REQUIREMENTS

Master's in Systems Science (MS SS)
Students must complete the required courses while maintaining at least a B average.

Required courses
SSIE 500, Computational Tools
SSIE 501, Introduction to Systems Science
SSIE 505, Introduction to Applied Probability and Statistics
SSIE 520, Modeling and Simulation
or SSIE 523, Collective Dynamics of Complex Systems

Thesis option: 4 electives* plus 6 credits of thesis work followed by oral presentation and defense.
Non-thesis option: 6 electives* plus a project of at least 3 credits.

Sample electives
SSIE 506, Systems Problem Solving
SSIE 519, Applied Soft Computing
SSIE 617, Fuzzy Sets, Fuzzy Logic and Fuzzy Systems
SSIE 631, Foundations of Neural Networks

PhD in Systems Science (PhD SS)
Degree requirements include:
• satisfaction of the learning contract, including proficiency in teaching and residence requirements
• pass a comprehensive exam
• presentation of a colloquium on proposed research
• acceptance of a prospectus outlining dissertation research
• submission of a dissertation, and
• defense of a dissertation at oral examination

Sample electives
SSIE 506, Systems Problem Solving
SSIE 519, Applied Soft Computing
SSIE 617, Fuzzy Sets, Fuzzy Logic and Fuzzy Systems
SSIE 631, Foundations of Neural Networks

MS SS:
A health systems concentration is also available. Contact the graduate director to learn more about this track.
An executive program with a health systems concentration, in Manhattan, is also available.

Course descriptions are available in the University Bulletin at bulletin.binghamton.edu.

This coursework is also available as an Advanced Graduate Certificate program in Complex Systems Science and Engineering (CX).
ABOUT THE SSIE DEPARTMENT

The Department of Systems Science and Industrial Engineering offers a BS degree in industrial and systems engineering (ISE), MEng degrees in industrial engineering (IE) and systems engineering (SE); and MS and PhD degrees in Systems Science (SS) and Industrial and Systems Engineering (ISE). With about 200 undergraduate, 135 masters and 80 doctoral students, the department is growing in numbers and reputation. The department also offers a cutting edge executive health systems program in Manhattan.

FACULTY AND RESEARCH

Attracting over $2.5 million dollars in research funding per year, our established faculty works collaboratively with over 24 global sponsors from industry and federal agencies. Binghamton University overall has placed great emphasis on innovative research and transdisciplinary areas of excellence, including Citizenship, Rights and Cultural Belonging, Health Sciences, Material and Visual Worlds, Smart Energy and Sustainable Communities. For more information on the department and its contributions to these efforts please visit ssie.binghamton.edu.

EARN YOUR GRADUATE DEGREE REMOTELY

EngiNet, the Watson School’s Graduate Distance Learning Program, uses software to digitally capture both classroom lectures and presentation materials. The lectures are posted on the course management system. Students use the online media in conjunction with course materials posted on each course website. Online files are usually posted within 24 hours of being recorded.

For additional information about courses, tuition or registration, send an e-mail to enginet@binghamton.edu or call 607-777-4965 (toll free 1-800-478-0718).

FOR MORE INFORMATION

SS Graduate Director, Dr. Hiroki Sayama: sayama@binghamton.edu