Course Name	Advanced Algorithms
References	1. T. Cormen, C. Leiserson, R. Rivest, and C. Stein. Introduction to Algorithms. 3rd ed. MIT Press, 2009. 2. V. Vazirani. Approximation Algorithms. Springer-Verlag, 2001. 3. Motwani and Raghavan. Randomized Algorithms. Cambridge, UK: Cambridge University Press, 1995. 4. Borodin, Allan, and Ran El-Yaniv. Online Computation and Competitive Analysis. Cambridge, UK: Cambridge University Press, 1998. 5. Sanjeev Arora and Boaz Barak .Computational Complexity: A Modern Approach. Cambridge University Press, 2007.
Course instructor	Dr. Farnaz Sheikhi
Syllabus	1. Complexity Classes 2. Introduction to Approximation algorithms 3. Linear programming 4. Advanced data structures 5. Introduction to Randomized algorithms 6. Introduction to Computational Geometry 7. Introduction to Online algorithms 8. Introduction to Metaheuristic algorithms 9. Introduction to Streaming algorithms 10. Introduction to Fixed parameter algorithms