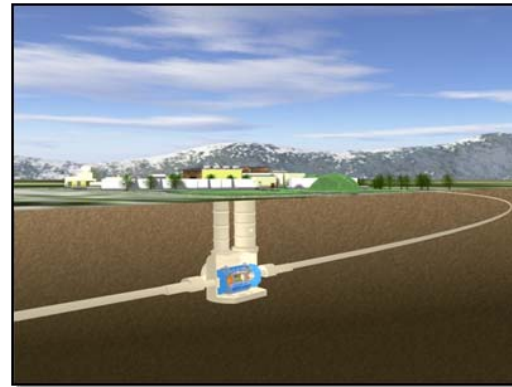


LHC Study Abroad Program Outline Of A Proposal



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Major Goals Of A Study Abroad Program

1. Expose U.S. Undergraduate Students To The Excitement Of Leading-Edge Research
2. Provide The Students With A Unique Educational Program
3. Enhance The Above With An Invaluable International Cultural Experience

Broad Outline Of The LHC Program

40-50 Undergraduate Students

- *Probably Junior or Senior Year*

Up To 12 Months in Geneva

- *Summer, Academic Semester, Year*

Full Academic Workload

- *Accredited Courses (No Lost Time)*

Participation in LHC Research Projects

- *Equivalent To A Senior Thesis*

Housed Near CERN

- *Dormitory, Cooking Facilities, etc.*

The Students

Who are the students?

- *Outstanding Physics Undergraduate Students*
 - Build on Successful REU Selection Process
- *Students From Other Relevant Fields*
 - Computing, Math, ...

Where do they come from?

- *Subscribing Universities from Across USA*
 - Agree to Crediting System
 - Potentially Providing Teachers, Research Projects
 - Not Necessarily LHC Institutes

The Students

Why 40-50 students?

- *1 Student / 2 U.S. LHC Institutes*
- *20 Fold Increase Over Current Exposure*

What can they accomplish in one semester or year?

- *Complete Academic Program*
 - Comparable Level To Top U.S. Research University
 - Physics, Math, Language Or Other Electives
- *Extensive Research Project*
 - Full Participation With LHC Research Group at CERN
 - Publication Of A Senior Thesis (Or Equivalent)

The Courses

What are the topics?

- *High-Level Physics, Math, Computing*
- *Languages, Other Requisites*

Who are the teachers?

- *Visiting US Faculty*
 - Part-Time Teaching / Part-Time LHC Research
- *Local Faculty*
 - Geneva-Area Institute

How do students receive credits?

- *Institutional Agreement for Accepting Credits*

The Projects

What are the topics?

- *LHC Physics*
 - Theoretical Studies, Experimental Analysis, R&D
- *Closely Related Topics*
 - Computing, Collaboration Science, Journalism, e.g.

Who are the mentors?

- *LHC Physicists*
 - Experiments, Accelerator, Theory, IT
 - US or Non-US Groups

How do we monitor student progress?

- *Periodic Interviews, Topic Presentations, Write-Ups*

Program Success

Students Completing Coursework

- *Satisfied with Quality of Teaching*
- *In Sync (or Ahead of) Classmates Back Home*

Students Completing Projects

- *Having Learnt Key Physics Skills*
- *Excited About The Field of Particle Physics*
- *Wanting To Do More*

Students With New Contacts

- *From Their Work Teams and Experiments*
- *From Their Classmates In The Program*

Program Costs & Resources

Primary Costs

- *Housing Facilities and Staff*
- *Instructional Support*
- *Administrative Support*
- *Student Subsidies*

Potential Resources

- *Student Fees*
- *University Contributions*
- *US Funding Agencies*
- *Foundation Support*

Next Steps

Major Immediate Challenges

- *Identifying proper housing*
- *Building a robust funding model and securing resource commitments*
- *Seeking agreement on teaching credits*
- *Proposing a management structure*
- *Identifying participating universities*
- *Coordinating with CERN, Swiss government*
- *Identifying local university curriculum options*
- *Developing a plan for identifying instructors*

Potential Program Agenda

LHC Study Abroad Program Example Semester

Jun

- Orientation Week at CERN
- Optional Intensive Language Course
- Research Project Begins

Jul-Aug

- Summer Student Lecture Program
- 1st Presentation of Research Project
- Continuation of Language Course

Sep-Nov

- Beginning of Fall Term Courses
- Academic Lecture Program
- 2nd Presentation of Research Project

Dec

- Course Exams
- Completion of Research Project Thesis, Defense