２０２４年度１０月入学

横浜国立大学大学院理工学府

博 士 課 程 後 期

渡日前特別選抜

学 生 募 集 要 項

October 2024 Application Guidelines

Special Admission Prior to Arrival in Japan

Doctoral Program,

Yokohama National University

Graduate School of Engineering Science

【出願手続について】
出願手続きは、インターネットから出願申請を行った上で、必要書類を提出してください。

Ⅰ．出願申請に必要な環境
出願申請を行うためには、インターネットを利用できるパソコン、プリンター及び電子メールアドレスが必要です。

Ⅱ．出願手続の流れ
(1) メールアドレス等の登録
１．本学の Web 出願システムにアクセスしてください。
２．画面の指示に従って、志望する専攻等を指定してください。
３．氏名やメールアドレス等を登録し、申込を行ってください。
４．メールアドレス等の登録が済みましたら、登録完了メールが届きます。

(2) 出願申請
１．Web 出願システムにログインし、必要な事項を入力し登録してください。
２．出願申請後、Web 出願システムから入学検定料の支払い方法を選択してください。
３．選択した方法に基づき、入学検定料を支払ってください。
４．入学検定料の支払完了通知メールを受信した後、Web 出願システムから出願に必要な書類を印刷してください。

(3) 出願書類提出
１．印刷した書類及び証明書類等を所定の出願期間内に提出してください。
２．必要な書類がすべて本学府に到着した時点をもって、出願手続が完了となります。
※Web 出願システムに出願申請を行っただけでは出願手続は完了しませんので、ご注意ください。
※出願手続の詳細は、本要項及び Web 出願システムにて確認してください。

How to Apply

All applicants must send a set of all required documents by post after applying online.

1. Required environment for the application

In order to complete the application procedure, applicants need PCs connected to the Internet, printers and their own email address.

2. Overview of the Application Procedure

Step 1 – Register

1) Visit YNU Web Application System;
https://e-apply.jp/e/ynu/
2) Select the preferred Department, etc. according to the guidance of the window.
3) Register your name, e-mail address, and other personal information.
4) You will receive a confirmation email after registration procedure is completed.

Step 2 – Apply online

1) Log in to YNU Web Application System, and fill in all the required information.
2) Select payment method for your application fee after you apply.
3) Pay the application fee as your choice.
4) After you have received an email that your payment was confirmed, print out all the documents via the YNU Web Application System

Step 3 – Submission of the application documents

1) Send all the printed-out application documents and other required certificates by post in the designated application period.
2) Application procedure is only completed when YNU received all required documents by post.

Note: You **must** submit printed-out documents by post in order to complete the application. Only filling out the online application is not enough to successfully complete the application procedure.

Please read the instructions of this application guideline and the YNU Web Application System carefully.

は じ め に Introduction

横浜国立大学大学院理工学府博士課程後期では、日本国外に在住する志願者が来日することなしに受験する機会を提供しています。今回は、2024 年 10 月入学の学生を募集します。

入学を希望する方は、この募集要項をよく読んで、必要とされる情報を正確に取得し、間違いのないように出願手続きを行ってください。

出願に際しては、あらかじめ希望指導教員あるいは表 1 の問い合わせ担当教員とよく相談した上で願書を提出してください。

Yokohama National University's Graduate School of Engineering Science offers applicants living outside Japan the opportunity to take the entrance examination for its doctoral program without coming to Japan. We are currently seeking students for matriculation in October of 2024.

Prospective students are requested to carefully read this application guideline, find the information that pertains to them, and apply with the correct procedures based on an accurate understanding.

File an application after close consultation with a faculty member in your desired field or with faculty members serving as contact persons on Table 1.

理工学府の概要や教員の研究内容などは、横浜国立大学大学院理工学府のウェブサイトをご覧ください。
Go to the website of the Graduate School of Engineering Science, Yokohama National University to see the outline of the school, as well as its respective specializations and departments.
https://www.fse.ynu.ac.jp

【安全保障輸出管理について】

横浜国立大学では、「外国為替及び外国貿易法」に基づいて「国立大学法人横浜国立大学 安全保障輸出管理規則」を定めて、物品の輸出、技術の提供、人材の交流の観点から外国人留学生の受入れについては厳格な審査を実施しています。規制されている事項に該当する場合は、希望する研究活動に制限がかかる場合や、教育が受けられない場合がありますので、願書の提出の前に指導教員予定者と相談をするなど、出願にあたっては注意してください。 なお、国籍を問わず入学者全員は、入学時に「外国為替及び外国貿易法」を遵守する誓約書に署名していただきます。詳細については研究推進機構ホームページを参照してください。

https://www.ripo.ynu.ac.jp/researcher/start/security/

【Security export control】

Pursuant to the Foreign Exchange and Foreign Trade Act, Yokohama National University (YNU) stipulates YNU Regulations for Security Export Control to rigorously screen admission of international students with respect to exported goods, technical assistance, and people-to-people exchange. Accordingly, some international students may have limited access to research and educational programs despite their preference. Be aware of such restrictions and consult with your intended supervisor prior to filing your application. All enrolled students, regardless of nationality, are requested to sign a pledge to comply with the Foreign Exchange and Foreign Trade Act. For more details, visit the following URL.

https://www.ripo.ynu.ac.jp/researcher/start/security/

【個人情報の取り扱いについて】

個人情報については、「個人情報の保護に関する法律」及び「国立大学法人横浜国立大学の保有する個人情報の保護に関する規則」に基づいて取り扱います。

(1) 志願者の入学試験成績及び出願書類等に記載された個人情報については、本学入学者選抜に係る用途の他、以下の目的のために利用します。

①合格者への連絡業務（奨学金や保険等に係る福利厚生関係資料や入学後の行事等に関する資料の送付、生協資料の送付）及び入学手続業務

②入学後のクラス編成及び本人の申請に伴う入学料免除（留学生を除く）・授業料免除等の福利厚生関係の資料

③入学後の教務関係（学籍管理、修学指導等）

④本学における広報・諸調査・研究（入学者選抜方法及び大学教育改善のための調査・分析を含む）

⑤入学者の個人情報について本学関連団体である校友会及び同窓会の入会手続きに必要な範囲で提供する場合があります。

調査・研究結果を発表する場合は個人が特定できないように処理します。
それ以外の目的に個人情報が利用又は提供されることはありません。

(2) 上記(1)の各種業務での利用に当たっては、一部の業務を本学より当該業務の委託を受けた業者（以下「受託業者」という。）において行うことがあります。受託業者には、委託した業務を遂行するために必要となる限度で、知り得た個人情報の全部又は一部を提供します。

【Handling of Privacy Policy】

Personal information will be handled under the Act on the Protection of Personal Information and the Policies on the Protection of Personal Information held by YNU.

(1) Personal information provided in the applicant’s entrance examination results and application materials may also be used for the following purposes in addition to those related to the selection of applicants for admission to YNU.

① Contacting successful applicants (sending materials related to welfare benefits such as scholarships and insurance, events after admission, and Co-op) and enrollment procedures.

② Organizing classes after enrollment and sending materials related to welfare such as entrance fee waiver (except for international students) and tuition fee waiver upon application by the applicant.

③ Academic affairs after enrollment (student registration management, academic guidance, etc.)

④ Public relations, surveys and research at the university (including surveys and analysis for the improvement of admission selection methods and university education)

⑤ Personal information of enrolled students may be provided to the extent necessary for enrollment procedures for the YNU Alumni Association.

When presenting the results of surveys and research, the information will be processed in such a way that individuals cannot be identified.
Personal information will not be used or provided for any other purposes.

(2) When using the information in the various works described in (1) above, some of the operations may be performed by a contractor entrusted by YNU. All or part of the personal information obtained will be provided to the contractor to the extent necessary to perform the work entrusted to the contractor.

【学生寮について】

学生寮への入居希望者は、合格発表より前に申請手続きが必要となる場合があるため、各自において学務・国際戦略部学生支援課ウェブサイトの学生寮のページの入居募集案内を確認し、期間内に手続きを行ってください。

https://www.gakuseisupport.ynu.ac.jp/

[Student Dormitory]

Those who wish to move into the dormitories should check the application guide on the Student Dormitories page of the Student Support Division website of the Academic Affairs and International Strategy Department and complete the application procedures within the time frame.

https://www.gakuseisupport.ynu.ac.jp/

【緊急時の入試実施に関するお知らせ】

公共交通機関の乱れや自然災害、人為災害、疫病等の影響により、所定の日程による試験実施が困難となるような不測の事態が生じた場合は、試験日程や選抜方法を変更したうえで、入学者の選抜を行うことがあります。最新情報は、理工学府ウェブサイトを定期的に確認してください。

[IMPORTANT]

The selection method may be modified due to any changes in unforeseen circumstances related to natural disasters, man-made disasters, epidemics etc. As for the latest information, please visit the "Admissions" page on the Graduate School's website (https://www.fse.ynu.ac.jp/english/index.html) regularly.

表１　問い合わせ担当教員

Table 1 Faculty members to consult with regarding respective specializations.

専攻 Department	ユニット（教育分野） Unit/ Specialization	担当教員名 Contact persons
機械・材料・海洋系工学 Mechanical Engineering, Materials Science, and Ocean Engineering	機械工学（機械工学，エネルギー材料） Mechanical Engineering / Mechanical Engineering, Energy Materials	渕脇　大海　准教授 Associate Prof. FUCHIWAKI Ohmi fuchiwaki-ohmi-xk@ynu.ac.jp
	材料科学フロンティア（材料工学，エネルギー材料） Materials Science Frontier/ Materials Science Frontier, Energy Materials	大野　直子　准教授 Associate Prof. OONO Naoko oono-naoko-yh@ynu.ac.jp
	海洋空間システムデザイン（海洋空間） Systems Design for Ocean-Space/ Systems Design for Ocean-Space	平川　嘉昭　准教授 Associate Prof HIRAKAWA Yoshiaki hirakawa-yoshiaki-jd@ynu.ac.jp
化学・生命系理工学 Chemistry and Life Science	先端化学（化学，応用化学，エネルギー材料） Advanced Chemistry/ Chemistry, Applied Chemistry, Energy Materials	生方　俊　准教授 Associate Prof. UBUKATA Takashi ubukata-takashi-wy@ynu.ac.jp
	化学応用・バイオ（化学応用・バイオ，エネルギー材料） Chemistry Applications and Life Science/ Chemistry Applications and Life Science, Energy Materials	松澤　幸一　准教授 Associate Prof. MATSUZAWA Koichi matsuzawa-koichi-zs@ynu.ac.jp
数物・電子情報系理工学 Mathematics, Physics, Electrical Engineering and Computer Science	数理科学（数学） Mathematical Sciences/ Mathematical Sciences	梶原　健　教授 Prof. KAJIWARA Takeshi kajiwara-takeshi-rj@ynu.ac.jp
	物理工学（物理工学） Physics/ Physics	中村　正吾　准教授 Associate Prof. NAKAMURA Shogo nakamura-shogo-zg@ynu.ac.jp
	電子情報システム（応用物理，情報システム，電気電子ネットワーク） Electrical and Computer Engineering/ Applied Physics, Information Systems, Electrical and Computer Engineering	大矢　剛嗣　准教授 Associate Prof. OYA Takahide oya-takahide-vx@ynu.ac.jp

※ ユニットは入試実施上の名称であり、入学者は上記の各教育分野に所属します。

※ 願書提出前に希望指導教員あるいは問い合わせ担当教員と相談すること。

* Names of units are assigned in order to facilitate entrance examinations. Admitted students will be enrolled in the abovementioned specializations.

* Before filing your application, consult with the faculty member in charge of your desired field of study or faculty members serving as contact persons.

入　試　日　程　Admissions Schedule

Ｗｅｂ出願システムによる出願申請 Online Application
２０２４年５月２４日（金）～６月４日（火）
Friday, May 24 - Tuesday, June 4, 2024

↓

出願期間　Application Period
２０２４年５月３１日（金）～６月６日（木）
Friday, May 31 - Thursday, June 6, 2024

↓

試験日　Examination
２０２４年７月９日（火）～７月１０日（水）
Tuesday, July 9- Wednesday, July 10, 2024

↓

合格発表　Announcement of successful applicants
２０２４年８月１日（木）
Thursday, August 1, 2024

↓

入学手続　Admission period
２０２４年９月６日（金）～９月１２日（木）
Friday, September 6 - Thursday, September 12, 2024

募集要項　Admission Guidelines

1．募集人員　Number of Admitted Students

専攻 Department	ユニット ※ Unit*	教育分野 Specialization	教育プログラム Program	募集人員 Number of Admitted Students
機械・材料・海洋系工学 Mechanical Engineering, Materials Science, and Ocean Engineering	機械工学 Mechanical Engineering	機械工学 Mechanical Engineering	TED / PED	若干名 A few
		エネルギー材料 Energy Materials	TED	
	材料科学フロンティア Materials Science Frontier	材料工学 Materials Science Frontier	TED / PED	
		エネルギー材料 Energy Materials	TED	
	海洋空間システムデザイン Systems Design for Ocean-Space	海洋空間 Systems Design for Ocean-Space	TED / PED	
化学・生命系理工学 Chemistry and Life Science	先端化学 Advanced Chemistry	化学 Chemistry	PSD	若干名 A few
		応用化学 Applied Chemistry	TED	
		エネルギー材料 Energy Materials	TED	
	化学応用・バイオ Chemistry Applications and Life Science	化学応用・バイオ Chemistry Applications and Life Science	TED / PED	
		エネルギー材料 Energy Materials	TED	
数物・電子情報系理工学 Mathematics, Physics, Electrical	数理科学 Mathematical Sciences	数学 Mathematical Sciences	理学 Science	若干名 A few
	物理工学	物理工学	PSD	

Engineering and Computer Science	Physics	Physics		
	電子情報システム Electrical and Computer Engineering	応用物理 Applied Physics	TED / PED	
		情報システム Information Systems		
		電気電子ネットワーク Electrical and Computer Engineering		

※ ユニットは入試実施上の名称であり、入学者は上記の各教育分野に所属します。

*Names of units are assigned in order to facilitate entrance examinations. Admitted students will be enrolled in the abovementioned specializations.

２．出願資格　Eligibility

出願時に日本国外に居住する者で、日本国外で修士の学位又は専門職学位に相当する学位を授与された者及び本大学院入学の前までに授与される見込みの者

Applicants must be individuals who reside outside of Japan at the time of application, and who have earned an academic degree equivalent to a master's degree or a professional degree outside of Japan or who expect to do so by the month preceding the admission to our graduate schools.

＊日本国外で修士の学位または専門職学位に相当する学位を取得見込みの者が、入学試験に合格した後に、本大学院入学の日までに学位を取得できなかった場合は、入学許可を取り消します。

*An applicant who expects to earn an academic degree equivalent to a master's degree or a professional degree outside of Japan and passes the entrance examination but then is unable to obtain the degree by the month preceding the admission to our graduate schools will be denied admission.

３．Ｗｅｂ出願システムによる出願申請　Online Application

2024 年 5 月 24 日（金）～6 月 4 日（火）の間にＷｅｂ出願システムで出願申請を行ってください。

The online application form must be completed during the period **between Friday, May 24, 2024, and Tuesday, June 4, 2024.**

Ｗｅｂ出願システム URL：https://e-apply.jp/e/ynu/

YNU Web Application System URL: https://e-apply.jp/e/ynu/

注意事項

① Ｗｅｂ出願システムの入力において、60 分間通信がない場合は、エラーとなりますので、ご注意ください。

② Ｗｅｂ出願システムにおける入力作業を一時中断する場合は、「一時保存」をクリックしてログアウトしてください。再ログイン後、入力を再開することができます。これ以外の方法で入力作業を中断した場合は、入力内容が取り消されます。

③ Ｗｅｂ出願システムの操作方法に関するお問い合わせは、以下へお願いします。
株式会社キャリタス　「学び・教育」出願・申込サービス　サポートセンター
ＴＥＬ　：0120-202079（受付時間：月～金　10:00～18:00）

E-Mail：cvs-web@career-tasu.co.jp

※Ｗｅｂ出願システムによる出願申請を行っただけでは出願手続は完了しません。下記４～５を参照のうえ、出願書類を郵送してください。

[Note]

1) Please note that an error message will show if there is no transmission for 60 minutes.

2) To temporarily suspend the input work in the Web application system, click "Save temporarily" Please log out. After re-logging in, input can be resumed. Other methods Input operation will be canceled if you interrupt the input work with.

3) If you have any questions about the YNU Web Application System, please contact the following.

Career-tasu, Inc.　Learning and Education Application Service Support Center

TEL：0120-202079（Reception time：from Monday to Friday, 10:00 － 18:00）

Email：cvs-web@career-tasu.co.jp

*　Only filling out the online application is not enough to successfully complete the application procedure. Send all the application forms printed out and other required materials by post. Please see below 4 to 5.

４．郵送による出願期間　Application period by post

2024 年 5 月 31 日（金）～6 月 6 日（木）の間とします。

Applications are accepted **between Friday, May 31 - Thursday, June 6, 2024.**

出願書類を期間内必着となるように、EMS（国際スピード郵便）等、引き受けや配達を記録できる方法で郵送してください。受付期間後に到着したものは受理しないので、郵便事情等を十分考慮して早めに送付してください。

Send the documents by international express mail or some other service that allows mail to be tracked, so that they arrive by the last day of the application period. Send your application as early as possible keeping in mind the time required for delivery by the postal service lest it reach us after the deadline and be rejected.

宛先：　Graduate School of Engineering Science Section

To　　Yokohama National University

79-5 Tokiwadai, Hodogaya-ku, Yokohama, 240-8501　JAPAN

［注］受入を内諾している指導教員を通じて出願を行う場合のみ、窓口受付を認めます。

[Note]　We accept the application documents at the reception counter only through academic supervisor who gave provisional acceptance letter to applicant.

５．出願手続　Application procedure

(1) 志願者は、本学府入学後に研究指導を受けたい教員を１名選んで、直接 E-mail 等で連絡をとったうえで、必ず出願の許可を得てください。

After selecting the faculty member that you would like to have as your academic advisor after you enroll in this

graduate school, contact that member directly by e-mail or some other means and obtain permission to apply.

教員に連絡をする際には、履歴書、過去の業績リスト、入学後の研究希望計画書、外国語試験の成績（TOEIC、TOEFL、日本語能力検定試験など）などの情報を指示に従って提出してください。

When consulting with your prospective academic advisor, please submit, as directed, your resume, a list of your past achievements, your intended research plan, your foreign language test results (TOEIC, TOEFL, Japanese Language Proficiency Test, etc.), and any other necessary information.

(2) 出願に必要な書式については、Ｗｅｂ出願システム及び理工学府ウェブサイトよりダウンロードして作成してください。様式の印刷は、全て「A4 サイズ・白色用紙」に「片面印刷」とします。

Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science. Print all forms in single-sided, A4-sized white papers.

出願書類等 Application documents, etc.	**注意事項** Note	**書式番号** Form number
出願書類送付内訳書 Detailed statement of application documents	理工学府ウェブサイトよりダウンロードし印刷して作成してください。出願書類は、この用紙に記載されている通りの順番に並べて、封入してください。 Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science. Sort and enclose application documents according to the order listed in this form.	**別紙 3** **※理** Attachment 3 *G
入学願書 Admittance Application Form	Ｗｅｂ出願システムにて必要事項（志願者の氏名、連絡先、学歴、志望先（専攻、ユニット、教育分野、プログラム、指導教員）等）を入力後、印刷して作成してください。縦 4cm×横 3cm 無帽、上半身正面、背景無地、3 ケ月以内に撮影した写真（1 枚）を入学願書に貼り付けてください。 Print out the form through YNU Web Application System after filling in all the required information(your name, address, phone#, educational history, Preferred Department, Unit, Specialization, Program, Academic supervisor, etc.). Prepare 4-cm by 3-cm upper body shot taken in the last 3 months on a solid-color background without any headwear. Affix one on your application for admission.	1 **※出** *Y
修了（見込）証明書 Certificate of (expected) completion	出身大学（在籍大学）長又は研究科長が作成したものを提出してください。 To be prepared by the president or dean of the school where the applicant was or is enrolled. ・卒業証書の写しをもって代える場合は、出願書類として卒業証書の原本を提出し、返却を希望する旨のメモを同封してください。複写をしたうえで、入試終了後に返却します。 - If you want to substitute your original graduation certificate with a photocopy, please include the original in your application, along with a note requesting that the original be returned. We will take a photocopy and return the original after the entrance examination. ・学位証明書など取得学位が記載されているものを併せて提出してください。 - Submit an original of their diploma or a document stating the most recently completed educational level. ・日本語または英語以外で作成された証明書は、日本語訳または英語訳を添付してください。 - Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
成績証明書 Transcript	出身大学（在籍大学）長又は研究科長が作成したものを提出してください。 日本語または英語以外で作成された証明書は、日本語訳または英語訳を添付してください。 To be prepared by the president or dean of the school where the applicant was or is enrolled. Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
在留資格に関する証明 Certificate of resident status	パスポートの写しを提出してください。(氏名・国籍・写真が記載されているページ) Submit a copy of your passport. (the page with your name, nationality and photograph)	

受入内諾書 Provisional Acceptance Letter	理工学府ウェブサイトよりダウンロードし印刷して作成してください。希望指導教員の署名を得たうえで提出してください。ただし、希望指導教員の署名は原本でなくてもかまいません。 Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science. The submitted letter needs to be signed by your prospective academic advisor. The signature does not necessarily have to be a handwritten original.	19-2 ※理 *G
修士論文とその概要 Master's thesis and summary	修士論文又はそれに代る論文(1 部)とその内容を日本語の場合 2000 字、英語の場合 500 words 程度に要約した概要（1 部）を提出してください。修士課程修了見込みの者は、修士論文課題と研究の進行状況を 2000 字程度の文章に要約してください。 Submit your master's thesis or a comparable paper (one copy), as well as a summary of it (one copy) in about 500 words in English or 2,000 characters in Japanese. A student expecting to complete a master's program should provide a summary of their thesis and a report on the progress of their research in about 2,000 characters.	
研究業績調書 Record of Research Achievements	公表論文その他業績リスト（可能な場合は別刷を添付してください。） List your published papers and other achievements. (If possible, attach excerpts.)	16 ※理 *G
研究（希望）計画書 (Desired) Research Plan	博士課程（後期）における研究（希望）計画書。作成に当たっては、志望するユニットの希望指導教員に問い合わせてください。 Present the research you have planned (or intended) to conduct for your doctoral program. Consult with your prospective academic advisor in your intended specialization before preparing a plan.	17 ※理 *G
語学能力を客観的に示す書類（該当者のみ） Documents that objectively indicate your linguistic abilities (Only if requested)	TOEIC または TOEFL のスコア証明書（英語を母国語としない者で、希望する指導教員から提出するよう指示があったもの。スコア証明書は、TOEIC、TOEFL の受験日が提出日から起算して **2 年以内で顔写真付き**のものを提出してください（ただし本要項記載の入試では、TOEIC、TOEFL の受験日が出願期間の最終日から起算して 2 年以内のスコア証明書も有効とします)。） A TOEIC or TOEFL score certificate (This must be submitted by applicants whose native language is not English and who have been asked to submit it by their prospective academic advisor. Submit an original score certificate from a test taken **in the last two years** counting from the date of submission and must include a photograph of the applicant. (However, for the entrance examination listed in this Guideline, score certificates submitted within two years of the last day of the application period are also valid.)) 日本語能力検定試験の成績証明書（日本語を母国語としない者で、希望する指導教員から提出するよう指示があったもの。） Japanese Language Proficiency Test score certificate (This must be submitted by applicants whose native language is not Japanese and who have been asked to submit it by their prospective academic advisor.)	
推薦書 Recommendation letter	所属・出身大学等の指導教員または研究科長レベル以上が作成したもの 日本語または英語以外で作成された推薦書は、日本語訳または英語訳を添付してください。 To be prepared by the prospective academic advisor or the dean of the school where the applicant was or is enrolled. Any recommendation letter written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
入学検定料 Entrance application fee	払込金額：30,000 円 Amount: 30,000 yen 払込期間：2024 年 6 月 4 日（火）までに払い込んでください。 Payment period: Make the payment by Tuesday, June4, 2024 払込方法： Ｗｅｂ出願システムで出願申請した後に表示される支払手続画面に従い、支払手続を完了してください。 クレジットカード（VISA・MasterCard・JCB・American Express・MUFG・DC・UFJ・NICOS）・中国銀聯ネット決済により払い込むことができます。 詳細は本学ホームページをご覧ください。 Payment method： According to payment guide of YNU Web Application system, please pay the application fee.	

	Payments can be made by credit card (VISA, MasterCard, JCB, American Express, MUFG, DC, UFJ, and NICOS) and online with China Union Pay. For more details, refer to our university website. ［注 1］入学検定料が払い込まれていない場合は、出願を受理しません。 [Note 1] Applications will not be accepted without payment of the entrance application fee.. ［注 2］各支払に係る手数料は、入学志願者本人の負担となります。 [Note 2] All charges involved are to be covered by the applicants. ［注 3］**日本政府（文部科学省）国費外国人留学生は、払込不要です。（出願の際、必ず国費外国人留学生証明書を同封してください。（コピー不可））** [Note 3] Payments are not required from Japanese government-financed (MEXT) international students. Enclose the original government sponsorship certificate; copies are not acceptable.	

※理　理工学府ウェブサイトよりダウンロードし印刷して作成して下さい。

※出　Ｗｅｂ出願システムにて必要事項を入力後、印刷して作成して下さい。

***G　The Graduate School's website**

***Y　YNU Web Application System**

6．選抜の方法　Method of Applicant Selection

応募した書類に基づく書類審査、および学力試験（筆記試験、または口述試験（インターネットインタビューを含む））を実施します。

インターネットインタビューを行う場合は、Skype 等の Web サービスを利用して行いますので、受験者は高速のインターネット環境で Web カメラとマイクを備えたコンピュータが利用出来る必要があります。

現地のインターネット環境等により本人確認が困難で改善の余地がない場合は、インターネットインタビューを無効とすることがあります。この場合は、インターネットインタビューは得点とせず書類審査のみで判定します。

インターネットインタビューは、面接員数名に対して受験者１名で行いますので、周囲に誰もいない環境を整えてください。

選抜方法等の詳細については、後日志願者に直接通知します。

The submitted documents will be reviewed, and a scholastic ability test (written test or oral test (including interview over the Internet)) will be carried out.

The applicants may be invited for an interview took place via the Internet, using such services as Skype. Accordingly, the interviewees must be able to avail themselves of computer facilities with camera and microphone functions, as well as fast Internet connection.

If we find it difficult to identify an applicant due to the local internet connection and there is no chance of improvement, the internet interview may be counted as invalid. In this case, the decision is based solely on the review of the application without counting any score for the internet interview.

Please make sure that nobody is around you as each internet interview should be conducted between one applicant and several interviewers.

Applicants will be directly notified at a later date of the test time, the method for carrying out the test, and other information.

7．選抜日程　Screening date

2024 年 7 月 9 日（火）～ 7 月 10 日（水）

Tuesday, July 9, 2024 - Wednesday, July 10, 2024

※実施日時等の詳細は、後日志願者に直接通知します。

*Applicants will be directly notified at a later date of the test time and other information.

８．合格発表　・Announcement of successful applicants

2024 年 8 月 1 日（木）16 時頃　Thursday, August 1, 2024, around 16:00

合格者には「合格通知書」を郵送します。また、横浜国立大学大学院理工学府のウェブサイト（https://www.fse.ynu.ac.jp/index.html）に合格者受験番号を掲載します。

Acceptance letters are sent to successful applicants. In addition, registration numbers of successful applicants are posted on the website of the Graduate School of Engineering Science (Website: https://www.fse.ynu.ac.jp/).

[注 1]「合格通知書」をもって、正式な通知とします。

The acceptance letter is the sole document entailing our official acceptance.

[注 2]電話等による合否結果の問い合わせには一切応じません。

We do not respond to any inquiries regarding the outcome of the examination via phone calls and so forth.

９．入学時に必要な経費[日本政府（文部科学省）国費外国人留学生に対しては徴収しません]

Required payments for admission [Payments are not required from Japanese government-financed (MEXT) international students.]

入学料　282,000 円（現行）

Admission fee　282,000 yen (currently)

[注 1]入学料及び授業料（年額 535,800 円）は改定される場合があります。在学中に授業料の改定が行われた場合、改定時から新しい授業料が適用されます。

The amount of the admission fee and tuition (535,800 yen) are subject to change. Any change in the amount of tuition while a student is enrolled will take effect from the moment the change is introduced.

[注 2]納入方法の詳細は、入学手続書類と一緒に送付します。

Information about the payment method will be sent together with documents on the enrollment procedures if your application is accepted.

１０．経済支援制度　Financial Aid

入学後の経済支援制度として、「授業料免除等制度」「奨学金制度」等があります。詳細は学務部学生支援課ホームページの奨学金・授業料／入学料免除のページを確認してください。

A post-enrollment financial aid program has been established, and provides for tuition waivers, scholarships and other such forms of assistance. For further details, check the scholarship and tuition/enrollment fee waiver section of the Student Affairs and International Relations Department, Student Support Division website.

http://www.gakuseisupport.ynu.ac.jp/　【日本語 Japanese】

また、独立行政法人日本学生支援機構では、海外から直接日本の大学に入学する私費外国人留学生のための奨学金を支給する制度があり、本要項の入試で合格した者は、この制度の対象となります。詳細は、以下のウェブサイトを確認してください。

Japan Student Services Organization sponsors a reservation program that sets aside scholarships for privately financed international students who enroll in a graduate school in Japan directly from overseas. Privately financed international students who successfully accepted in this special selection meet these criteria. For more details, refer to the following website.

https://www.jasso.go.jp/ryugaku/study_j/scholarships/shoureihi/tonichimaeyoyaku.html

【日本語 Japanese】

１１．合格発表後の渡日手続きについて

Procedures for Coming to Japan Following Notification of Acceptance

日本に来る前に次の手続きを必要とします。

The following procedures are necessary before coming to Japan.

(1) パスポート及び査証の取得　Obtaining a Passport and a Visa

外国人留学生が本学に入学するために必要な手続を以下のウェブサイトに掲載していますので、確認してください。

Referring to the following websites to see the necessary procedures before entering Yokohama National University.

https://global.ynu.ac.jp/admissions/before_enrolment/　【日本語 Japanese】

https://global.ynu.ac.jp/en/admissions/before_enrolment/　【英語 English】

(2) 住宅の確保　Securing a Residence

渡日後の住まいは、日本に住む代理人や同国の留学生を通じて事前に準備しておくようにしてください。なお、以下のウェブサイトもご覧ください。

Through an agent or another foreign student from your country who is living in Japan, please arrange for a residence where you can live once you come to Japan. In this connection, please visit the following websites.

https://www.ynu.ac.jp/campus/support/dormitory.html　【日本語 Japanese】

https://www.ynu.ac.jp/english/student/#housing　【英語 English】

１２．注意事項　Reminders

(1) 出願書類等に不備がある場合には、受理しないことがあります。

(2) 出願手続後の提出書類の内容変更は認めません。

(3) 出願書類等は返却しません。

(4) 払込済の入学検定料は、次の場合を除き、いかなる理由があっても返還しません。返還請求の方法は、理工学系教務課理工学府係へお問い合わせください。

ア．入学検定料を払い込んだが本学府に出願しなかった（出願書類等を提出しなかった又は出願が受理されなかった。）場合

イ．入学検定料を誤って二重に払い込んだ場合

※返還額は、返還の際に要する手数料が差し引かれた額となります。

（5）出願書類に虚偽の記載があった場合は、入学後でも入学を取り消すことがあります。

（6）出願の際に登録する氏名はなるべく常用漢字を使用してください。常用漢字以外を使用した場合、コンピュータで表記できないことがあります。その場合、合格通知書および入学許可書には出願時に登録した氏名と異なる漢字に置き換えることがあります。

（7）志望する教育分野、教育プログラム、指導教員については、入試の成績によっては志望のとおりとならない場合があります。第２志望以下についても考慮しておいてください。

（8）提出した卒業証明書や成績証明書について第三者による認証証明が必要だと本学が判断した場合には志願者の費用負担で、本学が指定する認証機関において認証に係る審査を受けていただく場合があります。

（9）在留資格「留学」を取得するに当たっては、留学生生活を維持できる経済的基盤を有している必要があります。

（10）本試験に関する変更等が生じた場合は、理工学府のウェブサイトでお知らせすると共に出願者に通知します。

（11）官公庁又は会社等に在職している者は、入学手続きの際、その長又は代表者の就学承認書（様式は任意）を必要としますので、あらかじめ用意してください。

（12）入学手続後は、どのような事情があっても、入学料の払い戻しはしません。

（13）入学後の経済支援制度として、「授業料免除等制度」・「奨学金制度」等があり、多くの学生が活用しています。

(1) Inadequately prepared application documents may be rejected.

(2) No changes may be introduced to documents already submitted for the application procedure.

(3) Application documents are not retuned.

(4) Entrance application fees are not refundable except in the following circumstances.

Contact the Graduate School of Engineering Science Section to find out how to ask for a refund.

A. An application was not filed after payment of the entrance application fee (application documents were not submitted or accepted).

B. Payment of the entrance application fee was made twice by mistake.

* Refunds are made after deduction of processing fees.

(5) Enrollment may be cancelled even after admission if false statements on application documents come to light.

(6) Please use the Joyo Kanji characters as much as possible. If you use non-Joyo Kanji characters, the computer may not be able to recognize your name. In such cases, the name may be replaced by a different Kanji character from the one registered on the application form on the acceptance notification and the admission letter.

(7) Depending on your performance in the entrance examination, you may not be assigned to your desired specialization, educational program or supervisor. Consider your other choice.

(8) If any third-party certification is deemed necessary with the submitted graduation certificate or transcript, the applicant is requested to take an examination with the certification organization specified by our university at the expense of the applicant.

(9) Sufficient economic resources for life on campus are necessary to gain residence status as a college student.

(10) Any changes related to the entrance examination will be notified to applicants along with announcements on the website of the Graduate School of Engineering Science.

(11) Employees of public offices or companies need to obtain written approval of enrollment (free form) from their directors or representatives. Prepare such documents in advance of the enrollment procedures.

(12) The admission fee is not refunded after the enrollment procedure under any circumstances.

(13) Many students admitted to the Graduate School of Engineering make use of economic assistance programs, such as tuition waivers, and scholarship programs.

１３．問い合わせ先　Contact Information

◆理工学系教務課理工学府係

住所：〒240-8501　横浜市保土ケ谷区常盤台 79-5

E-mail：ses.daigakuin-eng@ynu.ac.jp

◆Graduate School of Engineering Science Section, Yokohama National University

Address: 79-5 Tokiwadai, Hodogaya-ku, Yokohama 240-8501

E-mail: ses.daigakuin-eng@ynu.ac.jp

＊問い合わせは、電子メールにより日本語または英語でお願いします。

*You may send your inquiries by e-mail in either Japanese or English.

博士課程後期の概要

1. 大学院教育研究の目的

実践的学術の国際拠点を目指す本学の理工系大学院の基幹をなす理工学府において，自らの専門分野以外の分野の科学技術にも目を向ける進取の精神に富み，高い倫理観とグローバルに活躍するために必要な国際的に通用する知識と能力において理学と工学の両方のセンスを兼ね備えた理工系人材を育成することにより，ものづくりを中心とした産業を更に強化・発展させる。

理工学府博士課程後期では，自ら探求し発見した課題に対し，科学と技術に関する先進的な研究活動を通して幅広い視野から判断を下した解決をもって，広く社会に受容される発信能力により学術と産業の開拓を先導できる人材を育成する。すなわち，イノベーションの創出と発展を担う創造性豊かな高度専門職業人のリーダー人材を育成する。

2. 専攻の特色と育成人材像

2.1 機械・材料・海洋系工学専攻

本専攻では，ミクロからマクロにわたる物理現象の解析を基礎として，マイクロマシンから大型構造物まで，高度なシステムを総合的に設計する基盤的科学技術の研究，固体材料の有する力学的特性などの種々の特性の起源に係わる物性論に立脚した，地球と調和した機能及び構造材料の開発並びにこれら材料の製造・加工方法の研究，海洋空間におけるエネルギー利用や移動体・構造物の設計に関わるマクロエンジニアリング的アプローチによる海洋空間利用システムの研究等を通して教育を行い，実践的な高度技術者・研究者のリーダーとしてグローバルに活躍できる創造的な人材を養成する。

2.1.1 教育分野

機械・材料・海洋系工学専攻は，以下の 4 つの教育分野から構成される。それぞれの教育分野に，付与される学位と教育プログラム名を併記する。

・機械工学教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム
・材料工学教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム
・海洋空間教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム
・エネルギー材料教育分野：博士（工学），工学（TED）プログラム

2.1.2 教育プログラム

機械・材料・海洋系工学専攻での教育は，前節で示した各教育分野で行われるが，学位取得のためのプロセスとしての 2 つの教育プログラムを用意している。

・工学（TED）プログラム（機械工学教育分野，材料工学教育分野，海洋空間教育分野，エネルギー材料教育分野）

機械工学教育分野では，機械工学又はそれに関連する航空宇宙工学に関する博士課程前期レ

ベルの専門知識を有し，先進的な機械や機械システムを構築するための卓越した能力を備えた独創性豊かな研究者・技術者を目指す人を求める。材料工学教育分野では，材料工学・材料科学又はそれに関連する航空宇宙工学に関する博士課程前期レベルの専門的知識を有し，材料の力学と加工，材料の強度と組織，材料の機能と構造，材料の物理化学のいずれかの分野に関する高度で先進的な研究・技術に興味がある人を求める。海洋空間教育分野では，船舶海洋工学又はそれに関連する航空宇宙工学に関する博士課程前期レベルの専門的知識を有し，海洋空間を利用するための先進技術や基盤技術を統合する技術に積極的に取り組める人を求める。エネルギー材料教育分野では，材料工学又は機械工学に関する博士課程前期レベルの専門的知識を有し，エネルギー機器に用いられる材料の強度と組織，材料の機能と構造のいずれかの分野に関する高度で先進的な研究・技術に興味がある人を求める。

・工学（PED）プログラム（機械工学教育分野，材料工学教育分野，海洋空間教育分野）

機械工学教育分野では，機械工学又はそれに関連する航空宇宙工学に関する博士課程前期レベルの専門知識を有し，機械工学に係わる諸問題に対してグローバルに対応できる，実務能力を備えた自立した実務家・研究者を目指す人を求める。材料工学教育分野では，材料工学・材料科学又はそれに関連する航空宇宙工学に関する博士課程前期レベルの専門的知識を有し，材料の力学と加工，材料の強度と組織，材料の機能と構造，材料の物理化学のいずれかの分野の高度で実践的な研究・技術に興味がある人を求める。海洋空間教育分野では，船舶海洋工学又はそれに関連する航空宇宙工学に関する博士課程前期レベルの専門的知識を有し，海洋空間を利用するための機器の計画，建造，運用に関する実践的かつ高度な技術課題に積極的に取り組める人を求める。

2.2 化学・生命系理工学専攻

原子の集合体としての分子や固体材料，分子の集合体としての有機材料は，その電子構造及び原子や分子の種類とその配列によって現れる機能が大きく変化する。そのためその構造-機能発現相関を明らかにすることは物質化学の根幹をなす。また物質の持つ化学エネルギーを効率よく利用し，多種多様な情報を統合して新素材を効率よく製造するプロセスの確立は，環境負荷を少なく効率的に物質を製造・利用するための最重要課題である。食料問題や生命・医療などのグローバルな課題の解決に生命現象の解明と応用が必要である。本専攻では，新しい機能を発現する分子・材料の開発，製造や利用プロセスの開発，生命現象の解明と応用などを通し，物質と生命の課題を発見し地球環境に配慮して効率的に解決できる創造的な人材を育成する。

2.2.1 教育分野

化学・生命系理工学専攻は，以下の 4 つの教育分野から構成される。それぞれの教育分野に，付与される学位と教育プログラム名を併記する。

・化学教育分野：博士（理学），理学（PSD）プログラム

・応用化学教育分野：博士（工学），工学（TED）プログラム

・化学応用・バイオ教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム

・エネルギー材料教育分野：博士（工学），工学（TED）プログラム

2.2.2 教育プログラム

化学・生命系理工学専攻での教育は，前節で示した各教育分野で行われるが，学位取得のためのプロセスとしての３つの教育プログラムを用意している。

・工学（TED）プログラム（応用化学教育分野，化学応用・バイオ教育分野，エネルギー材料教育分野）

物質・材料の基盤となる無機化学，分析化学，物理化学，有機化学等の諸分野に加え，材料工学，エネルギー化学，触媒化学，高分子化学，生化学，化学工学，生物工学等に関する高度な知識を有し，新しい機能を発現する分子・材料の開発，製造や利用プロセスの開発，生命現象の解明と応用，物質と生命の課題を発見し地球環境に配慮して効率的に解決する力を育成する。本プログラムでは，化学，エネルギー化学，バイオ・ライフサイエンスおよびこれらの関連分野に関して，高度な研究・開発能力，及び未知の問題に対して幅広い視野から柔軟かつ総合的に判断し解決できる能力を身に付けた人材を求める。

・工学（PED）プログラム（化学応用・バイオ教育分野）

物質・材料の基盤となる化学の諸分野に加え，材料工学，化学工学，生物工学，生化学等に関する高度な知識を有し，先端的物質・材料の創製と製造，エネルギー化学，及びバイオ・ライフサイエンスに関する高度な研究・開発能力，未知の問題に対して幅広い視野から柔軟かつ総合的に判断し解決できる能力，基礎知識を総合して応用技術を構築する先進的な能力を育成する。本プログラムでは，化学工学，エネルギー化学，材料工学，バイオ・ライフサイエンスおよびこれらの関連分野に関して，高度な実践的な能力の育成を目指す工学系教育を行い，自らの知識，経験，技術，洞察力などを統合して新しい産業応用展開方向を生み出す力，リーダーとなる能力を養成する。

・理学（PSD）プログラム（化学教育分野）

無機化学，分析化学，物理化学，有機化学，触媒化学，高分子化学，電気化学，生物化学等の化学の諸分野において，分子・材料の設計原理およびその合成方法の深い探求や，化学的事象・物性等の詳細な解明を行うことにより，化学分野における高度の学術的探求能力を涵養するとともに，研究成果を国際的に発信する能力を育成する。併せて，材料工学，触媒工学，生物工学等，化学・生命系諸分野の工学的応用に関する教育により，化学分野における工学的価値観を確立する。これらを総合することにより，理学的な真理探究のみならず，理学的基礎科学に基づいた次世代の基盤材料開発にも貢献できる高度の能力を身に付けた，学界・産業界で国際的に活躍できる人材を養成する。

※機械・材料・海洋系工学専攻及び化学生命系理工学専攻の「エネルギー材料教育分野」入学志願者は、出願書類提出前に希望指導教員あるいは問い合わせ担当教員と研究分野等に関してよく相談すること。

2.3 数物・電子情報系理工学専攻

数物・電子情報系理工学専攻（博士課程後期）の人材養成目的は、数理科学，物理学などの

基礎（理学）から応用（工学）に至る広範囲な分野に精通した総合的・学際的見識が求められているのは博士課程前期と同様であるが，博士課程後期では，博士課程前期までに培った知識を 世界トップレベルの研究活動を通じて深化させ，先導的に数理科学，物理学，電気工学，電子工学，通信工学，情報工学，医療情報工学，応用物理学などの分野における学術・産業の創出，発展を担い，激変する知識基盤社会・高度情報化社会の諸問題を創造的に解決できる研究者・技術者のリーダー人材を育成することである。

2.3.1 教育分野

数物・電子情報系理工学専攻は，以下の 5 つの教育分野から構成される。それぞれの教育分野に，付与される学位と教育プログラム名を併記する。

・数学教育分野：博士（理学），理学プログラム
・物理工学教育分野：博士（理学），理学（PSD）プログラム
・応用物理教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム
・情報システム教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム
・電気電子ネットワーク教育分野：博士（工学），工学（TED）プログラムまたは工学（PED）プログラム

2.3.2 教育プログラム

・工学（TED）プログラム（応用物理教育分野，情報システム教育分野，電気電子ネットワーク教育分野）

電気・電子ネットワーク分野，情報システム分野，応用物理分野の基礎的な学力と専門分野において博士課程前期レベルの能力を有し，高度の研究・開発能力，自ら課題を探求し，未知の問題に対して幅広い視野から柔軟かつ総合的な判断を下して解決できる力を持ち，成果を国際的に発信する能力を有し，新しい研究の方向を開拓するリーダーとなることに情熱を持つ人を求める。

・工学（PED）プログラム（応用物理教育分野，情報システム教育分野，電気電子ネットワーク教育分野）

上記の分野において博士課程前期レベルの能力を有し，電気・電子・通信・情報などの分野のスタジオで論文作成指導を受け，専門性をさらに研鑽し，博士の学位を取得することに情熱を持つ人を求める。また，社会で活躍できる実務家の観点から学位論文を作成し，博士の学位を取得することに情熱を持つ人を求める。

・理学（PSD）及び理学プログラム（物理工学教育分野，数学教育分野）

物理学又は数学の各分野において博士課程前期レベルの能力，高度な研究・開発能力，及び成果を国際的に発信する能力を有する人を求める。また，自ら新しい問題・課題を発見し，それを物理学又は数学の概念を利用して論理的に解決する道を開く意欲と決意をもつとともに，これらを通して，新しい研究分野を開拓するリーダーとなることに情熱を持つ人を求める。

Overview of Doctoral Programs

1. Purpose of Education and Research at our Graduate School

The Graduate School of Engineering Science at YNU aspire to serve as an international hub of practical science. The effort is led by the Graduate School of Engineering Science, which aims to foster globally competitive scientists and engineers who have sound ethics and enterprising spirits to learn beyond their areas of expertise. We hope to further strengthen and develop the manufacturing industry and other industries by nurturing people who are well-versed in both science and engineering.

The doctoral programs at the Graduate School of Engineering Science produce professionals who can conduct leading-edge research on the issues that they have identified and apply solutions that they have found based on broad perspectives. At the same time, they are expected to exercise great communication skills in the society to drive forward the development of science and industries. Graduates are expected to lead further innovation as creative and highly specialized professionals.

2. Description of Departments and Profile of Graduates

2.1 Department of Mechanical Engineering, Materials Science, and Ocean Engineering

In this department, education will be conducted in mechanical, material, naval architecture and ocean, and aerospace engineering based on analyses of physical phenomena from micro to macro levels. Research conducted in this department addresses: basic science technologies to comprehensively design advanced systems from micromachines to large structures; production and processing methods for the development of functions and structural materials that maintain the balance with the global environment by applying the mechanical properties of solid materials and theories on the origins of various properties; and systems for using marine space through microengineering for marine energy use and for designing mobile objects and structures. In this manner, the department produces globally-competitive, practical, and creative engineers and researchers who can be leaders in their area of research.

2.1.1 Specializations

The Department of Mechanical Engineering, Materials Science, and Ocean Engineering covers the following four specializations. The awarded degree and offered programs are listed next to each specialization.

- Mechanical Engineering: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program
- Materials Science Frontier: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program
- Systems Design for Ocean-Space: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program

• Energy Materials: Doctor (Engineering), T-type Engineering Degree (TED) Program

2.1.2 Education Programs

Two different types of education programs are offered at the Department of Mechanical Engineering, Materials Science, and Ocean Engineering to obtain degrees in the specializations listed in the previous section.

- **T-type Engineering Degree (TED) Program (in Mechanical Engineering, Materials Science Frontier, Systems Design for Ocean-Space, and Energy Materials)**

The TED program in mechanical engineering welcomes students with a Master's level expertise in mechanical engineering or related fields of aerospace engineering who seek to become creative researchers and engineers with the excellent ability to construct advanced machines and mechanical systems. The program in materials science frontier welcomes students with a Master's level expertise in material engineering and science, or related fields of aerospace engineering who are interested in advanced research and technologies related to material mechanics and processing, material strength and structure, material function and composition, or material physics and chemistry. The program in systems design for ocean-space welcomes students with a Master's level expertise in naval architecture and ocean engineering or related fields of aerospace engineering who are keen to apply advanced technologies for using marine space and for combining basic technologies. In the field of energy materials education, those who have specialized knowledge at the early doctoral level in materials engineering or mechanical engineering, and who are advanced and advanced in either the strength and microstructure of materials used in energy equipment or the function and structure of materials We are looking for student who are interested in research and technology.

- **Pi-type Engineering Degree (PED) Program (in Mechanical Engineering, Materials Science Frontier, and Systems Design for Ocean-Space)**

The PED program in Mechanical Engineering welcomes students with a Master's level expertise in mechanical engineering or related fields of aerospace engineering who seek to gain practical skills and work globally and independently as practitioners and researchers while addressing issues involving mechanical engineering. The program in Materials Science Frontier welcomes students with a Master's level expertise in material engineering and science or related fields of aerospace engineering who are interested in advanced and practical research and technologies involving material mechanics and processing, material strength and structure, material function and composition, or material physics and chemistry. The program in Systems Design for Ocean-Space welcomes students with a Master's level expertise in naval architecture and ocean engineering or related fields of aerospace engineering who are keen to engage in practical and technical challenges involved in the planning, construction, and operation of devices for using marine space.

2.2 Department of Chemistry and Life Science

Molecules and solid materials as aggregates of atoms, and organic materials as aggregates of molecules, exhibit very different functions depending on their electronic structures, types of atoms and molecules, and their arrangements. Therefore, the clarification of the interrelation between structures and exhibited functions is vital to material chemistry. The most crucial task for producing and using materials efficiently with minimum environmental load is to establish efficient production systems for new materials by effectively harnessing the chemical energy of materials and integrating a wide range of information. In order to tackle global problems related to food, life, medicine, and so forth, it is essential to unravel and apply life phenomena. This department provides opportunities to develop molecules and materials that exhibit new functions, devise new processes for producing and using them, and unravel and apply life phenomena. In this manner, the department cultivates creative professionals who can identify challenges involving materials and life, and effectively address them with due consideration to the global environment.

2.2.1 Specializations

The Department of Chemistry and Life Science covers the following four specializations. The awarded degree and offered programs are listed next to each specialization.

• Chemistry: Doctor (Science), Professional Science Degree (PSD) Program

• Applied Chemistry: Doctor (Engineering), T-type Engineering Degree (TED) Program

• Chemistry Applications and Life Science: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program

• Energy Materials: Doctor (Engineering), T-type Engineering Degree (TED) Program

2.2.2 Education Programs

Three different types of education programs are offered at the Department of Chemistry and Life Science to obtain degrees in the specializations listed in the previous section.

• **T-type Engineering Degree (TED) Program (in Applied Chemistry, Chemistry Applications and Life Science, and Energy Materials)**

The program requires advanced knowledge in inorganic chemistry, analytical chemistry, physical chemistry, organic chemistry, and other essential fields related to materials, as well as in material engineering, energy chemistry, catalytic chemistry, polymer chemistry, biochemistry, chemical engineering, bioengineering, and so forth. Students will develop molecules and materials that produce new functions; develop processes for producing and using them; unravel and apply life phenomena; and identify challenges involving materials and life forms and effectively solve them with due consideration to the global environment. The program welcomes students who have both advanced research and development skills in chemistry, energy chemistry, bio and life science, and related fields, and the ability to make flexible and comprehensive judgments to address unknown problems based on their broad perspectives.

• **Pi-type Engineering Degree (PED) Program (in Chemistry Applications and Life Science)**

The program requires advanced knowledge in essential fields related to substances and materials, as well as material engineering, chemical engineering, bioengineering, biochemistry, and so forth. The program cultivates skills involved in the invention and manufacturing of advanced materials and in the advanced research and development of energy chemistry, and bio and life science. It also cultivates the ability to solve unknown problems by making flexible and comprehensive judgements based on broad perspectives and to integrate basic knowledge in the formation of applied technologies. The engineering education offered in this program is aimed at developing highly practical skills in chemical engineering, energy chemistry, material engineering, bio and life science, and related fields. Students are expected to integrate their knowledge, experience, technologies, and insights to set a new direction and lead future industries.

• **Professional Science Degree (PSD) Program (in Chemistry)**

In this program, students study designing principles and synthetic methods of molecules and materials and learn about chemical phenomena and properties in order to develop advanced skills for making scientific research in the fields of chemistry, including inorganic chemistry, analytical chemistry, physical chemistry, organic chemistry, catalytic chemistry, polymer chemistry, electrochemistry, and biochemistry. The additional studies in material engineering, catalytic engineering, bioengineering, and application of chemistry and life sciences to engineering are intended to build their engineering basics in chemistry. The integrated style of education produces highly capable and globally-competitive professionals in the scientific community and industries who can conduct scientific research, as well as contribute to the development of crucial materials for the next generation based on an understanding of basic science in terms of physics.

※Applicants for admission to the "Field of Energy Materials Education" in the Department of Mechanical Engineering, Materials Science, and Ocean Engineering and the Department of Chemistry and Life Science should consult carefully with their academic advisor or the faculty member in charge of inquiries regarding their field of study before submitting their application documents.

2.3 Department of Mathematics, Physics, Electrical Engineering and Computer Science

Similar to the master's programs, the doctoral programs at the Department of Mathematics, Physics, Electrical Engineering and Computer Science requires broad familiarity and interdisciplinary knowledge in mathematical science, physics, and other basic sciences, as well as their engineering application. By engaging in the world's leading researches, these doctoral programs deepen the knowledge gained in the master's programs and help students take initiatives in the creation and development of science and industries in the fields of mathematical science, physics, applied physics, as well as electrical, electronic, communication, information, and medical information engineering. In this manner, the programs produce leading researchers and engineers who can creatively address challenges faced by the knowledge-based and information-driven society that is going through a radical change.

2.3.1 Specializations

The Department of Mathematics, Physics, Electrical Engineering and Computer Science covers the following five specializations. The awarded degree and offered programs are listed next to each specialization.

- Mathematical Sciences: Doctor (Science), Science Degree Program
- Physics: Doctor (Science), Professional Science Degree (PSD) Program
- Applied Physics: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program
- Information Systems: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program
- Electrical and Computer Engineering: Doctor (Engineering), T-type Engineering Degree (TED) Program, or Pi-type Engineering Degree (PED) Program

2.3.2 Education Programs

- **T-type Engineering Degree (TED) Program (in Applied Physics, Information Systems, and Electrical and Computer Engineering)**

The program welcomes students with advanced research and development skills based on their academic background in electrical and computer engineering, information systems, and applied physics, as well as a Master's level expertise in their areas of specialization. They are expected to set their own agenda and flexibly address unknown problems by making comprehensive judgments based on their broad perspectives. Expected qualities also include the ability to communicate their findings to the world and the passion to serve as pioneers for new research.

- **Pi-type Engineering Degree (PED) Program (in Applied Physics, Information Systems, and Electrical and Computer Engineering)**

The program welcomes students with the abovementioned academic background at a Master's level who aspire to further enhance their expertise in electrical, electronic, communication, and information engineering; learn how to write a thesis in a studio (workshop); and receive a PhD degree. The program also welcomes PhD candidates who want to write their thesis from the perspective of a socially-relevant practitioner.

- **Professional Science Degree (PSD) Program and Science Degree Program (in Physics and Mathematical Science)**

The programs welcome students with an academic background in physics or mathematics at a Master's level, advanced research and development skills, and the ability to communicate their findings to the world. The programs also welcome motivated students who are committed to offering logical solutions to new issues and challenges that they have identified themselves by applying physical or mathematical concepts, thereby leading the way on the new frontiers of research.

Specialization and research field of supervisors

April 2024 Revised

For details of each supervisors, refer to the website of the Graduate School of Engineering Science, Yokohama National University (https://www.fse.ynu.ac.jp/english/index.html)

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	ARAKI Takuto	Professor	Mechanical Engineering(MD) and Energy Materials(D)	Thermo-fluid Dynamics, Mass and heat Transfer, Fuel Cells, Micro Electro Mechanical Systems	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	ISHII Kazuhiro	Professor	Mechanical Engineering(MD) and Aerospace Engineering(M)	Combustion Engineering, Chemical Propulsion	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	YU Qiang	Professor	Mechanical Engineering(MD) and Process Integration(M)	Computational Mechanics, Strength of Materials	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	OZAKI Shingo	Professor	Mechanical Engineering(MD) and Energy Materials(D)	Constitutive Equation, Plasticity, Friction, Self-healing materials, Terramechanics	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	SATO Yasukazu	Professor	Mechanical Engineering(MD)	Mechatronics, Electromechanical Systems, Fluid Power Control, Power Transmission	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	HYAKUTAKE Toru	Professor	Mechanical Engineering(MD)	Computational Fluid Dynamics, Biomechanics, Micro Nano Flow	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	MAEDA Yusuke	Professor	Mechanical Engineering(MD)	Robotics, Manufacturing systems engineering	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	MATSUI Jun	Professor	Mechanical Engineering(MD)	Internal Flow in Fluid Machinery , Computational Fluid Dynamics	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	MARUO Shoji	Professor	Mechanical Engineering(MD) and Process Integration(M)	Ultrahigh-precision 3D printing, Micromachine, Micro Total Analysis System	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	INOUE Fumihiro	Associate Prof.	Mechanical Engineering(M) and Process Integration(M)	Advanced Packaging and 3D Integration	—	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	OTA Hiroki	Associate Prof.	Mechanical Engineering(MD) and Process Integrartion(M)	Micro/Nano fabrication, Sensor engineering, Soft material	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	KATO Ryu	Associate Prof.	Mechanical Engineering(MD)	Robotics, Medical welfare machine, Rehabilitation engineering, Brain machine interface	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	KITAMURA Keiichi	Associate Prof.	Mechanical Engineering(MD) and Aerospace Engineering(M)	Aerodynamics, Computational Fluid Dynamics, Hypersonic Flow, Multiphase Flow	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	SAKAI Seigo	Associate Prof.	Mechanical Engineering(MD)	Heat Transfer, Numerical Simulation, Radiative Exchange	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	SHINOZUKA Jun	Associate Prof.	Mechanical Engineering(MD)	Cutting, FEM, Dynamic Behavior of Material	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	TAKAO Yoshinori	Associate Prof.	Mechanical Engineering(MD) and Aerospace Engineering(M)	Electric Propulsion, Plasma Application	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	FUJISAWA Kei	Associate Prof.	Mechanical Engineering(M)	Droplet impact, Erosion, Polishing, Modeling	—	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	FUCHIWAKI Ohmi	Associate Prof.	Mechanical Engineering(MD) and Process Integration(M)	Micro mechanism, Micro manipulation, Actuator, Precise mobile robot	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Mechanical Engineering	KUROSE Kizuku	Assistant Prof.	Mechanical Engineering(M)	Heat transfer engineering, Heat exchanger, Heat transport device, Phase change heat transfer	—	○

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	UMEZAWA Osamu	Professor	Materials Science Frontier(MD) and Energy Materials(D)	Physical Metallurgy, Microstructural Design and Control, Deformation and Fracture	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	NAKAO Wataru	Professor	Materials Science Frontier(MD) and Energy Materials(D)	Machine material/material mechanics, Inorganic material/physical properties, Structural/functional materials	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	HASEGAWA Makoto	Professor	Materials Science Frontier(MD) and Aerospace Engineering(M)	Strength of Materials, Fracture Mechanics, Microstructure Control, Composites, Coatings	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	HIROSAWA Shoichi	Professor	Materials Science Frontier(MD) and Energy Materials(D)	Structural Materials Design, Microstructural Control of Metals, Computational Materials Science	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	MUKAI Kohki	Professor	Materials Science Frontier(MD)	Semiconductor Nanostructures, Quantum Optical Material, Optoelectronics Materials, Microfabrication of Metals	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	OHTAKE Mitsuru	Associate Prof.	Materials Science Frontier(MD), Energy Materials(D), and Process Integration(M)	Nanomaterials, Crystal Growth, Magnetism	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	OONO-HORI Naoko	Associate Prof.	Materials Science Frontier(MD)	Reactor Structural Materials, Extreme Materials, Microstructure Analysis	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	NAKATSUGAWA Hiroshi	Associate Prof.	Materials Science Frontier(MD)	Functional Material Engineering, Solid State Physics, Thermoelectric Materials, First Principles Calculation	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	MAENO Tomoyoshi	Associate Prof.	Materials Science Frontier(MD)	Manufacturing Processes, Forming Processes	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Materials Science Frontier	OSADA Toshio	Visiting Prof.	Energy Materials(D)	High Temperature Structural Materials, Microstructure of Materials, Strength of Materials, Fracture Mechanics	○	—
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	KAWAMURA Yasumi	Professor	Systems Design for Ocean-Space(MD)	Structural Mechanics, Computer Aided Engineering, Structural Reliability	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	NISHI Yoshiki	Professor	Systems Design for Ocean-Space(MD)	Marine Resource, Deepsea development, Seawater desalination	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	MIYAJI Koji	Professor	Systems Design for Ocean-Space(MD) and Aerospace Engineering(M)	High Speed Aerodynamics, Computational Fluid Dynamics, Aircraft Design	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	MURAI Motohiko	Professor	Systems Design for Ocean-Space(MD)	Design of Ocean Structures, Hydroelastic Responses of Huge Floating Structures, Hydrodynamics, Ocean Environmental Engineering, Ocean energy	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	TAKAGI Youhei	Associate Prof.	Systems Design for Ocean-Space(MD)	Computational Fluid Dynamics, Drag Reduction, Multiphase Flow	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	HIGUCHI Takehiro	Associate Prof.	Systems Design for Ocean-Space(MD) and Aerospace Engineering(M)	Attitude Control / Guidance and Control of Aerspace Vehicles, Aerospace Systems Design, Optimal Control, Unmmanned Aerial Vehicles	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	HIRAKAWA Yoshiaki	Associate Prof.	Systems Design for Ocean-Space(MD)	Ship Motion, Ocean Wave, Experiments in Towing Tank and Actual Sea	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	MITSUYUKI Taiga	Associate Prof.	Systems Design for Ocean-Space(MD)	Complex Systems Design, Systems Engineering	○	○
Mechanical Engineering, Materials Science, and Ocean Engineering	Systems Design for Ocean-Space	LI Qiao	Associate Prof.	Systems Design for Ocean-Space(M)	Motion Responses of Floating Structures, Marine Renewable Energy, Aquacultural Engineering	—	○
Chemistry and Life Science	Advanced Chemistry	ATOBE Mahito	Professor	Chemistry(MD), Applied Chemistry(D), and Energy and Sustainable Chemistry(M)	Organic Electrochemistry, Electrochemical Synthesis, Electrochemical Polymerization	○	○

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Chemistry and Life Science	Advanced Chemistry	INAGAKI Satoshi	Professor	Chemistry(MD), Applied Chemistry(D), and Energy and Sustainable Chemistry(M)	Catalytic Chemistry, Zeolite Science, Environmentally Benign Synthesis of Fine Chemicals	○	○
Chemistry and Life Science	Advanced Chemistry	OYAMA Toshiyuki	Professor	Chemistry(MD) and Applied Chemistry(MD)	Polymer Synthesis, Functional Polymers, Photosensitive Polymers, Thermosetting resins	○	○
Chemistry and Life Science	Advanced Chemistry	KAWAMURA Izuru	Professor	Chemistry(MD) and Applied Chemistry(MD)	Structural Biology, Biophysical Chemistry, Biomacromolecules	○	○
Chemistry and Life Science	Advanced Chemistry	KUBOTA Yoshihiro	Professor	Chemistry(MD), Applied Chemistry(D), and Energy and Sustainable Chemistry(M)	Catalytic Chemistry, Zeolite Science, Environmentally Benign Synthesis of Fine Chemicals	○	○
Chemistry and Life Science	Advanced Chemistry	KOJIMA Chojiro	Professor	Chemistry(MD) and Applied Chemistry(MD)	Structural Biology, Structural Chemistry, Biological Chemistry, Chemical Biology, NMR	○	○
Chemistry and Life Science	Advanced Chemistry	DOKKO Kaoru	Professor	Chemistry(MD), Applied Chemistry(D), Energy and Sustainable Chemistry(M), and Energy Materials(D)	Electrochemistry, Materials Chemistry, Electrochemical Devices	○	○
Chemistry and Life Science	Advanced Chemistry	MOTOKURA Ken	Professor	Chemistry(MD), Applied Chemistry(D), Energy and Sustainable Chemistry(M), and Energy Materials(D)	Concerted Catalysis, Supported Catalyst, Chemical Conversion of CO_2	○	○
Chemistry and Life Science	Advanced Chemistry	YABUUCHI Naoaki	Professor	Chemistry(MD), Applied Chemistry(D), Energy and Sustainable Chemistry(M), and Energy Materials(D)	Solid State Chemistry, Materials Chemistry	○	○
Chemistry and Life Science	Advanced Chemistry	YAMAGUCHI Yoshitaka	Professor	Chemistry(MD) and Applied Chemistry(MD)	Coordination Chemistry, Organometallic Chemistry, Molecular Catalysts	○	○
Chemistry and Life Science	Advanced Chemistry	ITO Suguru	Associate Prof.	Chemistry(MD) and Applied Chemistry(MD)	Organic Chemistry, Photochemistry, Supramolecular Chemistry	○	○
Chemistry and Life Science	Advanced Chemistry	UENO Kazuhide	Associate Prof.	Chemistry(MD), Applied Chemistry(D), Energy and Sustainable Chemistry(M), and Energy Materials(D)	Elecrochemistry, Electrolyte materials	○	○
Chemistry and Life Science	Advanced Chemistry	UBUKATA Takashi	Associate Prof.	Chemistry(MD) and Applied Chemistry(MD)	Photo Functional Chemistry, Photochromism	○	○
Chemistry and Life Science	Advanced Chemistry	KIKUCHI Azusa	Associate Prof.	Chemistry(MD) and Applied Chemistry(MD)	Photophysics and Photochemistry, Singlet Oxygen, Photochromism, Organic UV Absorber	○	○
Chemistry and Life Science	Advanced Chemistry	GOTOH Hiroaki	Associate Prof.	Chemistry(MD) and Applied Chemistry(MD)	Organic Synthesis, Physical Organic Chemistry, Molecular Design	○	○
Chemistry and Life Science	Advanced Chemistry	SHIDA Naoki	Associate Prof.	Chemistry(M) and Energy and Sustainable Chemistry(M)	Organic Electrochemistry, Electrosynthesis, Electrocatalyst, Molecular catalyst	—	○
Chemistry and Life Science	Advanced Chemistry	TATARA Ryoichi	Associate Prof.	Chemistry(M) and Energy and Sustainable Chemistry(M)	Electrochemistry, Physical Chemistry, Materials Chemistry	—	○
Chemistry and Life Science	Advanced Chemistry	SAKOMURA Masaru	Lecturer	Chemistry(MD) and Applied Chemistry(MD)	Physical Chemistry, Surface Science	○	○
Chemistry and Life Science	Advanced Chemistry	IDE Yusuke	Visiting Prof.	Energy Materials(D)	Mineral, Low-Dimensional Material, Catalysis, Photocatalysis, UV Shielding	○	—
Chemistry and Life Science	Advanced Chemistry	MANDAI Toshihiko	Visiting Associate Prof.	Energy Materials(D)	Electrochemistry, Solution chemistry, Structural chemistry, Organic synthesis	○	—
Chemistry and Life Science	Chemistry Applications and Life Science	OKAZAKI Shinji	Professor	Chemistry Applications and Life Science(M【PED only】D), and Energy and Sustainable Chemistry(M)	Sensor Engineering, Corrosion Engineering, Continuing Engineering Education	○	○

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Chemistry and Life Science	Chemistry Applications and Life Science	KANAI Toshimitsu	Professor	Chemistry Applications and Life Science(MD)	Optical Materials, Colloid Science, Microfluidics	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	TAKAGAKI Atsushi	Professor	Chemistry Applications and Life Science(M【PED only】D), Energy and Sustainable Chemistry(M) and Energy Materials(D)	Catalyst Chemistry, Heterogenous Catalyst, Inorganic Material Chemistry	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	TAKAHASHI Koji	Professor	Chemistry Applications and Life Science(MD)	Strength of Materials, Materials Science and Engineering	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	TAKEDA Minoru	Professor	Chemistry Applications and Life Science(MD)	Microorganisms, Enzymes, Glycoconjugates	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	FUKUDA Junji	Professor	Chemistry Applications and Life Science(MD)	Tissue Engineering and Regenerative Medicine	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	MITSUSHIMA Shigenori	Professor	Chemistry Applications and Life Science(M【PED only】D), Energy and Sustainable Chemistry(M) and Energy Materials(D)	Applied Electrochemistry	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	YOSHITAKE Hideaki	Professor	Chemistry Applications and Life Science(M【PED only】D), and Energy and Sustainable Chemistry(M)	Environmental Physical Chemistry, Materials Chemistry	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	IIJIMA Kazutoshi	Associate Prof.	Chemistry Applications and Life Science(MD)	Biofunctional Chemistry, Biomedical Engineering, Biomaterials, Regenerative Medicine	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	KURODA Yoshiyuki	Associate Prof.	Chemistry Applications and Life Science(M【PED only】D), and Energy and Sustainable Chemistry(M)	Inorganic Synthetic Chemistry, Energy Materials	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	SUZUKI Atsushi	Associate Prof.	Chemistry Applications and Life Science(MD)	Developmental Biology, Biochemistry, Mouse Genetics	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	NAKAMURA Kazuho	Associate Prof.	Chemistry Applications and Life Science(MD)	Membrane separation, Separation engineering, Environmental chemical engineering	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	NITTAMI Tadashi	Associate Prof.	Chemistry Applications and Life Science(MD)	Biochemical Engineering, Environmental Engineering, Microbiology	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	MATSUZAWA Koichi	Associate Prof.	Chemistry Applications and Life Science(M【PED only】D), and Energy and Sustainable Chemistry(M)	Applied Electrochemistry, Material of Energy Conversion	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	MISUMI Ryuta	Associate Prof.	Chemistry Applications and Life Science(MD)	Fluid Mixing and Agitation, Crystallization, Computational Fluid Dynamics, Transport Phenomena	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	MUROMACHI Sanehiro	Associate Prof.	Chemistry Applications and Life Science(M【PED only】D), Energy and Sustainable Chemistry(M), and Energy Materials(D)	Gas hydrate, Energy process, Crystal engineering	○	○
Chemistry and Life Science	Chemistry Applications and Life Science	AIHARA Masahiko	Lecturer	Chemistry Applications and Life Science(MD)	Chemical Energy Engineering, Chemical Reaction Engineering , Membrane Separation, Green Hydrogen	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Mathematical Sciences	UEKI Seiichiro	Professor	Mathematical Sciences(MD)	analytic function spaces and operators	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Mathematical Sciences	KAJIWARA Takeshi	Professor	Mathematical Sciences(MD)	Algebraic and Arithmetic Geometry	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Mathematical Sciences	KUROKI Manabu	Professor	Mathematical Sciences(MD)	Statistical Causal Inference	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Mathematical Sciences	TAKEI Masato	Professor	Mathematical Sciences(MD)	Spatial Stochastic Models, Stochastic Process	○	○

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Mathematics, Physics, Electrical Engineering and Computer Science	Mathematical Sciences	HONDA Atsufumi	Associate Prof.	Mathematical Sciences(MD)	Differential Geometry, Submanifold Theory, Singularity Theory	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	KATAYAMA Ikufumi	Professor	Physics(MD)	Terahertz and Ultrafast Spectroscopy	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	HONG Feng-Lei	Professor	Physics(MD)	Precision Spectroscopy, Quantum Measurement	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	KOSAKA Hideo	Professor	Physics(MD)	Quantum Computer, Quantum Communication, Quantum Information Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	SATO Jo	Professor	Physics(MD)	Elementary Particle Physics (Theory)	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	SEKIYA Takao	Professor	Physics(MD)	Solid State Physics, High Pressure Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	MINAMINO Akihiro	Professor	Physics(MD)	Neutrino Physics, Particle Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	RAEBIGER Hannes	Professor	Physics(MD)	Physics, Quantum chemistry, Material Science	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	AKAMATSU Daisuke	Associate Prof.	Physics(M)	Quantum Electronics, Quantum Metrology, Quantum Optics, Atomic Physics	—	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	UEHARA Masatomo	Associate Prof.	Physics(MD)	Solid State Physics, Materials Science	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	OHNO Shinya	Associate Prof.	Physics(MD)	Surface Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	KATAYOSE Yusaku	Associate Prof.	Physics(MD)	Cosmic Ray Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	SHIMAZU Yoshihiro	Associate Prof.	Physics(MD)	Experimental Solid State Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	SHUDO Ken-ichi	Associate Prof.	Physics(MD)	Surface Physics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	SHIRASAKI Ryoen	Associate Prof.	Physics(MD)	Condensed Matter Physics, Complex Systems	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	BAMBA Motoaki	Associate Prof.	Physics(M)	Quantum theory of light-matter interaction	—	○
Mathematics, Physics, Electrical Engineering and Computer Science	Physics	HORIKIRI Tomoyuki	Associate Prof.	Physics(MD)	Quantum Information, Quantum Optics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	AKATSU Kan	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Electric Machine design, analysis, control by using Power Electronics Technique	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	ARAKAWA Taro	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Optoelectronics, Quantum Nano Structures, Semiconductor Photonic Devices, Optical Bio/Gas Sensors	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	ICHIGE Koichi	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Digital Signal Processing, Image Processing, Wireless Communication	○	○

Department	Unit	Name	Title	Specialization (M：Master's program) (D：Doctoral program)	Research Field	Type of Students Accepted	
						Doctoral	Master's
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	SEKIGUCHI Koji	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Spintronics, Magnonics, Energy harvesting	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	TAKEMURA Yasushi	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Magnetics for Biomedical Applications, Magnetic Sensors	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	TSUJI Takao	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Power system engineering, Smartgrid, Renewable energy source	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	BABA Toshihiko	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Optoelectronics, Nano-photonics, Silicon photonics, IoT sensor	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	HAMAGAMI Tomoki	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Intelligent Systems, Machine Learning	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	FUKUNAGA Kaori	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Electromagnetic Sensing, Nondestructive Inspection, Heritage Science	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	FUJIMOTO Yasutaka	Professor	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Manufacturing Automation, Discrete Event Systems, Motion Control, Robotics, Electrical Machinery	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	ISHIKAWA Naoki	Associate Prof.	Applied Physics(M), Information Systems(M), Electrical and Computer Engineering(M), and Integrated Electoronics(M)	Mobile Network, Wireless Signal Processing, Space-Time Coding	—	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	OHTSUKA Kazuhiro	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Multimodal Informatics, Social Signal Processing, Communication Data Science	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	OHTSUKI Takashi	Associate Prof.	Applied Physics(M), Information Systems(M), Electrical and Computer Engineering(M), and Integrated Electoronics(M)	Energy systems engineering, Energy and electricity economics, Climate change	—	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	OYA Takahide	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Nanotechnology, Carbon Nanotube, Nonlinear system	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	KUGA Nobuhiro	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(MD)	Microwave Engineering and measurement, Antenna Engineering	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	SHIMONO Tomoyuki	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(MD)	Motion control, Haptics, Mechatoronics, Robotics, Electrical Machinery	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	SUGIMOTO Chika	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(MD)	Perceptual Information Processing, Human Sensing, Medical ICT	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	SUN Heming	Associate Prof.	Applied Physics(M), Information Systems(M), Electrical and Computer Engineering(M), and Integrated Electronics(M)	Video processing, Computer vision, Deep learning, Embedded system	—	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	NAKATA Masaya	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Soft computing, Optimization, Data mining	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	NISHIJIMA Yoshiaki	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Plasmonics, micro/nanophotonics, Nano Photonics Sensors, Photo-Thermal Energy Conversions	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	MIZUNO Yosuke	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Sensing Photonics, Fiber Optics, Nonlinear Optics, Opto-Electronics	○	○
Mathematics, Physics, Electrical Engineering and Computer Science	Electrical and Computer Engineering	YAMANASHI Yuki	Associate Prof.	Applied Physics(MD), Information Systems(MD), Electrical and Computer Engineering(MD), and Integrated Electronics(M)	Electron/electric material engineering, Electronic device/electronic equipment	○	○

ChatGPT をはじめとする生成 AI の利用について
Use of ChatGPT and other Generative AI Tools

横浜国立大学では、学生に対して、ChatGPT などの生成 AI に対する注意喚起を行っています。入学試験に関しても、下記の注意事項を踏まえて、必要な提出書類等の作成を行うようお願いします。なお留学生の皆さんは、下記の他、必要に応じて各国、地域の方針・法令等も踏まえるようお願いします。

【注意事項】

生成 AI に入力した情報は、AI の学習に利用されたり、意図せず漏洩したりする恐れがあります。また生成 AI の出力する情報は、出典が明らかではなく、虚構や、偏った主張、倫理上問題のある表現などが含まれている危険性があります。

出願書類等の作成に当たっては、横浜国立大学の「入学者受入れの方針（アドミッション・ポリシー）」を確認し、不正が疑われたり、入学後に学修上のミスマッチが起きたりしないよう、自らの責任において十分に考えたものを提出してください。

We are urging our students to take note of the precautions concerning the use of generative AI tools including ChatGPT. Regarding the documents necessary for our entrance examination, please prepare and submit them based on the following reminder. In addition, international students must abide by their national and regional policies, laws, and regulations as required.

Reminder

Information entered into generative AIs could be used for AI learning or leaked to unintended parties. Furthermore, the source of the information obtained from generative AIs is not clear and may contain fabricated data, biased views, or ethically problematic expressions.

Regarding an application form and other necessary documents, please prepare them in accordance with our Admission Policy and submit them at your own responsibility, ensuring that no wrongdoing is being committed and that no discrepancies in academic skills are suspected after admission.

別紙(Attachment) 3

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受験番号※ Examinee's number※

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Date：Day, Month, Year

出願書類送付内訳書
横浜国立大学大学院理工学府博士課程後期　渡日前特別選抜
Detailed Statement of Application Documents
Special Admission Prior to Arrival in Japan
Doctoral Program at Graduate School of Engineering Science, Yokohama National University

氏名(Name)

ユニット(Unit)

教育分野(Specialization)

本内訳書は、出願時の提出書類に添付して下さい。同封する書類等は下記の順に並べ、チェック欄に〇を付けて下さい。

Submit this statement as an attachment along with your application documents. Enclose the necessary documents in the following order and put a circle in each corresponding check box.

（チェック欄）

(Check box)

出願書類 Application document	書式 Form	注意事項 Note	外国人留学生 International students 渡日前 Special Admission Prior to Arrival in Japan
入学願書 Admittance Application Form	1	ＷＥＢ出願システムよりダウンロードし印刷して使用。写真１枚を入学願書に貼付。 Print out the form after downloading it from YNU Web Application System. Paste one photo on an application for admission.	
修了(見込)証明書 Certificate of (expected) completion	－	出身大学（在籍大学）長又は研究科長が作成したもの。 日本語または英語以外の証明書は、日本語訳または英語訳を添付。 To be prepared by the president or dean of the graduating (enrolled) school. Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
学位取得証明書 Certificate of degree	－	取得学位が記載されたもの。卒業証書の写しをもって代える場合は、出願書類として卒業証書の原本を提出し、返却を希望する旨のメモを同封。 日本語または英語以外の証明書は、日本語訳または英語訳を添付。 The degree obtained must be stated on the certificate. If you want to substitute your original graduation certificate with a photocopy, please include the original in your application, along with a note requesting that the original be returned. Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
成績証明書 Transcript	－	出身大学（在籍大学）長又は研究科長が作成したもの。 日本語または英語以外の証明書は、日本語訳または英語訳を添付。 To be prepared by the president or dean of the graduating (enrolled) school. Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	

在留資格に関する証明 Certificate of resident status	−	パスポートの写し。（氏名・国籍・写真が記載されているページ） Submit a copy of your passport. (the page with your name, nationality and photograph)	
受入内諾書 Provisional Acceptance Letter	19-2	理工学府ウェブサイトよりダウンロードし印刷して使用。希望指導教員の署名が必要。 Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science. Obtain a signature from the desired supervisor.	
修士論文とその概要 Master's thesis and summary	−	修士論文又はそれに代る論文とその内容を日本語の場合 2000 字、英語の場合 500 words 程度に要約した概要。 修士課程修了見込み者は、修士論文課題と研究の進行状況を 2000 字以内の文章に要約すること。 Master's thesis or a comparable paper, as well as a summary of it in about 500 words in English or 2,000 characters in Japanese A student expecting to complete a master's program should provide a summary of their thesis and report on the progress of their research in no more than 2,000 characters.	
研究業績調書 Record of Research Achievements	16	理工学府ウェブサイトよりダウンロードし印刷して使用。公表論文その他業績のリスト。可能な場合は別刷添付。 Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science. List your published papers and other achievements. (If possible, attach excerpts.)	
研究（希望）計画書 (Desired) Research Plan	17	理工学府ウェブサイトよりダウンロードし印刷して使用。 Prepare your application by downloading the necessary forms from the website of the Graduate School of Engineering Science.	
語学能力を客観的に示す書類（該当者のみ） Documents that objectively indicate your linguistic abilities (Only if requested)	−	・TOEIC または TOEFL のスコア証明書（英語を母国語としない者で、希望する指導教員から提出するよう指示があった者。スコア証明書は、出願期間の最終日から起算して 2 年以内のもの。）【※コピー不可】 ・日本語能力検定試験の成績証明書（日本語を母国語としない者で、希望する指導教員から提出するよう指示があった者。） -A TOEIC or TOEFL score certificate (This must be submitted by applicants whose native language is not English and who have been asked to submit it by their prospective academic advisor. Submit a score certificate from a test taken within the last two years counting from the last date of the designated application period. *No copies are accepted. - Japanese Language Proficiency Test score certificate (This must be submitted by applicants whose native language is not Japanese and who have been asked to submit it by their prospective academic advisor.)	
推薦書 Recommendation letter	−	所属・出身大学等の指導教員または研究科長レベル以上が作成したもの 日本語または英語以外で作成された証明書は、日本語訳または英語訳を添付。 To be prepared by the prospective academic advisor or the dean of the school where the applicant was or is enrolled. Any certificate written in a language other than Japanese or English must be accompanied by a Japanese or English translation.	
国費外国人留学生証明書 Government sponsorship certificate	−	（日本政府（文部科学省）国費外国人留学生のみ提出） コピー不可。 (Submit only for Japanese government-financed (MEXT) international students) No copies are accepted.	

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［窓口取扱時間］8:30～12:45，13:45～17:00
土日・祝日、夏季休業期間（8 月 13 日～8 月 19 日）を除く。

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and Summer Holidays(August 13th to August 19th)