

# James Worth Bagley College of Engineering

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## Degree and Certificate Programs

Department	Degree and Major	Concentration	Thesis	Non-Thesis	Starkville	Meridian	Distance
Aerospace Engineering	Master of Science - Aerospace Engineering		X	X	X		X
Aerospace Engineering	Doctor of Philosophy - Engineering	Aerospace Engineering			X		X
Agriculture and Biological Engineering	Master of Science - Biological Engineering		X		X		
Agriculture and Biological Engineering	Master of Science - Biomedical Engineering		X		X		
Agriculture and Biological Engineering	Doctor of Philosophy - Engineering	Biological Engineering			X		
Agriculture and Biological Engineering	Doctor of Philosophy - Biomedical Engineering				X		
Dave C. Swalm School of Chemical Engineering	Master of Science - Chemical Engineering		X	X	X		
Dave C. Swalm School of Chemical Engineering	Doctor of Philosophy - Engineering	Chemical Engineering			X		X
Civil & Environmental Engineering	Master of Science - Civil Engineering		X	X	X		X
Civil & Environmental Engineering	Doctor of Philosophy - Engineering	Civil Engineering			X		X
Computer Science & Engineering	Master of Science - Computer Science		X	X	X		X
Computer Science & Engineering	Master of Science - Cyber Security and Operations	Cyber Defense		X	X		X
Computer Science & Engineering	Master of Science - Cyber Security and Operations	Cyber Operations		X	X		X

Computer Science & Engineering	Doctor of Philosophy - Computer Science				X		X
Electrical & Computer Engineering	Master of Science - Electrical and Computer Engineering		X	X	X		X
Electrical & Computer Engineering	Doctor of Philosophy - Electrical and Computer Engineering				X		X
Industrial & Systems Engineering	Master of Science - Industrial Engineering	Human Factors & Ergonomics	X	X	X		X
Industrial & Systems Engineering	Master of Science - Industrial Engineering	Industrial Systems	X	X	X		X
Industrial & Systems Engineering	Master of Science - Industrial Engineering	Management Systems	X	X	X		X
Industrial & Systems Engineering	Master of Science - Industrial Engineering	Manufacturing Systems	X	X	X		X
Industrial & Systems Engineering	Master of Science - Industrial Engineering	Operations Research	X	X	X		X
Industrial & Systems Engineering	Doctor of Philosophy - Industrial and Systems Engineering				X		X
Mechanical Engineering	Master of Science - Mechanical Engineering		X	X	X		X
Mechanical Engineering	Doctor of Philosophy - Engineering	Mechanical Engineering			X		X
Interdisciplinary	Master of Engineering - Engineering		X	X			X
Interdisciplinary	Master of Science - Computational Engineering		X	X	X		X
Interdisciplinary	Doctor of Philosophy - Computational Engineering				X		X
Interdisciplinary	Doctor of Philosophy - Engineering	Applied Physics			X		
Interdisciplinary	Doctor of Philosophy - Engineering	Engineering Education			X		X

## Certificate Programs

Note: The following certificates are not stand-alone programs and must be completed in conjunction with either an undergraduate or graduate degree program:

- Automotive Engineering
- Computational Biology
- Information Assurance Professional Certificate
- Materials Engineering

**The Bagley College of Engineering (BCoE)** was created at MSU in 1902 as the School of Engineering and was named for MSU alumnus James Worth Bagley (EE, B.S. 1961; M.S. 1966) in 2002. The BCoE seeks to increase doctoral enrollment and direct-admits qualified B.S. graduates to doctoral programs. The College is comprised of eight academic departments and offers 12 master's degrees and 12 doctoral degrees. Excellence in research is a high priority for BCoE faculty. The College is comprised of tenure-track faculty members and research faculty who play an active role in both teaching and research for graduate students. With several state-of-the-art research centers and laboratories to provide hands-on experience for master's and doctoral students, excellence extends beyond the classroom offerings. Information on BCoE research centers and laboratories may be accessed under General Information—Centers and Institutes in this publication. The BCoE also focuses on the placement of BCoE Engineering graduates with major multinational companies and top research universities. BCoE is committed to a diverse student study body and seeks to enrich graduate education by providing a multiplicity of views and perspectives that enhance research, teaching, and the development of new knowledge. Additional information about the Bagley College of Engineering is available at <http://www.bagley.msstate.edu> (<http://www.bagley.msstate.edu>).

### Academic Requirements

All graduate students in the BCoE must complete 50% of their degree coursework requirement at the 8000-level.

## Doctor of Philosophy in Engineering with concentration in Engineering Education

Graduate Coordinator: Dr. Lesley Strawderman

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### Required Courses

ENE 8003	Foundations in Engineering Education	3
ENE 8303	Pedagogy & Assessment in Engineering Education	3
EDF 8363	Function and Methods of Research in Education	3
EDF 9373	Educational Research Design	3

### Statistics Requirement 6-7

Choose one of two sequences:

ST 8114 & ST 8253	Statistical Methods and Regression Analysis	
IE 6623 & ST 8603	Engineering Statistics II and Applied Statistics	

Select graduate courses in EDF and EPY	6
Other engineering graduate courses	18
Select graduate elective courses	6
Dissertation/Research	20

### Total Hours 68-69

An oral comprehensive exam is required. Upon successful completion of the comprehensive exam and all coursework, all Ph.D. students must prepare and successfully defend the dissertation before a committee composed of faculty members of the University.