

# COMPUTING - COMPUTER SCIENCE

Bachelor of Science

Curriculum Guide

## ▪ FIRST YEAR

### First Semester

CORE	108	Connections	1
CPTR	225	Web Development Basics	1
CPTR	226	Computer Science I	4
COMM	105	Public Speaking	2
ENGL	111	College Writing I	3
MATH	121	Precalculus	5
			<u>16</u>
Total			16

### Second Semester

CPTR	240	System Administration	3
CPTR	227	Computer Science II	4
ENGL	112	College Writing II	3
MATH	184	Calculus I	4
		Fine Arts Elective	2
			<u>16</u>
Total			16

## ▪ SECOND YEAR

### First Semester

CPTR*	335	Web Technologies	3
CPTR^	325	Programming Languages	3
MATH	340	Discrete Mathematics	3
MATH	285	Calculus II	4
RELB*	255	Jesus and the Gospels	3
			<u>16</u>
Total			16

### Second Semester

MATH	352	Linear Algebra	3
MATH	286	Calculus III	4
CPTR	327	Systems Analysis & Design	3
HHPA	155	Concepts of Wellness	2
LITR		Literature Elective	3
			<u>16</u>
Total			16

## ▪ THIRD YEAR

### First Semester

CPTR^	310	Data Structure & Algorithms	3
CPTR	320	Networking	3
PHYS*	251	College Physics	4
RELT	305	Christian Ethics	3
HIST		History Elective	3
HHPA		Activity Elective	1
			<u>17</u>
Total			17

### Second Semester

BIOL*	377	Origins	3
CPTR	230	Computer Organization	3
MATH	331	Statistics and Probability	3
RELT	141	Christian Beliefs	3
HHPA		Activity Elective	1
		Electives	3
			<u>16</u>
Total			16

## ▪ FOURTH YEAR

### First Semester

CPTR	424	Database Systems	3
CPTR	405	Software Engineering	3
MUHL*	261	Traditional and World Music	3
		Social Science Elective	3
		Elective	5
			<u>17</u>
Total			17

### Second Semester

CPTR	475	Internship in Computer Science	3
CPTR^	451	Operating Systems Principles	3
REL		Religion Elective	3
		Social Science Elective	3
		Electives	4
			<u>16</u>
Total			16

128 hours are required for graduation. 40 hours must be upper division (300 level or above).

\* Other courses may also meet this requirement. See the Union College Bulletin 2012.

^ Alternate year course.

UN-L (University of Nebraska-Lincoln) classes need to be coordinated with the CS advisor. Recommendation: Take UN=L classes in the summer!

This sample guide is intended only to show you how a program might be arranged. Course schedules may change and it is possible that your courses will not be taken exactly in the order shown. Your academic advisor will help you design a program around your educational needs and goals.