Preparing a Globally Competent STEM Workforce through Study Abroad

September 14, 2023

#LaunchIDEASabroad

The IDEAS (Increase and Diversify Education Abroad for U.S. Students) Program is a program of the U.S. Department of State with funding provided by the U.S. Government and supported in its implementation by World Learning.
USA Study Abroad

Heidi Manley, Branch Chief
USA Study Abroad, Office of Global Educational Programs
Bureau of Educational and Cultural Affairs, U.S. Department of State

Mission:

The Bureau of Educational and Cultural Affairs (ECA)’s mission is to increase mutual understanding between the people of the United States and the people of other countries by means of educational and cultural exchange that assist in the development of peaceful relations. ECA is committed to fairness, equity and inclusion, and its programs strive to reflect the diversity of the United States and global society.

55,000 participants engage in exchange programs funded by ECA annually

15,000 American participants travel abroad on exchanges each year

101 U.S. public and private non-profit institutions funded

www.exchanges.state.gov
#ExchangeOurWorld
www.eca.state.gov

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CHIPS and Science Act

- Bipartisan CHIPS and Science Act of 2022
- Gilman Scholar STEM Supplemental Award
  - For Gilman Scholars conducting STEM-related research abroad
  - Up to $1,000 each
  - Gilman Program and Gilman-McCain applications deadline October 5, 2023
  - Email Gilmanadvisors@iie.org with any questions

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IDEAS Program

A program of the U.S. Department of State Bureau of Educational and Cultural Affairs, USA Study Abroad branch

Seeking to expand higher education institutions’ capacity to grow and diversify study abroad programs for U.S. students

• Increase number of all students studying abroad, particularly those from historically underrepresented groups
• Increase the number of U.S. higher education institutions offering study abroad programs
• Expand study abroad to new overseas destinations, particularly those that are less common

Grant Competition

• Approximately 30 grants of up to $35,000
• Approximately one consortium grant of up to $50,000

Capacity Building Initiatives

• Virtual and in-person, open to everyone

StudyAbroadCapacityBuilding.org
IDEAS Grant Competition

179 grants awarded

47 U.S. states + D.C. and P.R.

10,000 estimated students impacted

173 recipient colleges and universities

$5.4 million awarded

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STEM and Study Abroad

**SELECTED FIELDS OF STUDY FOR U.S. STUDY ABROAD, 2020/21**

- **Business and management**: 17%
- **Social sciences**: 17%
- **Physical and life sciences**: 10%
- **Engineering**: 9%

**STEM Majors Abroad**
(% of all U.S. Students Abroad)

- **2000/01**: 16.6%
- **2019/20**: 24.5%

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Speakers

Lauren Griggs
Director, Multicultural Engineering Program; Director, Clark Scholars Program; Assistant Teaching Professor
Pennsylvania State University

Gloria Kim
Assistant Professor, Department of Engineering Education
University of Florida

Zach Petrea
Professor of English; Study Abroad Coordinator
Heartland Community College

Kanton Reynolds
Director of Undergraduate Programs, Department of Industrial and Systems Engineering
North Carolina State University

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A. James Clark Scholars Program

- 470+ Scholars
- 11 University Partners
- 46% Underrepresented
- 50% Women
- 51% Federal Pell Grant Eligible

*Penn State Clark Scholars Program

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Cohort-Based Global Experience: Peru

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“Waterfall” Chat

Finish this phrase:

“If only I had ______,” more STEM students at my institution would study abroad.”

Type your answer into the chat box, but don’t press enter yet.
Registration Recap

What demographic of STEM students are you hoping to reach with your program(s)?

- First years
- Community College students
- Pharmacy
- Agriculture + Animal Science
- Physics
- Chemistry
- Math
- Biology/ Biological Science
- Health Sciences + Medical...
- Computer Science, Computer...
- All STEM students
- Engineering

- Creative program models
- Faculty/administrative buy-in
- Curricular integration
- Funding

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University of Florida

- Gainesville, FL
- ~35,000 undergraduates
- 70% Financial Aid
- 33% students of color

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B.C. (Before COVID)

- National Science Foundation (NSF) International Research Experiences for Students (IRES) grantee
- Consultant for the shared curriculum development for future semiconductors

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Why IDEAS?
Diversifying STEM Study Abroad @ UF

NSF IRES IRiKA* Program Applicants

* Interdisciplinary Research in Korea on Applied smart systems (IRiKA) for Undergraduate Students

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IDEAS Grant Impact

• **Summer 2024**: GatorEngineering @SF Faculty-led Program
  - Design-thinking
  - Science communication
  - Cultural immersion

• **Fall 2024**: Exchange Student Program
  - 5 POSTECH students : 5 UF students

• **Spring 2025**: Hybrid Exchange Program
  - POSTECH students @UF in February
  - Virtual exchange over Spring
  - UF students @POSTECH in May

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Heartland Community College

- Central Illinois
- ~5,000 students
- 72% Financial Aid
- 30% students of color
- 20% 1st Generation
- 43 languages

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Study Abroad Infrastructure

Study Abroad Coordinator
• Student Engagement under International Programs Office (IPO)
• 6 programs provided by membership in Illinois Consortium for International Programs and Studies (ICISP)

Committee for Global Education (2018)
• Co-chaired with IPO and academic representatives
• Study Abroad Scholarship (2019)
• Global Studies Curriculum Sequence Designation (2019)
• Faculty Academy (2021)
• Virtual Physical Therapy Assistance Service-Learning in Tanzania (2022)
• IDEAS Grant (2022)

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IDEAS Grant: Short-term, Faculty-led Programs

• Agriculture to South Africa
  • Coincides with new agriculture building and degree programs
  • Leverage existing virtual provider
• Electric Vehicle (EV) to Finland
  • Coincides with new EV lab and degree programs
  • Rivian is a local EV manufacturer
  • Leverage existing relationship
• Health Sciences to Tanzania
  • High faculty interest
  • Leverage existing virtual provider

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NC State College of Engineering

- Raleigh, NC
- ~11,000 students
- 30% from rural NC counties
- 57% STEM majors

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Rwanda Study Abroad Program

- Facilitated through Women and Minority Engineering Program
- Rwanda committed to goal of Middle-Income Country Status by 2035
- Shortage of STEM professionals in country
- Benefit to all stakeholders

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IDEAS Grant Activities

• The Field Experiences in Engineering Education: Rwanda Program
  • Workshops and coaching
  • Thematic Education (skill enhancement)
  • Research opportunities
IDEAS Grant Activities

Jennie Mangala
Coordinating installation of solar panels at primary school in Rwanda

Catherine Reckard
Developed virtual reality environment focused on teaching engineering utilized by high school students in Rwanda

Meriem Laroussi
Received Fulbright Student Program Award to Rwanda after completing Alternative Service Break Program (Team Lead)

Amy Isvik
Received Fulbright Student Program Award to Rwanda after completing NC State Abroad Program

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Q&A

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Takeaways

• Think BIG and...
  • start small
  • start local
  • start with motivation

• Student outreach and support
  • Go where the students are
  • Information to students as early as possible
  • Elevate previous student experience
  • Give students agency in designing part of the experience

• Make it a win-win for your institution and your partner

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Connect with IDEAS in Person!

• Diversity Abroad Global Inclusion 2023 – Chicago, IL
  • October 31 - November 3, 2023
  • Session: IDEAS for Indigenous Inclusion in Education Abroad

• NAFSA Region VI Conference 2023 – Lexington, KY
  • November 5-7, 2023
  • Find us in the exhibitor hall!

• NAFSA Region VIII Conference 2023 – Roanoke, VA
  • November 7-10, 2023
  • Grantee-led session: Enhancing and Advancing Internationalization Efforts via IDEAS Grant – November 9

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Upcoming IDEAS Webinar

Join us for our next free webinar on October 4th, 2:00 – 3:00PM EST

Campus Engagement in Refugee Resettlement: Perspectives from the SHERR Program

Register Now!

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