

# INTEGRATED STUDIES IN SCIENCE, ENGINEERING & SOCIETY CERTIFICATE

*Helping STEM majors fulfill liberal arts requirements while exploring the relationship between science and society with the arts, humanities and social sciences*



**Lyn Macgregor, Ph.D.**

Associate Director, Holtz Center for Science & Technology Studies

**For more information**

<http://sts.wisc.edu/academics>

[sts@ssc.wisc.edu](mailto:sts@ssc.wisc.edu)

## Courses

### \*1 required course

*Science & Technology Studies 201: Where Science Meets Society*

### \*12 additional credits

*Students create custom course package around a central theme or topic within one Focus Area*

**Leadership**—intersection between science, technology, policy, and institutions (Typical courses from Political Science, History of Science, Environmental Studies, Literature, Anthropology, Life Sciences Communication, Psychology, Sociology)

**Ethics**—probe the ethical issues raised by scientific research, innovation and practice (Typical courses from Philosophy, Medical History & Bioethics, Gender & Women's Studies, History of Science, Literature)

**Design**—esthetic and social issues raised in science and engineering practice (Typical Courses from Design Studies, Art, Art History, History of Science, Communication Arts, Life Sciences Communication)

## Learning Goals

\*Give STEM majors **systematic exposure** to social sciences, humanities and arts and see these ways of knowing as **integral** to the scientific enterprise

\*Develop student capacity for **interdisciplinary, critical thinking** about the relationship between science, technology, engineering and society

\*Encourage students to develop sense of **personal and social responsibility** for engineering/scientific practice

\*Cultivate **non-technical communication** skills

## Multipurpose Assessment Plan

\*gathers program evaluation data

\*affords opportunities for student reflection

\*bolsters goals of fostering integrative thinking with pre- and post-participation writing samples, exit interviews

### **Original program & assessment models developed by**

Daniel Kleinman, Boston University

Sarah Pfatteicher, Five Colleges Consortium

Jeffrey Russell, University of Wisconsin-Madison

## What Students Say

“We are taught that science is pure and separate from other forces, science is as social a process as anything else.”

“I learned I have to think about where we are going as a society, not just about the science.”

“Thinking about the impact of engineers in society—I never would have made those connections without getting out of the engineering world.”

“I learned that science doesn't have all the answers. In practice you have to be comfortable with grey areas and have tools to think through those ethical dilemmas.”

“You can have a perfect technical solution, but if you don't understand the history and culture of the people you think will use it, it could be a complete failure.”