

Meeting date	Lectures	Algorithms
26 Sept	Lesson 1. Intro	Dynamic programming
	Sequence alignment	
29 Sept	Lesson 2. Database search	BLAST
	Intro to phylogenetics (HWK1, 10%)	
13 Oct	Lesson 3. Molecular evolution	Maximum Likelihood, MCMC
	Tree reconstruction	
20 Oct	Lesson 4. Tree support and systematic errors	Bayesian Approach Bootstrap
	Phylogenomics (HWK2, 10%)	
27 Oct	Lesson 5. Pattern matching,	Hidden Markov Model

	Profiling	
3 Nov	Lesson 6. NGS data assembling,	Suffix tree, De Bruijn Graph
	Read mapping (HWK3, 10%)	
10 Nov	Lesson 7. Artificial neural networks	Neural network
	AI applications	
17 Nov	Review Q&A	
	Final exam 70%	

N.B., we will meet every Wednesday from 18:00 to 21:20 in room 2-103. The lecture materials can be found at <http://www.lmse.org/learning/bioinformatics.html>.