Course Name	Pattern Recognition
References	1. S.Theodoridis, K. Koutroumbas, Pattern Recognition, 4'th Edition, Elsevier, 200۹. 2. R.O. Duda, P.E. Hart, and D.G. Stork, Pattern Classification, Second Edition, New York: John Wiley, 2001, 3. C.M.Bishop, Pattern Recognition and Machine Learning, 2006. 4. S.Theodoridis, K. Koutroumbas, An Introduction to Pattern Recognition: A Matlab Approach, 2010.
Course Instructor	Dr. Babak Nasersharif
Syllabus	1. An Introduction to pattern recognition 2. A review on probability and statistics 3. A review on linear algebra 4. Bayes Decision theory 5. Bayes quadratic classifiers 6. Parametric estimation, ML and MAP 7. Non-Parametric estimation, KNN, and KDE 8. Linear Classifiers 9. Linear classifier- Logistic regression 10. Support vector machine: Linear and Kernel-based SVM 11. VC dimension 12. Non-Linear Classifiers: MLP 13. Non-Linear Classifiers: RBF 14. Cross-Validation 15. Ensemble of Classifiers 16. Feature Transformation methods: PCA 17. Feature Transformation methods: LDA 18. Feature selection methods 19. Clustering methods