創造理学コース

Creative Science Course

Check 詳しくはコースHPへ!

基礎科学の学識と問題解決能力に加え、さらにイノベーションとグローバルの観点をあわせもつ人材を育成します。

全国の理学部のなかで、イノベーションとグローバルの観点から基礎科学の教育を行う本コースは、大変ユニークなものです。
カリキュラムには、理学部各学科の専門の授業に加え、国際的視点と科学英語力を養成するための授業、
企業や国内有数の研究所で活躍されている方々の講義、そして海外有力大学との交流などが組まれています。

カリキュラム

専門分野の知識と技術
＋ 基礎教養

各学科教養・専門科目

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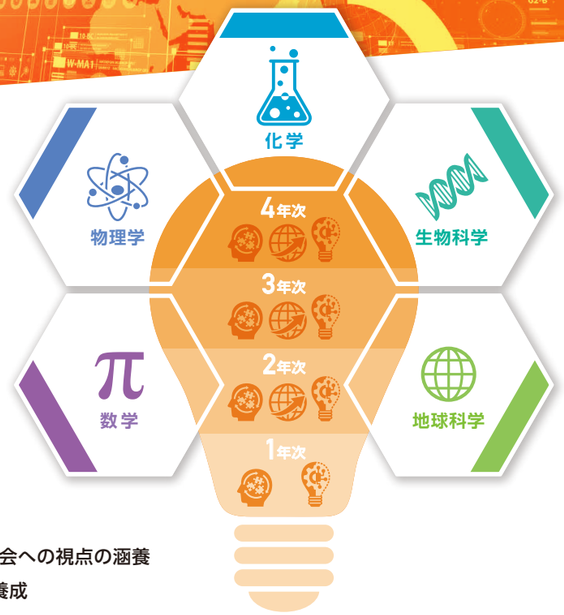
創造理学コース科目

- 自主的な研究者の育成
- 先端科学・イノベーション・社会への視点の涵養
- 国際的視点と科学英語力の養成



4年次〜3年次
- 先端科学Ⅲ
- グローバルサイエンスイノベーション実習
- 創造理学実践演習Ⅲ
- 先端科学Ⅱ
- サイエンスイノベーション実習

2年次
- 創造理学実践演習Ⅱ
- 科学英語表現Ⅰ・Ⅱ
- 短期グローバル研修Ⅰ・Ⅱ
- 先端科学Ⅰ
- サイエンスイノベーション入門

1年次
- 創造理学実践演習Ⅰ
- 先端科学入門

創造理学コースにおける学習の紹介

複数の専門分野を学び、自分にあった学科を選択

1年生では学科には所属せず、複数の専門科目(数学、物理学、化学、生物科学、地球科学)を履修する。2年進級時に自分が進みたい学科を選択する。

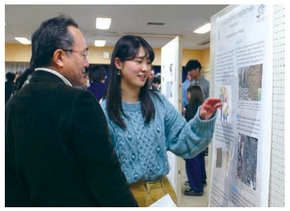
グローバルな視野を広げ、将来は国際的に活躍

海外に短期留学し、語学研修と研究施設見学、現地の人たちと英語での交流を行う。英語研修により、英語コミュニケーション能力を磨く。

応用科学の視点を持ちつつ、基礎科学の知識と技術を習得

複数分野にまたがる基礎科学の知識と技術を機能的に融合させて、実社会に適用できる問題解決型のサイエンスを身につける。

PICK UP 特徴的な授業



科学英語表現Ⅱ(英語授業)
Scientific English Communication II

論文の書き方とポスター発表の方法を学ぶ

Through this course, students acquire effective scientific communication skills; learn to select and organize the contents of an oral presentation, create compelling slides to support it, deliver the presentation effectively; learn how to create, promote and present scientific posters effectively.

先端科学Ⅰ(英語授業)
Frontier of Science I

最先端の科学を英語でプレゼンテーションする

To keep update with recent discovery and important breakthroughs in the fields of science is the key objective of this course. In this course, students learn how to identify areas requiring further research and apply case-based reasoning.

OG・OB Voice

Challenging a Taiwanese university master's course

I think the Creative Science Course is the best at Shizuoka University for preparing students to tackle the world. It was difficult for me to read many papers in English and give presentations in English during my first year of undergraduate study. However, the classes provided in the curriculum helped me build up my skills and confidence. Now I am applying to National Taiwan Ocean University's master's course. I could not have imagined this choice as a first-year undergraduate student. However, through the classes in the Creative Science course, I became more confident and willing to take on new challenges abroad. I was confused at first because many of the classes in the Creative Science Course were in English, but the teachers were very kind and helped me a lot. The course contents are also very different from other departments and are globally oriented. The Creative Science Course contributed significantly to expanding my possibilities.

創造理学コース卒業生(地球科学科) 吉野 瑞己さん

研究室紹介

ポーレ リコ　物理学

Emergence from Collective Phenomena in Quantum Matter

I study how large groups of electrons can work together to create surprising states of matter -- like magnetism, superconductivity, and topological insulators. These collective behaviors often emerge from simple ingredients but lead to rich and sometimes mysterious phenomena.
Using computer simulations, I explore how these phases form, how they behave at different temperatures, and how we might detect them in experiments. My goal is to connect theoretical ideas with real materials and help uncover new kinds of quantum matter.

道羅 英夫　生物科学

Functional genomics on the molecular mechanisms of interactions between organisms

All organisms survive by interacting with other organisms, and interactions between organisms have a significant impact on the evolution and diversity of organisms. Therefore, I study the molecular mechanisms of the symbiotic system of the paramecium and the symbiotic chlorella, as well as entomopathogenic fungi that parasitise insects and produce fruiting bodies, using state-of-the-art bioinformatics technology.

日下部 誠　生物科学

Fish physiology, Adaptation, Temperature Tolerance, Osmoregulation

I am interested in adaptation strategies of fish that inhabit various environmental conditions such as salinity and temperature. In recent years, it has been reported that seawater temperature is rising due to the effects of global warming. How do fish deal with the rising seawater temperature? For cold-water fish such as salmon, an increase in water temperature is a critical issue for surviving. I am currently studying what physiological mechanisms control the survival in a high water temperature environment in fishes.

デュア ガエル　地球科学

Aquatic plankton, Anthropogenic Perturbation, Individual-Based Modeling

Fascinated by the underwater world since my childhood, I study the response of planktonic organisms to anthropogenic perturbations. In particular, my research integrates data visualization and analysis and modeling to contribute to the understanding of how individual biology, physiology, behavior, as well as demographic and evolutionary processes influence the response of populations to different stresses.

OVERSEAS STUDIES

短期グローバル研修Ⅰ
※2022年度は、オンラインで実施。

English classes and Scientific Activities
One week at Hong Kong University of Science and Technology, Hong Kong or Auckland LSI and NIWA, New Zealand

Final Presentation of the FY2024 EngRich Program taught by the language center of HKUST.

Field visit to NIWA's Marine Research Center, Ruakaka, New Zealand (FY2024)

STUDENT APPRECIATIONS

"This short-term study abroad gave me various experiences at the overseas university. It was a good opportunity to think what I should be doing now as a student."
[創造理学コース・生物科学] 石原 健 さん

"In this study abroad I was able to improve my English!"
[創造理学コース・生物科学] 諏訪 敦也 さん

"From the last presentation, I gain more confidence in talking in front of people!"
[創造理学コース・地球科学] 馬場 美邑 さん

"I can speak English more fluently than before I came here!
[創造理学コース・数学] 伊藤 武 さん

取得できる資格

- 中学校教諭一種免許状(数学・理科)
- 高等学校教諭一種免許状(数学・理科)
- 測量士補 ●学芸員資格
- 甲種危険物取扱者資格(受験資格)
- 毒物劇物取扱責任者
- 自然再生士補資格

※取得できる資格は2年進級時の学科により異なるので、各学科のページでご確認ください。

学びの特色

It is undoubtedly important that students acquire knowledge on particular subjects, but one of the most important aspects of university studies is to develop in students the skills to ask "why?" and the ability to apply their knowledge to think, "How can it be answered?" This questioning approach is a skill that I would like students to acquire from their CSC studies.

[創造理学コース] 日下部 誠