

Degree Worksheet for the College of Arts and Sciences: 2019-2020

B.A. COMPUTER SCIENCE & COMPUTATIONAL THINKING

Biology Concentration

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COLLEGE of ARTS & SCIENCES Language Requirement

All students who major in the College of Arts & Sciences are required to demonstrate competence in a second language. For complete details: <https://www.gonzaga.edu/college-of-arts-sciences/about/information-for-students/language-requirement-information>

Credits Sem/Yr

UNIVERSITY CORE REQUIREMENTS:

► FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

	Credits	Sem/Yr
<i>Writing</i>		
ENGL 101 Writing (fulfills 3 credits Writing Enriched)*	3	<input type="text"/>
<i>Reasoning</i>		
PHIL 101 Reasoning	3	<input type="text"/>
<i>First Year Seminar</i>		
Dept. 193	3	<input type="text"/>
<i>Communication & Speech</i>		
COMM 100 Communication & Speech	3	<input type="text"/>
<i>Math</i>		
MATH (must be above Math 100)	3	<input type="text"/>
<i>Scientific Inquiry (2cr + 1cr lab)</i>		
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3	<input type="text"/>

Year 2: Being & Becoming

	Credits	Sem/Yr
<i>Christianity & Catholic Traditions</i>		
RELI (see approved list)**	3	<input type="text"/>
<i>Philosophy of Human Nature</i>		
PHIL 201 Philosophy of Human Nature	3	<input type="text"/>

Year 3: Caring & Doing

	Credits	Sem/Yr
<i>World/Comparative Religion</i>		
RELI (see approved list)** (fulfills 3cr Global Studies)*	3	<input type="text"/>
<i>Ethics</i>		
PHIL 301 Ethics or RELI 330 Principles-Christian Morality	3	<input type="text"/>

Year 4: Imagining the Possible

	Credits	Sem/Yr
<i>Core Integration Seminar</i>		
Dept. 432	3	<input type="text"/>

NOTE: some courses have pre-requisites, check the catalog carefully!

► BROADENING COURSES - see approved list**

	Credits	Sem/Yr
Social & Behavioral Science	3	<input type="text"/>
Literature	3	<input type="text"/>
History	3	<input type="text"/>
Fine Arts & Design	3	<input type="text"/>

► REQUIRED COURSE DESIGNATIONS - see approved list**

	Credits	Sem/Yr
*Writing Enriched	9 total	<input type="text"/>
Social Justice	3 total	<input type="text"/>
*Global Studies	6 total	<input type="text"/>

**for list of approved RELI, Broadening & Designated courses, see : <https://my.gonzaga.edu/academics/undergraduate-programs/general-degree-requirements-procedures/university-core>

B.A. Computer Science & Computational Thinking - Biology Concentration

55-59 Credits

LOWER DIVISION

18-19 Credits

	Course	Course Title	Credits	Grade
	CPSC 121	Computer Science I	3	<input type="text"/>
	CPSC 122	Computer Science II	3	<input type="text"/>
	CPSC 223	Algorithm/Abstract Data Structures	3	<input type="text"/>
	CPSC 224	Software Development	3	<input type="text"/>
	MATH 231	Discrete Structures	3	<input type="text"/>

One of the following two courses:

	Course	Course Title	Credits	Grade
	MATH 148	Survey of Calculus	3	<input type="text"/>
	MATH 157	Calculus-Analytic Geometry I	4	<input type="text"/>

UPPER DIVISION

25 Credits

	CPSC 491	Software Engineering	2	<input type="text"/>
	CPSC 491L & 492L	Sr. Design Project Lab I & II	4	<input type="text"/>
	CPSC 499	Computers & Society	1	<input type="text"/>

Computer Science Electives:

18 Credits

	Course	Course Title	Credits	Grade
	<i>any CPSC 200, 300, or 400-level course</i>			

NOTE! 9 of the 18 elective credits to be determined by the DCT Committee to best coincide with the chosen concentration.

A maximum of three **electives** (9 credits) may be 200-level courses.

A maximum of five 200-level Computer Science courses may be used in the **entire major**.

Many upper division CPSC courses require CPSC 260 as a **pre-requisite**, see the undergraduate catalog for details.

BIOLOGY CONCENTRATION (DCT)

14-15 Credits

	Course	Course Title	Credits	Grade
	BIOL 105/105L	Info. Flow in Biological Systems	4	<input type="text"/>
	BIOL 106	Energy Flow in Biological Systems	3	<input type="text"/>

(NOTE: CHEM 101/101L is a pre-requisite for BIOL 106)

Select one of the following four options (A,B,C,D):

NOTE: some courses have pre-requisites, check the undergraduate catalog for details)

OPTION A

Choose two of the following three courses:

	Course	Course Title	Credits	Grade
	BIOL 205/205L	Physiology & Biodiversity	4	<input type="text"/>
	BIOL 206/206L	Ecology	4	<input type="text"/>
	BIOL 207/207L	Genetics	4	<input type="text"/>

OPTION B

	Course	Course Title	Credits	Grade
	BIOL 205/205L	Physiology & Biodiversity	4	<input type="text"/>
	BIOL 451/451L	Comparative Endocrinology*	4	<input type="text"/>

*(when course is offered)

OPTIONS C & D - see page 2 (on reverse)

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Select one of the following four options (A,B,C,D):
(continued from Page 1)

OPTION C

Course	Course Title	Credits	Grade
BIOL	206/206L Ecology	4	<input type="text"/>

Choose one of the following six courses:

Course	Course Title	Credits	Grade
BIOL	303/303L Population Ecology*	4	<input type="text"/>
	<i>*(when course is offered)</i>		
BIOL	305 Biological Data Analysis	4	<input type="text"/>
BIOL	333 Community Ecology	3	<input type="text"/>
BIOL	340/340L Field Botany	4	<input type="text"/>
BIOL	344/344L GIS & Ecological Techniques	4	<input type="text"/>
BIOL	360/360L* Plant Biology <i>*(when lab is offered)</i>	4	<input type="text"/>

OPTION D

Course	Course Title	Credits	Grade
BIOL	207/207L Genetics	4	<input type="text"/>

Choose one of the following four courses:

Course	Course Title	Credits	Grade
BIOL	305 Biological Data Analysis	4	<input type="text"/>
BIOL	335 Advanced Genetics	3	<input type="text"/>
BIOL	337/337L Developmental Biology*	4	<input type="text"/>
	<i>*(when course is offered)</i>		
BIOL	351/351L Advanced Cell Biology*	4	<input type="text"/>
	<i>*(when course is offered)</i>		

(NOTE: CHEM 230 is a pre-requisite for BIOL 351/351L)