

## Challenges for Students from Resource-Poor Countries

Erno Sajo  
University of Massachusetts Lowell

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### Overview

- ▶ Application Requirements in the US
- ▶ Competitiveness – how to get accepted?
- ▶ Relevance of US curriculum to technology and practice available in the home country
- ▶ Distance learning?

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### Application Requirements

#### CAMPEP and ABR compliance

- ▶ Medical Physics is a graduate degree
  - Screening of Applicants for undergrad curriculum
  - CAMPEP requirement: Equiv. minor in physics
    - Upper level Mechanics, E&M, QM, Calculus, DE
  - Ancillary: Biology, chemistry, computer progr.
  - Others: Anatomy
  - Most applicants are missing some courses
- ▶ Course content verification
  - ABR audit
  - Comprehensive PhD exam within 1 year
    - Exam partially relies on undergrad courses
  - No time and no support for remedial courses

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### Competitiveness

- ▶ TOEFL
  - Required for TA appointment
- ▶ GRE
  - Not just an aptitude test
    - Cultural and language aspects
  - Accessibility to practice problems
- ▶ GPA
  - Differences in grading systems and criteria
  - Often best grade is 3 out of 5
- ▶ Prior med phys experience or shadowing
- ▶ Prior research experience

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### Relevance of Curriculum

- ▶ Can the graduates apply what they learned?
  - Basics: Rad bio, rad interactions, imaging, therapy
  - Advanced treatment methods and clinical practice
    - Technology-specific education in the US
    - Is that technology available in the home country?
    - Should we teach the technology that is available?
  - Treatment planning methods and software
    - Availability of computational equipment
    - Communication and data transfer (eg, PACS)
  - Availability and maintenance of tools
    - Beam scanning, dosimetry, etc.

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### Distance Education

- ▶ Challenges even within the US
- ▶ Real-time course delivery needs broad-band
- ▶ Time difference
- ▶ Courses that may be export-controlled
- ▶ Few courses not conducive to distance delivery
  - Labs and clinical rotation

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**Conclusion and Recommendation**

- ▶ Compatible undergrad degree and courses
  - Document equivalencies with US or EU institutions
- ▶ Be cognizant of CAMPEP requirements
- ▶ Explain grading policies and criteria
- ▶ Get prior Med Phys experience (shadowing)
  - Compare current practice in home country to US
- ▶ Make curriculum relevant

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