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Developing and Supporting Summer Programs for Engineering Students





By the Numbers Fall 2012



Mississippi State University Enrollment

- 20,365

Engineering Enrollment

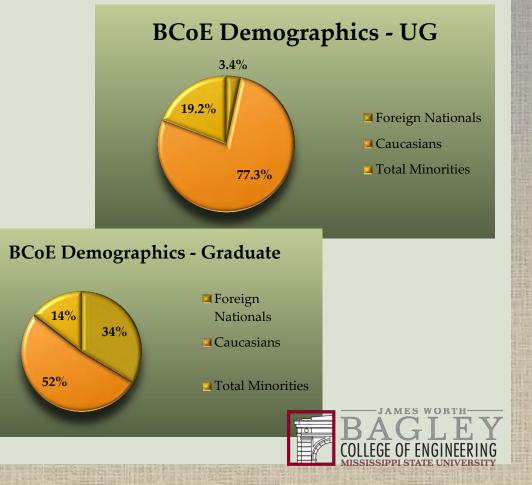
- 3,337 (*top* 20% US)
- > Top 10% nationally in research expenditures among U.S. colleges of engineering*
- More than \$100 million in engineering research awards annually
- * NSF Annual Ranking



Student Demographics



- > High percentage of
 - rural
 - first-generation
 - minority
 - economically-challenged students



Barriers to Study Abroad



> COST

- Lack of awareness of existing possibilities
- > Students are unaware of the value of study abroad
- Families do not have an international experience and do not encourage students to participate in studying abroad
- Requires a cooperative effort between student and academic adviser
- Students are afraid of the unknown
- Cultural barriers
- Perceived barriers:
 - Student needs to know the language of the host country
 - It costs more to study abroad for a semester than it does at MSU
 - Studying abroad delays graduation
 - GPA might be affected



When Students Select Short-Term SA Programs



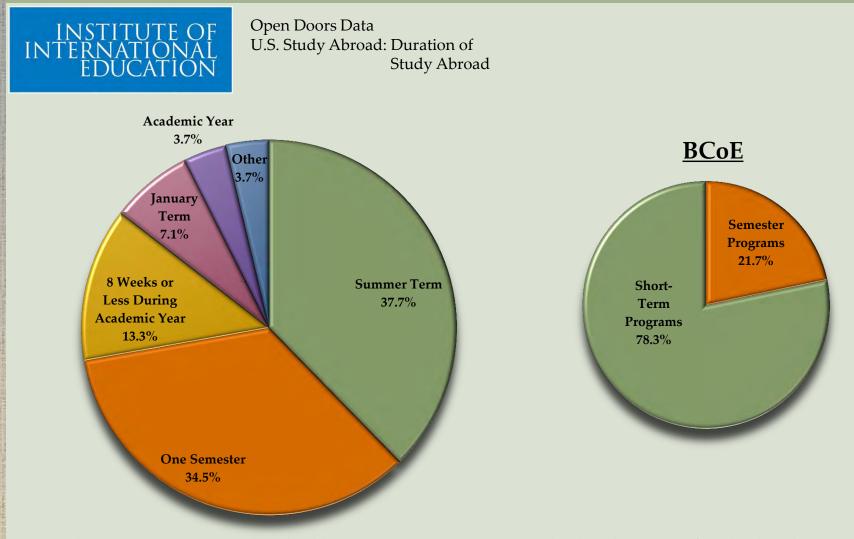
- The cost of long-term programs is too high
- Student is afraid to go abroad on his/her own
- Student has a full-time job
 - Student is trying to decide if he/she should participate in a semester-long program
- Student has a family

Additional reasons to select a Maymester program:

- Student has to work in summer to support him/herself
- Student wants to take additional courses during summer terms

BAGLEY COLLEGE OF ENGINEERING MISSISSIPPI STATE UNIVERSITY

Short-Term SA Programs in Numbers

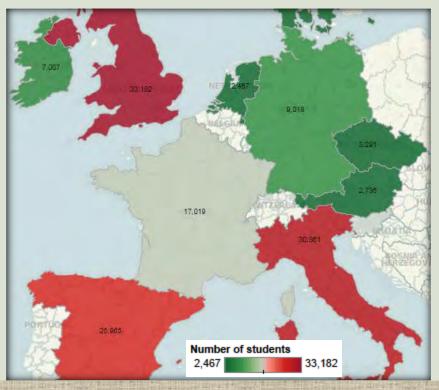


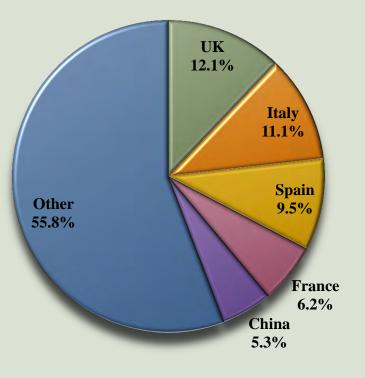
Sources: http://www.iie.org/Research-and-Publications/Open-Doors/Data/US-Study-Abroad/Duration-of-Study-Abroad/2000-11

Top Study-Abroad Destinations for U.S. Students in 2010-2011



Open Doors Data U.S. Study Abroad: Leading Destinations





Sources: http://www.iie.org/Research-and-Publications/Open-Doors/Data/US-Study-Abroad/Leading-Destinations/2009-11 http://chronicle.com/article/Growth-in-Study-Abroad/135716/

BCoE Study Abroad



Faculty-led Summer Programs

Targeted countries

- United Kingdom
- Italy
- France

Targeted Timing

Maymester



BCoE Faculty-Led SA Summer Programs – Programs that work



"Introduction to Satellite Imaging of the Earth" May 11 – June 1, 2013 Guildford, UK \$2,750*

- Open to all students with sophomore standing and above
- Can be taken as a graduate level course
 - tuition, travel to/from Guilford, UK are not included; most meals are included

"Structure and Beauty"

May 10 – May 30, 2013

Italy

\$2,200*



MILAN, VICENZA, VERONA, VENICE, ROME, PISA, FLORENCE

Open to all students with sophomore standing and above
*meals, tuition, travel to/from Italy are not included; domestic transportation (in Italy) and hotel stays are included



BCoE Faculty-Led SA Summer Programs – Programs that did not make



"Analysis & Design of Lightweight Structures"

May 11 – June 9, 2013

"Mechanics of Materials"

May 12 – June 11, 2012

Clermont-Ferrand, France

\$2,021(\$2,100 in 2012)

- Prerequisite: Grade C or better in Calculus III and Mechanics of Materials (Calculus III and Engineering Mechanics I in 2012)
 - tuition, travel to/from Clemont-Ferrand are not included; **3day trip to Paris is included**

"Engineering Economy"

July 3 – August 2, 2012

Istanbul, Turkey

\$2,550*

- Taught by MSU faculty member
- **Prerequisite:** Calculus I

*meals, tuition, travel to/from Istanbul, Turkey are not included





Short-Term Faculty-Led SA Programs



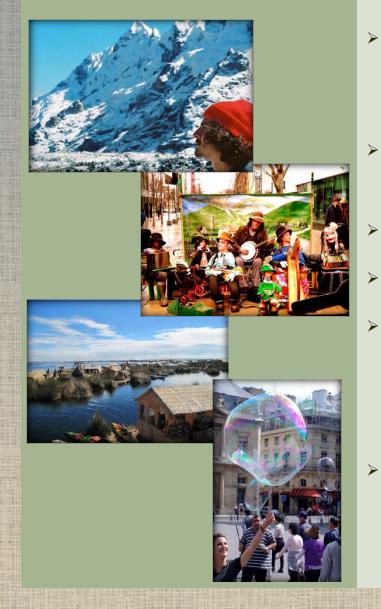


Why does a program fail?

- Not advertised properly
- Undesirable Country
- A prerequisite required
- Timing not suitable for students
- Too many SA courses offered at the same period of time
- The course cannot be counted toward degree for some or all students



Short-Term Faculty-Led SA Programs



Important strategies

- Proper advertisement of the program
- Students have to be aware of the importance of international experience in today's globalized world
 - Academic integration of SA in curriculum
 - Program quality and sustainability
 - Incentives for both, students and faculty
 - Diversity of Programs Offered
 - Technical Electives
 - Arts/Humanities Electives
- Efficient administration





Questions - ????





