

# Information Science (IS)

## **IS 1990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **IS 2050. Information and Uncertainty. (4 Hours)**

Introduces the foundations of probabilistic inference, information theory, and their uses for drawing conclusions from noisy data. Applications include diagnosing diseases with inconclusive medical tests, locating autonomous vehicles when sensors are imperfect, and how best to make inferences with incomplete or partial information. Central topics include distinguishing deductive and probabilistic inference, philosophical interpretations of probability, fundamental justifications for the rules of probability, and key concepts of information theory. Introduces analytic and mathematical methods of analysis in these cases and contemporary computational (i.e., programming) techniques for implementing and applying theories of information and probabilistic inference.

**Attribute(s):** NUpath Analyzing/Using Data, NUpath Formal/Quant Reasoning

## **IS 2990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **IS 3990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **IS 4990. Elective. (1-4 Hours)**

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

## **IS 4991. Research. (4,8 Hours)**

Offers an opportunity to conduct research under faculty supervision. May be repeated up to three times.

**Prerequisite(s):** IS 4800 with a minimum grade of D- or (CS 5350 with a minimum grade of C- or CS 5350 with a minimum grade of D- )

**Attribute(s):** NUpath Capstone Experience, NUpath Integration Experience, NUpath Writing Intensive