

**Sub-course: Exploring and Creating Fulfilling and Healthy Human Life in Modern Society**

	Course Title	Code	Credits
Undergraduate students	Summer Program in English II	26N3049	2
Graduate students	Special Lectures in Humanities and Sciences II	26S0152	2

## 1. Description

This course is a collaborative program between the Faculty of Human Life and Environmental Science and the Faculty of Transdisciplinary Engineering. In modern society, while the development of science and technology and globalization have made our lives more convenient, environmental problems and changes in social conditions affect our daily lives, psychological health, and lifestyle habits.

In this course, these issues are examined from the perspective of ordinary people in their daily lives, while also incorporating an understanding of AI and data science. Topics addressed include psychological health, the promotion of physical activity, healthcare, and well-being, approached from various specialized perspectives. As the creation of a future society will require the realization of a sustainable society that takes into account the diversity of people, the course aims to explore ways to improve quality of life (QOL).

## 2. Teaching Day and Time

Day	Time	Lecturer	Topic/Contents	Place
July 21 Tue	18:10-18:40	Mebuki Sunagawa	Course Orientation	Semina Room 3F, Plaza
July 22 Wed	9:30-11:00 11:10-12:40	Kaoruko Iida	Let's Talk About Lifestyle and Health: Understanding NCDs	Same as above
July 23 Thu	13:40-15:10	Shohei Nishizaka	※General Education: Japanese Culture 1 "Kyogen"	The junior high school gym
July 24 Fri	11:10-12:40	Ikuyo Ichi	The Science of Nutrition and Health	Semina Room 3F, Plaza
July 25 Sat	9:30-11:00 11:10-12:40	Tripette Julien	Data-Driven Approaches to Physical Activity Promotion in Modern Societies	Same as above
July 27 Mon	11:10-12:40	Yoko Sato	Japanese-style menu planning	Same as above
July 28 Tue	9:30-11:00 11:10-12:40	Nathanael Aubert-Kato	Machine Learning for Healthcare and Wellbeing	Same as above

July 28 Tue	13:40-15:10	Shohei Nishizaka	※General Education: Japanese Culture 2 “Kodo”	Room A-C 2F, Plaza
July 29 Wed	13:30-16:00	Mebuki Sunagawa	Field trip (EDO-TOKYO MUSEUM)	Yokoami, Sumida-ku
July 30 Thu	9:30-11:00 11:10-12:40	Mebuki Sunagawa	Psychological Well-being and Sociocultural Factors	Semina Room 3F, Plaza

### 3. Class Contents:

#### **Topic: Let’s Talk About Lifestyle and Health: Understanding NCDs**

Dr. Kaoruko Iida

Abstract: Are you familiar with non-communicable diseases (NCDs)? Non-communicable diseases, also referred to as lifestyle-related diseases, encompass diseases associated with high-risk lifestyle behaviors. According to the World Health Organization (WHO) (<https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>), NCDs account for 43 million deaths annually, representing 75% of global deaths not related to pandemics. Among the key risk factors, unhealthy dietary habits play a central role.

This lecture will first provide basic knowledge about NCDs. Participants will then be asked to research and present the characteristics of NCD profiles in their respective countries using reliable web-based sources. Through these presentations, we will discuss the relationship between lifestyle and health, as well as strategies for prevention and health promotion.

#### **Topic: The Science of Nutrition and Health**

Dr. Ikuyo Ichi

Abstract: Nutrition plays a fundamental role in maintaining human health. The foods we consume provide energy and essential nutrients that support growth, metabolism, and a wide range of physiological functions. However, imbalanced dietary habits can disrupt metabolic homeostasis and increase the risk of various chronic health conditions. In this lecture, we will introduce the fundamental concepts of energy metabolism and nutrient function, including how macronutrients are processed and utilized in the body. We will also discuss the roles of micronutrients, particularly those that have been identified as being insufficient in the diet, in maintaining normal physiological functions. In addition, we will briefly discuss how imbalances in energy and nutrient metabolism can affect health.

#### **Topic: Data-Driven Approaches to Physical Activity Promotion in Modern Societies**

Dr. Tripette Julien

Abstract: Regular physical activity is a cornerstone of healthy human life. However, in modern societies characterized by rapid technological development, urbanization, and demographic change, promoting active lifestyles requires new interdisciplinary approaches. This course explores how data science, wearable technologies, and environmental design can contribute to the promotion of active living and

overall well-being. We will examine how scientific evidence is translated into public health policy and introduce the concept of walkability indicators, highlighting how urban design and neighborhood structure influence movement behaviors. Students will learn how wearable sensors and smart environments enable the objective measurement of human movement in real-life settings. Evaluation will be based on attendance and participation, as well as a concise 1–2 page illustrated mini-report analyzing a selected strategy for promoting physical activity in modern society.

### **Topic: Japanese-style menu planning**

Dr. Yoko Sato

Abstract: Traditional Japanese cuisine (*Washoku*) has been inscribed on UNESCO's Intangible Cultural Heritage list. One of the defining features of Japanese cuisine is its well-balanced nutritional balance, based on the principle of "one soup and three dishes (*ichiju-sansai*).” When planning menus, several perspectives, such as palatability, cost, and safety, must be considered. In particular, menu planning should ensure that meals do not become monotonous, as we eat every day. This lecture begins with an introduction to the concept of *Washoku*. It then presents practical approaches for daily menu planning used by Japanese dietitians. The lecture will discuss not only nutritional aspects but also palatability and cookery science.

### **Topic: Machine Learning for Healthcare and Wellbeing**

Dr. Nathanael Aubert-Kato

Abstract: Over the past few decades, we have seen an explosion in the generation of health-related data, including Electronic Health Records (EHRs), imaging, and wearable sensor data. Meanwhile, machine-learning (ML) approaches have provided the means to deal with such large amounts of information, with potential applications to medical decisions and health promotion. This lecture provides an overview of the impact of ML in health-related fields and its applications, with concrete examples taken from wearable data. The lecture will also discuss potential future aspects, such as the use of Large Language Models (LLMs), as well as ethical concerns.

### **Topic: Psychological Well-being and Sociocultural Factors**

Dr. Mebuki Sunagawa

Abstract: In our daily lives, we experience various sources of stress related to academic or work demands, interpersonal relationships, and social circumstances. Maintaining psychological well-being (mental health) is therefore essential. This course introduces concepts of stress and mental states from a psychological perspective and considers how sociocultural factors influence psychological distress. It also addresses approaches to understanding and supporting mental health while taking into account individuals' diverse backgrounds and characteristics. Through the course, participants will develop an awareness of their own mental health and self-care, and understand the importance of considering cultural backgrounds and human diversity. Active participation is encouraged, with respect for others' perspectives.

#### 4. Evaluation

The final grade for this course will be based on a comprehensive assessment by each instructor responsible for their respective session. Participants are required to submit one paper for each lecture, for a total of eight papers (five in the specialized field, two in general education subjects, and one for the field trip). In addition, attendance and engagement in class will be taken into account. The evaluation methods and criteria may vary depending on the instructor.

※**General Education** Dr. Shohei Nishizaka

#### **Japanese Culture 1 “Kyogen”**

Kyogen is a traditional form of Japanese comic theatre that has been performed for centuries alongside Noh drama. Through its distinctive language, stylized movements, and humorous portrayal of everyday life, Kyogen offers insight into Japanese aesthetics, social values, and perspectives on human relationships. In this session, students will first gain an overview of Kyogen and observe a live demonstration by three professional Kyogen performers—MIYAKE Tokuro, IZUMI Junko, and IZUMI Motoya. They will then participate in introductory training exercises to experience its basic techniques. Through this direct cultural experience, students will reflect on the characteristics of Japanese culture and consider similarities and differences in relation to their own cultural backgrounds.

#### **Japanese Culture 2 “Kodo”**

Kodo, the traditional Japanese art of incense appreciation, is considered one of the three major classical arts of refinement in Japan, alongside the tea ceremony and flower arrangement. Compared to these more widely practiced arts, opportunities to experience Kodo firsthand are relatively rare. Through engagement with this traditional cultural practice, students will explore Japanese aesthetics and sensibilities while also reflecting on their own cultural backgrounds from a broader, comparative perspective. In this session, led by SHIMADA Hanako, students will learn about the history of Kodo, experience “listening” to incense, and create their own scented sachets. Through these activities, they will gain a deeper understanding of the cultural and spiritual dimensions of Japanese incense traditions.