



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# Translating Engineering Research to K-8 (TEK8)

## ENGR 4850S

**Credit Hours:**

3.00 - 3.00

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**Course Levels:**

Undergraduate (1000-5000 level)

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**Course Components:**

Lecture

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**Course Description:**

Students translate a prior engineering research experience through developing and delivering and documenting mini-design challenges for an underserved K-8 school partner.

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**Prerequisites and Co-requisites:**

Prereq: 1182, 1188, or 1282H; and permission of instructor.

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**Course Goals / Objectives:**

- Students will be able to develop and deliver age-appropriate engineering design challenges inspired by a prior research experience in an in-school or after-school environment.
  - Students will be able to successfully facilitate K-8 students through the steps of the engineering design process.
  - Students will be able to explain their research to K-8 students and successfully convey its societal significance.
  - Students will be able to appropriately document a design challenge so that it can be used in a web-based environment and facilitated by a non-engineer.
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**Course Topics:**

- Translating Engineering Research and Middle School Communication.
  - What makes a good design challenge?
  - Preparing for urban middle school environment and working with our partner school.
  - Design Challenge Deliveries
  - Design Challenge Debriefing – Self and Peer Reflection
  - Final Design Challenge Documentation and Deliverables
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**Designation:**

Elective