

# BIOTECHNOLOGY AND PLANT GENOMICS (B.S.PL.SC.)

Required course work includes the university requirements (see regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/#j3>)) and:

Code	Title	Hours
AGED 4060	Exploring International Agriculture	3
or AGED 4070	Global Agricultural & Life Sciences Systems	
or FN 4500	Global Nutrition	
or SOC 3500	Food, Culture, and Society	
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
ENGL 3130	Business Writing	3
or ENGL 3160	Environmental Writing	
or ENGL 3170	Technical Writing II	
or ENGL 3180	Science Writing	
PLSC 1020	The Science of Plants in Agriculture	3
or PLSC 2050	General Botany	
PLSC 4000	Plant Science Seminar	1
SOIL 2050	The Soil Ecosystem	3
Select one of the following:		4-5
EPPN 1540	Microbiology and the World Around Us	
& EPPN 1550	and Microbiology and the World Around Us: Laboratory	
BIOL 2500	General Microbiology	
& BIOL 2550	and General Microbiology Lab	
Select one of the following:		4
CHEM 1101	Introduction to Chemistry	
& 1101L	and Introduction to Chemistry Laboratory	
CHEM 1111	General Chemistry I	
& 1111L	and General Chemistry I Laboratory	
Select one of the following:		3-4
MATH 1143	Precalculus I: Algebra	
MATH 1160	Survey of Calculus	
MATH 1170	Calculus I	
Select one of the following:		3
PLSC 3980	Internship	
PLSC 4020	Undergraduate Research in Plant Science	
PLSC 4990	Directed Study	
<b>Biotechnology and Plant Genomics Courses</b>		
BIOL 3800	Biochemistry I	4
BIOL 4440	Genomics	3
CHEM 1120	General Chemistry II	5
& 1120L	and General Chemistry II Laboratory	
CHEM 2770	Organic Chemistry I	4
& CHEM 2780	and Organic Chemistry I: Lab	
GENE 3140	General Genetics	3
PLP 4150	Plant Pathology	3
PLSC 2070	Introduction to Biotechnology	3
PLSC 4010	Plant Physiology	3

PLSC 4330	Plant Tissue Culture Techniques	3
PLSC 4400	Advanced Laboratory Techniques	4
PLSC 4460	Plant Breeding	3
PLSC 4860	Plant Biochemistry	3
PLSC 4880	Genetic Engineering	3
STAT 2510	Statistical Methods	3
Select 12 credits of Biotechnology and Genomics of Plants electives		12
from the following:		
BIOL 2130	Structure and Function Across the Tree of Life	
BIOL 3820	Biochemistry I Laboratory	
BIOL 4820	Protein Structure and Function	
BIOL 4850	Prokaryotic Molecular Biology	
BIOL 4870	Cellular and Molecular Basis of Disease	
ENT 3220	General and Applied Entomology	
PLP 4160	Plant Pathology Lab	
PLSC 2010	Principles of Horticulture	
PLSC 2050	General Botany	
PLSC 3070	Agronomy	
PLSC 3380	Organic and Conventional Weed Management	
PLSC 4100	Invasive Plant Biology	
PLSC 4380	Pesticides in the Environment	
PLSC 4510	Vegetable Crops	
PLSC 4900	Potato Science	
SOIL 2060	The Soil Ecosystem Lab	
SOIL 4460	Soil Fertility	

**Total Hours** **90-92**

## Courses to total 120 credits for this degree

Fall Term 1		Hours
ENGL 1101	Writing and Rhetoric I	3
PLSC 1020	The Science of Plants in Agriculture	3
Oral Communication Course		3
MATH 1143 OR MATH 1160 OR MATH 1170		3
(CHEM 1101 AND CHEM 1101L) OR (CHEM 1111 AND CHEM 1111L)		4
<b>Hours</b>		<b>16</b>
Spring Term 1		Hours
BIOL 1150	Cells and the Evolution of Life	3
BIOL 1150L	Cells and the Evolution of Life Laboratory	1
ENGL 1102	Writing and Rhetoric II	3
STAT 2510	Statistical Methods	3
Humanistic and Artistic Ways of Knowing Course		3
<b>Hours</b>		<b>13</b>
Fall Term 2		Hours
CHEM 1120	General Chemistry II	4
CHEM 1120L	General Chemistry II Laboratory	1
SOIL 2050	The Soil Ecosystem	3
Social and Behavioral Ways of Knowing Course		3
(BIOL 2500 AND BIOL 2550) OR (EPPN 1540 AND EPPN 1550)		4
<b>Hours</b>		<b>15</b>
Spring Term 2		Hours
CHEM 2770	Organic Chemistry I	3
CHEM 2780	Organic Chemistry I: Lab	1
GENE 3140	General Genetics	3
Humanistic and Artistic Ways of Knowing Course		3

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BIOL 2130 OR BIOL 3820 OR BIOL 4820 OR BIOL 4850 OR BIOL 4870 OR ENT 3220 OR PLP 4160 OR PLSC 2010 OR PLSC 2050 OR PLSC 3070 OR PLSC 3380 OR PLSC 4100 OR PLSC 4380 OR PLSC 4510 OR PLSC 4900 OR SOIL 2060 OR SOIL 4460	3
<b>Hours</b>	<b>13</b>
<b>Fall Term 3</b>	
BIOL 3800 Biochemistry I	4
PLSC 2070 Introduction to Biotechnology	3
Social and Behavioral Ways of Knowing Course	3
ENGL 3130 OR ENGL 3160 OR ENGL 3170 OR ENGL 3180	3
BIOL 2130 OR BIOL 3820 OR BIOL 4820 OR BIOL 4850 OR BIOL 4870 OR ENT 3220 OR PLP 4160 OR PLSC 2010 OR PLSC 2050 OR PLSC 3070 OR PLSC 3380 OR PLSC 4100 OR PLSC 4380 OR PLSC 4510 OR PLSC 4900 OR SOIL 2060 OR SOIL 4460	3
<b>Hours</b>	<b>16</b>
<b>Spring Term 3</b>	
BIOL 4440 Genomics	3
PLSC 4330 Plant Tissue Culture Techniques	3
PLSC 4860 Plant Biochemistry	3
International Course	3
BIOL 2130 OR BIOL 3820 OR BIOL 4820 OR BIOL 4850 OR BIOL 4870 OR ENT 3220 OR PLP 4160 OR PLSC 2010 OR PLSC 2050 OR PLSC 3070 OR PLSC 3380 OR PLSC 4100 OR PLSC 4380 OR PLSC 4510 OR PLSC 4900 OR SOIL 2060 OR SOIL 4460	3
<b>Hours</b>	<b>15</b>
<b>Fall Term 4</b>	
PLSC 4000 Plant Science Seminar	1
PLSC 4880 Genetic Engineering	3
PLP 4150 Plant Pathology	3
American Experience Course	3
PLSC 3980 OR PLSC 4020 OR PLSC 4990	3
BIOL 2130 OR BIOL 3820 OR BIOL 4820 OR BIOL 4850 OR BIOL 4870 OR ENT 3220 OR PLP 4160 OR PLSC 2010 OR PLSC 2050 OR PLSC 3070 OR PLSC 3380 OR PLSC 4100 OR PLSC 4380 OR PLSC 4510 OR PLSC 4900 OR SOIL 2060 OR SOIL 4460	3
<b>Hours</b>	<b>16</b>
<b>Spring Term 4</b>	
PLSC 4010 Plant Physiology	3
PLSC 4400 Advanced Laboratory Techniques	4
PLSC 4460 Plant Breeding	3
Senior Experience Course	3
AGED 4060 OR AGED 4070 OR FN 4500 OR SOC 3500	3
<b>Hours</b>	<b>16</b>
<b>Total Hours</b>	<b>120</b>

3. Students will gain experiential practice in applying their knowledge of biotechnology and plant genomics through internships or laboratory research experiences and participation in student clubs/organizations.

4. Students will be able to communicate effectively, verbally and in writing, problems, analyses, and solutions to biotechnology problems as effected by research techniques and public opinion to a variety of audiences.

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Students will be able to recognize and apply scientific principles to various laboratory techniques used for production, management or modification of a wide variety of plant species and their associated systems.

2. Students will be able to present and explain important concepts for plant molecular techniques and will be able to recognize and analyze various laboratory procedures used for analyses of different agronomic and horticultural crops.