SIMPSON UNIVERSITY

Bachelor of Science in ENGINEERING Credit Worksheet

Name: _____ Date: _____

GENERAL EDUCATION (44 credits)

BASECAMP (37)

GATE 1000 University, Vocation & Wellness (2; F) _____
or GATE 2000 University…(1; F,Sp - Transfers) _____
& PHED 1100 Fitness & Wellness (1; F,Sp) _____
BIBL 1300 Lit. of the Old Testament (3; F,Sp) _____
BIBL 1310 Lit. of the New Testament (3; F,Sp) _____
*CHEM 1510 Chemistry I (3+1; F) _____
COMM 1260 Oral Communication (3; F,Sp) _____
*CORE 2000 Engaging Faith & Society (3; F,Sp) _____
*†ENGL 1220 Princ. of College Writing II (3; F,Sp) _____
ENGR 1000 Intro. to Engineering (3, F) _____
*ENGR 1950 Engineering Economic Analysis (2; F) _____
*MATH 2610 Statistics (3; F,Sp) _____
*PHYS 2510 University Physics I (3+1, F) _____
*PHYS 2520 University Physics II (3+1, Sp) _____

EXPEDITION COURSES (4)

Trail #2 or Trail #3 (3 units)
Select one from "Trail #2" OR "Trail #3 course menus on reverse)
Course taken: _____ _____

Trail #5: Adventure Recreation (1 unit)
(Select one from Trail #5 course menu on reverse)
Course taken: _____ _____

SUMMIT (3)

(Select one from "Summit" courses menu on reverse)
Course taken: MUSI 3690 _____

LEAD 2000 Service Seminar (0; FSp) _____

REQUIRED PREREQUISITE

*#MATH 1830 Precalculus (3; F) _____
#This course may be waived with dept. chair permission.
If course is taken, it will count toward unrestricted elective credits

**Additional program requirements*
Course has prerequisites; consult course descriptions in catalog

† ENGL 1210 Principles of College Writing I is the pre-requisite for ENGL 1220. You may be waived from ENGL 1210 by SAT, ACT, AP or a Placement Exam.

Additional program requirements
Cross-Cultural Coursework (6 units)
Students must

Course taken: Trail #2 Cross Cultural Option in GE
Course taken: MUSI 3690 in GE

MAJOR REQUIREMENTS (82)

CORE REQUIREMENTS (76)

*MATH 2430 Calculus I (4; F) _____
*MATH 2530 Calculus II (4; Sp) _____
*MATH 2630 Calculus III (3; F) _____
*MATH 3940 Diff. Equations & Linr Algebra (4, Sp) _____
ENGR 1060 Comp Aided Design… (3; Sp) _____
ENGR 1830 Comp Program/Algortihms (4; Sp) _____
*ENGR 2150 Statics (3; Sp) _____
*ENGR 2250 Dynamics (3; F) _____
*ENGR 2400 Princ of Materials Science (4; F) _____
*ENGR 2510 Linear Circuits I (4; F) _____
*ENGR 2600 Manufacturing Processes (3; Sp) _____
*ENGR 2910 Sophomore Project (2; Sp) _____
*ENGR/BUSS 2940 Principles of Mgmt (3; F) _____
*ENGR 3210 Signals & Systems (3; Sp) _____
*ENGR 3230 Fluid Mechanics (3) _____
*ENGR 3410 Thermodynamics (3; F) _____
*ENGR 3530 Control Systems (3; Sp) _____
*ENGR 3620 Intro. to Robotics (3; F) _____
*ENGR 3640 Mechanics of Materials (3) _____
*ENGR 3830 Eng Design & Proj. Dev. (3; Sp) _____
*ENGR 4030 Quality Engineering (3; F) _____
*ENGR 4910 Capstone Design Project I (2; Sp) _____
*ENGR 4920 Capstone Design Project II (3; F) _____
Choose one from the following: _____
*ENGR 3920 Eng Undergraduate Research (3; F) _____
*ENGR 3930 Engineering Cooperative Exp (3; Sp) _____
*ENGR 3950 Engineering Internship (3; Su) _____

ELECTIVES (6)

Choose from the following: _____
*ENGR 2520 Linear Circuits II (4; F) _____
*ENGR 2370 Logic Design (3; F) _____
*ENGR 3110 Electronics (3; F) _____
*ENGR 3850 Digital Systems Design (3; F) _____
*BUSS/ENGR 3945 Intro. to Data Analytics (4; F) _____
*ENGR 4420 Decision & Risk Analysis (3; F) _____
*ENGR 4610 Discrete Sys Modeling & Sim (3; F) _____
*ENGR 4890 Special Topic in Engineering (3; F) _____
*BUSS 3810 Internet of Things (3; Sp) _____
*BUSS 4810 System Analysis & Design (3; Sp) _____
*BUSS 4950 Entrepreneurship (3; Osp) _____
*BIOL 3510 Environmental Science (3; Sp) _____
*CHEM 1520 Chemistry II (4; Sp) _____
KINS 3300 Biomechanics (3; Sp) _____

TOTAL PROGRAM

General Education	44
Engineering Core	76
Major Electives	6
TOTAL	126

APPROVED COURSE MENUS FOR THE ASCENT

BASECAMP COURSE MENU

Before setting out on the Ascent, there are both things one needs to be able to do and things one needs to know. Simpson University's GE "Base Camp" is the learning space where those skills and literacies will begin to be developed. The Basic skills and literacies offered by an institution are valuable for any number of reasons, but primarily because they allow a person to function independently in both personal and professional settings. These foundations are most frequently recognized in the realm of communication--the ability to read, write, and speak well--but addionally, a Simpson education also requires basic literarcies to construct a Christian worldview. The following courses will set the foundation for the Ascent.

Course 1: The Liberal Arts Path at Simpson
GATE 1000 University, Vocation & Wellness (2; F)

Course 2: English
ENGL 1220 College Writing II (3; F,Sp)

Course 3: Oral
COMM 1260 Oral Communication (3; F,Sp)

Course 4:
Choose one of the following:
MATH 1830 Precalculus (3; Sp)
MATH 2300 Math for the Educated Citizen (3; Sp)
MATH-2400 Math Concepts for Teachers I (3; EF)
MATH 2610 Statistics (3; F,Sp)

Courses 5-7: Biblical & Christian Worldview
BIBL 1300 Literature of the Old Testament (3; F,Sp)
BIBL 1310 Literature of the New Testament (3; F,Sp)
CORE 2000 Engaging Faith and Society (3; F,Sp)

Course 8:
Choose one of the following:
BIOL 1310/1310L Human Anatomy (4; F)
BIOL 1510/1510L General Biology I (4; F)
BIOL 2520/2520L Introduction to Biology (4; F,Sp)
CHEM 1300/1300L Introduction to Chemistry (4, F)
CHEM 1510/1510L General Chemistry I (4; F)
PHYS 1510/1510L Introduction to Physics (4; Sp)

EXPEDITION COURE MENU

Trail #1: Artistic Expression (Choose at least 3 units)
An Artistic Expressions course examines the incredible creativity of humanity as they respond to the challenges, pains, and triumphs of life through artistic mediums and language. The following courses achieve this.

BIBL 3020 Psalms (3; OF)
BILA 2210 Greek (3; EF)
BILA 2260 Hebrew (3; OF)
COMM 2300 Digital Photography (3; F)
COMM-2330 Graphic Design (3; EF)
ENGL 2100 Introduction to Literature (3; EF)
ENGL 3200W Advanced Composition (3; F)
HUMA 2440 Fine Arts & Western Culture (3; Sp)
LING 3350 Language Acquisition (3; Sp)**
MUAP 1712 Simpson Chorale (1; F,Sp)^^
MUSI 1600 Music in History and Context (3; F,Sp)

Trail #2: Cultural Perspectives (Choose at least 3 units)
A Cultural Perspectives course explores the cultural diversity of the world and teaches students to appreciate and value all individuals as bearers of the image of God. The following courses achieve this.

§ANTH 3110 Cultural Anthropology (3; F)
§CCST 3740 Peoples of the World (3; F)
COMM 2100 Media & Culture (3; EF)
§COMM/LING 4330 Communicating Cross Culturally (3; ESp)**
§ENGL 3220 World Literature (3; EF)
§HIST 3385 History of the Islamic World (3; ESp)
§HUMA 1450 World Civilizations I (3; F)
§HUMA 1460 World Civilization II (3; Sp)
§POLS 2000 Politics and Culture of the Developing World (3; OSp)

Trail #3: Civic Engagements (Choose at least 3 units)
A Civic Engagement course is one in which students are introduced to the concepts, practices, and obligations of our civic and economic processes and their effects on humanity. These courses empower students to be engaged and informed citizens in a democratic society.

BUSS 1950 Introduction to Economics (3; F,Sp)
COMM 2090 Small Group Communication (3; EF)
POLS 2700 Introduction to Political Science (3; F)
POLS 2720 American Government (3; Sp)
POLS 3000 Political Thought (3; OSp)

^^This course may be repeated *§Course meets cross-cultural requirement.*

Trail #4: Science and Society (Choose at least 3 units)
A Science and Society course is one in which students explore the manifold wonder of the created order and gain a better appreciation for the complexity of the earth and the interconnectedness of all that dwells in it. These courses provide an introduction to the natural and social sciences and offer an overview of a given field and its skills.

BIOL 3510 Environmental Science (3; Sp)
BIOL 3540 Human Biology (3; F)
ODLE 3015 Environmental Education (3; OSp)
PHYS 3200 Earth and Space Science (3; F)
PSYC 1600 Introduction to Psychology (3; F,Sp)

Trail #5: Adventure Recreation (Choose at least 1 unit)
An Adventure Recreation course is one in which students either engage in physical activity and/or enter into the natural world and learn how to be healthy and whole individuals in both mind and body. The following courses achieve this.

ODLE 1005 Wilderness Journey (3; Su)
ODLE 1060 Hiking (1; TBA)
ODLE 1015 Snowshoeing/Winter Camping (1; TBA)
ODLE 1020 Rock Climbing (1; TBA)
ODLE 1025 Mountaineering (1; TBA)
ODLE 1040 Mountain Biking (1; TBA)
ODLE 1050 Kayaking (1; TBA)
ODLE 1055 Canoeing (1; TBA)
ODLE 1070 Cross-Country Skiing (1; TBA)

SUMMIT COURSE MENU

Summit courses are designed to be taken after a student completes 45 total units and has completed at least one course in each trail (#1-5) of the Expedition. Typically students will take the Summit Course in their Junior year.

CCST 3120 Microenterprise Development (3; OSp)
COMM 4290 Advanced Public Communication (3; OF)
HIST 3370 History of Christianity (3; EF)
§MUSI 3690 Music in World Cultures (3; Sp)
ODLE 3960 Survey of Leadership Theories (3; Sp)
PHIL 3010 Philosophy & Critical Thought (3; Sp)
PSYC 3016 Lifespan Development (3; F)
THEO 3600 Christian Theology (3; F)
THEO 3650 Issues in Ethics (3; EF)