

Why Graduate School?

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Overview

- What is graduate school?
- What to study?
- Requirements for graduate school
- Why go to graduate school?
- Common questions
- Summary

What is graduate school?

- Graduate school continues education past the Bachelor level.
- A Master of Science (MS) degree is the first degree in graduate school:
 - Typically 2 years
 - About 30 credits (can vary by major)
 - Often has thesis option and course work only option.
- A Doctor of Philosophy (PhD) degree is the terminal degree in most fields.
 - Typically, 5 years after BS with many students earning MS along the way.
 - Significant focus on research.
 - Most programs require:
 - Qualifying Exam
 - Ph.D. Proposal
 - Ph.D. Dissertation
 - Ph.D. Defense



What to study?

- You can switch fields of study in graduate school within reasonable bounds.
- Many ways to switch between STEM fields.
- Need to look at pre-requisite requirements for major.
- Mostly basic math, physics, and chemistry.
- Focus on developing your strengths.



Requirements for Graduate School

- BS degree in field area you are applying to or a similar area.
- Most fields have prerequisites.
- Good GPA (depends heavily on school applying to).
- GRE scores (many schools are now waiving these).
- Letters of reference.

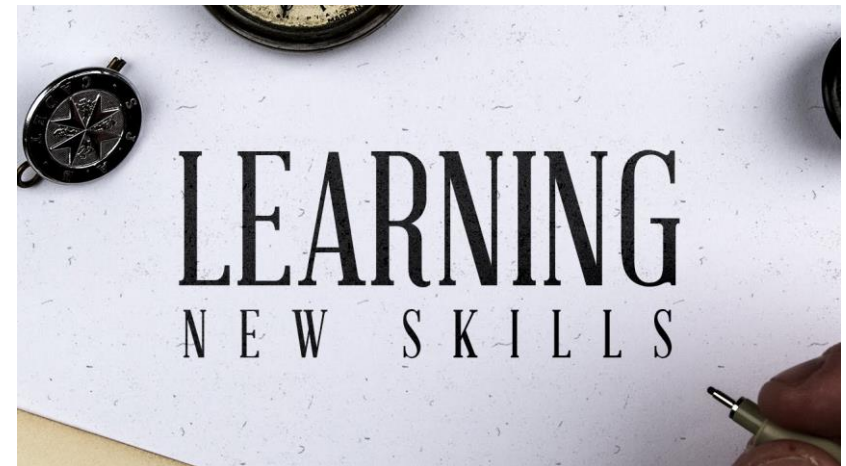


Why go to Graduate School?

- Continue learning and develop new skills.
- Improve career potential.
- Improve ability to work in areas you are interested in.
- Broaden your network.
- Increased salary.

Continue Learning and Develop New Skills

- Graduate school offers the opportunity to increase your toolbox.
- Many graduate students learn to conduct independent research.
- Most graduate students present research at conferences and publish research in peer-reviewed journals.



Improve Career Potential

- Graduate degrees open new career options.
- Graduate degrees give an advantage when promotions are considered.
- Increased tools that you learn in graduate school are useful in completing career tasks. You will be an expert where others are not.



Improve Ability to Work in Areas you are Interested in

- Graduate school will help with paving a path to career areas of interest.
- Specialized knowledge increases ability to land jobs in that area.
- Areas like Medical Physics require graduate education.
- Graduate school opens opportunities for research and teaching.



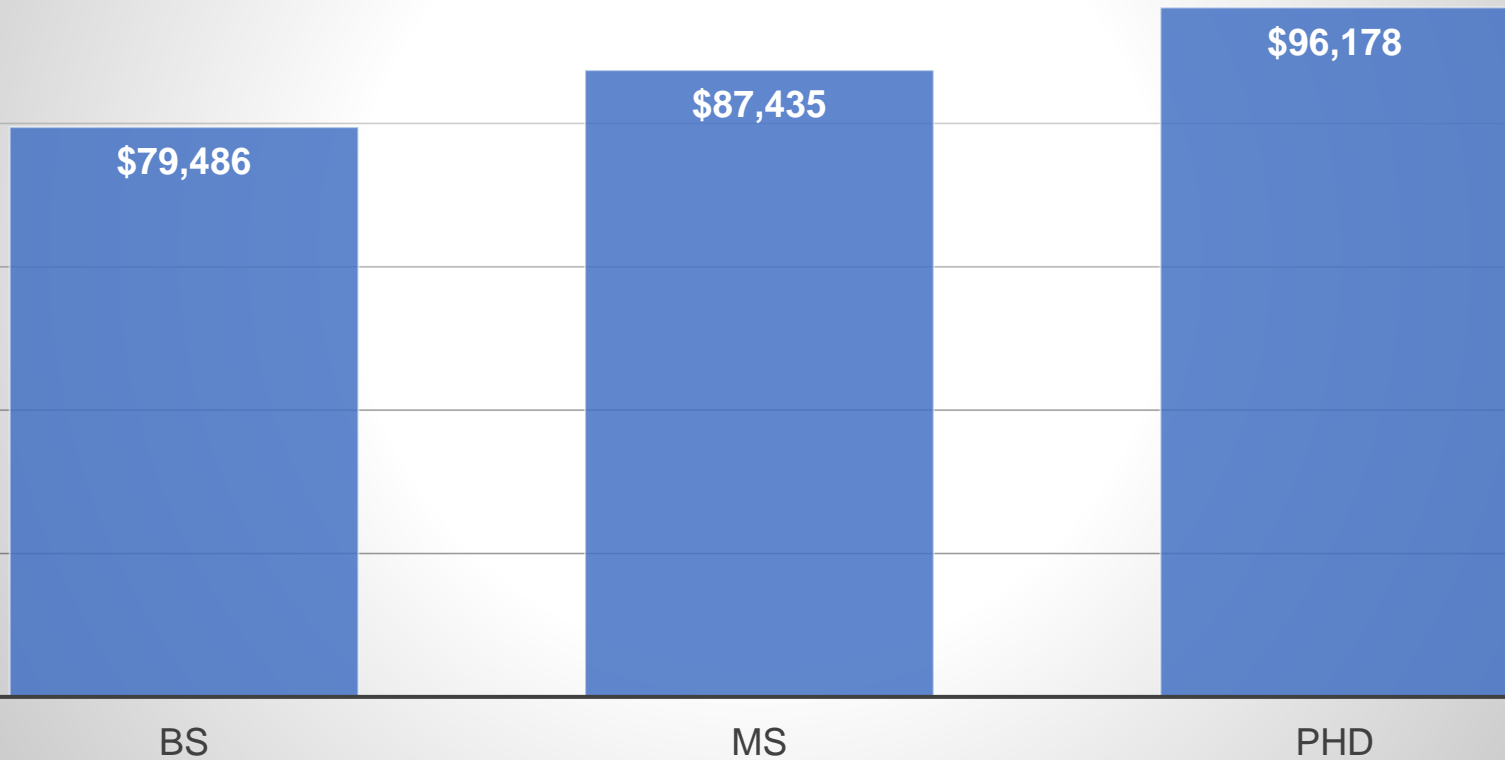
Broaden your Network

- Graduate school increases ability to broaden your professional network.
- Develop relationships with faculty.
- Attend conferences and interact with experts in your field.
- In-depth relationships with peers.



Increased Salary

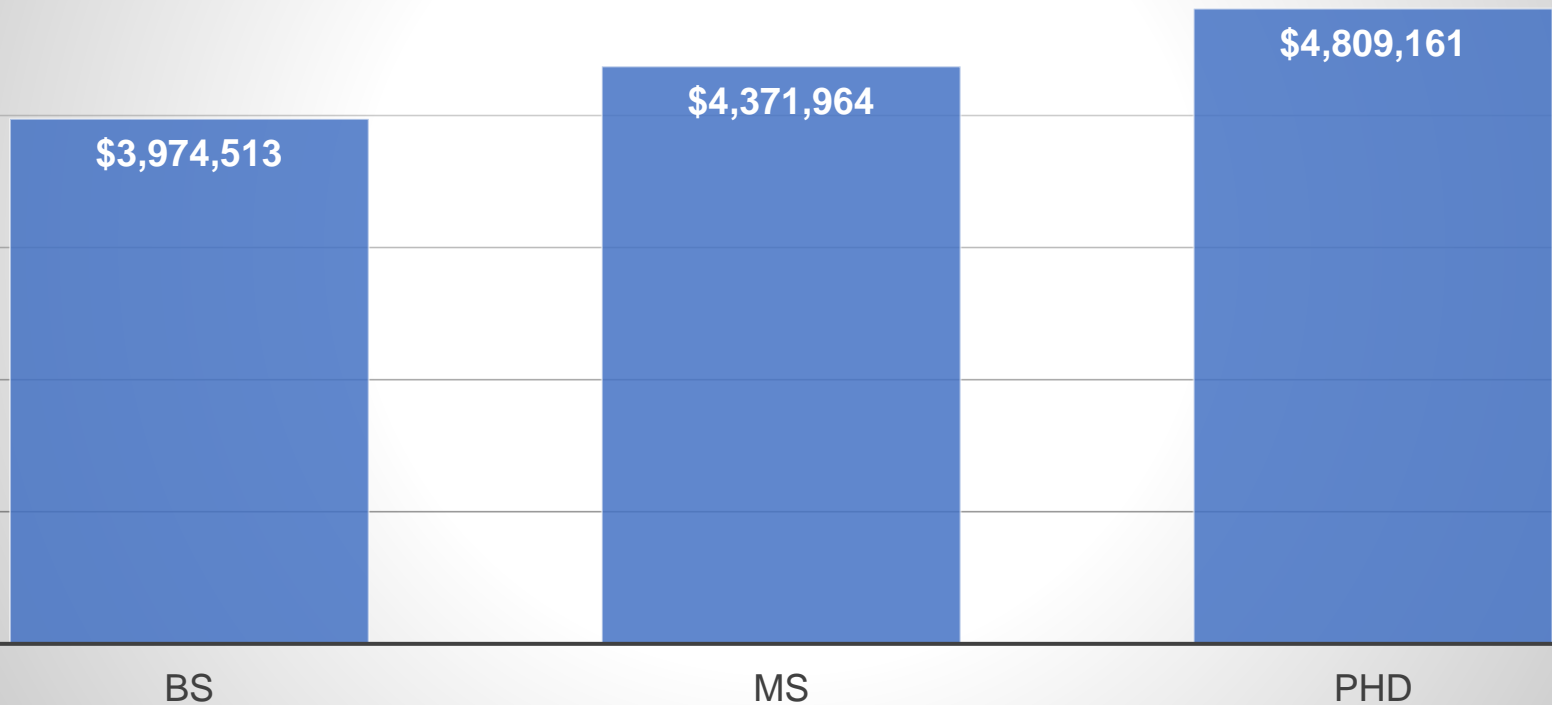
Starting Salaries in Nuclear Engineering



Values from salary.com

Increased Salary

**Estimated Career Earning in Nuclear Engineering
(30 year career)**



■ Career Earning

Common Questions

- What are application requirements?
- What does it cost?
- How long will it take?



What are application requirements?

- You need an undergraduate major that provides proper preparation.
- GPA is strongly considered in graduate admissions.
- GRE scores (most schools are waiving these now).
- Three letters of reference.
- Hints:
 - Pick people you know will write you a strong reference letter. You should work to develop the relationships for this.
 - If you are struggling with paying application fees, email the Chair and ask for a waiver.



What is the cost?

- Many graduate students in STEM fields are covered by:
 - Research Assistantships
 - Teaching Assistantships
 - Fellowships
- These usually cover:
 - Tuition
 - Monthly stipend



How long will it take?

- A Master's degree takes in the range of 1.5 to 2.5 years. Average time to graduation for MS is 2 years.
- A Ph.D. degree takes in the range of 4 to 6 years after BS. This usually includes earning a MS. Range of time is often dictated by research project timelines.



Summary

- Graduate school provides dividends over a career that range from better advancement opportunities to higher salaries.
- Graduate school facilitates the development of specialized expertise.
- There are many opportunities to have your graduate school paid for and for you to earn a stipend to pay for your monthly expenses.