

## **1226241 Healthcare Research and Innovations in Japan and India**

1.0 Credits, 1, 2 Year, Fall Semester by request  
Takeaki Sakurai

### **Course Overview**

Despite significant advances in science and technology, many unmet medical needs still exist worldwide. This course compares healthcare systems and practices in Japan and India, which differ in social structure and cultural background. Topics include healthcare delivery, public health, infectious disease control, and advanced medical technologies. Through these lectures, students will develop a comparative perspective on healthcare and acquire the ability to analyze healthcare challenges from multiple angles.

### **Remarks**

Pre-registration required (Capacity: 100 students)  
Lectures are conducted in English.  
Online(Asynchronous)  
Further details will be announced via website

### **Course Type**

lectures

### **Subject Category,Level,Division**

### **Relation to Degree Program Competences**

### **Course Objectives(Learning Outcomes)**

By the end of this course, students will be able to:

1. Understand that healthcare challenges are influenced not only by medical factors but also by social systems, cultural contexts, and the implementation of technologies.
2. Develop a comparative framework for understanding healthcare beyond a single country or discipline, through comparison of Japan and India.
3. Integrate knowledge across multiple disciplines (medicine, medical science, engineering, public health, etc.) and analyze

healthcare challenges from the perspective of unmet medical needs.

4. Build foundational skills to identify and analyze problems in healthcare, engineering, and global contexts, considering broader societal backgrounds.

### **Course Keywords**

International comparison of healthcare, medical innovation, global health, healthcare systems

### **Class Schedule**

Orientation & Unmet Medical Needs

1. Introduction to the course structure and objectives. Definition and background of unmet medical needs and an overview of global healthcare challenges.

Healthcare Systems in Japan and India

2. Comparative analysis of healthcare systems, including universal health coverage, healthcare delivery, and access in Japan and India.

Global Infectious Disease

3. Exploration of infectious diseases in a globalized world, including antimicrobial resistance, zoonotic diseases, and parasite biology, with perspectives on public health and global health challenges.

Medical Technology & Innovation

4. Examination of advanced medical technologies, digital health, and medical devices, and their role in improving healthcare delivery.

Society, Culture & Healthcare

5. Analysis of how social systems, demographics, and cultural contexts shape healthcare systems and outcomes.

Specialty Topics

6. Lectures from various disciplines (e.g., surgery, nursing, medical science), focusing on specific healthcare challenges and unmet medical needs.

Japan–India Joint Lecture: Approaches to Healthcare Challenges

7. Joint lecture with IIT faculty, comparing approaches to healthcare challenges from both Japanese and Indian perspectives.

### **Course Prerequisites**

None

### **Grading Philosophy**

- Final report: 50%
- Participation and engagement: 50%

### **Course Hours Breakdown and Out-of-Class Learning**

- Watching lecture videos: 60%
- Review and consolidation: 20%

### **Textbooks, References, and Supplementary Materials**

- Lecture videos and slides prepared by instructors (JV-campus)
- Supplementary materials including references, data, and relevant literature
- No specific textbook required

### **Office Hours and Contact Information**

Inter-University Exchange Project (Japan–India) Office, Tsukuba  
interuniv-india-jp@un.tsukuba.ac.jp

### **Other (Behavioral expectations and points to note for students during coursework)**

### **Relation to Other Courses**

### **Teaching Fellow and/or Teaching Assistant**