

# ITDE - INTERDISCIPLINARY ENGR (ITDE)

---

## ITDE 201 Foundations of Interdisciplinary Engineering

**Credit 1. 1 Lecture Hour.**

Success strategies for the interdisciplinary approach to engineering problems; ethical issues in engineering and formation of ethical codes in the interdisciplinary context; effective communications for engineering practice; formation of professional cohorts and networks.

**Prerequisites:** Admission to major degree sequence in interdisciplinary engineering.

## ITDE 285 Directed Studies

**Credits 0 to 6. 0 to 6 Other Hours.**

Directed studies within interdisciplinary engineering.

**Prerequisites:** Sophomore classification and approval of interdisciplinary engineering director or delegate.

## ITDE 289 Special Topics in...

**Credits 1 to 4. 1 to 4 Lecture Hours.**

Selected topics in an identified area of interdisciplinary engineering.

## ITDE 291 Research

**Credits 1 to 6. 1 to 6 Other Hours.**

Research conducted under the direction of faculty member in interdisciplinary engineering.

**Prerequisites:** Sophomore classification and approval of interdisciplinary engineering director or delegate.

## ITDE 301 Interdisciplinary Engineering Experimentation

**Credit 1. 0 Lecture Hours. 3 Lab Hours.**

Role of experimentation across engineering problems; data collection, analysis and interpretation; use of engineering judgment to draw conclusions; instrumentation and procedures used in a variety of engineering contexts; presentation of experimental findings in written and oral formats.

**Prerequisite:** Grade of C or better in ITDE 201 or approval of instructor.

## ITDE 399 High Impact Experience for Interdisciplinary Engineers

**Credits 0. 0 Other Hours.**

Participation in an approved high-impact learning practice; reflection on professional outcomes from engineering body of knowledge; documentation and self-assessment of learning experience at mid-curriculum point. Must be taken on a satisfactory/unsatisfactory basis.

**Prerequisites:** ITDE major; junior or senior classification.

## ITDE 401 Interdisciplinary Engineering Capstone Design I

**Credits 3. 2 Lecture Hours. 3 Lab Hours.**

Instruction and practice in the design process applied to an interdisciplinary design project including establish the customer need; determination of requirements in terms of function, what, and performance, how well; development of alternative design concepts; performance of trade-off studies among performance, cost and schedule; embodiment and detail design; iteration of the above steps; major interdisciplinary design project.

**Prerequisite:** Grade of C or better in ITDE 301; senior classification; approval of instructor.

## ITDE 402 Interdisciplinary Engineering Capstone Design II

**Credits 2. 1 Lecture Hour. 3 Lab Hours.**

Extended interdisciplinary design development process; project management; product-market fit and customer search considerations; manufacturing detailed design specifications; failure modes; applications of codes and standards; selection of design margins; product, component, development guidelines; intellectual property, product liability and ethical responsibility.

**Prerequisite:** Grade of C or better in ITDE 401.

## ITDE 485 Directed Studies

**Credits 0 to 6. 0 to 6 Other Hours.**

Directed studies within interdisciplinary engineering.

**Prerequisites:** Junior or senior classification and approval of interdisciplinary engineering director or delegate.

## ITDE 489 Special Topics In...

**Credits 1 to 4. 1 to 4 Lecture Hours.**

Selected topics in an identified area of interdisciplinary engineering. May be repeated for credit.

## ITDE 491 Research

**Credits 1 to 6. 1 to 6 Other Hours.**

Research conducted under the direction of faculty member in interdisciplinary engineering.

**Prerequisites:** Junior or senior classification and approval of interdisciplinary engineering director or delegate.

## ITDE 499 Degree Plan Approval for ITDE

**Credits 0. 0 Other Hours.**

Successful completion of approved Bachelor of Science in Interdisciplinary Engineering degree plan.

**Prerequisites:** ITDE major; junior or senior classification; ENGR 402 or concurrent enrollment.