

# Genetic Engineering & Society (Minor)

The interdisciplinary minor in Genetic Engineering and Society (GES) examines the technological, societal and ecological issues surrounding the development and potential use of genetically engineered organisms. Participants in the minor will learn the basic concepts and principles underlying genetic engineering and the methods used for evaluating the technology's social, cultural and environmental dimensions. The graduate minor is available to students pursuing either an MS or a Ph.D. degree.

## Requirements

In order to complete the minor, coursework must be taken in relevant areas of natural sciences and the humanities and social sciences. 9 credit hours from a list of approved courses (see below) are required, 6 of which must be two of the core GES courses. The remaining 3 credit hours must be fulfilled by a course from the list of approved courses that are outside the students' home discipline. A grade of B or higher must be achieved in each course counted towards the minor. In addition, a student must have a GES faculty member on his or her committee, and this faculty member should be from a discipline other than the student's major, ensuring that there is representation from both humanities/social science and natural science.

The choice of courses must be consistent with the interdisciplinary outlook of this minor, namely that students will learn the basic concepts and principles underlying genetic engineering and the methods used for evaluating the technology's social, cultural and environmental dimensions. The minor representative will be responsible for ensuring that the courses taken are appropriate and balance the student's major. Students in the biological sciences will be encouraged to take hands-on courses, such as those offered by the BIT program.

## Plan Requirements

Code	Title	Hours	Counts towards
<b>Core Courses</b>			<b>9</b>
GES/COM/HI 508	Emerging Technologies and Society		
GES 591	Special Topics in Genetic Engineering and Society (Governance, Systems & Modeling)		
GES 591	Special Topics in Genetic Engineering and Society (Genetic Engineering for Sustainable Crop Development)		
<b>Select one additional course below:</b>			<b>3</b>

GES 506	Principles of Genetic Pest Management
ANT 550	Culture, Ecology, and Sustainable Living
BIT 410/510	Manipulation of Recombinant DNA
COM 536	Seminar in Environmental Communication
ECG 540	Economic Development
ENG 515	Rhetoric Of Science and Technology
FW 411/511	Human Dimensions of Wildlife and Fisheries
GN 735	Functional Genomics
HI 540	American Environmental History
HI 581	History of the Life Sciences
HI 585	History of American Technology
NR 571	Current Issues in Natural Resource Policy
REL 571	Darwinism and Christianity
PA 598/798	Special Topics in Public Administration (Science and Technology Policy)
PHI 475/575	Ethical Theory
PSY 757	Innovation and Technology
ST 590	Special Topics (Bioinformatics I/ II)
<b>Total Hours</b>	<b>12</b>

## Faculty

### Full Professors

Rick Lynn Brandenburg

David Buchwalter

Wayne G. Buhler

Hannah J. Burrack  
Robert R. Dunn  
Steven D. Frank  
Fred L. Gould  
Rebecca Elizabeth Irwin  
George G. Kennedy  
Dominic Duane Reisig  
Richard M. Roe  
Coby J. Schal  
Jules Silverman  
Clyde E. Sorenson  
David R. Tarpay  
James F. Walgenbach  
David W. Watson  
Anna Elizabeth Whitfield  
Brian M. Wiegmann

Wayne Maurice Brooks  
William V. Campbell  
Lewis L. Deitz  
Maurice H. Farrier  
Fred P. Hain  
James D. Harper  
Ruediger C. Hillmann  
John R. Meyer  
Harry B. Moore Jr.  
Herbert H. Neunzig  
John F. Roberts  
Robert L. Robertson  
Kenneth A. Sorensen  
Phillip S. Southern  
Ronald Edwin Stinner  
John W. VanDuyn  
Charles Gerald Wright

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### **Associate professors**

Marce D. Lorenzen  
David B. Orr  
Michael Hay Reiskind  
Dorith Rotenberg

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### **Adjunct Professors**

Nicholas M. Haddad  
Loganathan Ponnusamy  
Christopher M. Ranger

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### **Assistant Professors**

Zachary Steven Brown  
Sydney E. Crawley  
Anders Schmidt Huseth  
Aram Arshak Mikaelyan  
Elsa Youngsteadt

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### **Emeritus Faculty**

Charles Smith Apperson  
Jack S. Bachelier  
James R. Baker  
Julius R. Bradley Jr