

## Structural Systems Engineering Requirements



### General Studies 20 - 23 Credits

Social Sciences  
Humanities  
Ethnic Studies  
Economics  
International Studies  
Oral and written communication

### Basic Sciences 37 - 40 Credits

Biological Science  
Mathematics  
Chemistry  
Physics

### Engineering Sciences 21 Credits

Fluids  
Statics and Mechanics of Materials  
Thermodynamics  
Engineering Economics  
Material properties  
Instrumentation

### Structural Systems Engineering Option 44 -50 Credits

Structural analysis  
Structural design  
Material selection & design  
Building codes, standards, specifications  
Technical electives

### Minimum Requirements for a Bachelor of Science Degree 128 credits

The curriculum changes from year to year. Updated curriculum sheets with exact requirements can be obtained from the department. For more details, please consult the university catalogue or visit our website.

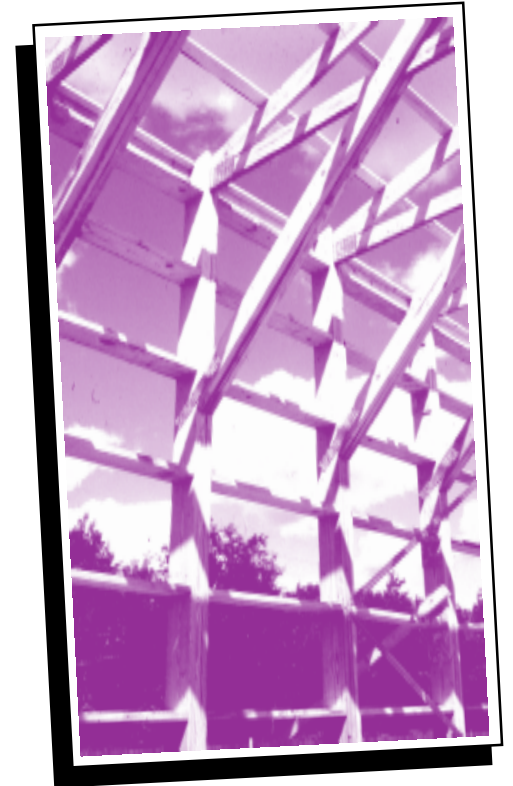
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# Structural Systems Engineering



## Supporting Food Production

Food production and processing is dependent on an immense infrastructure of unique buildings and other structures. Structural



engineers work to ensure that these structures are safe, functional, durable and economical.

Advancements in food production and processing methods, an increased need for larger facilities, building code changes, and the development of new construction methods and materials, continually provide new and unique challenges for Structural engineers.

## Career Opportunities

Structural engineers combine a background in structural design with knowledge of biology and agriculture to develop the



infrastructure that supports agriculture. Such work includes the design and construction of facilities for: growing produce; food and fiber processing; soil erosion control; animal housing; waste storage and handling; equipment storage and repair; and handling and bulk storage of feed, fertilizer and food. Structural engineers are typically employed by design-build firms, building contractors, or engineering consulting firms.

## Academic Preparation

Structural Systems Engineering is ideal for students who enjoy math and science and are interested in the environment, biology, agriculture or construction. Your college preparatory curriculum should include at a minimum, classes in algebra, trigonometry, biology, chemistry and physics. You should also take any advanced math or science classes that are available.

## The Biological Systems Engineering Department

Structural Systems Engineering is a program option within the Biological Systems Engineering (BSE) Department at the University of Wisconsin-Madison. The BSE Department offers a personalized education that includes a wide variety of classes with hands-on experience. You won't be just another number in your Structural Systems Engineering courses. We have small class sizes taught by professors who know each student by name. This one-on-one interaction and personal attention is a cornerstone of our program.

## Other Option Areas

- Machinery Systems Engineering
- Natural Resources and Environmental Engineering
- Food and Bioprocess Engineering

## Learning Outside the Classroom

Prospective employers are looking for new hires who have had learning experience outside the classroom. In Structural Systems Engineering, you'll have a wide variety of options to enhance your education beyond the classroom, including:

- Industry Co-ops and Internships - earn credits while working in industry
- Faculty Research Projects - work on cutting edge research projects
- Student Chapter of ASAE - take a leadership role in our student professional organization
- Engineering Expo - develop projects to display at this biannual event

## Financial Aid Resources

- College of Agriculture and Life Sciences Scholarship Program
- Biological Systems Engineering Department
- Work Study
- UW-Madison Financial Aid



*Please visit our website at*

***<http://bse.wisc.edu>***

*to learn more about Structural Systems Engineering at the University of Wisconsin-Madison.*

## Student Testimonials

“ Small in size, yet large in individual attention. ”

“ It's a great learning environment with great work facilities. ”

“ My advisor is always willing to help and answer any questions. ”

“ The opportunity to work with great students and staff that are willing to give input in class or on outside projects. ”