

Module 1	
Research Topics	<ul style="list-style-type: none"> a. Biomimicry and biomineralization b. Biological synthesis of nanoparticles for environmental science c. Groundwater for sustainable development d. Environmental microbiology e. Remediation for soil and groundwater
Instructor	Prof. Chien-Yen Chen Department of Earth and Environmental Sciences Email: chien-yen.chen@oriel.oxon.org Webpage: http://www.eq.ccu.edu.tw/english/faculty/CV_used_YEN.pdf

Module 2	
Research Topics	<ul style="list-style-type: none"> a. Nanoplasmonic biosensors b. Raman-barcoded bead biosensors c. Nanomaterials: sol-gel, nanoparticles, and molecular films
Instructor	Prof. Lai-Kwan Chau Department of Chemistry and Biochemistry Email: chelkc@ccu.edu.tw Webpage: http://www.chem.ccu.edu.tw/~lkc/

Module 3	
Research Topics	<ul style="list-style-type: none"> a. Lab-on-a-chip/ microfluidics technologies b. Electrokinetics fundamentals c. Biosensing technologies d. Plasmonics detection technologies
Instructor	Prof. Shau-Chun (Paul) Wang Department of Chemistry and Biochemistry Email: chescw@ccu.edu.tw Webpage: http://www.chem.ccu.edu.tw/~scw/

Module 4	
Research Topics	a. Reaction Dynamics b. Theoretical/Computational Chemistry c. Quantum Chemistry d. Noble-Gas Chemistry e. Photochemistry f. Molecular Modeling
Instructor	Prof. Wei-Ping Hu Department of Chemistry and Biochemistry Email: chewph@ccu.edu.tw Webpage: http://deptche.ccu.edu.tw/faculty/wph.html

Module 5	
Research Topics	a. Nanophotonics b. Nonlinear Optics c. Organic Electronics d. Polymer Optics
Instructor	Prof. Chia-Chen Hsu Department of Physics Email: phycch@ccu.edu.tw Webpage: http://physics.ccu.edu.tw/English/teacher/CCHsu.html

Module 6	
Research Topics	a. Cancer Immuno-Epigenomics b. Cancer Systems Biology c. Bioinformatics
Instructor	Prof. Michael Chan Department of Biomedical Sciences Email: biowyc@ccu.edu.tw Webpage: http://admbio.ccu.edu.tw/admbio_v4.2/index.file=teacher.c

Module 7	
Research Topics	a. Development of novel synthetic methods in particular with the use of organometallic compounds as a catalyst to explore new reactions b. Investigation of catalytic synthetic methodology that reduces or eliminates the use or generation of hazardous substances in chemical reactions c. Ligand designs and fundamental study of organometallic reactions.
Instructor	Associate Prof. Shuchun Joyce Yu Department of Chemistry and Biochemistry Email: chejyy@ccu.edu.tw Webpage: http://deptche.ccu.edu.tw/faculty/jyy.html

Module 8	
Research Topics	a. Generic networks that regulate the pancreatic development b. In vitro differentiation of stem cells into pancreatic β cells c. Identifying components of herbal extracts that can be used to treat type II diabetes d. Molecular pathogenesis of <i>Klebsiella pneumonia</i> infections in diabetes patients
Instructor	Prof. Ming-Ko Chiang Department of Biomedical Science Email: biomkc@ccu.edu.tw Webpage: http://admbio.ccu.edu.tw/new/teacher_cmk.html

Module 9	
Research Topics	a. Application of phytochemicals b. Photodynamic therapy c. Protein misfolding
Instructor	Associate Prof. Cheng-I (Sophia) Lee Department of Biomedical Sciences Email: biocil@ccu.edu.tw Webpage: http://admbio.ccu.edu.tw/admbio_v4.2/index.content=lab/lcy

Module 10	
Research Topics	<ul style="list-style-type: none"> a. Replication and pathogenesis mechanisms of RNA viruses b. Production of antibodies by novel linear array epitope (LAE) technique c. Identification of new biomarkers of oral cancers d. Studies on the carcinogenesis by betel quid e. Development of new drugs for oral cancers therapy
Instructor	Associate Prof. Hau-Ren Chen Department of Biomedical Sciences Email: biohrc@ccu.edu.tw Webpage: http://admbio.ccu.edu.tw/2011/eng/db_teachers/teacher_chr.pdf

Module 11	
Research Topics	<ul style="list-style-type: none"> a. Transfectin expression of polycations/DNA complexes in eukaryotes b. Evaluation of pharmacological activities of potential drugs c. Development of novel drug delivery systems
Instructor	Associate Prof. Jong-Yuh Cherng Department of Chemistry and Biochemistry Email: chejyc@ccu.edu.tw Webpage: http://deptche.ccu.edu.tw/faculty/jyc.html

Module 12	
Research Topics	<ul style="list-style-type: none"> a. Chemical composition and evolution of marine pore waters b. Boron, chlorine, strontium and lithium isotopes in natural surface waters c. The origin of mud volcano fluids d. Burial age dating by cosmogenic nuclides e. Gas hydrate in marine sediment f. The source of the soil and soil evolution g. Stable Sr isotopes and their linkage with weathering and soil evolution h. New analytical technique for Cl isotope by TIMS i. The origin of hot springs (hydrothermal fluids) j. Implication of D and O isotopes in air moisture vs precipitation
Instructor	Assistant Prof. Hung-Chun Chao Department of Earth and Environmental Sciences Email: ekman60@gmail.com Webpage: http://www.eq.ccu.edu.tw/english/faculty/teacher_HCC.php

Module 13	
Research Topics	a. Palynology and Climatic Dynamics b. Paleoenvironmental Research c. Electron Microscope
Instructor	Assistant Prof. Liang-Chi Wang Department of Earth and Environmental Sciences Email: lcwang@ccu.edu.tw Webpage: http://www.eq.ccu.edu.tw/english/faculty/teacher_21.html

Module 14	
Research Topics	a. Nitric oxide uptake by erythrocytes and smooth muscle cells b. Hemoglobin-based blood substitutes c. Thermotolerant yeasts d. Drug design for sepsis e. Optica fiber biosensors
Instructor	Associate Prof. Kuang-Tse Huang Department of Chemical Engineering Email: chmkth@ccu.edu.tw Webpage: http://www.che.ccu.edu.tw/~biomed/frame.htm

Module 15	
Research Topics	a. Carbon nanomaterials: carbon nanotubes, carbon nanofibers, graphene, activated nanocarbon b. Nanomaterials by nanotechnology: chemical vapor deposition, electrospinning, electrospraying c. Energy storage: Li ion battery, fuel cell, metal air battery, supercapacitor d. Field emission application: field emission display, field emission lighting, field emission x-ray
Instructor	Prof. Yuan-Yao Li Department of Chemical Engineering Email: chmyyl@ccu.edu.tw Webpage: http://www.che.ccu.edu.tw/~nanotec/web/