

アフリカの潜在力と日本の 科学技術融合によるSDGs 貢献人材育成プログラム



受講生募集

上記プログラムによる講義

“Sustainable Global Management
2025”を開講します



“Global Management” はアフリカ 6 大学と
宇都宮大学の国際共同ウェブ講義です。

- ガーナ大学 (UG) (ガーナ)
- アディスアベバ大学 (AAU) (エチオピア)
- ジョモ・ケニヤッタ農工大学 (JKUAT) (ケニア)
- メル科学技術大学 (MUST) (ケニア)
- ダルエスサラーム大学 (UDSM) (タンザニア)
- ネルソンマンデラアフリカ科学技術大学院大学 (NM-AIST) (タンザニア)
- 宇都宮大学 (UU) (日本)

講義の目的

新型コロナウイルス（COVID-19）のパンデミックは世界中に様々な影響を与え、教育分野では一挙にデジタル化が進みました。一方で、2030年に向けて国連が推進するSDGs（持続可能な開発目標）を達成するために、国際協力やそれを支える人材が必要とされています。








そこで本プログラムは、SDGs達成に必須の社会構造に基づいた持続可能な開発を実現するために、地域社会の可能性を理解し、アフリカと日本の共同活動に貢献できる人材の育成を目的として、アフリカの6大学と宇都宮大学が共同でアフリカ、SDGs、そして科学を理解して考えて自ら成長することを目標に、必修集中講義「Sustainable Global Management」を開講します。このような広範囲な国際連携講義は画期的な試みです。

この講義は6月2日(月) から7月18日(金)の期間にC-learningを用いて開講され、15回のうち13回はオンデマンド講義、2回がZoomのリアルタイム講義で、単位は2単位です。講義はすべて英語です。

この講義はアフリカの6大学と宇都宮大学の相互学生交流の基礎となり、本講義を受講した修士学生の中から短期1名・長期1名の計2名が、旅費と滞在費の支援を受けてアフリカの6大学に留学が可能です。

以下、本講義の講師と講義のタイトルを紹介します。

| University name | Lecturer name | Title of the lecture (on-demand) | Outline of the lecture (about 100 words) | SDGs | Photo | E-mail Address (change (at) to @) |
|---|---|--|--|--|---|--|
| Jomo Kenyatta University of Agriculture and Technology (Kenya) | Prof. Arnold N. Onyango | Targeting the gut-liver axis for the prevention of non-communicable diseases | The burden of non-communicable diseases such as obesity, diabetes, hypertension, cardiovascular disease, chronic kidney disease and various types of cancer is increasing worldwide. Dietary and lifestyle modifications can reduce the risk for these diseases. For such approaches to be most effective, they should be targeted to pathophysiological events that occur long before the non-communicable diseases manifest. In this lecture, the concept that targeting early changes in the gut and liver could help in the prevention of many non-communicable diseases will be discussed. Examples of dietary and lifestyle modifications that promote gut and liver health will be given. | SDG 2 (Good health and well-being) |  | Arnold.onyango@jkuat.ac.ke |
| Meru University of Science and Technology (Kenya) | Dr. Zakayo Malngi | Nontuberculous Mycobacteria in a One Health Context: Bridging Human, Animal, and Environmental Health | This lecture explores the growing significance of Nontuberculous Mycobacteria (NTM) through a One Health approach, emphasizing their distribution and impact across human, animal, and environmental domains. It will examine the rising concern of antimicrobial resistance among NTM species, alongside key virulence factors that contribute to their persistence and pathogenic potential. Drawing on recent studies and real-world case examples, the session will highlight how genetic diversity, environmental resilience, and cross-species interactions influence the epidemiology and public health implications of NTM. The lecture underscores the urgent need for integrated surveillance, collaborative research, and coordinated intervention strategies to address the complex challenges posed by NTM at the human-animal-environment interface. | SDG 3: Good Health and Wellbeing SDG 17: Partnerships for the Goals |  | zakayo@must.ac.ke |
| Addis Ababa University (Ethiopia) | Dr. Bezawork Afework Bogale (Associate Professor) | Climate change impacts on birds | Although bird populations are showing a declining trend around the world mainly due to factors such as habitat loss and fragmentation, collisions with window, infrastructures and different anthropogenic factors, the effect of climate change as an important driver behind this worrying trend is not properly addressed. The change in climate patterns on earth and human-caused climate changes in an alarming rate cause difficulty for birds to adapt. In this seminar, how changing climatic conditions affect birds and the direct and indirect impacts will be addressed. | SDG Goal 13: Climate Action |  | bezawork.afework@asu.edu.et |
| University of Dar es Salaam (Tanzania) | Mr. Steven Kitigwa | Functional foods and nutraceuticals from Indigenous and wild foods of Africa | This lecture will cover the role of functional foods and nutraceuticals derived from indigenous and wild foods of Africa. The lecture will define functional foods and nutraceuticals, giving emphasis on their health benefits beyond basic nutrition. The session will explore African foods, focusing on their bioactive compounds that can combat micronutrient deficiencies and non-communicable diseases. The session will also highlight how traditional knowledge can be integrated with research to address the challenges and opportunities in utilization of indigenous and wild foods. | SDG 1: Zero hunger SDG 2: Good Health and Well-being |  | kitigwasSteven@gmail.com |
| Nelson Mandela African Institution of Science and Technology (Tanzania) | Dr. Pavithravani Venkataramana | Transforming Seed Systems for Climate Resilience: Governance, Innovation, and Equity in Achieving the SDGs | It focuses on the role of diverse, accessible, and well-governed seed systems in supporting food security, environmental sustainability, and social equity. By examining the interplay between formal and informal seed systems, governance structures, innovation, and local knowledge, students will gain a systems-level understanding of how seeds influence global food systems. The course also critically analyzes policies, private sector dynamics, and participatory approaches that shape seed access and biodiversity in the face of climate change. | |  | pavithravani.venkataramana@nm-aist.ac.tz |
| University of Ghana (Ghana) | Dr. Solomon Koti Amoah | State-Philanthropy Relations in Modern Governance | Philanthropy, defined as private giving for human welfare, plays a vital role in governance and social policy delivery. However, its effectiveness can wane without the power of the state. The relationship between state and philanthropy is essential for enhancing public welfare, driving innovation, and promoting sustainable development. Collaborative efforts between these sectors can create a more equitable and effective approach to addressing social challenges. This lecture aims to explore the dynamics, advantages, and challenges of partnerships between state and philanthropy in contemporary governance. We will examine the global evolution of philanthropy, highlight the historical connections between state entities and philanthropic organizations, and analyze their complementary roles. The lecture will also delve into the challenges and tensions currently present in state-philanthropy relations. | SDG 1 – 'No poverty' and zero hunger SDG 3 – Good health and well-being |  | skamoah@ug.edu.gh |

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|-----------------------|-------------------------------------|---|--|--|---|--|
| Utsunomiya University | Dr. Nao IGARASHI (再任・共同教育学部) | Poetry, Language, and the World | Many poets from former British colonies write about social issues, and yet the language they use, English, is in many cases a cause of the problems. This lecture invites students to examine how the poets' complex emotions regarding language, home, and identity are explored and illustrated in their poems. The lecture focuses not only on works of African poets but also on several poems written by the Caribbean and Irish poets. Some common themes in those poems, including the influence of history on the present, will encourage students to understand and overcome inequalities and injustice that still exist in the world. | Goal 5 Gender Equality Goal 10 Reduced Inequalities Goal 16 Peace, Justice and Strong Institutions |  | nao.igarashi@cc.utsunomiya-u.ac.jp |
| | Prof. Nobuaki Ohmori (地域デザイン科学部) | Realizing Sustainable City and Transportation by Introducing Light Rail Transit (LRT) | Japan is facing an aging society with a declining population. In particular, local cities, where citizens' daily lives are heavily dependent on automobiles, are trying to change their urban form to be more compact with higher levels of public transportation service. In 2023, the city of Utsunomiya introduced the new tram system, with all new tracks. This is the first time in these 75 years in Japan and the best practice of sustainable city and transportation in Japan. This lecture will explain why and how Utsunomiya City introduced LRT, what the impacts are, and what the future of the city will be. | SDG 11 Sustainable Cities and Communities |  | nobuaki@cc.utsunomiya-u.ac.jp |
| | Prof. Yutaka Mabuhi (工学部) | CO2 Reduction Technologies Through Improved Automotive Fuel Efficiency | Reducing CO ₂ emissions is one of the biggest challenges today, and making car engines and transmissions more efficient is an important part of that effort. In this lecture, we will explore some advanced technologies that help reduce friction in car parts—such as applying diamond-like carbon (DLC) coatings to moving surfaces, and adding tiny materials like graphene or fullerenes to engine oil. These carbon-based materials work in a unique way: when friction occurs, the carbon surface reacts with the oil to form special chemical groups. These groups then attract oil additives, creating an ultra-thin layer that allows the surfaces to slide more smoothly, reducing friction. Since these processes happen on a very small (nanoscale) level, they are hard to see or measure, and recent advances in surface analysis technologies have made it possible to study and improve them. | SDG 13 Climate action |  | y-mabuhi@cc.utsunomiya-u.ac.jp |
| | Dr. Naoki Sugita (データサイエンス経営学部) | Social Management of Agrobusiness in Japan from the Perspective of SDGs Marketing of Japanese Tea | This lecture explores the distribution system of Japanese tea, highlighting varieties, production trends, and consumption patterns. It discusses the impact of agriculture on SDGs, noting both negative effects like pesticide use and positive contributions such as biodiversity conservation and cultural preservation. The role of family farms in achieving SDGs is emphasized, with a focus on mission-based marketing strategies. Case studies illustrate successful integration of environmental conservation and local culture in agricultural practices. | SDGs goal 8 and 12 |  | sugitanaoki@cc.utsunomiya-u.ac.jp |
| | Dr. ARJON Sugit (国際学部) | The Dual Nature of Humanitarian Aid in Post-Conflict Reconstruction | This lecture focuses on an exploration of the dual nature of humanitarian aid, examining whether it primarily serves as a temporary measure to secure peace or as a foundational step towards sustainable peacebuilding and development. Moreover, the lecture also discusses the intricate politics underlying aid distribution, including how geopolitical interests shape aid allocation and the consequent effects on peacebuilding efforts and community recovery. The aim of this lecture is to build the awareness of how humanitarian aid works within the ecosystem of post-conflict reconstruction, navigating between immediate needs and long-term development goals while contending with the realities of international politics. | SDG 1 No Poverty SDG 11 Sustainable Cities and Communities SDG 16 Peace, Justice and Strong Institutions |  | sugit@cc.utsunomiya-u.ac.jp |
| | Dr. Masatsugu Tamura (農学部) | Creation of new healthy food using local agricultural products | Continuous intake of starch-containing foods causes rapid changes in blood glucose levels due to the hydrolysis of starch to glucose. This stress on the human body is closely related to the development of metabolic diseases such as type 2 diabetes and obesity. In recent years, it has been clarified that dietary fiber, resistant starch, polyphenols, and the tissue structure of raw materials modulate the rise in blood glucose levels and starch digestibility, and the mechanism of such modification has been studied, leading to the development of starch-restricted foods and low-starch foods. Although there are attractive agricultural products and raw materials in various regions of the world, it is an urgent issue to develop processing methods and technologies to extract and enhance the value of such products and raw materials. This lecture presents our research on the development of local foods with reduced starch digestibility, based on the evaluation of carbohydrate digestibility using an in vitro simulated digestion test. | SDG 1 Zero Hunger SDG 3 Good Health and well-being SDG 9 Industry, Innovation and Infrastructure |  | m-tamura@cc.utsunomiya-u.ac.jp |
| | Prof. Shinso Yokota (農学部) | Cellulose and its new application | Cellulose is one of the major chemical components of plant cell wall, and the most abundant biomass resource on the earth. It has been used for pulp (material for making paper) and many kinds of cellulose derivatives that are used for a wide range of fields and daily usage. Recently, some methods to change cellulose into nanofiber have been developed and its applications have been developing worldwide. In this lecture, chemical structure and characters are explained, and production methods of cellulose nanofiber and its new applications are introduced. | SDG 9 Industry, Innovation and Infrastructure SDG 15 Life on Land |  | yokotas@cc.utsunomiya-u.ac.jp |

講義の詳細

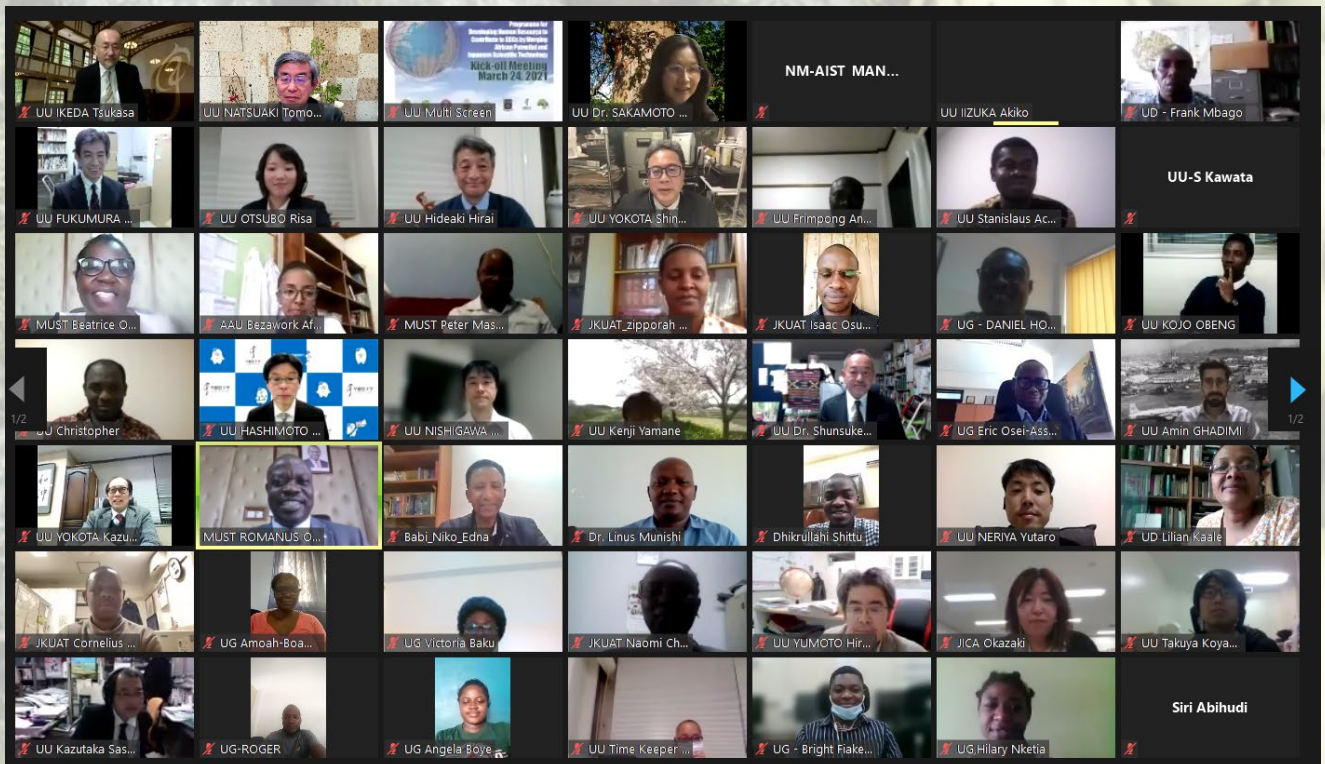
- 本講義は15回：前のページのようにアフリカ6大学の教員が6回、宇大教員が7回の計13回はオンデマンド講義です。開講期間中はいつでもC-learningの講義資料にアクセスして聴講できます。
- 1回目(6月2日(月))と15回目(7月18日(金))の2回はZoomによるリアルタイムで11～12時限(17:40～19:10)に開講します。
- 開講期間：6月2日(月)～7月18日(金)
- 言語：英語（オンデマンドなので何回でも繰り返して聴講できます）
- 単位：2単位（地域創生科学研究科選択必修「地域創生リテラシー」の「実践力」「Sustainable Global Management」を付与）
- 登録先：C-learning 講義コード B100521「Sustainable Global Management」に聴講登録
- 締切：5月9日（金）
- 採点：開講期間中に各講義のC-learningに掲載のレポートか小テストに解答してください。15回の講義の合計150点満点で採点されます。
- 留学派遣：本講義を受講した学生の中から短期1名・長期1名の計2名が旅費と滞在費の支援を受けてアフリカに留学可能です。問合せ先：留学生・国際交流室

TEL: 028-649-5100 E-mail: tenkai@a.utsunomiya-u.ac.jp

アフリカ留学：本プログラムは、アフリカの6大学からも計2名の留学生を受け入れる相互学生交流です。2024年度派遣・受入プログラムの学生の成果報告会の動画は、UU-Aホームページにて公開していますので、是非ご覧ください。

<https://uu-a.utsunomiya-u.ac.jp/2024exchange/>

Come and join us!



問合せ先

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