





More Information:

 [sub-wsc](https://www.instagram.com/sub-wsc)

 [@sub_wsc](https://twitter.com/sub_wsc)

 021-66165329

 wsc.ch@sharif.edu

 sub-chemometrics@gmail.com



Day 1- Sunday

Time	Title	Presenter
8:30-9:00	Opening	
9:00-9:45	Introduction to artificial intelligence, machine learning and chemometrics	Prof. Abdollahi
9:45-10:45	Unsupervised pattern recognition and principal component analysis (PCA)	Prof. Hemmateenejad
10:45-11:10	Break	—
11:10-12:00	Multiple linear regression (MLR) and principal component regression (PCR)	Prof. Abdollahi
12:00-12:45	Design of experiments: factorial designs	Prof. Khoshayand
12:45-14:00	Break	—
14:00-15:00	Multivariate curve resolution (MCR)-basics	Prof. Abdollahi
15:00-15:45	Linear/quadratic discriminant analysis(L/QDA)	Prof. Hemmateenejad
15:45-16:00	Break	—
16:00-17:00	Soft independent modeling of class analogy (SIMCA)	Dr. Parastar
17:00-18:00	Partial least squares regression (PLSR) and PLS-discriminant analysis (PLS-DA)	Prof. Weller

Day 2- Monday

Time	Title	Presenter
8:30-9:30	Multivariate curve resolution-alternating least squares (MCR-ALS)	Prof. Abdollahi
9:30-10:30	Artificial neural networks: shallow and deep nets	Dr. Parastar
10:30-10:45	Break	—
10:45-11:35	DOE- Response surface methodology (RSM)	Prof. Khoshayand
11:35-12:20	Data preprocessing	Dr. Parastar
12:20-13:30	Break	—
13:30-14:30	Design of experiment (DOE)- Optimization	Prof. Khoshayand
14:30-15:15	Model validation (classification and regression)	Dr. Parastar
15:15-15:30	Break	—
15:30-16:30	Linear and non-linear machine learning: k-nearest neighbors (kNN) and decision trees (DT)	Prof. Kirsanov
16:30-18:00	Kernel-PLS (KPLS) and analytical figures of merit	Prof. Olivieri

Day 3 Tuesday

Time	Title	Presenter
8:30-9:30	Multivariate calibration-MVC1	Dr. Parastar
9:30-9:45	Break	---
9:45-10:45	Design of experiments-Design Expert	Prof. Khoshayand
10:45-11:00	Break	---
11:00-12:00	Multivariate classification-Classification toolbox	Dr. Parastar
12:00-13:00	Break	---
13:00-14:00	Design of experiments-Design Expert	Prof. Khoshayand
14:00-14:15	Break	---
14:15-15:15	Multivariate calibration-MVC1	Dr. Parastar
15:15-15:30	Break	---
15:30-16:30	Multivariate Classification- classification toolbox	Dr. Parastar