

<b>Molecular phylogeny</b>	
<b>Course Code:</b>	NTNU students: DID0005      THU students: 5496
<b>Credits</b>	Refer to NTNU&THU course enrollment system
<b>Lecturers</b>	Prof. Chiao-Hao Chang · Dr. Jen-Pen Huang
<b>Time</b>	Mondays 14:00~
<b>Place</b>	B208, Biodiversity Research Center, BRCAS
<b>Prerequisites</b>	BIOLOGY, GENETICS, EVOLUTION
<b>Description</b>	Phylogenetics has been widely used in broad fields of biological research. This course will equip students with the principal concepts of Phylogenetics and skills of molecular phylogeny reconstructions. The lectures will address the development history, foundational concepts, and current applications of Phylogenetics. Moreover, several practices will be applied to train students the skills of reconstructing phylogenies with given real molecular data, interpreting phylogenetic trees, and resolving evolutionary questions independently.
<b>Purpose</b>	Understanding and application of molecular phylogenetics
<b>Grade</b>	Attendance 10%; Homework 45%, Presentations 45%

<b>Week</b>	<b>Date</b>	<b>Topic</b>
Week 1	9/20	<b>Moon Festival</b>
Week 2	9/27	Introduction
Week 3	10/4	Trees
Week 4	<b>10/11 Adjusted Holiday</b>	
Week 5	10/18	Genes: Organization, Function and Evolution
Week 6	10/25	Molecular evolution and population genetics
Week 7	11/1	Measuring genetic change

Week 8	11/8	Midterm Exam
Week 9	11/15	Information resources for genes and proteins
Week 10	11/22	Models of Molecular Evolution
Week 11	11/29	Inferring molecular evolution
Week 12	12/6	Applications of molecular evolution
Week 13	12/13	Plant phylogenomics
Week 14	12/20	Students' project practice I
Week 15	12/27	Students' project practice II
Week 16	1/3	Final Exam