Division of Environmental Studies

Department of Socio-Cultural Environmental Studies

Laboratory	Faculty	Introduction of research activities and laboratory	Key words	Projects or activities summer program students can participate
Jun SASAKI	Prof. Jun SASAKI	We are involved in estuarine and coastal environmental studies in the field	Coastal engineering;	Students will firstly learn physical and biogeochemical processes
(Estuarine & Coastal		of civil and coastal engineering, such as (1) numerical modeling of physical	numerical simulation;	in estuarine and coastal waters, which may include some of
Environment)		and biogeochemical processes, (2) environmental restoration in enclosed	data science; estuarine	coastal circulation, water quality, ecosystems, and sediment
<u>Laboratory</u>		coastal waters, (3) disaster mitigation, (4) mitigation of and adaptation to	and coastal	quality. Secondly students will choose one of the related
		climate change, and (5) sustainability of community and livelihood in	environment; water	problems, learn its mechanism and consider measures for
		coastal areas in developing countries. Tokyo Bay, at short distance from	quality and ecosystems	resolving the problem by applying, e.g., a numerical model or
		our campus, is one of our main fields for studying environmental restoration		data analysis. Students will also learn some of the basics of
		and disaster mitigation based on field observation and development and		computer literacy, e.g., pre-processes and post-processes for
		application of numerical models. The bay has suffered from decline in		numerical computation using, e.g., Python based tools. Students
		fishery and water quality, including hypoxia and anoxia, for long time. We		may select one of the open source models coded in Fortran,
		have been considering strategies for environmental restoration,		including FVCOM (unstructured-grid Finite Volume Community
		rehabilitation and mitigation in the bay supported by scientific evidence.		Ocean Model), GOTM (1-D water column model), and TEEM
		Disaster mitigation against storm surges and tsunamis is also our research		(coastal circulation, water quality and sediment quality model), or
		targets, including development and application of prediction systems for		Python based data science tools for statistical data analysis.
		coastal hazards using open source numerical models. Studies on coastal		Students will create charts for showing results and interpret and
		zone management for sustainability in developing countries, especially in		discuss them. Students will be requested to present their
		mangrove coastal areas influenced by climate change and associated sea		outcomes at our laboratory's progress report seminar. We
		level rise, are also our main focus.		welcome students who are interested in estuarine and coastal
				environmental studies using numerical computation.