# Professional electives for chemistry BS (version 3-11)

This is a list of potential courses that could fulfill the Professional Electives requirement. Other courses may fulfill this requirement particularly 500 level classes that are not required by your option, however you should seek your advisor's consent prior to enrolling into such a course and prepare a petition to allow it to count towards this requirement.

## Fall Offerings

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EFB334  WOODY PLANTS/NAT&BUILT LAND
EFB336  DENDROLOGY I
EFB352  ELEMENTS OF ENTOMOLOGY
EFB400  TOXIC HEALTH HAZARDS
EFB415  ECOLOGICAL BIOGEOCHEM
EFB416  INTRO/ENV INTERPRETATION
EFB427  PLANT DEVELOPMENTAL BIOL
EFB440  MYCOLOGY
EFB462  ANIMAL PHYSIOL:ENVRN&ECOL
EFB482  ORNITHOLOGY
EFB485  HERPETOLOGY
EFB487  FISHERIES SCIENCE & MGT
EFB493  MGT WILDLIFE HABITAT&POP
EFB496  TOPICS/ENVRN&FOREST BIO
EFB502  ECOLOGY & MGT/INVASIVE SPECIES
EFB518  SYSTEMS ECOLOGY
EFB524  LIMNOLOGY
EFB525  LIMNOLOGY LABORATORY
EFB535  SYSTEMATIC BOTANY
EFB554  AQUATIC ENTOMOLOGY

ERE - Environmental & Resource Engineering

ERE362  MECHANICS OF MATERIALS
ERE371  SURVEYING FOR ENGINEERS
ERE440  WATER POLLUTION ENGR
ERE441  AIR POLLUTION ENGR
ERE496  SPECIAL TOPICS
ERE501  BIOPROCESS MICROBIOLOGY
ERE502  BIOSEPARATIONS
ERE542  BIOREACTION ENGINEERING
ERE570  PRIN MASS/ENERGY BALANCE
ERE571  FLUID MECHANICS
ERE596  SPECIAL TOPICS
ESC - Environmental Science

ESC325  ENERGY SYSTEMS
ESC422  ENERGY MARKETS AND REGULATION
ESC525  ENERGY SYSTEMS
ESC622  ENERGY MARKETS AND REGULATION

EST - Environmental Studies

EST353  ENVRN PSYCHOLOGY

FCH - Forest Chemistry

FCH511  ENVRN CHEMISTRY II
FCH515  METH/ENVRN CHEM ANALYSIS
FCH530  BIOCHEMISTRY 1
FCH531  BIOCHEMISTRY LAB
FCH551  POLYMER TECHNIQUES
FCH552  POLYMER SCI:PROP&TECH

FEG - Forest Engineering

FEG335  NUMERICAL & COMPUTING METHODS

FOR - Forestry

FOR321  FOREST ECOLOGY & SILVICULTURE
FOR332  FOREST ECOLOGY
FOR340  WATERSHED HYDROLOGY
FOR345  INTRODUCTION TO SOILS
FOR357  PRACTICAL VECTOR GIS
FOR360  PRINCIPLES OF MANAGEMENT
FOR373  FOREST OPERATIONS
FOR430  AGROFORESTRY

Cross Listed with FOR630
FOR442  WATERSHED ECOLOGY & MANAGEMENT
FOR465  NATURAL RESOURCES POLICY
FOR487  ENVIRONMENTAL LAW AND POLICY
PSE - Paper Science & Engineering

PSE300  INTRO TO PAPERMAKING
PSE302  PULP&PAPER LAB SKILLS
PSE370  PRIN MASS/ENERGY BALANCE
PSE371  FLUID MECHANICS
PSE436  PULP & PAPER UNIT OPERATIONS
PSE465  PAPER PROPERTIES
PSE477  PROCESS CONTROL
PSE481  PROC/PLNT DSGN II:SYNTHERES

WPE - Wood Products Engineering

WPE487  WOOD CHEMISTRY AND PHYSICS

SPRING Offerings

APM - Applied Mathematics

APM391  INTRO/PROBABILITY&STATS
APM485  DIFF EQUAT/ENGR&SCIENTIST
APM620  ANALYSIS OF VARIANCE
APM630  REGRESSION ANALYSIS
APM696  SPEC TOPICS/QUANT METHODS

BPE - Bioprocess Engineering

BPE305  CO-OP EXP/BIOPROCESS ENG
BPE335  TRANSPORT PHENOMENA
BPE336  TRANSPORT PHENOMENA LAB
BPE421  BIOPROCESS KINETICS&SYSTM ENG
BPE441  BIOMASS ENERGY

BTC - Biotechnology

BTC425  PLANT BIOTECHNOLOGY
EFB - Environmental & Forest Biology

EFB311  PRINCIPLES OF EVOLUTION
EFB326  DIVERSITY OF PLANTS
EFB340  FOREST/SHADE TREE PATH
EFB355  INVERTEBRATE ZOOLOGY
EFB385  COMPARATIVE VERT ANATOMY
EFB390  WILDLIFE ECOLOGY&MGT
EFB405  LITERATURE OF NATURAL HISTORY
EFB413  INTRO TO CONSERVATION BIO
EFB419  PROB SOLVING/CONSERVATION BIOL
EFB428  MYCORRHIZAL ECOLOGY
EFB445  PLANT ECOLOGY
EFB446  THE ECOLOGY OF MOSSES
EFB480  PRIN OF ANIMAL BEHAVIOR
EFB483  MAMMAL DIVERSITY
EFB484  WINTER MAMMALIAN ECOLOGY
EFB486  ICHTHYOLOGY
EFB491  WILDLIFE ECOL&MGT PRACTM
EFB495  UNDERGRAD EXP/COLL TEACH
EFB516  ECOSYSTEMS
EFB519  GEOGRAPHIC MODELING
EFB523  TROPICAL ECOLOGY
EFB530  PLANT PHYSIOLOGY
EFB531  PLANT PHYSIOLOGY LAB
EFB542  FRESHWATER WETLAND ECOSYS

ERE - Environmental & Resource Engineering

ERE362  MECHANICS OF MATERIALS
ERE503  BIOPROCESS PLANT DESIGN
ERE511  ECOLOGICAL ENGR IN THE TROPICS
ERE519  GREEN ENTREPRENEURSHIP
ERE534  TRANSPORT PHENOMENA
ERE540  ENGR HYDROLOGY&HYDRAULICS
ERE548  OPEN CHANNEL HYDRAULICS
ERE561  ENGR THERMODYNAMICS
ERE565  PRINCIPLES OF REMOTE SENSING  
ERE570  PRIN MASS/ENERGY BALANCE  
ERE585  MICROSCPY&PHOTOMICRGRPHY  
ESC - Environmental Science  
ESC335  RENEWABLE ENERGY  
ESC535  RENEWABLE ENERGY  
ESF - Environmental Science and Forestry  
ESF300  INTRO/GEOSPATIAL INFO TECH  
FCH - Chemistry  
FCH390  DRUGS FROM THE WILD  
FCH496  SPECIAL PROBLEMS IN CHEM  
FCH510  ENVIRONMENTAL CHEMISTRY I  
FCH532  BIOCHEMISTRY II  
FCH550  POLYMER SCI:SYNTH&MECH  
FCH560  CHROMATOG/SEPARATION TECH  
FCH571  WOOD CHEMISTRY I  
FEG - Forest Engineering  
FEG340  ENGR HYDROLOGY&HYDRAULICS  
FEG437  TRANSPORTATION SYSTEMS  
FEG448  OPEN CHANNEL HYDRAULICS  
FEG454  POWER SYSTEMS  
FEG489  FOREST ENGR PLAN&DESIGN  
FOR - Forestry
FOR 338  METEOROLOGY
FOR 488  NAT RESOURCES AGENCIES & ADMIN
FOR 489  NATURAL RESOURCES LAW & POLICY
FOR 490  INTEGRATED RESOURCE MGT
FOR 523  TROPICAL ECOLOGY
FOR 533  NATURAL RESRC MANAGERIAL ECON
FOR 535  ADVANCED FOREST SOILS
FOR 538  METEOROLOGY

PSE - Paper Science & Engineering

PSE 350  PULP&BLEACH PROCESSES
PSE 351  PULP&BLEACH LABORATORY
PSE 361  ENGR THERMODYNAMICS
PSE 456  MGT/PAPER INDUSTRY
  Cross Listed with ERE676
PSE 466  PAPER COATING/CONVERTING
PSE 467  PAPERMAKING WETEND CHEM
PSE 468  PAPERMAKING PROCESSES
PSE 480  ENGR DESIGN ECONOMICS

WPE - Wood Products Engineering

WPE 386  STRUCT & PROP OF WOOD
WPE 422  COMPOSITE MATERIALS