Course Title	Molecular Biology Lab. 1		
Semester	3-1	Course Type	Core
Course Number	28441-00	No. of Credit	2/0/4
Professor	Hee-Moon Park	E-mail	hmpark@cnu.ac.kr
Objective	The purpose of this course is to acquaint students with genetic and molecular biological techniques using bacteria, fungi and animal cells.		
Syllabus	1. Types and characteristics of buffer 2. Enzyme kinetics 3. Protein purification I: Cell disintegration, discarding cell debris by centrifugation, and precipitation with salt and dialysis 4. Protein purification II: Ion exchange chromatography and SDS-PAGE 5. Concept of gene expression control in prokaryotic microorganisms 6. Expression & purification of recombinant protein in *E. coli* 7. Collection and culture of animal cell & tissue 8. Concept of gene expression control in eukaryotic microorganisms: eukaryotic promoter adjustment 9. Observation of organelles by using fluorescent protein tagging techniques 10. General & molecular genetics I: genotype, phenotype, and complementation 11.General & molecular genetics II: gene knock-out		