Challenges for Students from Resource-Poor Countries
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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?

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
**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 (e.g., 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
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