

College of Physical Sciences and Engineering

Architecture & Construction (MAJORS ONLY)

CM Business Management Cluster (12-15 Credits) 6000

Accounting - Select Option A or B (2 classes)

Accounting Option A

Take one of these courses

Acct 180	Survey of Accounting	3
Acctg 201	Financial Accounting	3
Acctg 202	Managerial Accounting	3

Take one of these courses

B 101	Intro to Business	3
B 283	Entrepreneurship	3

Accounting Option B

Take these courses

Acctg 201	Financial Accounting	3
Acctg 202	Managerial Accounting	3

AND

Enrichment (Choose 2 Classes)

B 201	Introduction to Finance	3
B 341	Marketing Management	3
B 370	Human Resource Management	3
B 380	Introduction to Inter Business	2
B 413	Real Estate (prereq: B 201)	3

FDMat 221	Business Statistics OR MATH 221	3
Econ 112	Economic Principles & Problems - Micro	3

TOTAL CREDITS 12-15

NOTE: Students may choose from one of the CM clusters below or they may establish a Specialized Cluster by selecting 12 credits from any of the other CM clusters. Clusters using classes that are not in the CM cluster lists need to be approved and signed by your academic advisor before beginning the coursework.

Commercial Construction Cluster (Choose 12-15 Credits) 6001

Take twelve credits

Const 340	Fundamentals of Land Survey	3
Const 350	Soils and Equipment	3
Const 400	Advanced Estimating	3
Arch 270	Specifications	3
Arch 300	Sustainable Design & Construction	3
Span	Spanish	3 or 4
ME 105	Basic Welding	4

TOTAL CREDITS 12-15

Architectural Cluster (Choose 12-15 Credits) 6002

Take twelve credits

Arch 110	AutoCAD Arch Desktop	3
Arch 160	Arch Design and Drafting	3
Arch 210	Adv AutoCAD Arch Desktop	3
Arch 260	Rendering and Perspective	3
Arch 270	Specifications	3
Arch 280	Building information Modeling	3
Arch 300	Sustainable Design & Construction	3
ME 115	Computerized Technical Illustration	2

TOTAL CREDITS 12-15

Residential Construction Cluster (12-15 Credits) 6003

Take twelve credits

Const 300	Cabinetmaking	3
Const 460	Residential Constr Practice	2
Span	Spanish	3 or 4
ME 105	Basic Welding	4
Const 210	Finishing Systems	3
Const 230	Mechanical Systems	3
Const 240	Electrical Systems	3
Const 250	Steel Structural Systems	3
Const 350	Soils & Equipment	3
Arch 300	Sustainable Design & Construction	3

TOTAL CREDITS 12-15

Automotive

Automotive Technology Cluster (12-15 Credits) 6100

Take one or both of these classes

Auto 100	Beginning Auto	1
Auto 118	Auto Maintenance	1

Take at least TWO of these classes

Auto 155	Brakes, Suspension & Align	4
Auto 225	Automotive Electricity/Electronics	6
Auto 235	Auto Engine Performance	6

TOTAL CREDITS 12

Mathematics

General Mathematics Cluster (12-15 Credits) 6200

Take at least 12 credits from Mathematics classes numbered 111 or higher.

TOTAL CREDITS 12-15

Mechanical Engineering

Engineering Cluster (12-15 Credits) 6300

Take this class

ME 172	Visualization in Engr Design	3
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AND Take 4 credits from the following list

ME 105	Essentials of Welding	4
ME 131	Manufacturing Processes I	2
ME 132A*	Manufacturing Processes II	2
ME 132B*	Manufacturing Processes III	2

*Only one of these two classes may be taken for credit

AND Take 8 credits from the following list

FDMAT 112	Calculus 1 (or MATH 112)	4
ME 142	Engr. Comp. I	2
ME 201	Engineering Mechanics: Statics	2
ME 202	Strength of Materials	3
ME 204	Engineering Mechanics: Dynamics	3
ME 210	Measurement & Instrumentation	1
ME 218	Materials Lab	1
ME 250	Materials Science	3
ME 280	ME Design I: Practical Mech. Design	3

TOTAL CREDITS 12-15

Physics

Technical Physics Cluster (12-15 credits) 6400

Take 12 Credits from the following classes

Ph 121	Principles of Physics I	3
Ph 123	Principles of Physics II	3
Ph 150	Beginning Physics Lab	1
Ph 220	Principles of Physics III	3
Ph 250	Inter Physics Lab for Phy & Ph Sci	1
Ph 279	Modern Physics	3
Ph 311	Physics by Inquiry I	3
Ph 314	History/Philosophy of Science	3

TOTAL CREDITS 12-15

Physics Exposure Cluster (14 Credits) 6401

Take either:

Ph 105	Introductory Applied Physics I	4
Ph 106	Introductory Applied Physics II	4

OR

Ph 115	Pre-Med Professional Physics I	4
Ph 116	Pre-Med Professional Physics II	4

AND

Ph 311	Physics by Inquiry I	3
Ph 314	History/Philosophy of Science	3

TOTAL CREDITS 14

Chemistry

Chemistry Cluster (12-15 Credits) 6500

Take at least 12 Credits from the following classes

Chem 105	General Chemistry	4
Chem 106	General Chemistry	4
Chem 150*	Intro. Organic & Biochemistry	5
Chem 220	Quantitative Analysis	5
Chem 351*	Organic Chemistry	4
Chem 352*	Organic Chemistry	4

TOTAL CREDITS 12-15

*Chem 150 cannot count with Chem 351 and/or Chem 352

College of Physical Sciences and Engineering

Computer Science & Engineering

Computer Science (12-15 Credits) 6600

Take the following classes

CS 124	Introduction to Software Dev	3
CS 165	Object-oriented Software Dev	3

AND two from the following list

CompE 224	Fundamentals of Digital Systems	3
CompE 324	Computer Architecture	3
CS 213	Web Engineering I	3
CS 235	Data Structures	3
CS 237	Discrete Mathematics I	3
CS 238	Discrete Mathematics II	3
CS 246	Software Design and Dev	3
CS 371	Human-Computer Interaction	3
CS 460	Computer Communication & Networks	3

TOTAL CREDITS 12

Computer Engineering (13 Credits)

6601

Take the following classes

CompE 150	Electric Circuit Analysis I	3
CompE 224	Fundamentals of Digital Syst	3
CS 124	Introduction to Software Dev	3
CS 165	Object-oriented Software Dev	3

TOTAL CREDITS 12

Geology

Geology Cluster (12-15 credits) 6700

Take one of the following classes

Geol 101	Introduction to Phy Geology	3
Geol 104	Natural Disasters & Resources	3
Geol 111	Physical Geology	3

AND take the following three classes

Geol 111L	Physical Geology Lab	1
Geol 112	Historical Geology	3
Geol 112L	Historical Geology Lab	1

AND take one class from Group A or at least 4 Credits from Group B

Group A

Geol 250	Rocks and Minerals	4
Geol 350	Mineralogy and Petrology	4

Group B

Geol 240	Oceanography & Meteorology	3
Geol 240L	Oceanography & Meteorology Lab	1
Geol 311	Structural Geology	4
Geol 340	Introduction to GIS/GPS	3
Geol 370	Stratigraphy & Sedimentation	4
Geol 380	Regional Geology	4
Geol 404	Environmental Geology	3
Geol 411	Geomorphology	3
Geol 420	Geochemistry	3
Geol 425	Petroleum Geology	3
Geol 435	Hydrology	3
Geol 440	Applied GIS	3
Geol 445	Geophysics	3
Geol 480	Paleontology	3

TOTAL CREDITS 12-15

Geographic Information Systems Cluster (12-15 Credits)

6701

Take one of the following options

Geol 340	Introduction to GIS/GPS	3
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Option 2

Geog 230 & (Recommended for Geographers) (Recommended for geographers) Introduction to GIS		
Geog 230	to GIS	3
Geog 340	Advanced GIS and Spacial Analysis	3

AND take courses below for a total of 12 cluster credits

FDMat 222	Bio Statistics OR	3
MATH 221	Statistics	
CS 124	Intro. to Software Development OR	3
CIT 203	Intro. to Programming	
Geol 440	Applications of GIS in Geology	3
Geog 240	Maps & Remote Sensing	3

TOTAL CREDITS 12-15

Physical Science

Physical Science & Mathematics Cluster (12-15 Credits) 6800

Select 12-16 credits from at least two of the following areas

Chemistry

Chem 105	General Chemistry	4
Chem 106	General Chemistry	4

Physics

Ph 105	Introductory Applied Physics I	4
Ph 106	Introductory Applied Physics II	4

OR

Ph 115	Pre-Med Professional Physics I	4
Ph 116	Pre-Med Professional Physics II	4

OR

Ph 121	Principles of Physics I	3
Ph 123	Principles of Physics II	3
Ph 220	Principles of Physics III	3

Geology

Geol 101	Introduction to Phy Geology	3
Geol 104	Natural Disasters & Resources	3
Geol 111	Physical Geology	3

AND take the following three classes

Geol 111L	Physical Geology Lab	1
Geol 112	Historical Geology	3
Geol 112L	Historical Geology Lab	1

Math

Take any Math class numbered 111 or higher	3
Total Credits	12-15