

Introduction to genomics: data and analysis 基因體學的理论與分析方法	
Course Code:	DIC 8031
Credits	Three (lectures: 3hrs per week)
Organizers	Isheng Jason Tsai
Time	Wednesday 14:00-17:00
Place	B208, Biodiversity Research Center, AS
Description	This module aims to cover the backgrounds of sequencing, and what you can do with it in research. This module will also provide hands-on exercises from real-world scenarios.
Purpose	Basic background in genomics and to deliver the most updated knowledge, skills and applications to current biological problems
Grade	40% Assignment; 30% Final Exam; 30% Attendance

Week	Date	Topic
Week 1	2/22	Introductory Lecture (Dr. Isheng Tsai)
Week 2	3/1	Omics approaches to studying biodiversity (Dr. Isheng Tsai)
Week 3	3/8	Mapping and Case studies (Dr. Isheng Tsai)
Week 4	3/15	Genome Assembly (Dr. Isheng Tsai)
Week 5	3/22	Comparative Genomics (Dr. Isheng Tsai)
Week 6	3/29	Population Genomics (Dr. Isheng Tsai)
Week 7	4/5 Tomb Sweeping Day	*Study week (no class)
Week 8	4/12	Amplicon / Metagenomic (Dr. Isheng Tsai)
Week 9	4/19	Transcriptomes (Dr. Isheng Tsai)
Week 10	4/26	Alignment to phylogenies (Prof. Jia-Ming Chang; Dr. Isheng Tsai)
Week 11	5/3	*R and Linux Practical I (Dr. Isheng Tsai)
Week 12	5/10	*R and Linux Practical II (Dr. Isheng Tsai)
Week 13	5/17	*Nanopore sequencing (Dr Huei-Mien Ke)
Week 14	5/24	*Nanopore sequencing practical (Dr Huei-Mien Ke)
Week 15	5/31	*Midterm exam (Students) (Dr. Isheng Tsai)
Week 16	6/7	*Final presentation I (Students) 10 mins x15(Dr. Isheng Tsai)

*Enrolled students only