BS Combined Major for Computer Science and English
DRAFT of 2016-04-26

CS Requirements
10 @ 4 SH = 40 SH
Total: 45 SH with 1 SH courses

Overview [2 SH]

CS 1200 CS/IS Overview 1 [1 SH]
CS 1210 CS/IS Overview 2: Co-op Preparation [1 SH]

CS Freshman level required courses [19 SH]

CS 1800 Discrete Structures
   CS 1801 Recitation for CS 1800 [0 SH]
CS 2500 Fundamentals of Computer Science 1
   CS 2501 Lab for CS 2500 [1 SH]
CS 2510 Fundamentals of Computer Science 2
   CS 2511 Lab for CS 2510 [1 SH]
CS 2800 Logic and Computation
   CS 2801 Lab for CS 2800 [1 SH]

CS Upper level required courses [12 SH]

CS 3200 Database Design [4 SH]
CS 3500 Object-Oriented Design [4 SH]
CS 4800 Algorithms and Data [4 SH]

CS/IS elective [4 SH]

Choose one:
   IS 2000 Principles of Information Science [4 SH]
   CS 4500 Software Development [4 SH]

Note: If IS 2000 is selected then this should be taken earlier in the program. If CS 4500 is selected then this should be taken later in the program.

Computing Strand Requirement [8 SH]

Computing strands related to language or analytics. Total: 2 courses.

Students are required to choose one of the following 3 strands that are related to language or analytics. These strands will act as informal integrative courses for the combined major.
Strand 1: Natural Language Processing

This strand brings an in depth knowledge of natural language processing.

CS 3800 Theory of Computation [4 SH]
CS 4120 Natural Language Processing [4 SH]

Strand 2: Programming Languages

This strand describes the formal principles of language and then applies this to the interpretation of programming languages.

CS 3800 Theory of Computation [4 SH]
CS 4400 Programming Languages [4 SH]

Strand 3: Analytics

This strand provides the analytics foundations for applications that process text.

DS 4100 Data Collection, Integration, and Analysis [4 SH]
DS 4200 Information Presentation and Visualization [4 SH]

Presentation Requirement [1 SH]

THTR 1170 The Eloquent Presenter [1 SH]

English Requirements

10 @ 4 SH = 40 SH

Foundational [8 SH]

ENGL 1400 Introduction to Literary Studies [4 SH]

Choose one:
- ENGL 1160 Introduction to Rhetoric [4 SH]
- ENGL 1410 Introduction to Writing Studies [4 SH]

Literary Period [8 SH]

Choose one from each historical period:

Pre 19th Century
The usual ENGL list + ENGL 1700 Global Literature to 1500

19th to 21st Century
Combines the usual ENGL lists for the 19th, 20th, and 21st centuries
The next four categories are described in lists maintained by the English Department. All courses in the Diversity category are also listed in one of the other three categories. Hence, with wise planning, this is not an additional requirement.

**Theories and Methods [4 SH]**
The usual ENGL list except for ENGL 3340 Technologies of Text [see Integrative below]

**Comparative [4 SH]**
The usual ENGL list

**Writing [4 SH]**
The usual ENGL list

**Diversity [4 SH, but may double count]**
The usual ENGL list

**Capstone [4 SH]**

*Choose one:*
- ENGL 4710 Capstone Seminar [4 SH]
- ENGL 4720 Capstone Project [4 SH]

**English Electives [8 SH]**

*Choose additional ENGL electives to reach a total of 10 ENGL courses. The course LING 1150 Introduction to Language and Linguistics may substitute for one ENGL course in this elective requirement.*

**Integrative Course Requirement [4 SH]**
ENGL 3340 Technologies of Text [4 SH]

*Although ENGL 3340 is normally in the Theories and Methods group, a student must take this course to separately meet the Integrative requirement.*

**University Requirements [8 SH]**

**Writing in the First Year [4 SH]**

*Choose one: ENGW 1111 or ENGW 1102*

**Advanced Writing in the Disciplines [4 SH]**

*Choose one: ENGW 3302 or ENGW 3309 or ENGW 3310 or ENGW 3315*
CCIS Computing and Social Issues [4 SH]

Choose one:

SOCL 4528 Computers & Society [4 SH]
SOCL 3485 Environment, Technology, and Society [4 SH]
SOCL 1280 The Twenty-First-Century Workplace [4 SH]
ANTH 3418 Wired/Unwired: Cybercultures and Technopolitics [4 SH]
PHIL 1145 Technology and Human Values [4 SH]
IA 5240 Privacy, Ethics, and Digital Rights [4 SH]

Total of Explicit Requirements

24 @ 4 SH and 6 @ 1 SH = 102 SH

General Electives [8 courses = 32 SH]

Total Credits Required: 133 SH

Note: CCIS intentionally makes the total credits required one less than the sum of the credits to allow for a one credit waiver if needed.
Regarding NU Core 2016

**CCIS requirements satisfy**
- ND = Engaging with the Natural and Designed World
- FQ = Conducting Formal and Quantitative Reasoning
- AD = Analyzing and Using Data

**ENGL and Integrative requirements satisfy**
- EI = Exploring Creative Expression and Innovation
- AD = Analyzing and Using Data
- WI = Writing Intensive in the Major [2]
- CE = Demonstrating Thought and Action in a Capstone

**University requirements satisfy**
- WF = Writing in the First Year
- WD = Advanced Writing in the Disciplines

Some ENGL elective courses and some Computing and Social Issues courses satisfy additional NU Core 2016 categories.

Students must arrange to fulfill the remaining NU Core 2016 requirements by choice of appropriate electives. Coop will satisfy the experiential requirement EX.

Regarding NU Core 2007

**CCIS requirements satisfy**
- Science/Technology Level 1
- Mathematical/analytical thinking Level 1
- Mathematical/analytical thinking Level 2

**ENGL and Integrative requirements satisfy**
- Capstone
- Two writing intensive in the major
- Mathematical/analytical thinking Level 2

**University requirements satisfy**
- First-year writing
- Advanced writing in the disciplines

Some ENGL elective courses courses and some Computing and Social Issues courses satisfy additional NU Core 2007 requirements.

Students must arrange to fulfill the remaining NU Core 2007 requirements by choice of appropriate electives. Coop will satisfy the experiential learning requirement.