

**Outline of Proposal for SDGs Online Cross-Registration:
Online Exchange Program (OEP) focusing on SDGs**

Name of University/ Institution		Shibaura Institute of Technology			
General Information	Brief Introduction of the University/Institution	Shibaura Institute of Technology (SIT) has firmly maintained "learning through practice" as the philosophy in education of engineers ever since Tokyo Higher School of Industry and Commerce, the predecessor to SIT, was established in 1927. In response to the recent progress in the globalization of the economy, SIT is providing an up-to-date framework for "learning through practice" including intensive English Language programs, Project Based Learning programs under multicultural environment, along with many Hands-on subjects that has been preserved through SIT's history. SIT now aims to foster scientists and engineers who can contribute to the sustainable growth of the world by exposing our students to culturally diverse environments where they learn to cope with, collaborate with, and have ever-lasting friendships with fellow students from around the world.			
	Country/Territory	Japan	City	Koto-Ku	
	Address	3-7-5 Toyosu Koto-ku Tokyo	Telephone Number	81-3-5859-7140	
	Fax Number	81-3-5859-7141	Official University Institution Website	https://www.shibaura-it.ac.jp/en/	
	UMAP Contact Person	Name	Kenichi Sugimura		
		Organization/Office	Division of Global Initiatives		
Email Address		global-admission@ow.shibaura-it.ac.jp			
Name of Subject	Nanostructure Physics	Name of Faculty	Dr. MIRYALA MURALIDHAR		
Name of Department	Innovative Global Program				
Program Information	Program Description & syllabus	<p>· Course description:</p> <p>This course introduces a comprehensive state-of-the-art in the field of high temperature superconductivity (HTS), in this case copper-oxide-based (cuprates), and its application for United Nations Sustainable Development Goals (SDGs). The course mainly deals with various aspects of processing methods, properties, and applications of high-Tc cuprates. Industrial applications require high-quality materials. The students will learn to create and evaluate phase diagrams reflecting the quality of nano-structures achieved in the production stage. For this, it will be important to understand the vortex pinning techniques needed for individual industrial applications. This course is designed to be as broad and rigorous as possible to cover super-magnets' processing, reliable production, and characterization needed for several industrial applications in medicine, transport, and research fields, supporting the SDGs goals.</p> <p>· Purpose of class:</p> <p>To develop excellence in bulk high-Tc processing and activate ability to produce nanostructured super-magnets for industrial applications conforming to SDGs. The class will focus on understanding phase diagrams, production of new materials, and creation of nano-structures improving the material's performance, in particular above liquid nitrogen temperature. Eventually, students should understand how the new class of nanostructured materials contributes to the everyday applications conforming to SDGs.</p> <p>http://syllabus.sic.shibaura-it.ac.jp/syllabus/2022/ko1/131824.html?g=M00</p>			
	Degree Level and/or Grade	Open to all students	Language of Instruction	English	
	Number of Credits to Transfer (Timing of credit issuance)	University Credits	UTCS converted into University Credits	Definition of UTCS	
		2 credits		<small>The definition of UTCS is as follows: One (1) UTCS = 38 - 48 hours of student workload. This includes 13-16 academic hours of instruction. *FYI, please refer to UCTS Users' Guide on UMAP website. (http://umap.org/ucts/)</small>	
	Means of Transmission (e.g. via Zoom, etc.)	Zoom/ Microsoft Stream/ Google Meets	Number of Lectures	14 weeks	
	Number of class Hours	1hour and 40minutes	Total Teaching Hours	23hours and 20minutes	
	Independent Study Hours	44hours and 40minutes	Student's Total Workload	68hours	
	Program Fee	N/A			
Requirement	Language Proficiency	CEFR B2 or equivalent			
		<small>We accept native English speakers and/or a certificate issued by the home institution if English is used as the medium of instruction.</small>	Yes		
	GPA	N/A	Others (if any)	N/A	
Program Schedule	Length	1 term			
	From	27-Sep-22	To	24-Jan-23	
	Day of week	Tuesday	Time of class(Standard Time)	10:50-12:30(JST)	
Participants	Number of acceptable participants	3 students (Negotiable)			
Application Period	From	11-Jul-22	Until (Deadline)	24-Jul-22	
Others	If there are any other facts to inform, please specify.	N/A			