

# Genetics (PhD)

## Degree Requirements

Code	Title	Hours	Counts towards
<b>Core Courses</b>			<b>18</b>
GN 701	Molecular Genetics		
GN 702	Cellular and Developmental Genetics		
GN 703	Population and Quantitative Genetics		
GN 810	Special Topics in Genetics (Journal Club) <sup>1</sup>		
GN 820	Special Problems		
GN 850	Professionalism and Ethics		
ST 511	Statistical Methods For Researchers I		
<b>Teaching Course</b>			<b>6</b>
GN 885	Doctoral Supervised Teaching		
<b>Elective Courses<sup>2,3</sup></b>			<b>9</b>
See "Elective Courses" listed below			
<b>Other Elective</b>			<b>3</b>
"Other Elective" is determined in conjunction with the academic committee			
<b>Research Course</b>			<b>36</b>
GN 895	Doctoral Dissertation Research		
<b>Total Hours</b>			<b>72</b>

<sup>1</sup> GN 810 Special Topics in Genetics is to be repeated twice to meet the 2 credit hour requirement.

<sup>2</sup> Only three hours of these courses may be counted toward the primary elective requirement.

<sup>3</sup> Other courses that do not appear on this list may be counted if they have substantial genetics content. Please consult with the Director of Graduate Programs if you would like to count a course as an elective that is not on this list.

## Elective Courses

Code	Title	Hours	Counts towards
<b>Select at least three courses below:</b>			
GN 713	Quantitative Genetics and Breeding	3	

GN 721	Genetic Data Analysis	3	
GN 725	Forest Genetics	3	
GN 735	Functional Genomics	3	
GN 740	Evolutionary Genetics	3	
GN 745	Quantitative Genetics In Plant Breeding	1	
GN 750	Developmental Genetics	3	
GN 755	Population Genetics	3	
GN 756	Computational Molecular Evolution	3	
GN 757	Quantitative Genetics Theory and Methods	3	
GN 758	Microbial Genetics & Genomics	3	
GN 761	Advanced Molecular Biology Of the Cell	3	
GN 768	Nucleic Acids: Structure and Function	3	
GN 810	Special Topics in Genetics	1-6	
GN 820	Special Problems (Professional Development)	1-6	
ST 590	Special Topics (Bioinformatics I)	1-6	
ST 590	Special Topics (Bioinformatics II)	1-6	
PB 780	Plant Molecular Biology	3	
PB 824	Topical Problems (Topics in Plant Molecular Genetics)	1-4	
BCH 701	Macromolecular Structure	3	
BIT 510	Core Technologies in Molecular and Cellular Biology	4	
BIT 815	Advanced Special Topics	1-6	

## Faculty

### Full Professors

Jose Miguel Alonso

Peter J. Balint-Kurti  
Rodolphe Barrangou  
David M. Bird  
Adam Joseph Birkenheuer  
Matthew Breen  
Ignazio Carbone  
Ralph A. Dean  
Ralph E. Dewey  
Robert Graham Franks  
Troy Ghashghaei  
John R. Godwin  
Major M. Goodman  
Fred L. Gould  
Candace Hope Haigler  
Linda Kay Hanley-Bowdoin  
Christine Veronica Hawkes  
James B. Holland  
Fikret Isik  
Ramsey S. Lewis  
Hsiao-Ching Liu  
Steven Lommel  
James W. Mahaffey  
Christian Maltecca  
Carolyn Jane Mattingly  
Kathryn Montgome Meurs  
Spencer V. Muse  
Natasha J. Olby  
Charles H. Opperman  
Balaji M. Rao  
Emilie Francesca Rissman  
Jean B. Ristaino  
Coby J. Schal  
Maxwell J. Scott  
Heike Inge Ada Sederoff  
Seth M. Sullivant  
William F. Thompson

Jeffrey L. Thorne  
Jung-Ying Tzeng  
Keith R. Weninger  
Ross W. Whetten  
Brian M. Wiegmann  
Qiuyun Xiang  
Deyu Xie  
Jeffrey A. Yoder  
Zhaobang Zeng

---

## Associate Professors

John J Classen  
David Lawrence Aylor  
Chase Beisel  
Nicolas Emile Buchler  
Gavin Clay Conant  
Shobhan Gaddameedhi  
Steffen Heber  
Vasu Kuraparthi  
Randall Brian Langerhans  
Terri A. Long  
Marce D. Lorenzen  
John Edward Meitzen  
Susana Rita Milla-Lewis  
Nanette M. Nascone-Yoder  
Dahlia M. Nielsen  
Xinxia Peng  
Marcela Pierce  
Antonio Planchart  
David Michael Reif  
Michael Hay Reiskind  
Reade Bruce Roberts  
Michael L. Sikes  
Rosangela Sozzani  
Anna N. Stepanova

Yihui Zhou

---

## Assistant Professors

Hamid Ashrafi

Benjamin John Callahan

Michael Anthony Cowley

Colleen Jennifer Doherty

Rafael Felipe Guerro Farias

Amanda Marie Hulse

Albert Jun Qi Keung

Manuel Kleiner

Caroline Laplante

Wusheng Liu

Anna Michelle Locke

Elizabeth Lucas

Kurt Marsden

Santosh Kumar Mishra

Casey C. Nestor

Benjamin J. Reading

Ruben Rellan Alvarez

Adriana San Miguel Delgadillo

Caitlin Suzanne Smukowski Heil

Casey Michelle Theriot

Laurianne Chantal Van Landeghem

Justin Graham Alexander Whitehill

Christina Zakas

---

## Emeritus Professors

Roderick M Rejesus

William Reid Atchley

Stephanie E. Curtis

Eugene Eisen

Charles S. Levings III

Todd Robert Klaenhammer

Wesley Edwin Kloos

Dale F. Matzinger

Wendell Herbert McKenzie

John G. Scandalios

Henry E. Schaffer

Ron Ross Sederoff

Charles William Stuber

Earl A. Wernsman

---

## Adjunct professors

Robert R .Anholt

Trudy F. MacKay

Alison Anne Motsinger-Reif

Nadia Singh