

# Truman Noyce Scholarship Program

Ian M. Lindevald

Professor of Physics, Truman Noyce Grant, PI

Truman State University

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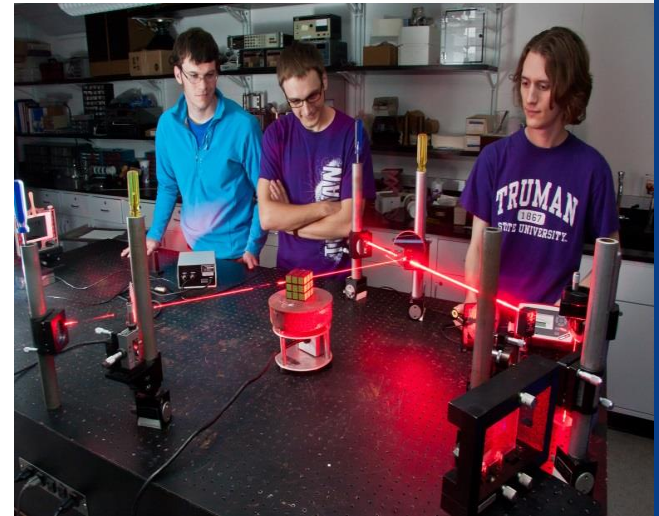
# Truman and Me

- **Truman State University:**

- Truman is Missouri's highly selective public liberal arts university in rural northeast Missouri
- COPLAC member
- ~6,000 students
- Mostly undergrad, but also signature Master's of Arts in Education (MAE) program
- Historically little focus and little production in STEM Ed (~ 1 secondary physics teacher every two years)

- **Me:**

- 22 years at Truman
- Physics Chair 2004 - 2014
- Virtually no previous grants experience



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# Need for High School Physics Teachers

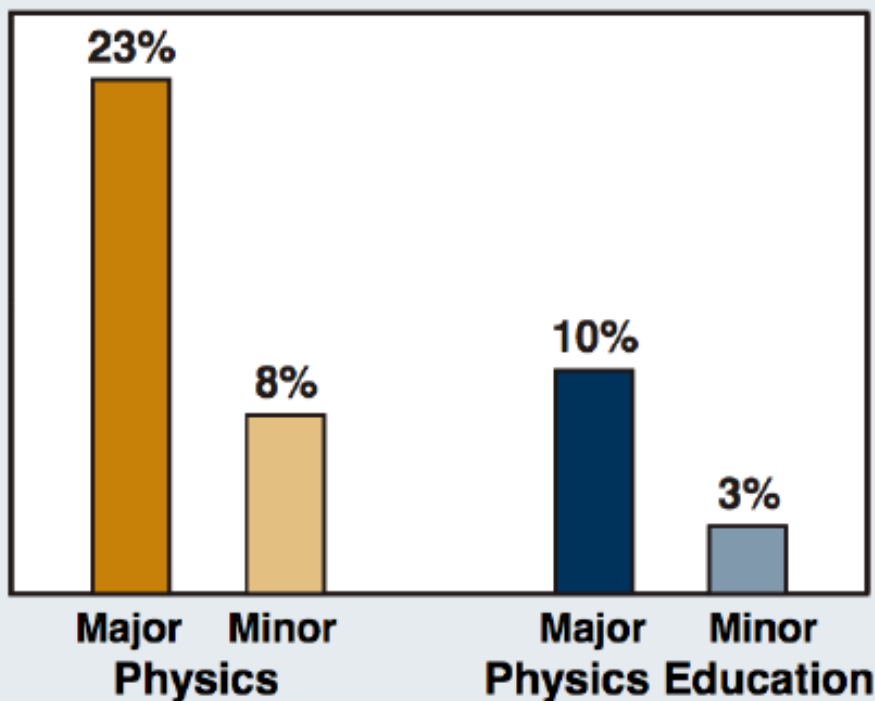
## Relative Demand by Field

### Fields with Considerable Shortage (5.00 - 4.21)

Severe/Profound Disabilities (Spec. Ed.)	4.47
Mathematics Education	4.46
<b>Physics</b>	<b>4.39</b>
Multicategorical (Spec. Ed.)	4.39
Mild/Moderate Disabilities	4.37
Chemistry	4.35
Mental Retardation (Spec. Ed.)	4.34
Emotional/Behavioral Disorders (Spec. Ed.)	4.31
Bilingual Education	4.31
Learning Disability (Spec. Ed.)	4.28
Visually Impaired	4.24
Dual Certificate (Gen./Spec.)	4.23
Hearing Impaired	4.23
Speech Pathology	4.21

2008 AAEE (*American Association of Employment in Education*)  
Educator Supply and Demand in the United States Report

# Physics Teacher Education



AIP Statistical Research Center: 2004-05 High School Physics Survey

For comparison,  
secondary teachers with  
a major in the field  
(2004):

Science (all)	77%
Math	61%
English	76%
Social Studies	79%

Source: Schools and staffing survey,  
National Center for Education Statistics

# Third Time is the Charm

F10: PHYS Tec



S12: NOYCE  
Capacity Building



S13: NOYCE  
Phase I



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# NSF's Robert Noyce Teacher Scholarship Program

[nsfnoyce.org](http://nsfnoyce.org)

- *"... responds to the critical need for K-12 teachers of science, technology, engineering, and mathematics by encouraging talented STEM students and professionals to pursue teaching careers in elementary and secondary schools."*
- Increase number and quality of STEM teachers in high need school districts
- First authorized in 2002



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# 3 Funded Categories

## 1. The teacher scholarship track (Phase I & II)

- Phase I
- Phase II
  - Scholarship and Stipend (S&S)
  - Monitoring and Evaluation (M&E)

## 2. The fellowship tracks

- Teaching fellowship
- Master teaching fellowship track

## 3. Capacity building projects



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# Noyce Scholarship Tracks

- No cost sharing requirement
- **Phase I**
  - Scholarships for juniors, seniors, and 1 grad year or for STEM professional changing career
  - ≤ 1.2 M\$ (75% scholar support, 25% admin) for up to 5 years
  - Other scholar support (internships, meetings, memberships)
  - Scholar service commitment: 2 years in high need district for each year of support (see next)

- **Phase II** (after Phase I)
  - Scholarship and Stipend (S&S)
    - Extension of Phase I
    - Additional research and evaluation expectation
    - ≤ 800 k\$ (75% scholar support, 25% admin) for up to 5 years
  - Monitoring & Evaluation (M&E)
    - For continued tracking of scholars
    - ≤ 300 k\$ for up to 5 years



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# High-Need School District

- Must meet at least one of:
  - High percentage of families below poverty line
  - High percentage of secondary teachers teaching content out of specialty area
  - High teacher turnover rate
- If one district school satisfies a criterion, then so does entire district
- Most rural schools are high-need
- Most urban schools are high-need
- Most schools are high-need



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# Fellowship Tracks

- **Teaching Fellowship (TF)**

- Fellowships and support for a **master's degree** program for STEM professionals and recent STEM graduates leading to STEM teacher certification

- **Master Teaching Fellowship (MTF)**

- Fellowships and support for professional development and leadership training for **current STEM teachers** to become master-teachers

- Phase I:  $\leq 3$  M\$ (75% scholar support, 25% admin) for up to 5 years (1 cohort) or 6 years (2 cohorts)
- Phase II:  $\leq 1.8$  M\$ (75% scholar support, 25% admin) for up to 5 years
- Cost share requirements (Over 1.5 M\$ - 50%, Under 1.5 M\$ - 30%)
- Partnerships required: STEM department, Ed department, High-need school, Non-profit org than can support project goals



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# Capacity Building

- “...establish infrastructure and partnerships for a future Noyce Scholarship or Fellowship proposal”
- “...expand efforts to document, disseminate and implement evidence-based practices for preparing effective STEM teachers and teacher leaders.”
- $\leq 300$  k\$ for up to 2 years (+50 k\$ if collaboration between 2-year and 4-year institutions)
- No cost sharing requirement



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# Typical timeline

- RFP in October
- (Optional) intent letter due in February
- Proposals due in March (right after spring break☹!)
- Proposals evaluated in May
- Q&A through summer months for proposals that survive first cut
- Awards finalized in late August



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# Truman's Phase I Noyce

- Mathematics and Physics
- Bachelor's degrees in mathematics AND physics
- Master's Degree in Education (MAE)
  - Dual Secondary Mathematics/Physics teacher certification
  - Full-year teaching internship (paid teacher of record)
- 5 scholars  $\times$  4 years = 20 teachers (@  $\leq$  \$18k)



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# Our Activities to Date

- In the first year, we . . .
  - Developed a curriculum and got it all approved
  - Attended a STOM meeting
  - Hired a grant coordinator
  - Developed a logo
  - Developed a web site: [noyce.truman.edu](http://noyce.truman.edu)
  - Developed a brochure
  - Marketed to Truman mathematics and physics majors
  - Marketed to high school students considering Truman
  - Developed application materials
  - Attended the Noyce national conference
  - Recruited 3 – 2 = 1 scholar for next year (3 scholars, but only 1 scholarship)
  - And . . . Gave a talk at the BCCE



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# Advice

- Assemble a team
- **Develop a unique proposal that fits well with your university's culture and strengths**
- **Read RFP frequently and carefully, and use it to craft proposal**
- Enlist external partners



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# Thanks

- **Dr. Robert Boggess** for the invitation
- **The Truman Noyce team**
  - **Dr. Susan LaGrassa** (Professor and Chair of Mathematics)
  - **Dr. Paul Yoder** (Professor and former Chair of Education)
  - **Mr. John Nash** (Administrative Coordinator of the Truman Noyce Scholarship Program)
- **American Association for the Advancement of Science (AAAS)**
- **National Science Foundation (NSF)**

[noyce.truman.edu](http://noyce.truman.edu)

[nsfnoyce.org](http://nsfnoyce.org)



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