Chemistry, X-ray Spectroscopy	3
	Associate Professor	OURA Yasuji	Radiochemistry, Cosmochemistry, Cosmogenic Nuclides	
Organic and Structural Biochemistry	Professor	ITO Yutaka	Solution-State NMR, In-cell NMR, Structural Biology	4
Organic Chemistry	Professor	NOMURA Kotohiro	Organometallics, Molecular Catalysis, Organic Synthesis	5
	Associate Professor	INAGAKI Akiko	Organometallics, Molecular Catalyst, Photocatalyst	
	Associate Professor	Abdellatif Mohamed Mehawed	Polymer Chemistry, Materials Science	
Biochemistry	Professor	HIROTA Kouji	DNA Repair, Chromatin, Replication	6
	Associate Professor	TAOKA Masato	Proteomics, RNA, Biochemistry	
Physical Chemistry of Molecular Structure and Reaction	Professor	KANYA Reika	Physical Chemistry, Atomic Molecular Optical Physics	9
Synthetic Organic Chemistry	Professor	SHIMIZU Toshio**	Organic Chemistry, Main Group Element Chemistry, Host-Guest Chemistry	10
Theoretical and Computational Chemistry	Professor	HADA Masahiko*	Quantum Chemistry, Electronic Structure Theory, Molecular Magnetic Properties	11
	Associate Professor	NAKATANI Naoki	Quantum Chemistry, Electronic Structure Theory, Transition Metal Complexes	
	Associate Professor	KOMURA Shigeyuki	Physical Chemistry of Biological and Soft Matter	
	Associate Professor	SATO Soichi	Organic Chemistry, Main Group Chemistry, Material Chemistry	
Isotope Chemistry	Associate Professor	KUBUKI Shiro	Chemistry of Glass and Ceramics,Radiochemistry of fullerenes	12

Affiliated graduate school

Research Field	Guest teacher	Affiliation	Research Subject
Organic and Structural Biochemistry (Field 4)	MIKAWA Tsutomu	RIKEN	Biofuel cell which mimics metabolic pathways, Functional analysis of proteins which are important for homologous recombination
Biochemistry (Field 6)	KAJI Hiroyuki	National Institute of Advanced Industrial Science and Technology (AIST)	Glycoscience and Glycotechnology

Biological Sciences

Section	Research Field	Thesis Adviser		Research Subjects	Field Number
Biology	Molecular Neuroscience	Assoc. Prof.	ANDO, Kanae	Neuroscience, Cell Biology, Molecular Biology, Neurological Diseases and Aging	1
	Developmental Biology	Assoc. Prof.	FUKUDA, Kimiko	Morphogenesis, Digestive Tract, Extra-embryonic tissue	2
		Assoc. Prof.	TAKATORI, Naohito	Germ Layer Fates, Polarity, Nuclear Migration	3
	Cellular Biochemistry	Prof.	KAWAHARA, Hiroyuki	Protein Quality Control, Cell Cycle Control, Ubiquitin System	4
	Cellular Genetics	Prof.	SAKAI, Takaomi	Molecular and celluler mechanisms of learning and memory	5
	Molecular Genetics	Prof.	KATO, Jun-ichi**	Genetics, Molecular Biology, Genome Sciences	6
		Assoc. Prof.	EHIRA, Shigeki	Molecular Biology & Molecular Physiology of Microorganisms	7
	Plant Development and Physiology	Prof.	OKAMOTO, Takashi	Plant Development, Plant Reproduction	8
	Neurobiology	Assoc. Prof.	KUROKAWA, Makoto*	Neurobiology, Comparative Physiology, Neural Control of Behavior	9
		Assoc. Prof.	WEITEMIER,Zachary Adam	Behavior, Neurotransmission, Electrochemistry	10
	Evolutionary Genetics	Prof.	TAMURA, Koichiro	Evolutionary Genetics, Evolutionary Genomics, Bioinformatics	11
		Assoc. Prof.	TAKAHASHI, Aya	Evolutionary Genetics, Molecular Basis of Speciation, Population Genomics	
		Assoc. Prof.	NOZAWA, Masafumi	Evolutionary Genetics, Evolution of Sex Chromosomes, Evolution of Small RNAs	
	Plant Environmental Responses	Assoc. Prof.	KANEGAE, Takeshi	Plant Cell & Molecular Biology, Photoreceptor, Fern	12
		Assoc. Prof.	NARIKAWA, Rei	Photobiology, Photosynthesis, Optogenetics	13
	Environmental Microbiology	Prof.	HARUTA, Shin	Microbial Ecosystems, Interspecies Interaction, Ecophysiology	14
	Animal Ecology	Prof.	HAYASHI, Fumio*	Ecology, Behavior, Evolutionary Ecology, and Ecological Developmental Biology of animals	15
		Assoc. Prof.	OKADA, Yasukazu		16
	Plant Ecology	Prof.	SUZUKI, Jun-Ichirou	Plant Ecology,Conservation Ecology,Theoretical Ecology	17
	Systematic Zoology	Assoc. Prof.	EGUCHI, Katsuyuki	Systematics and Biogeography of Invertebrates (mainly Terrestrial Arthropods)	18
		Assoc. Prof.	CRONIN, Adam L.	Behaviorual Ecology, Evolutionary Ecology, Collective Behavior of Social Insects and Others	19
	Systematic Botany	Prof.	MURAKAMI, Noriaki	Molecular Systematics, Evolutionary Biology and Island Biology of Plants and Fungi, Pteridology	20
		Assoc. Prof.	KAKUGAWA, Yoko	Phylogenetic Taxonomy of Plants, Evolutionary Biology	
Biomedicine and Biotechnology	Molecular Neuroscience	Assoc. Prof.	ANDO, Kanae	Neuroscience, Mechanisms underlying Alzheimer's disease and other tauopathies, Drosophila models of neurodegenerative disease	1
	Developmental Biology	Assoc. Prof.	TAKATORI, Naohito	Asymmetric Cell division, Microtubules, mRNA localization	3
	Cellular Biochemistry	Prof.	KAWAHARA, Hiroyuki	Protein quality control mechanisms related to immunology, oncology, diabetes and neurodegenerations	4
	Cellular Genetics	Prof.	SAKAI, Takaomi	Stress-induced brain plasticity in Drosophila	5
	Molecular Genetics	Prof.	KATO, Jun-ichi**	Bacterial Synthetic Biology, Genome Sciences	6
	Plant Development and Physiology	Prof.	OKAMOTO, Takashi	Production of hybrid and polyploid plants by gamete breeding	8
	Stem Cell Modulation 1)	Prof.	HARA, Takahiko	Blood regeneration by using ES/iPS cells and development of anti-cancer/leukemia drugs	21
	Protein and organelle degradation 1)	Assoc. Prof.	MATSUDA, Noriyuki	Elucidate mechanisms underlying mitochondrial quality control to suppress familial forms of Parkinson's disease	22
	Molecular Regulation of Aging 2)	Prof.	ISHIGAMI, Akihito	Elucidation of aging mechanism and anti-aging research	23
	Plant Growth Regulation 3)	Assoc. Prof.	SEO, Mitsunori	Plant Hormones, Seed Biology	24
	Chemical Biotechnology 3)	Prof.	ITO, Yoshihiro**	Design and development of bioconjugated molecules and materials for biomedical applications	25

1)Tokyo Metropolitan Insitute of Medical Science 2)Tokyo Metropolitan Institute of Gerontology 3)RIKEN

◇ Affiliated graduate school

Field Number	Guest Professor	Affiliation	Research Subjects
1	MIURA, Yuri	Tokyo Metropolitan Institute of Gerontology	Search for diagnostic markers using proteome-based technologies
1	NONAKA, Takashi	Tokyo Metropolitan Insitute of Medical Science	Molecular mechanisms of neurodegenerative diseases
2	MARUYAMA, Chiaki	Tokyo Metropolitan Insitute of Medical Science	Brain development, Cell Migration, Neocortical Evolution
4	INOUE, Azusa	RIKEN Integrative Medical Sciences	Intergenerational epigenetic inheitance in mammals
5	UENO, Kohei	Tokyo Metropolitan Insitute of Medical Science	Neural plasticity in the *Drosophila* brain
14	IINO, Takao	RIKEN, BioResource Research Center	Isolation and polyphasic taxonomy of yet-to be cultured archaea and bacteria.