APPROVED
COMMISSION ON UNDERGRADUATE STUDIES AND POLICIES

COLLEGE OF ENGINEERING

THE MYERS-LAWSON SCHOOL OF CONSTRUCTION

BACHELOR OF SCIENCE IN CONSTRUCTION ENGINEERING AND MANAGEMENT

FOR STUDENTS GRADUATING IN CALENDAR YEAR 2018

132 CREDITS REQUIRED FOR GRADUATION

FALL SEMESTER FRESHMAN 2014	Credits
CHEM 1035 General Chemistry	3
CHEM 1045 General Chemistry Lab *Co: CHEM 1035*	1
ENGL 1105 First-Year Writing	3
MATH 1225 Calculus of a Single Variable *Pre: Math Ready*	4
ENGE 1215 Foundations of Engineering **(C-)**	2
CLE (Area 2)	3
TOTAL	**16**

SPRING SEMESTER FRESHMAN 2015	Credits
ENGL 1106 First-Year Writing *Pre: ENGL 1105*	3
MATH 1114 Linear Algebra or MATH 2114 Introduction to Linear Algebra	2
MATH 1226 Calculus of a Single Variable **(C-)** *Pre: MATH 1225 (C-)*	4
PHYS 2305 Found of Physics I w/lab **(C-)** *Pre: MATH 1225; Co: MATH 1226*	4
ENGE 1216 Foundations of Engineering **(C-)** *Pre: ENGE 1215 (C-) or ENGE 1024 (C-)*	2
CLE (Area 6)	1
TOTAL	**16**

FALL SEMESTER SOPHOMORE 2015	Credits
GEOS 2104 Elements of Geology **(C-)**	3
MATH 2204 Intro Multivariable Calculus *Pre: MATH 1226*	3
PHYS 2306 Foundations of Physics I w/lab *Pre: MATH 1226, PHYS 2305*	4
ESM 2104 Statics *Pre: MATH 1114 Co: MATH 2224 or MATH 2224H or MATH 2204 or MATH 2204H or MATH 2406H*	3
ISE 2014 Engineering Economy *Pre: (ENGE 1024 (C-) or ENGE 1215 (C-)) or BC 1224*	2
CNST 2104 Introduction to CEM *Pre: ENGE 1216*	2[F]
TOTAL	**17**

SPRING SEMESTER SOPHOMORE 2016	Credits
BC 2114 IT in Design & Construction	3
MATH 2214 Differential Equations *Pre: (MATH 1114 or 1114H or 2114 or 2114H), (MATH 1206 or 1206H or 1226 or 1226H)*	3
CEE 2814 CEE Measurements **(C-)** *Pre: ENGE 1216, MATH 1226 Co: CEE 2824*	4
ESM 2204 Mech of Deformable Bodies **(C-)** *Pre: ESM 2104, (MATH 2224 or 2224H or 2204 or 2204H)*	3
CLE (Area 2)	3
TOTAL	**16**

FALL SEMESTER JUNIOR 2016	Credits
ECON 2005 Principles of Economics	3
BC 3064 Building Systems Tech Lab *Pre: (BC 2064, PHYS 2305) or (CNST 2104, PHYS 2305) Co: BC 3114*	2
BC 3114 Building Systems Tech *Pre: (BC 2024 or CNST 2104), PHYS 2305; Co: BC 3064*	3
CEE 3014 Construction Management **(C-)** *Pre: Junior Standing*	3
CEE 3404 Theory of Structures **(C-)** *Pre: ESM 2204*	3
CEE 3684 CEE Materials **(C-)** *Pre: CHEM 1035 (C-), CHEM 1045 (C-), ESM 2204 (C-), CEE 2814 (C-), (GEOS 2104 (C-) or GEOS 1004 (C-)*	3
TOTAL	**17**

SPRING SEMESTER JUNIOR 2017	Credits
BC 4064 Construction Practice Lab *Pre: BC 406; Co: BC 4434*	2
BC 4434 Construction Practice I *Pre: BC 2044 or CEE 3014 Co: BC 4064*	3
CEE 3434 Design of Steel Structures *Pre: CEE 3404, CEE 3684*	3
CEE 4014 Estimating, Production, and Cost Engineering *Pre: CEE 3014*	3
CEE 4074 Construction Means & Methods *Pre: CEE 3014*	3[S]
CNST 3164 Construction Health and Safety *Pre: CNST 2104*	3
	17

FALL SEMESTER SENIOR 2017	Credits
ECON 2006 Principles of Economics *Pre: ECON 2005*	3 [F,S]
BC 4444 Construction Practice II *Pre: BC 4434*	4
CEE 3424 Reinforced Concrete Structures *Pre: CEE 3404, CEE 3684*	3
CEE 3514 Intro to Geotechnical Engr *Pre: ESM 2204, GEOS 2104*	3
CEE 4024 Const Control Techniques *Pre: CEE 3014*	3[F]
TOTAL	**16**

SPRING SEMESTER SENIOR 2018	Credits
CEE 4804 Prof & Legal Issues in Eng *Pre: 75 hrs completed*	3
CEE 3104 Intro to Environmental Engr *Pre: CHEM 1035, CHEM 1045, MATH 1206, PHYS 2305* **or** CEE 4554 Natural Disaster **or** ENGR 1814 Energy, Resrce & Envr	3
CNST/BC 3134 Temporary Structures in Construction	3
Engineering Elective	2-3
Business Elective	2-3
Business Elective	2-3
TOTAL	**17-18**

APPROVED
COMMISSION ON UNDERGRADUATE
STUDIES AND POLICIES

Curriculum for Liberal Education (CLE) Consult the CLE Alphabetical Listing at: http://www.cle.prov.vt.edu/guides/alpha.html, CLE courses need to be completed prior to graduation				
CLE Area 1: Writing and Discourse (6 hrs)	**ENGL 1105**	**(3)**	**ENGL 1106**	**(3)**
CLE Area 2: Ideas, Cultural Traditions, Values Electives (6 hrs)		**(3)**		**(3)**
CLE Area 3: Society & Human Behavior electives (6 hrs)	**ECON 2005**	**(3)**	**ECON 2006**	**(3)**
CLE Area 4: Scientific Reasoning and Discovery (8 hrs)	**PHYS 2305**	**(4)**	**PHYS 2306**	**(4)**
CLE Area 5: Quantitative and Symbolic Reasoning (8 hrs)	**MATH 1225**	**(4)**	**MATH 1226**	**(4)**
CLE Area 6: Creativity & Aesthetic Experience elective (1 hr)				**(1)**
CLE Area 7: Global Issues Elective (3 hrs)	**CEE 3104 or CEE 4554 or ENGR 1814**			**(3)**
If a CLE course is double-counted to satisfy two different CLE areas, a free elective(s) must be taken to maintain a minimum of 132 credits.				

Electives

The CEM degree requires 2-3 credits of engineering electives at the 3000 or higher level from any department in the College of Engineering , and 5-6 hours of business electives from the approved list attached.

Change of Major Requirements: This is a restricted major. All students should reference the following webpage for policies and requirements: http://www.enge.vt.edu/undergraduate/undergraduate-changing-majors

Foreign Language Requirements: Students must have had 2 years of a foreign language in high school or one year at the college level (6 credit hours) of the same language. College-level credits used to meet this requirement do not count towards the degree.

Satisfactory Progress Towards Degree: University Policy 91 outlines university-wide minimum criteria to determine if students are making satisfactory progress towards the completion of their degrees. The Myers-Lawson School of Construction fully supports this policy. Specific expectations for satisfactory progress for CEM majors are as follows:

- Each student must meet the minimum University-wide criteria as described in Policy 91 and summarized in the Undergraduate Catalog (under Academic Policies)
- Upon completion of 70 hours, students must have completed CNST 2104 and CEE 2814 and have a minimum of a 2.0 in-major and a 2.0 overall GPA. (The in-major GPA consists of all courses taken under the CEE, CNST and BC designation).

Statement of Hidden Prerequisites: Pre-requisites for each course are listed after the course title. There are no hidden pre-requisites in this program of study. Be sure to consult the University Course Catalog or check with your advisor.

Graduation Requirements: Students must pass all required courses and both the in-major and overall GPA must be at least 2.0 or graduation. Courses on the College of Engineering list of non-degree credit may not be taken for credit towards graduation (list found at www.eng.vt.edu/forms)

CEM BUSINESS ELECTIVES (6 credits)

ACIS 2115 – Principles of Accounting
ACIS 2116 – Principles of Accounting (Pre: ACIS 2115)
BIT 2405 – Quantitative Methods (Pre: (MATH 1525, 1526) or (MATH 1205, 1526) or (MATH 1225, 1526) or (MATH 1016, 1526) or (MATH 1525, 2015, 1114) or (MATH 1016, 2015, 1114) or (MATH 1015, 1525, 2015) or (MATH 1015, 1525, 1206) or (MATH 1015, 1205, 2015) or (MATH 1525, 1206, 1114) or (MATH 1016, 1206, 1114) or (MATH 1205, 1526) or (MATH 1225, 1526) or (MATH 1016, 1526) or (MATH 1025, 1526) or (MATH 1205, 1206, 1114) or (MATH 1205, 1206, 2114) or (MATH 1225, 1226, 1114) or (MATH 1225, 1226, 2114) or (MATH 1525, 1206, 1114) or (MATH 1525, 1206, 2114) or (MATH 1525, 1226, 1114) or (MATH 1525, 1226, 2114) or (MATH 1016, 1206, 1114) or (MATH 1016, 1206, 1114) or (MATH 1016, 1206, 2114) or (MATH 1016, 1226, 1114) or (MATH 1016, 1226, 2114) or (MATH 1025, 1206, 1114) or (MATH 1025, 1206, 2114) or (MATH 1025, 1226, 1114) or (MATH 1025, 1226, 2114)))
BIT 2406 – Quantitative Methods (Pre BIT 2405)
BIT 3414 – Operations and Supply Chain Management (Pre-BIT 2406, ACIS 2116, ECON 2006)
ECON 3104 – Microeconomic Theory (pre-see undergraduate catalog)
ECON 3214 – Money and Banking (pre ECON 2005 or 20253H) & ECON 2006)
ECON 4074 – Lab or Economics (Pre (ECON 2005 or 2116 or 2126 or 2025H), ECON 3254)
ECON 4084 –Industry Structure (pre-ECON 3104 or 4924)
ECON 4124 – Growth and Development (Pre: ECON 2006, (ECON 2025H or 3104))
FIN 3054 – Legal and Ethical Environment of Business
FIN 3104 – Introduction to Finance (Pre: ACIS 2115, (BIT 2405 or STAT 3005 or 3604 or 4604 or 4705 or 4714) or (STAT 3615, 3616), (ECON 2005 or 2025H))
MGT 3304 – Management Theory and Leadership Practice (Sophomore Standing)
MGT 3324 – Organization Behavior
MGT 3334 – Managing Human Resources (Pre: MGT 3304)
MGT 4334 – Ethical Leadership and Corporate Social Responsibility (pre-MGT 3304)
MKTG 3104 – Marketing Management (Junior Standing)
UAP 4714 – Economics and Financing of State and Local Governments (pre- B- in UAP 3024, C or better in ECON 2005 & 2006)
UAP 2004 – Principles of Real Estate
UAP 4754 – Legal Foundations of Planning