HOW TO APPLY:

ELIGIBILITY AND PREREQUISITES:

EP 253 and PHYS 356. Students must also have a minimum of 30 cu and an overall average no lower than 65%

01 Deadline: February 1, 2025

02 Apply online here

03 All results will be sent to students after the deadline

Instructor:

Dr. Mark Boland

Department of Physics and Engineering Physics

mark.boland@usask.ca

For more information:

LaVina Watts, Manager Study Abroad
Arts 119.5

as.studyabroad@usask.ca

PHYS 473.3

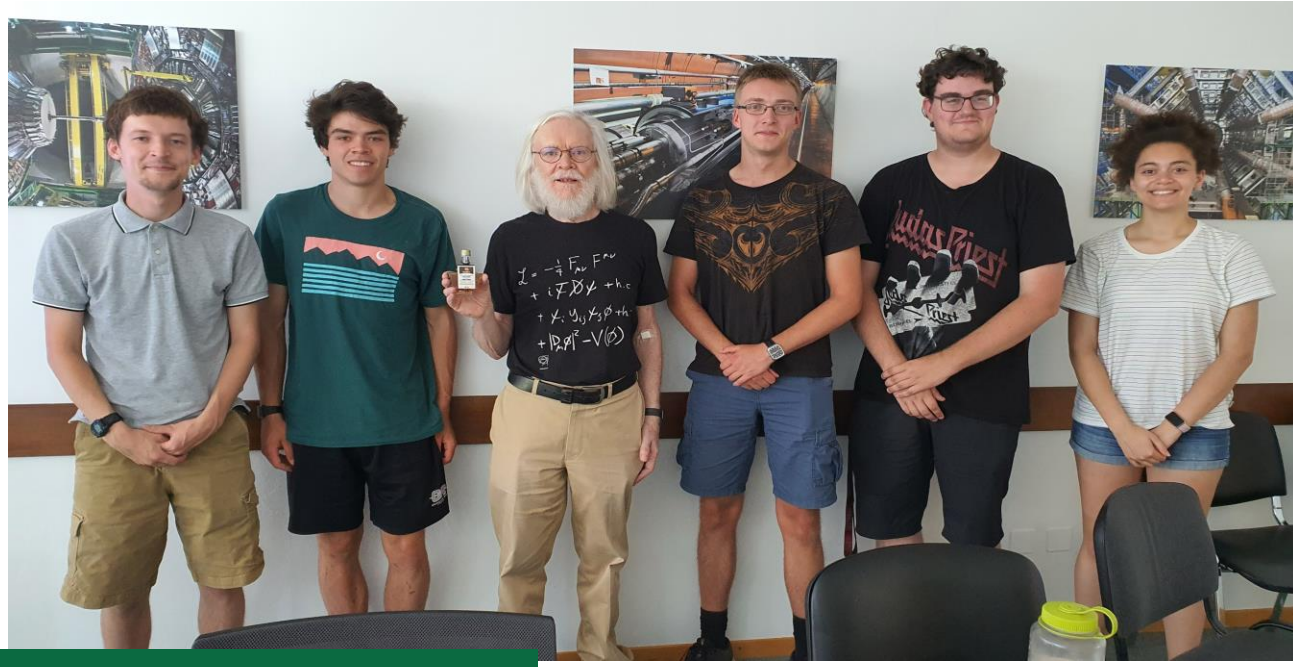
HIGH ENERGY PARTICLE ACCELERATORS FOR PHYSICS RESEARCH

CERN, Geneva, Switzerland

June 2025 (exact dates TBD)

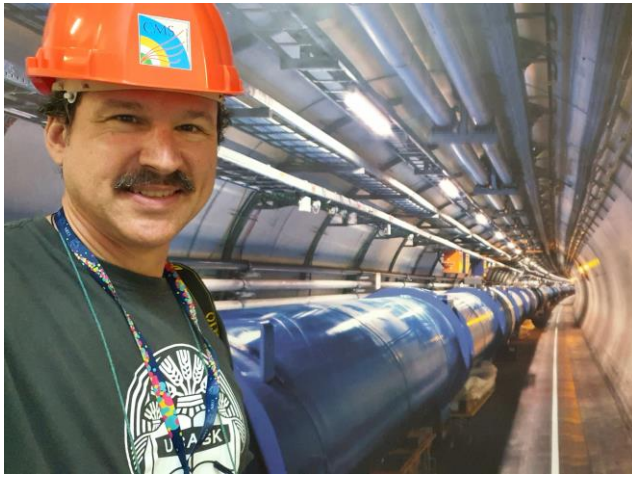
COURSE OVERVIEW

CERN is the world's premier particle accelerator laboratory with research achievements such as the discovery of the Higgs Boson particle and the invention of the World Wide Web. This course taught at CERN during a few weeks in the summer term is designed to help students understand how accelerators can be used for their research in a very broad field from high energy particle physics to medical applicatic Dr. Boland will combine with experts from CERN to lecture the physics of particle accelerators with emphasis on how these impact the research that can be conducted with then the fields of high energy particle and nuclear physics.



- *"It brought a lot of fun and excitement into the course material that is sometimes lacking in a classroom. It was really cool to see the things we had researched in person."*

- *Kara, Taught Abroad Student (2024)*



COURSE DESCRIPTION

After the class the students will be familiar with the particle accelerators used at CERN and be able to calculate the fundamental design parameters of these machines. Students will learn how to design basic accelerators and model their performance for use in research in high energy physics and synchrotron light source research. Tours of the particle accelerators and high energy particle physics detectors located at the CERN campus in Geneva will be conducted to give students an understanding of how these machines are built and used for fundamental physics research.

WHAT'S INCLUDED IN THE FEE

Accommodations	Admission Fees
On-site transportation	Guest speakers by experts in the field

COST OF PROGRAM: per student

USask Tuition: approx. ~$815
Program fee: ~$1750
Flights: ~$2000
Personal expenses (meals, souvenirs): varies