



IST-KIU Training Workshop (2019)

Tentative Program		
Day-01, Monday July 22		
Time	Activity	Speaker
8:30 AM-9:00 AM	Registration	
9:00 AM-9:30 AM	Opening Ceremony	Prof. Dr. Attaullah Shah VC KIU Gilgit
9:30 AM-10:30 AM	Earth Climate System	Dr. Mujtaba Hassan IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Earth Rotation, Seasons and Atmospheric Circulations	Dr. Mujtaba Hassan IST Islamabad
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-4:00 PM	Hands-on Climate Extremes	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Hands-on Climate Extremes/RClmDex	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST

		Islamabad
Day-02, Tuesday July 23		
Time	Activity	Speaker
09:00 AM -09:45 AM	Moisture, Clouds and Precipitation	Dr. Mujtaba Hassan IST Islamabad
9:45 AM-10:30 AM	Introduction to Climate Modeling	Dr. Mujtaba Hassan IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Climate Models and Modeling for Climate Change Impact Assessment	Dr. Mujtaba Hassan IST Islamabad
12:00-2:00 PM	Lunch and Prayer Break	
2:00 PM -3:00 PM	Hands-on Climate Data Operators (CDO)	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
3:00 PM-4:00 PM	Hands-on Post-Processing of climate data for climate change impact assessment	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Hands-on Grid Analysis and Display System (GrADS)	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
Day-03, Wednesday July 24		
Time	Activity	Speaker

9:00 AM -10:30 AM	Introduction to Hydrological Modeling	Dr. Mujtaba Hassan IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00PM	An overview of HEC-HMS Hydrological Model	Dr. Mujtaba Hassan IST Islamabad
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-2:30 PM	HEC-HMS Application for Urban Flooding Studies	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
2:30 PM-3:30 PM	Hands on: HEC-HMS Application for Urban Flooding Studies	Dr. Mujtaba Hassan IST Islamabad; Mr. Asghar Ali IST Islamabad
3:30 PM-4:00 PM	Tea Break	
4:00 PM-5:00 PM	Surface Dynamics of Snow and Glacierized Catchment using Geospatial techniques-A case study of Astore Basin	Ms. Saleha Fatima IST Islamabad
Day-04, Thursday, July 25		
Time	Activity	Speaker
9:00 AM-10:30 AM	Basic Concept on Spatial Processes in Hydrology: SPHY Model Overview	Ms. Eshrat Fatima IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Hands-on: Setting up SPHY Model	Ms. Eshrat Fatima IST

	for a watershed	Islamabad
12:00 PM -2:00 PM	Lunch and Prayer Break	
2:00 PM-3:00 PM	Hands-on: Calibrating the SPHY Model for a watershed	Ms. Eshrat Fatima IST Islamabad
3:00 PM-4:00 PM	Hands-on: Assessing Validation of the SPHY Model	Ms. Eshrat Fatima IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Introduction to Climate Change	Dr. Shahid Iqbal IST Islamabad
Day-05, Friday, July 26		
Time	Activity	Speaker
9:00 AM-10:30 AM	Climate Change Impact Assessment on Water Resources	Dr. Shahid Iqbal IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Prediction, Projection and Scenarios	Dr. Shahid Iqbal IST Islamabad
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-3:00 PM	RCP and SRES Scenario Overview	Dr. Shahid Iqbal IST Islamabad
3:00 PM-4:00 PM	Shared Socioeconomic Scenarios and Scenario Matrix Approach	Dr. Shahid Iqbal IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Water availability in future for Pakistan under different scenarios	Dr. Shahid Iqbal IST Islamabad
10:00 AM-11:00 AM	Day-06, Saturday July 27 Exam (Participants will appear in a short test based on the lectures of first 5 days)	

Day-07		
Sunday, July 28 Field Visit		
Day-08, Monday July 29		
Time	Activity	Speaker
9:00 AM-10:30 AM	Constrained and biases in the climate change projections over the Hindukush Karakoram and Himalaya (HKH) region	Dr. Asif Khan UET Peshawar
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Applications of Remote Sensing/GIS in the watershed modeling for big DAM sites	Dr. Syed Amer University of the Punjab Lahore
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-4:00 PM	Introduction to SAR Remote Sensing	Dr. Waqas Qazi IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Hydrological & Geological Applications of SAR Remote Sensing	Dr. Waqas Qazi IST Islamabad
Day-09, Tuesday, July 30		
Time	Activity	Speaker
9:00 AM-09:45 AM	Palaeochannel Detection using Optical and SAR Data Fusion	Dr. Waqas Qazi IST Islamabad
9:45 AM-10:30 AM	Introduction to MATLAB	Dr. Waqas Qazi IST Islamabad
10:30 AM-11:00 AM	Tea Break	

11:00 AM-12:00 PM	MATLAB: Handling scientific data formats (netCDF, HDF, etc.) datasets	Dr. Waqas Qazi IST Islamabad
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-4:00 PM	MATLAB: Handling scientific data formats (netCDF, HDF, etc.)	Dr. Waqas Qazi IST Islamabad
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	MATLAB: Plotting / analyzing spatial data, analysis of directional data	Dr. Waqas Qazi IST Islamabad
Day-10, Wednesday, July 31		
Time	Activity	Speaker
9:00 AM-09:45 AM	Introduction to Google Earth Engine and datasets	Dr. Hammad Gilani IST Islamabad
9:45 AM-10:30 AM	Satellite Images Classification and Change Analysis using Earth Engine	Dr. Hammad Gilani IST Islamabad
10:30 AM-11:00 AM	Tea Break	
11:00 AM-12:00 PM	Basic JavaScript Syntax and Earth Engine Code Platform and Editor	Dr. Hammad Gilani IST Islamabad
12:00 PM-2:00 PM	Lunch and Prayer Break	
2:00 PM-3:00 PM	Hands on Exercise: Satellite Image Visualization and Metadata	Dr. Hammad Gilani IST Islamabad
3:00 PM-4:00 PM	Mathematical Operations and Spectral Indices (NDVI, NDWI,	Dr. Hammad Gilani IST Islamabad

	NDSI, etc.)	
4:00 PM-4:30 PM	Tea Break	
4:30 PM-5:30 PM	Phonological Time Series Analysis;	Dr. Hammad Gilani IST Islamabad
5:30 PM-6:30 PM	Closing Ceremony	Prof. Dr. Wilayat Hussain VC IST Islamabad

