

**PROGRAM COMPONENT (Group B) OR NON-SUBSTANTIVE MINOR REQUEST FORM (Short Form)**

**Instructions:** Please use one form for each request/action. Clearly mark all changes using either (1) Track Change or (2) strikethroughs for deletions and underlines for additions. Following the approval of the appropriate college curriculum committee, the **department chair** will e-mail the completed form to [gracemiller@uidaho.edu](mailto:gracemiller@uidaho.edu).

**Deadline:** This form must be submitted by October 1 for inclusion in the next available General Catalog and to be available for scheduling beginning with the next summer session.

**When applicable, a Curriculum Change Form and Course Approval Forms must accompany the short form.**

**Submission Information**

This section must be completed

Dept Chair Name:	Paul McDaniel	Email:	paulm@uidaho.edu
College:	CAL S		
Department/Unit:	Plant Sciences		
Dept/Unit Approval Date:	09/15/2017	Vote Record:	unanimous
College Approval Date:	9/26/2017	Vote Record:	unanimous
Primary Point of Contact:	Joe Kuhl	Email:	jkuhl@uidaho.edu
Briefly describe the change you are requesting:	Add a minor in Biotechnology and Plant Genomics		

**What is the financial impact of the requested change?**

Greater than \$250,000 per FY:	<input checked="" type="checkbox"/>	Less than \$250,000 per FY:	<input type="checkbox"/>
--------------------------------	-------------------------------------	-----------------------------	--------------------------

**\*\*Note: If financial impact is greater than \$250,000, you must complete a Program Proposal form.**

Describe the financial impact: None

**Rationale for Program Component Request or Name Change**

This section must be completed

Explain the change you are requesting, and provide a rationale for this request. Include an explanation of how the department will manage the added workload for a new program component; describe whether the program component curriculum and admissions requirements remain the same; describe the rationale for a name change or degree designation change, if applicable.

The addition of this minor will provide students the opportunity to take a small number of classes to demonstrate their knowledge and understanding of topics in the area of Biotechnology and Plant Genomics, and have that curriculum highlighted on their transcript.

**Name or Degree Change Only Requests**

Leave blank if not making a name and/or degree change only request

This section to be completed **ONLY** for changes to the name of: degree, major, minor, option, emphasis, certificate, teaching endorsement.

Current Name:	
New Name:	
Current Degree:	
New Degree:	
Other Details:	
Effective Date:	

Please indicate if any course or curriculum changes are occurring as a result of this name or degree change request:  Yes  No

If there are accompanying curriculum or course changes, complete the next section and attach the curriculum and/or course forms.

**\*\*Note:** A substantive change to a program degree, major, or program component may require a program proposal form.

Please indicate whether 25% or more of the program learning outcomes are changing:  Yes  No

**\*\*Note:** If you answered YES to this question, complete the table below:

	List Old Learning Outcomes	New Learning Outcome, if changed (if no change, write N/A and move to next outcome)	New Direct Measure (list student work product and explain how it will be evaluated)	Have you updated the assessment cycle to include this change? (yes/no)
SLO#1				
SLO#2				
SLO#3				
SLO#4				
SLO#5				

### Program Component Request

Leave blank if not adding, discontinuing, or modifying a program component. Program components consist of option, emphasis, minor, academic certificate less than 30 credits, or teaching endorsement

Clearly mark all changes to existing program components by using either (1) Track Change or (2) strikethroughs for deletions and underlines for additions. A curriculum change form and/or course approval forms associated with this request are required to be submitted with this short form.

X	Create New		Discontinue	Implementation Date:	August 20, 2018		
	Graduate Level	X	Undergraduate Level		Law Level	Credit Requirement:	18-19
Are new courses being created: (circle your response)				<input checked="" type="radio"/> No	Yes	If yes, how many courses will be created:	

If the request is for an option or emphasis, enter the associated major and degree:

Major:		261201		Degree:	
--------	--	--------	--	---------	--

Enter the name of the program component in the appropriate row:

Option:	
Emphasis:	
Minor:	Biotechnology and Plant Genomics
Academic Certificate less than 30 credits:	
Teaching Endorsement (Major/Minor):	

Provide a summary/description of the program component using 50 words or less:

Complete 13 credits in Biochemistry (Biol 380), Genetics (Gene 314 or Biol 310), Genetic Engineering (PISc 488) and Introduction to Biotechnology (PISc 207), and additional 6 to 7 credits in advanced courses specialized in genomics, plant biochemistry, molecular biology, and/or plant breeding.

### Learning Outcomes and Assessment Information

This section must be completed if program component request section is completed

1. List the intended learning outcomes for the program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program:

Learn and integrate knowledge in biotechnology and plant genomics and to integrate this information across biology, plant science, biochemistry, molecular biology and chemistry.

Apply thinking strategies to real-world issues to solve problems and make consequential decisions in the area of biotechnology and plant genomics.

Students should be able to communicate basic biotechnology concepts using verbal and written methods to demonstrate understanding in a complex society.
2. Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component:
<p><u>Direct Measure Process (per our current protocols and metrics):</u>            Demonstrated ability to apply academic knowledge to real-world problems and controversies as assessed by final exam questions in Genetic Engineering (Gene 488); performance on parts of standardized exams that assess ability to integrate and synthesize various concepts.</p> <p><u>Indirect Measure Process (per our current protocols and metrics):</u>            Student evaluations of teaching; student grades in core courses, including performance on lecture exams, laboratory exams, class projects, and term papers.</p> <p><u>Face-to-Face Measures (per our current protocols and metrics):</u>            Exit interviews with graduating seniors, including overall assessment of minor program. Academic advising will also be assessed in order to improve student knowledge about careers in the proposed minor.</p>
3. How will you ensure that the assessment findings will be used to improve the program?
The new Department of Plant Sciences Curriculum Committee will oversee assessment measures and outcomes as well as recommend curricular changes to improve the minor as needed.
4. What direct and indirect measures will be used to assess student learning?
<p><u>Direct Benchmarks (per our current protocols and metrics):</u>            At least 80% of students pass standardized tests; at least 80% of employers are satisfied with performance of student interns.</p> <p><u>Indirect Benchmarks (per our current protocols and metrics):</u>            Student evaluations of course and instructor quality in courses required by minor should be 3 or higher; students receive a grade of C or higher in all courses required for the minor. At least 75% of students actively participate in club/organization and/or service learning activities.</p>
5. When will assessment activities occur and at what frequency?
Learning Outcomes Assessment as outlined will occur throughout the academic year with metrics annually reported during September for the prior Academic Year. New or adjusted procedures and metrics will be developed by Plant Sciences faculty members during FY18 and beyond as needed for the three proposed plant science majors.

### Distance Education Availability

This section must be completed if program component request section is completed

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU), the University of Idaho must declare whether 50% or more of the curricular requirements of a program may be completed via distance education. **If the program component is to be offered via distance education, additional or different formwork may be required.** Contact [provost@uidaho.edu](mailto:provost@uidaho.edu) for assistance.

The U.S. Department of Education defines distance education as follows:

*Distance education means education that uses one or more of the technologies listed below to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor, either synchronously or asynchronously. The technologies may include--*

- (1) *The internet;*
- (2) *One-way and two-way transmissions through open broadcast, closed circuit, cable, microwave, broadband lines, fiber optics, satellite, or wireless communications devices;*
- (3) *Audio conferencing; or*

(4) Video cassettes, DVDs, and CD-ROMs, if the cassettes, DVDs, or CD-ROMs are used in a course in conjunction with any of the technologies listed in paragraphs (1) through (3).

Can 50% or more of the curricular requirements of this program component be completed via distance education?	Yes*		No	X
*If Yes, can 100% of the curricular requirements of this program component be completed via distance education?	Yes		No	

### Geographical Area Availability

This section must be completed if program component request section is completed

Identify the geographical area(s) this program component can be completed in:

Moscow	X		
Coeur d'Alene			
Boise*			
Idaho Falls*			
Other**		Location(s):	

\*Note: Programs offered in locations other than Moscow may require additional formwork from the State Board of Education. Contact the Office of the Provost and Executive Vice President for additional information.

\*\*Note: If Other is selected, identify the specific area(s) this program component will be offered.

### Biotechnology and Plant Genomics Minor

Biol 380	Biochemistry I	4 cr
PISc 207	Introduction to Biotechnology	3 cr
PISc 488	Genetic Engineering	3 cr

### One of the following (3 cr):

Gene 314	General Genetics	3 cr
Biol 310	Genetics	3 cr

### Two of the following courses (6-7 cr):

Biol 444	Genomics	3 cr
Biol 487	Eukaryotic Molecular Genetics	3 cr
PISc 440	Advanced Laboratory Techniques	4 cr
PISc 486	Plant Biochemistry	3 cr
PISc 446/ 546	Plant Breeding	3 cr

### Courses to total 19-20 credits