



# High Energy Density Welding Processes

## WELDENG 4024

**Credit Hours:**

2.00

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**Course Levels:**

Undergraduate (1000-5000 level)

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**Course Components:**

Lecture

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**Course Description:**

Theory and practice of laser, electron beam, and other high energy density welding processes.

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**Prerequisites and Co-requisites:**

Prereq: 4001, and enrollment as a WeldEng-BS or MatScEn-BS major; or permission of instructor.

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**Course Goals / Objectives:**

- Understand how the physical laws affect the design and operation of electron beam and laser material processes and processing systems
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**Course Topics:**

- Electron beam welding systems
  - Electron beam welding processes
  - Lasers and systems
  - Optics
  - Laser beam welding process
  - laser cutting and drilling processes
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**Designation:**

Elective