

# 2025 Nuclear Global Internship Job Description

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## 1. Basic Information

- Expected Internship duration: *3-6 months*
- Internship Area/Topic: *Reactor Thermal-hydraulics and Two-phase Flow*  
<https://engineering.purdue.edu/ARTH/>
- Division/Department Placement: *School of Nuclear Engineering, Purdue University*  
(<https://engineering.purdue.edu/NE>)
- Supervisor's contact information: *seungjin@purdue.edu*

## 2. Responsibilities

### 1) Main Purpose

- To acquaint with fundamental knowledge on single-phase and two-phase fluid flow by performing experiments.
- To learn measurement principles of various advanced flow instrumentation.
- To learn how to perform data analysis.
- To learn how to communicate professionally via technical reports and presentations.

### 2) Tasks/ Key Results Expected

- Student will learn measurement principles and learn how to use both fundamental and advanced flow instrument, including the multi-sensor conductivity probe, impedance meter, pressure transducer, magnetic flow meter and gas/liquid rotameters, as well as high-speed digital movie camera.
- Student will perform experiments in the inclinable air-water two-phase flow test facility.
- Student will acquire flow parameters for data analysis.
- Student will learn how to write technical reports summarizing the data acquired in experiments
- Student will participate in weekly research meeting.
- Student will submit bi-weekly progress reports – a template will be provided.
- Student will make at least two technical presentations over the course of semester.
- Student will submit two technical reports: one midterm report and one final report.
- Student are expected to meet with Dr. Kim separately on a weekly basis

### 3) Knowledge, Skills and Abilities

Basic knowledge of thermodynamics, fluid mechanics and heat transfer is expected at any level (undergraduate or graduate). It will be great if student intern has previous hands-on experience but not required. It will also be useful if student is familiar with any computational fluid dynamics software or thermal-hydraulics simulations code but not required.

### 3. Qualifications (Education)

- ☐ (1) Bachelor degree (3<sup>rd</sup> year ☐, 4<sup>th</sup> year ☐)
- ☐ (2) Master degree (or candidate)
- ☐ (3) Ph. D. degree (or candidate)
- ☒ (4) Does NOT matter

### 4. Required documents

- ☒ Resume / Curriculum Vitae
- ☒ Cover letter
- ☒ Academic transcript
- ☒ Recommendation letter written by academic supervisor
- ☒ English Test score (TOEFL, TOEIC, IELTS, etc.)
- ☐ Others ( )

### 5. Is the host organization providing any additional financial support in addition to the funding from KONICOF?

- ☐ Yes
- The amount of stipend:
  - Purpose of the stipend: *To cover lodging expenses at West Lafayette*
- ☒ No



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