

# Idaho State University – College of Engineering

## Civil Engineering Graduation Checklist

*effective Fall 2006*

STUDENT INFORMATION	
Name:	Mailing Address:
Bengal ID#:	
Telephone:	
Preferred Email Address:	

<b>CREDIT HOUR SUMMARY</b>	<b>Required</b>	<b>Earned</b>
General Education Requirements	38	
Additional Mathematics Courses	12	
Engineering Core Courses	35	
Civil Engineering Courses	48	
<b>Total Credits for Graduation</b>	<b>133</b>	

GRADUATION APPROVALS
Advisor:
Department Chair:
Dean:
Graduation Date:

## General Education Requirements

Course	Title	Corequisite(s)	Prerequisite(s)	Credits	Semester Offered	Grade	Remarks
<i>Goal 1 – English</i>							
ENGL 102	Critical Reading and Writing		ENGL 101	3	F,S,Su		
<i>Goal 2 – Speech</i>							
COMM 101	Principles of Speech			3	F,S		
<i>Goal 3 – Mathematics</i>							
MATH 170	Calculus I		MATH 147, OR MATH 143 & MATH 144	4	F,S,Su		*
<i>Goals 4 and 5 – Natural Sciences</i>							
CHEM 111	General Chemistry I		MATH 143	5	F,S		*
PHYS 211	Engineering Physics I	MATH 175		4	F,S		*
PHYS 212	Engineering Physics II		PHYS 211	4	F,S		*
<i>Any 2 of Goals 6, 7 &amp; 8 – Humanities</i>							
				3			**
				3			**
<i>Any 3 of Goals 9, 10a or 10b, 11 &amp; 12 – Social Sciences</i>							
				3			**
				3			**
				3			**
<b>Subtotal</b>				<b>38</b>			

## Additional Mathematics Courses

Course	Title	Corequisite(s)	Prerequisite(s)	Credits	Semester Offered	Grade	Remarks
MATH 175	Calculus II		MATH 170	4	F,S		*
MATH 230	Introduction to Linear Algebra		MATH 143	2	F,S,Su		*
MATH 352 or	General Statistics		MATH 175	3	F		*
MATH 360	Differential Equations		MATH 175 & MATH 230	3	F,S		*
<b>Subtotal</b>				<b>12</b>			

\* This group of courses collectively meets ABET mathematics and basic sciences requirements.

\*\* See page 4 for a list of elective courses which can be used to satisfy these general education requirements.

## Engineering Core Courses

Course	Title	Corequisites	Prerequisite(s)	Credits	Semester Offered	Grade	Remarks
ENGR 105	Engineering Graphics		MATH 147	2	F,S		
ENGR 120	Introduction to Engineering	MATH 147		2	F,S		
ENGR 165	Structured Programming		MATH 170 & MATH 230	2	F,S		
ENGR 167	Engineering and Scientific Programming	ENGR 165		1	F,S		
ENGR 210	Engineering Statics	ENGR 105, PHYS 211 & MATH 175	ENGR 120	3	F,S		
ENGR 220	Engineering Dynamics		ENGR 210	3	F,S		
ENGR 223	Materials and Measurements	ENGR 120, ENGR 224 & MATH 170	CHEM 111 & ENGL 102	3	F,S		
ENGR 224	Materials and Measurements Laboratory	ENGR 223		1	F,S		
ENGR 240	Introduction to Electrical Circuits	PHYS 212	MATH 175	3	F		
ENGR 307	Thermodynamics		CHEM 111, ENGR 220, PHYS 212 & MATH 175	3	F,S		
ENGR 350	Mechanics of Materials		ENGR 210, ENGR 223, ENGR 224	3	F,S		
ENGR 361	Engineering Economics and Management			3	S,D		
ENGR 496A	Project Design I		Approval of Application	3	F		
ENGR 496B	Project Design II		ENGR 496A	3	S		
<b>Subtotal</b>				<b>35</b>			

### Civil Engineering Courses

Course	Title	Corequisite(s)	Prerequisite(s)	Credits	Semester Offered	Grade	Remarks
CE 301	Surveying		MATH 147	3	F,D		
CE 332	Basic Geotechnics	ME 341	ENGR 223	3	S		
ME 341	Fluid Mechanics		ENGR 307 & MATH 360	3	S		
CE 351	Engineering Hydrology	ME 341		2	S		
CE 362	Structural Analysis		ENGR 350 & MATH 230	4	F		
CE 434	Geotechnical Design		ENGR 350 & CE 332	3	F		
CE 435	Hydraulic Design		ME 341	3	F		
CE 436	Roadway Design	CE 332	ENGR 223 & CE 301	3	S		
CE g437	Geotechnical Engineering Laboratory	CE 332		1	F		
CE g462	Design of Steel Structures		CE 362	3	S		
CE g464	Design of Concrete Structures		CE 362	3	S		
CE g467	Structural Engineering Laboratory	CE 362		1	S		
CE 490	Civil Engineering Seminar		Senior Standing in Engineering	1	F		
CE Elective				3			***
CE Elective				3			***
CE Elective				3			***
ENVE g408	Water and Waste Water Quality		CHEM 111	3	S,D		
ENVE g410	Introduction to Environmental Engineering		ENVE g408	3	F		
<b>Subtotal</b>				<b>48</b>			

\*\*\* See page 4 for a list of approved Civil Engineering elective courses

## ELECTIVE SELECTIONS

**HUMANITIES AND SOCIAL SCIENCES ELECTIVES:** The following is a list of courses that may be taken to satisfy the General Education Requirements of Idaho State University.

- Goal 6: AMST/MUSC 106, AMST/ART/MC 210, ART 100, ART 101, ART 102, ENGL 126, MUSC 100, MUSC 108, DANC 201, THEA 101
- Goal 7: ENGL 110, ENGL 115, ENGL 257, ENGL 258
- Goal 8: PHIL 101, PHIL 103
- Goal 9: AMST/HIST 111, AMST/HIST 112, AMST 200, HIST 118
- Goal 10A: ANTH 237, AMST/ANTH 238, ANTH 239, LANG 207, HIST 101, HIST 102, HIST 251, HIST 252, HIST 254, HIST 255
- or* 10B: ANTH/SHOS 101-102, FREN 101-102, GERM 101-102, LANG 101-102, LATN 101-102, RUSS 101-102, SPAN 101-102, ANTH/SHOS 201-202, FREN 201-202, GERM 201-202, LANG 201-202, RUSS 201-202, SPAN 201-202
- Goal 11: ECON 100, ECON 201, ECON 202, AMST/POLS 101
- Goal 12: ANTH 100, PSYC 101, SOC 101, SOC 102

**CE ELECTIVES:** In addition to completing ENVE g408 and ENVE g410 (3 credits each), Civil Engineering students must choose three additional CE Elective courses from the following list. Students are encouraged to consult with their advisor in order to choose appropriate electives. There may be other courses to choose from that do not appear on this list (new or special courses).

CE g 431	Advanced Mechanics of Solids	3 credits
CE g440	Vibrations Analysis	3 credits
CE g454	Basic Engineering Geology	3 credits
CE g455	Geologic Data Methods	3 credits
CE g466	Design of Wood Structures	3 credits
CE g468	Behavior of Composite Materials	3 credits
CE g499	Special Topics	3 credits
ENVE g404	Environmental Risk Assessment	3 credits
ENVE g409	Water and Waste Water Lab	1 credit
ENVE g430	Air Pollution and Solid Waste	3 credits