

2022 Fall Semester

Centers and Institutes

General Education Center

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
GS3081	Global Cities and Social Spaces	2	U
GS3084	Smart Cities and Urban Traffic	2	U
GS4451	An Introduction to Modern Astronomy	2	U

International Ph.D. Program in Environmental Science and Technology (UST-EST)

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
ET7001	Seminar	1	G
ET7003	Seminar	1	G
ET7006	Special Topics on Environmental Monitoring and Analysis	3	G

Language Center

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
RS7009	Detection and Estimation	3	G
RS7011	Antenna and Wave Propagation	3	G
RS7078	Spatial Data Analysis and Applications	3	G
RS7119	Cloud-based Geographic Information System	3	G
RS9998	Research Training	0	G
LN1001	Freshman English as an Introduction to Engineering	3	U
LN1001	Freshman English as an Introduction to Engineering	3	U
LN1001	Freshman English as an Introduction to Engineering	3	U
LN1001	Freshman English as an Introduction to Engineering	3	U
LN1001	Freshman English as an Introduction to Engineering	3	U
LN1003	Freshman English as an Introduction to Science	3	U
LN1003	Freshman English as an Introduction to Science	3	U
LN1003	Freshman English as an Introduction to Science	3	U
LN1005	Freshman English as an Introduction to Management	3	U
LN1005	Freshman English as an Introduction to Management	3	U
LN1005	Freshman English as an Introduction to Management	3	U
LN1007	Freshman English as an Introduction to Humanities and Social Sciences	3	U
LN1034	English Grammar and Writing	3	U
LN2010	Life issues from English movies	3	U
LN2012	Business English	3	U
LN2902	Intermediate English Listening	2	U
LN2903	English Reading and Reading-Aloud	2	U
LN2907	Oral Training II	2	U
LN2908	English for Life	2	U
LN2916	English speech and presentation for technology	2	U
LN2916	English speech and presentation for technology	2	U
LN2917	Workplace English	2	U

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Language Center			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
LN2918	Advanced English Communication	2	U
LN2919	Oral English Communication	2	U
LN2923	Selected Reading on English Magazines	2	U
LN3009	English Topics	2	U
Master of Science Program in Remote Sensing Science and Technology			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
RS5012	Satellite Geodesy and Navigation	3	G
RS5024	Machine Learning & Active Image Processing	3	G
RS5035	Descriptive Oceanography	3	G
RS5037	Remote Sensing and Image Interpretation	3	G
RS5044	Digital Image and Social Change	3	G
RS5096	Statistics	3	G
RS6001	Seminar	1	G
RS6003	Seminar	1	G
RS6053	Principle of Space Remote Sensing	3	G
RS6081	Digital Image Processing for Remote Sensing I	3	G
RS7012	Digital Signal Processing	3	G
RS7032	Geological Remote Sensing	3	G
RS7035	Ocean Remote Sensing	3	G
RS7036	Aerosol Remote Sensing	3	G
RS7065	Geographic Information Systems	3	G
RS7076	Digital Photogrammetry	3	G

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College of Earth Sciences

Department of Atmospheric Physics

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
AP6060	Radar Meteorology	3	G
AP6063	Introduction to Physical Oceanography	3	G
AP6067	Advanced Applied Mathematics I	3	G
AP8003	Seminar	1	G
AP8007	Seminar II	1	G
AP8080	Special Topics on Planetary Boundary Lay	3	G
AP8125	Critical Analysis of Atmospheric Environmental Research	2	G
AP8127	Special Topics on Microwave Remote Sensing of the Atmosphere II	3	G

Department of Geophysics

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
GP3031	Neotectonics	2	U
GP4087	Special Topics in Earth Science (I)	1	U
GP4087	Special Topics in Earth Science (I)	1	U
GP4087	Special Topics in Earth Science (I)	1	U
GP5049	English Thesis Writing	2	G
GP5051	Volcanology	2	G
GP5068	Geomorphology	2	G
GP5091	Introduction to mountain building processes	2	G
GP5097	Advanced Observatory Seismology	2	G
GP6036	Seismic Data Processing	2	G
GP6057	Basin Analysis	2	G
GP6095	Seminar II (Geology)	1	G
GP6097	Seminar II (Geophysics)	1	G
GP7032	Theoretical geophysics	3	G
GP7039	Advanced Geoelectric Prospecting (I)	2	G
GP8001	Seminar III	1	G
GP8045	Seminar IV (Geology)	1	G
GP8047	Seminar IV (Geophysics)	1	G

Department of Space Science and Engineering

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
SS6018	Advanced Ionospheric Physics II	3	G
SS6052	Heliospheric Physics II	3	G
SS6053	Principle of Space Remote Sensing	3	G
SS8001	Seminar I	1	G

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International Ph.D. Graduate Program for Earth System Science			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
ES7001	Introductory Earth System Science	3	G
ES7011	Marine Biogeochemistry	3	G
ES7029	Seminar III	1	G
ES7061	Isotope geochemistry	2	G
ES7071	Seismic Hazard Assessment	2	G
ES7079	The Solid Earth	3	G
ES7081	Global Hydrological Cycles	3	G
ES7085	Scientific Programming	3	G
ES7087	Introduction to Volcanic Processes	2	G
ES7089	Observation and Modeling of Cloud Physics	3	G
ES7091	Exploration Seismology using Active and Passive Sources	3	G
ES7093	Paleolimnology	2	G
MSc in Applied Geology			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
AG7001	Advanced Field Geology I	3	G
AG7002	Mathematics in Applied Geology	2	G
AG7015	Seminar of Geotechnical Engineering I	1	G
AG7041	Seminar of Geotechnical Engineering III	1	G
AG7056	Rock Mechanics	3	G
AG7058	Seminar of Numerical Groundwater Models I	1	G
AG7060	Seminar of Numerical Groundwater Models III	1	G
AG7064	Groundwater Hydrology	3	G
AG7076	Seminar of Geomechanics I	1	G
AG7078	Seminar of Geomechanics III	1	G
AG7080	Seminar of Groundwater Contaminant Transport I	1	G
AG7082	Seminar of Groundwater Contaminant Transport III	1	G
AG7086	Advanced Physical Geology	2	G
AG7098	Fundamentals of Mathematics and Computer	2	G
AG7100	Seminar of Geohydraulics I	1	G
AG7102	Seminar of Geohydraulics III	1	G
AG7107	Seminar of Active Tectonics I	1	G
AG7109	Seminar of Active Tectonics III	1	G
AG7112	Quaternary Geology and the Critical Zone	2	G
AG7113	Seminar of Geo Energy I	1	G
AG7117	Geo Energy	3	G
MSc in Hydrological and Oceanic Sciences			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
HS6028	Atmospheric and Oceanic Processes	3	G
HS6077	Special Topic on Coastal Environments	3	G

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MSc in Hydrological and Oceanic Science			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
HS6087	Special topics on environmental turbulence	3	G
HS6091	Scientific Computing	3	G
HS6092	Computational Fluid Dynamics	3	G
HS6114	Regional oceanography in Taiwan waters	3	G
HS6151	Hydrological analysis	3	G

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College of Electrical Engineering and Computer Science

Department of Communication Engineering

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CO6021	Digital Signal Processing	3	G
CO6023	Coding Theory	3	G
CO6055	Distributed Networks	3	G

Department of Computer Science and Electrical Engineering

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CE2012	Assembly Language and System Programming	3	U
CE2013	Introduction to Computer Science and Information Engineering	3	U
CE3060	Introduction to Computer Vision and Its Applications	3	U
CE6102	Machine Learning	3	G
CE6143	Introduction to Data Science	3	G
CE6145	Programming Language Design	3	G
CE6146	Introduction to Deep Learning	3	G
CE6154	System Component Design for Emerging Memory and Storage Technologies	3	G
CE7024	Natural Language Processing	3	G
CE8007	3D Computer Graphics	3	G

Department of Electrical Engineering

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
EE2016	Introduction to Digital Systems	3	U
EE3047	Electronical Circuits Laboratory III	1	U
EE3047	Electronical Circuits Laboratory III	1	U
EE5011	DSP VLSI Architecture Design	3	G
EE6013	VLSI Design	3	G
EE7039	Compound Semiconductors	3	G
EE8041	Biomedical Systems Modeling	3	G
EE8043	Biomedical Statistics	3	G
EE8053	Microwave and Millimeter-wave Frequency Synthesizers	3	G
EE8070	Power System Fault Analysis	3	G
EE8074	Memory Circuit Design	3	G
EE8077	Signal Processing of Power Quality Disturbances	3	G
EE8079	Power Semiconductor Devices	3	G
EE8083	Advanced Nanoelectronic Devices	3	G

Graduate Institute of Network Learning Technology

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
NL6032	Advanced Seminar in Learning Theories	3	G
NL6046	Design of Digital Game-Based Learning	3	G

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Graduate Institute of Network Learning Technology			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
NL6048	High Interaction in Multimedia	3	G
NL7030	Quantitative Research Methods in e-Learning	3	G
NL7045	Educational Data Mining Using Python	3	G
NL7051	Development of Online Learning Content	3	G
NL7052	Qualitative Research of Digital Learning	3	G

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College of Engineering			
College of Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
EG1001	Programming for Engineering	3	U
Department of Civil Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CI2011	Fluid Mechanics	3	U
CI2027	Introduction to Geoinformatics	3	U
CI3005	Reinforced Concrete	3	U
CI5012	Satellite Geodesy and Navigation	3	G
CI5016	Centrifuge modeling technique and data analysis	3	G
CI5017	Geotechnical reliability and risk assessment	3	G
CI5018	Internet of Things and Smart Structural Health Monitoring	3	G
CI5025	Structural Control	3	G
CI5035	Basics of Satellite Remote Sensing	3	G
CI6018	Structural Dynamics	3	G
CI6026	Experimental Soil Mechanics	3	G
CI6046	Plasticity	3	G
CI6048	Finite Element	3	G
CI6065	Asphalt Concrete Mix Design	3	G
CI6087	Instrumentation for Material Research	3	G
CI7006	Computational Hydraulic	3	G
CI7009	Stress Wave Propagation Theory	3	G
CI7025	Continuum Mechanics	3	G
CI7059	Remote Sensing Image Processing and Analysis	3	G
CI7065	Geographical Information Systems	3	G
CI7076	Digital Photogrammetry	3	G
CI7105	Earthquake Disaster Reduction	2	G
CI7121	Special Topics in Geoinformatics Sciences I	4	G
CI8016	Geotechnical Seminar	1	G
CI8029	Geoinformatics Seminar II	1	G
CI8031	Geoinformatics Seminar	1	G
CI8032	Geoinformatics Seminar	1	G
CI8035	Building Information Modeling: Theory and Applications	3	G
Department of Chemical Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CH2001	Organic Chemistry I	3	U
CH2031	Materials Chemistry	3	U
CH2033	Chemical Engineering Outline	3	U
CH6007	Advanced Transport Phenomena	3	G

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Department of Chemical Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CH7007	Materials Physics	3	G
CH8055	Molecular Modeling	3	G
CH8076	Applied Electrochemistry	3	G
CH8081	Biomacromolecules	3	G
CH8097	Bio-inspired Materials	3	G
CH8111	Organometallic Chemistry and Applications in Organic Synthesis	3	G
Department of Mechanical Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
ME2001	Engineering Mathematics I	3	U
ME2073	Thermodynamics I	3	U
ME3001	Computer-aided Graphics	3	U
ME4016	Intermediate Mechanics of Materials	3	U
ME4061	Automatic Control I	3	U
ME5027	Advanced Applied Mathematics	3	G
ME5029	Reverse Engineering	3	G
ME5053	Two-phase Heat Transfer	3	G
ME5096	Statistics	3	G
ME6000	Numerical Analysis	3	G
ME6061	Robotics	3	G
ME6100	English Seminar	0	G
ME6105	Theory of Gearing	3	G
ME7014	Vibration Analysis	3	G
ME7056	Linear Systems	3	G
ME7069	Digital Control System	3	G
Institute of Materials Science & Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
MS5019	Processing and Characterization of Nanomaterials	3	G
MS5037	Materials Physics of Solid	3	G
MS5045	Electrochemistry of Materials	3	G
MSc in Energy Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
ER5050	Research Project on Energy Technology I	3	G
ER6003	Heat Exchangers	3	G
ER6009	Advanced and Statistical Thermodynamics	3	G

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MSc in Environmental Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
EN6041	Chemical Processes of Environmental Engineering	3	G
EN6047	Physical Processes of Environmental Engineering	3	G
EN6070	Special Topics in Water Treatment	3	G
EN6310	Waste Treatment and Recycling Engineering	3	G
EN6316	Applied Environmental Microbiology	3	G

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College of Health Science and Technology

Department of Life Science

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
LS3037	Neurological diseases	3	U
LS5029	Topic Seminar III	0	G
LS5033	Neurobiology	2	G
LS5039	Molecular Cell Biology	3	G
LS5055	Advanced Evolutionary Biology	3	G
LS5078	Fly genetics and disease model	3	G
LS5080	Genomics and Applications	3	G
LS6005	Seminar I	1	G
LS6005	Seminar I	1	G
LS6017	Seminar III	1	G
LS6051	Special Topics in Gene Cloning	3	G
LS6054	Plasmid	3	G
LS6081	Special Topics in Plant Gene Transformation	3	G
LS6091	Special Topics in Gene Regulation in Yeast	3	G
LS6104	Special topic: Free radical biology and medicine	3	G
LS6107	Special Topic: Genetic Basis of Phenotypic Evolution	3	G
LS6113	Special Topic in Tumorigenesis of Neuroblastoma	3	G
LS6117	Special Topics: Neurobiology of social behavior	3	G
LS6119	Special Topics: New Advances in Exosome Research	3	G
LS7001	Seminar I	2	G
LS7001	Seminar I	2	G
LS7003	Seminar III	2	G
Graduate Institute of Cognitive Neuroscience			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
NS5001	Cognitive Psychology	3	G
NS5011	Special Topics I	0	G
NS5019	Advanced Seminar I	0	G
NS5023	Advanced Statistics in Psychology	3	G
NS5088	Independent Study: An Introduction to Non-invasive Brain Stimulation Techniques	3	G
NS5097	Independent Study: Modeling of Brain Dynamics during Cognitive Processes	3	G
NS5131	Pupillometry: A window on mind and brain	3	G
NS5133	Independent Study: The psychology of attention	3	G
NS6001	Special Topics I	1	G
NS6003	Special Topics I	1	G

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International Ph.D. Program in Interdisciplinary Neuroscience			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
NI5001	Introduction to Neuroscience	3	G
NI5003	Interdisciplinary Lecture I	1	G
NI5005	Neuroscience Seminar I	1	G
NI5007	Electrophysiology Technique	3	G
NI5011	Neuroscience Seminar	1	G
Department of Biomedical Sciences and Engineering			
Department of Biomedical Sciences and Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
BM3014	Special topic on Biomedical Engineering and Scientific Modeling	2	U
Master Program in Biomedical Engineering			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
BE5001	Seminar I	0	G
BE5018	Systems Neuroscience	3	G
BE5019	Biomedical Signal Processing	3	G
BE5020	Drug Delivery Systems	3	G
BE5046	Bionanophotonics	3	G
BE5050	Introduction to Nanomaterials & Device Technology	3	G
Department of Biomedical Sciences and Engineering			
Master Program in Systems Biology and Bioinformatics			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
SB6001	Computation Biology and Bioinformatics	3	G
SB6004	Seminar I	2	G
SB6008	An Introduction to Bioinformatics Algorithms	3	G
SB6020	Biological Databases	3	G
SB7004	Application of R in Systems Biology	3	G
SB7036	Special Topic: Molecular Diagnosis and Drug Development I	2	G
SB7076	Introduction to Biomedical Pharmacology	3	G
SB7079	Deep reinforcement learning	3	G
SB7080	Molecular Regulation of Chronic Diseases	3	G
Interdisciplinary Translational Medicine Doctorate Program			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
TM7041	Mathematics for machine learning	3	G

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College of Liberal Arts
Department of Chinese Literature

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CL6108	Chinese Drama and Theatre	3	G

Department of English

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
EL1060	Writing through Media	3	U
EL1060	Writing through Media	3	U
EL1061	Phonetics and Pronunciation	3	U
EL1066	Emotional Literacy and Popular Culture	3	U
EL1067	Reconsidering Fiction, History & Philosophy	3	U
EL2005	Intro. to Linguistics	3	U
EL2059	English Literature: Survey I	3	U
EL2062	American Literature: Survey II	3	U
EL2075	Expository Writing	3	U
EL2075	Expository Writing	3	U
EL2076	Presentation & Communication I	3	U
EL2076	Presentation & Communication I	3	U
EL3055	Sociolinguistics	3	U
EL3060	Science Fiction	3	U
EL3096	Professional Communication	3	U
EL4055	Research Paper Writing	3	U
EL5001	Survey of Literary/Cultural Theories	3	G
EL6083	Seminar on Feminisms A	3	G
EL6107	British Colonial Modernity	3	G

International Master's Program in Inter-Asia Cultural Studies

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
IS5001	Introduction to Inter-Asia Cultural Studies	3	G

Master of Philosophy

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
PD6685	Topics in Western Philosophy I	3	G

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College of Management

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
MT2041	Statistics	3	U
MT4002	Workplace English for SOM Graduates	0	U

Department of Business Administration

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
BA2000	Financial Management	3	U
BA6030	Production & Operations Management	3	G
BA7032	Flexible Manufacturing Systems	3	G
BA8001	Research Methodology I	3	G
BA8009	Ph.D. Seminar	1	G
BA8012	Ph.D. Seminar	1	G
BA8050	Seminar on Marketing Management	3	G

Department of Economics

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
EC2003	Microeconomics	3	U
EC3007	Mathematical Economics	3	U
EC3047	Theory and Application of Information Economics I	3	U
EC3053	Business Communication in English	2	U
EC5001	Microeconomic Theory	3	G
EC5003	Macroeconomic Theory	3	G
EC7026	Econometric Methods and Applications	3	G

Department of Finance

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
FM2031	Financial Management	3	U
FM3036	Financial Institutions and Markets	3	U
FM4042	Business Communication in English	2	U
FM6056	Financial Management	3	G
FM6062	Real Estate Investments	3	G
FM6090	Advanced Topic in Fixed-Income Securities	3	G
FM6101	Empirical Analysis of Financial Market	3	G
FM6113	Corporate Social Responsibility	3	G
FM8001	Financial Theory I	3	G
FM8005	Seminar on Finance Theory and Applications I	1	G
FM8007	Seminar on Finance Theory and Applications III	1	G
FM8009	Advanced Quantitative Methods I	3	G
FM8011	Topics in Corporate Finance	3	G
FM8013	Seminar on Finance Theory and Applications V	1	G
FM8018	Seminar on Finance Theory and Applications VII	1	G

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Department of Information Management			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
IM2044	Introduction to Data Science	3	U
IM5019	Managerial Communications	2	G
IM5019	Managerial Communications	2	G
IM5025	Business Data Protection	3	G
Master of Human Resource Management			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
HR4001	Business Communication in English	0	U
HR6002	Human Resource Management	3	G
HR6045	Performance Management	3	G
HR6087	Experiential Learning in Negotiations	3	G
HR6094	Cross-Cultural Management	3	G
Master of Industrial Economics			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
IE5032	Introduction to Anglo-American Law	3	G
IE6001	Industrial Economics I	3	G
IE6005	Quantitative Methods I	3	G
IE8005	Advanced Quantitative Methods	3	G
Master of Industrial Management			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
IA5001	Operations Research I	3	G
IA5011	Operations Management	3	G
IA5041	Business Process Management	3	G
IA5051	Planning and Scheduling	3	G
IA7027	Operations Research I Lab	0	G
IA7034	Material Handling and Distribution	3	G
IA7044	Renewable Energy & Sustainable Development	3	G
IA7045	Statistical Methodology	3	G
MSc of Accounting			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
AC6026	Seminar on Information Management	3	G

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College of Science

Department of Chemistry

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
CM6054	Computational Chemistry	3	G
CM6057	Coordination chemistry	3	G
CM6063	Solid state Chemistry	3	G
CM6072	Principle and Use of Powder XRD in Chemistry	3	G
CM6090	Drug Design	2	G
CM7001	Seminar	2	G

Department of Mathematics

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
MA8017	Differential Equations I	3	G
MA8019	Numerical Analysis I	3	G

Department of Physics

Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
PH2029	Experimental Physics and Method II	6	U
PH3029	Mathematical Method in Physics I	3	U
PH6003	Quantum Mechanics I	3	G
PH6005	Classical Electrodynamics I	3	G
PH6007	Classical Mechanics I	3	G
PH6029	Quantum Field Theory I	3	G
PH6033	Solid State Physics I	3	G
PH6059	Biophysics	3	G
PH7046	Modern Cosmology	3	G
PH7066	Experimental Condensed Matter Physics	3	G
PHT003	Quantum Mechanics (I)	3	G
PHT009	Solid State Physics (I)	3	G
PHT015	Advanced Physical Chemistry (I)	3	G
PHT030	Fundamentals and Application of Synchrotron Radiation and Neutron Scattering	2	G
PHT031	Colloquium I	0	G
PHT032	Colloquium II	0	G
PHT033	Quantum Optics	3	G
PHT035	Advanced Inorganic Chemistry	3	G
PHT048	Modern Experimental Techniques-Physics	2	G
PHT051	Irreversible Thermodynamics and its Application in spin caloritronic	3	G
PHT065	Introduction to Nanotechnology- Physics	3	G
PHT066	Introduction to Nanotechnology- Chemistry	3	G
PHT071	Special Studies on Topics about Molecular Science and Technology I	0	G

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Department of Physics			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
PHT073	Seminar Presentation on Topics about Molecular Science and Technology I	2	G
PHT074	Seminar Presentation on Topics about Molecular Science and Technology II	2	G
PHT075	Seminar Presentation on Topics about Molecular Science and Technology III	2	G
Department of Optics & Photonics			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
OS6003	Fourier Optics	3	G
OS6015	Geometrical Optics	3	G
OS7097	Guided Wave Optics	3	G
OS7188	Optical System Design and Simulation I	3	G
OS7203	Modern Optical Engineering	3	G
MSc in Astronomy			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
AS6001	Seminar I	1	G
AS6047	Observational Astronomy	3	G
AS6059	Star Clusters and Stellar Population	3	G
AS6070	Solar System Astrophysics	3	G
AS6074	Stellar Atmosphere and Structure	3	G
AS6075	Astrophysics of Galaxies	3	G
AS6095	Astroinformatics	3	G
AS8008	Theoretical Astrophysics	3	G
AS8010	Frontiers in Astronomy I	1	G
MSc in Statistics			
Course	Course Name	Credit	Undergraduate Course(U) or Graduate Course(G)
ST6038	Mathematical Statistics	4	G
ST7021	Spatial Statistics (I)	3	G
ST8003	Advanced Probability I	3	G

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