

生物信息学（留）0141703

Fall, 2024

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Week	Meeting date	Lectures	Algorithms
2	26 Sept	Lesson 1.2 Intro Sequence alignment (HWK1, 10%) Database search,	Dynamic programming, BLAST
3	3 Oct	No class	National day
4	10 Oct	Lesson 2.3 Intro to phylogenetics Phylogenetic_methods, Molecular evolution,	UPGMA, NJ, Maximum Likelihood
5	17 Oct	Lesson 4. Tree reconstruction, Tree support and systematic errors Phylogenomics (HWK2, 10%)	Bayesian Approach, MCMC, Bootstrap

6	24 Oct	Lesson 5. Pattern matching, Profiling	Hidden Markov Model
7	31 Oct	Lesson 6. NGS data assembling, Read mapping (HWK3, 10%)	Suffix tree, De Bruijn Graph
8	7 Nov	Lesson 7. Artificial neural networks, AI applications	Neural network
	TBA	Q&A, Review	Online & Offline
9	14 Nov	Lesson 8. Final exam 70%	Close book

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