IOWA

CIVIL FOCUS AREA: Transportation
Department of Civil and Environmental Engineering

General Education (19 sh)

		sh
ALL	**RHET:1030 Rhetoric**	4
F/S	**Diversity & Inclusion**	3
ALL	**Be Creative**	3
ALL	**Approved Gen Ed Course**	3
ALL	**Approved Gen Ed Course**	3
ALL	**Approved Gen Ed Course**	3

Math & Basic Science Core (24 sh)

		sh
F/S	**MATH:1550 Math I: Single Variable Calculus** *(P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)*	4
ALL	**MATH 1560 Math II: Multivariable Calculus** *(P: MATH:1550)*	4
ALL	**MATH:2550 Math III: Matrix Algebra** *(P: MATH:1550)*	2
ALL	**MATH:2560 Math IV: Differential Equations** *(P: MATH:1560 & MATH:2550)*	3
F/S	**STAT:2020 Probabilty & Statistics For Engr & Phys Sci** *(P: MATH:1560)*	3
ALL	**CHEM:1110 Principles of Chemistry I** *(P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)*	4
ALL	**PHYS:1611 Introductory Physics I / Lab** *(C: MATH:1550)*	4

Engineering Core (7 sh)

		sh
F	**ENGR:1000 Engineering Success for First-Year Students** *(First semester standing)*	1
F	**ENGR:1100 Intro to Engineering Problem Solving**	3
F/S	**ENGR:1300 Intro to Engineering Computing** *(C: MATH:1550)*	3

Civil Engineering Requirements (45 sh)

		sh
ALL	**CHEM:1120 Principles of Chemistry II** *(P: CHEM:1110)*	4 OR
F/S	**PHYS:1612 Introductory Physics II / Lab** *(P: PHYS:1611; C: MATH:1560)*	4
ALL	**ENGR:2110 Statics** *(P: MATH:1550; C: MATH:1560 & PHYS:1611)*	2
ALL	**ENGR:2130 Thermodynamics** *(P: CHEM:1110 & PHYS:1611; C: MATH:1560)*	3
F/S	**ENGR:2510 Fluid Mechanics** *(P: MATH:2560 & ENGR:2710; C: ENGR:2130)*	4
ALL*	**ENGR:2710 Dynamics** *(P: ENGR:2110 & MATH:1550)*	3
ALL*	**ENGR:2750 Mechanics of Deformable Bodies** *(P: ENGR:2110; C: MATH:2560)*	3
ALL	**CEE:1030 Intro to Earth Science (no lab required)**	3
F	**CEE:2015 Civil Engineering Tools**	2
S	**CEE:3155 Principles of Environmental Engineering** *(P: CHEM:1110)*	4
S	**CEE:3371 Principles of Hydraulics and Hydrology** *(P: ENGR:2510)*	3
F	**CEE:3530 Geomechanics** *(P: ENGR:2750)*	4
F	**CEE:3533 Principles of Structural Engineering** *(P: ENGR:2750)*	4
S	**CEE:3586 Civil Engineering Materials** *(P: ENGR:2750)*	3
S	**CEE:3763 Principles of Transportation Engineering** *(C: ENGR:1100)*	3

Capstone Design Courses (3 sh)

		sh
F/S	**CEE:4850 Project Design & Management in CEE** *(P: final semester; C: CEE:3003)*	3

CEE Professional Skills (4 sh)

		sh
S	**CEE:2010 Professional Practice and Ethics**	1
F	**CEE:3001 Leadership Skills for Engineers** *(junior standing)*	1
S	**CEE:3002 Technical Communication in CEE** *(junior standing)*	1
F	**CEE:3003 Project Management Skills** *(senior standing)*	1

Required: Transportation (3 sh)

		sh
F	**CEE:4762 Design of Transportation Systems** *(P: CEE:3763)*	3

Electives: Transportation (24 sh)

CEE Design Course*
sh

select **one course** from this list

		sh
F	**CEE:4157 Environmental Engineering Design** (P: CEE:3155)	3
F	**CEE:4374 Water Resource Design** (P:CEE:3371)	3
F	**CEE:4506 Design of Concrete Structures** (P:CEE:3533)	3
S	**CEE:4535 Design of Steel Structures** (P: CEE:3533)	3

Electives: Focus Area, Minor, Certicate, etc.
sh

select **5 courses** from the list below

		sh
F	**CEE:3142 Quality Control** (P: STAT:2020 or BAIS:9100 or (STAT:3100 & STAT:3101 & STAT:3200))	3
S	**CEE:3783 Surveying & Remote Sensing** (P: ENGR:1100)	3
S	**CEE:3790 Resilient Infrastructure and Operations**	3
F/S	**CEE:3998 Individual Investigation in CEE**	3
S	**CEE:4160 Introduction to Bridge Engineering** (spring semester, even years) (P: CEE:3533)	3
S	**CEE:4176 Transportation Demand Analysis**	3
F	**CEE:4560 Pavement Engineering** (fall semester, odd years) (P: CEE:3763)	3
F	**CEE:4730 Transportation Infrastructure Construction and Management** (fall semester, even years) (P: CEE:3763)	3
F	**CEE:4763 Traffic Engineering** (P: CEE:3763)	3
	CEE:6763 Application Simulation to Transportation (check MyUI for listings) (P: CEE:3763 or	

Electives: Focus Area, Minor, Certicate, etc.
sh

select **2 courses** from the list below

		sh
	Any additional CEE Design Course(s) listed above	
	Any additional elective course(s) in CEE	
S	**ISE:2500 Engineering Economy** (C: STAT:2020)	3
F/S	**ENGR:2120 Electrical Circuits** (C: MATH:2560)	3
F/S	**ENGR:2995 Intro to AI & Machine Learning in Engineering** (P: ENGR:1300; C: MATH:2550)	3
F/S	**ENGR:2730 Computers in Engineering** (P: ENGR:1300)	3
	Any pre-approved non-engineering Focus Area course(s) (see CEE web site for list of pre-approved courses)	
	All other course(s) require approval for Focus Area credit (see CEE web site regarding the approval process)	

Total Semester Hour Requirements: 129