
SDGs Initiatives at Osaka University

October 29, 2024

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President's Message: Direction of SDGs at Osaka University

To realize the Sustainable Development Goals (SDGs) and its principle of “Leave No One Behind” stated in the Transforming Our World: the 2030 Agenda for Sustainable Development adopted by the United Nations in 2015, President Nishio sent the following message to society.

President's message:

- The principle of the SDGs has much in common with the whole operation of Osaka University, which is based on the Osaka University Charter, the Inochi Initiative, creation of “a society that fosters a sense of purpose in life”, and the OU Ecosystem to embodies co-creation
- Through education, we develop human resources who can contribute to solving social issues represented by the SDGs
- Through research, by collaborating with overseas organizations and other such means, we contribute to the achievement of the SDGs in a variety of fields
- We aim to create an environment with an awareness of the SDGs that fosters diversity and creates interaction
- We aim to contribute to the achievement of the SDGs through the Expo 2025 Osaka, Kansai, Japan, also known as the SDGs Expo



Source: “Osaka University x SDGs” website

Sharing information on SDGs-related activities with society through the Osaka University SDGs website



SDGs-related education/research initiatives posted: **761**

News & topics on SDGs-related activities posted: approx. **3/month**

Posting of articles on the Inochi Forum started in April 2023

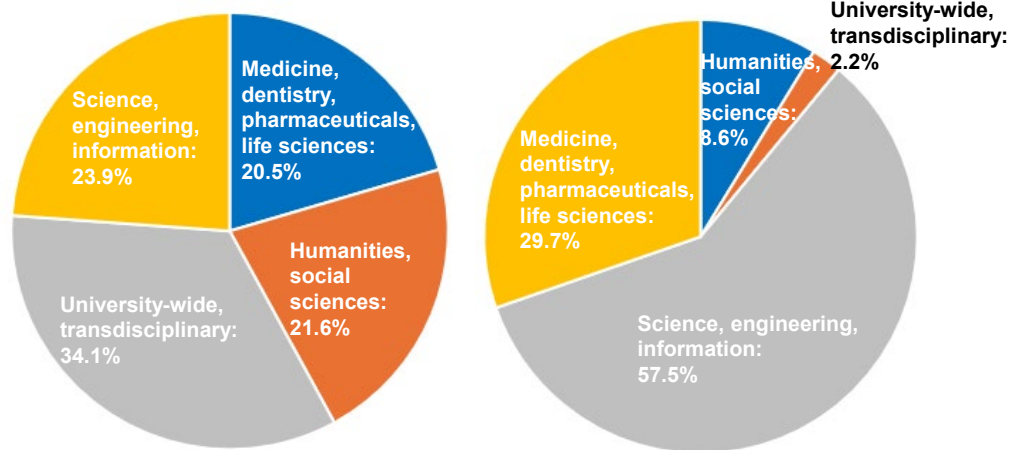
SDGs initiative videos have been posted since September 2024
(Additional some 250 videos from the research seeds collection of the Graduate School of Engineering, will be posted, resulting in a total of more than 1,000 videos.)

SDGs-related education/research initiatives

Total: **761** (Social contribution: **10**)

Education: **88**

Research: **663**






**Osaka University
OU-SDGs
Program**

持続可能な未来社会の実現に向けて、
幅広い知識とスキルを身につけよう！

OU-SDGsプログラムは、複雑化する社会課題の解決に
貢献し、「いのちを大切に、一人ひとりが輝く未来社会」の
実現に資する人材を育成する学部教育プログラムです。
学部初年次段階から履修できるSDGs関連科目を設定し、
この中から所定の単位数を修得した学生に対して修了認定証
を授与します。

原簿掲載校：大阪大学 全学部学生
修了要件：プログラム履修科目から8単位以上取得（※2単位はSDGs専門科目）
プログラム履修方法：指定の履修中にWeb KOANでプログラム履修を申請してください
プログラム履修科目：基礎教養教育科目、アドヴァンスト・セミナーのうち6SDGsに関連した科目

全学教育推進機構
Center for Education in Liberal Arts and Sciences

運営：大阪大学 全学教育推進機構
プログラムの詳細は特設ウェブサイトをご覧ください。→ <https://ou-sdgs.osaka-u.ac.jp>



Required Subject: Introduction to SDGs Studies

Relation to the SDGs

In this subject, students acquire basic knowledge such as the philosophy behind SDGs and Osaka University's efforts to solve social issues. Lecturers with high academic expertise and experience in the cutting-edge fields talk on social issues such as economy, the environment, dementia, menstruation, urban development, disaster prevention, and education and environmental rights; and their relations to the 17 Sustainable Development Goals (SDGs). The subject aims to equip the students with a wide range of knowledge.

Students enrolled in AY2023: 230

Students enrolled in AY2024: 256





高校生のための
SDGs@HANDAI 2024
フューチャー・デザイン
ワークショップ
 ～持続可能な社会を考える～

日時 **8/5 (月)**
 10:00～16:00

2050年の社会には何が必要でしょうか？
 持続可能な社会のために今できることは？
 大阪大学でフューチャー・デザインを使って一緒に考えませんか？

フューチャー・デザインとは、未来世代に持続可能な社会を創り出していくための社会の仕組みや社会システムをデザインしようとする取り組みです。このワークショップでは、市内の高校生から、府内各市町の高校生グループに分かれて大阪大学で考案したカードゲームを用いて一緒に考えます。文系・理系問わずどなたでも参加が可能な予定です。この機会にぜひフューチャー・デザインを体験してみてください。

プログラム

9:30 開場・受付開始
 10:00-12:00 開演説明 / カードゲーム・ワークショップ1 (グループワーク)
 12:00-12:30 昼休憩 (食費負担可)
 キャンパス見学 (阪大生が案内します)
 12:30-14:00 開演 / カードゲーム・ワークショップ2 (グループワーク)
 発表・クロージングセッション
 ※プログラムは変更する場合があります。

主催
 企画 先生 大阪大学工学部環境・エネルギーエンジニアリング専攻 教授
 若本 雅仁 大阪大学工学部環境・エネルギー・ナノマシンセンター 准教授
 阪大生もサポーターとして各グループに参加します。

会場 大阪大学 豊中キャンパス
 大阪大学会館 アセンブリーホール

対象・人数 高校生 80名程度 (先着順)

参加方法 対面 参加費 無料

締め切り 7/30 (火)

申し込み WEBサイトからお申し込みください
https://koudei.osaka-u.ac.jp/20240406_S033/

お問い合わせ | スチューデント・ライフスタイルサポートセンター 大阪大学
 ☎ koudei@ml.office.osaka-u.ac.jp

協力 | 大阪大学 スチューデント・ライフスタイルサポートセンター

共催 | 大阪大学 社会ソリューションイニシアティブ

協賛 | スチューデント・ライフスタイルサポートセンター 大阪大学

SDGs SUSTAINABLE DEVELOPMENT GOALS

“Future design” is a new discipline that seeks to design social structures and social systems in order to pass on a sustainable society to future generations.

In this workshop, participants (high school students) are divided into groups, and group members think together about the policies of an existing city from the perspective of the future using a card game devised at Osaka University. OU students also join the groups as supporters. The workshop is designed to allow all high school students to participate, regardless of their interest (either humanities and sciences).

(Number of participants: 80)



Osaka University supports the Sustainable Development Goals

Osaka University SDGs Virtual Student Exchange-2024

Live Locally, Grow Globally!

This year, we welcome you to:

- Video Production Workshop
- “Learning SDGs Globally and Locally” Online Course
(*eligibility criteria applies)
- “3 Minutes of Inspiration for Sustainable Development”
Video Contest
- Awards Ceremony & Virtual Student Forum!

You can participate in ALL or ANY of the events!



**Video Production
Workshop**
May 18-19
Oct 12-13



**Intensive
Online Course**
Aug 19-28



Video Contest
April-Oct 27



**Virtual
Student Forum**
Dec 16

More information coming soon...

 English 日本語
 中文
 YouTube Channel
 Osaka University
 SDGs Virtual Student Exchange
<http://osku.jp/sdgs>
 Email: sdgs@cgjin.osaka-u.ac.jp

The SDGs Virtual Student Exchange, hosted by the Center for Global Initiatives, provides opportunities for students at Osaka University and its partner institutions across the world to learn about the Sustainable Development Goals (SDGs), share ideas through creative media, and discuss student roles and actions. Participants will learn local and global challenges and potential solutions and strategies from expert researchers, faculty, and guest speakers, and will reflect on their roles in their communities.

This program will continue to be implemented until Expo 2025 Osaka, Kansai.

✂ This program will consist of four parts

- “Let’s learn from the Pros” Video Production Workshop
- “Learning SDGs Locally & Globally” Intensive Online Summer Course
- “3 Minutes of Inspiration for Sustainable Development” Student Video Contest 2024
- Video Contest Awards Ceremony & Virtual Student Forum 2024



【Research】Professor Hiroshi Uyama (Division of Applied Chemistry, Graduate School of Engineering): Bioplastics contributing to carbon neutral and solving marine plastic waste issue



Plastics, Packaging materials, Consumer goods



Bioplastics contributing to carbon neutral and solving marine plastic waste issue

Division of Applied Chemistry, Graduate School of Engineering
Professor Hiroshi Uyama <https://researchmap.jp/hued0168389>
Assistant Professor Yu-I Hsu <https://researchmap.jp/yuihsu>



Abstract

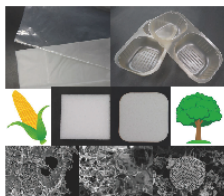
Recently, marine pollution caused by microplastics has become more serious, and there is a social demand for plastic resource recycling to build a carbon-free society. Bioplastics consisting of biomass plastics that contribute to carbon neutrality and biodegradable plastics that reduce the environmental load at the time of disposal are expected to be environmentally friendly plastics. We are actively promoting industry-academia collaborative research toward the practical applications of bioplastics. A functional coating material that brings out the feature of cheap vegetable oils has been developed, which has been put into practical use as a roof paint. Furthermore, a significant improvement in the heat resistance and impact resistance of bioplastics has been achieved by a vegetable oil-based additive. We have launched a development platform for marine biodegradable biomass plastic (MBBP) using proprietary thermoplastic starch and biodegradable plastics, and are prototyping biodegradable plastic products. A molding technology for starch alone has also been developed, leading to fabrication of a multi-layer starch/polyethylene sheet.

Significance of the research and Future perspective

We strongly promote activities at the MBBP development platform in which more than 30 companies participate and the newly launched venture company (KYU Co., Ltd.) for the early social implementation of bioplastics, which are indispensable for the recycling of plastic resources. By bridging the development of materials and molding technology, we contribute to the social implementation of bioplastic products.



Starch-containing Bioplastics



Polysaccharide-containing Plastic Prototypes / Ocean Biodegradability of Developed Product



Plant Oil-based Bioplastics



Biopolymer-based Plastics

Patent Japanese Patent No. 4840436, No. 5057874, No. 5436360
Realization Uyama, Hiroshi, Functional polymers from renewable plant oils. Polymer Journal 2018; 50:1003-1011. doi: 10.1039/s141428-018-0007-8
URL <http://www.chem.sng.osaka-u.ac.jp/mbbp/>
<http://www.sng.osaka-u.ac.jp/~uyamahi/>
Keyword bioplastics, biomass plastics, marine biodegradable plastics, thermoplastic starch

【Research Overview】

Recently, marine pollution caused by microplastics has become more serious, and there is a social demand for plastic resource recycling to build a carbon-free society. Bioplastics consisting of biomass plastics that contribute to carbon neutrality and biodegradable plastics that reduce the environmental load at the time of disposal are expected to be environmentally friendly plastics. We are actively promoting industry-academia collaborative research toward the practical applications of bioplastics.



OSAKA UNIVERSITY



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Inochi Forum Paves the Way for the Future

