

# Professional Doctorate in Medical Physics (PDMP)

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# PDMP in Medical Physics

- ▶ PDMP – What Is It?
- ▶ Impact on Medical Physics
- ▶ PDMP Program Plans at Vanderbilt
- ▶ PDMP Curriculum at Vanderbilt
- ▶ New Proposed Clinical Training Model and Financial Impact

## PDMP – What Is It?

- ▶ Professional Degree (PDMP) not a Research Degree (PhD)
- ▶ Combines Didactic and Clinical Training
- ▶ Four – Five Year Program
- ▶ More than a MS Degree and a Clinical Physics Residency
- ▶ Students Pay Tuition for Duration of the Program (perhaps stipend)
- ▶ May Limit the Number of Graduates per Year
- ▶ Meets Eligibility Requirements for ABR Physics Exam (Parts I and II)

# Impact on Medical Physics

- ▶ White Paper Presented to AAPM Board in July, 2008
  - Impact on Medical Physics Profession
  - Impact on Current Education Programs
  - Impact on Medical Physics Research
  - Impact on PDMP Graduates
  - Impact on MS Graduates

## PDMP Program Plans at Vanderbilt

- ▶ Awaiting Board of Trust Approval (Agenda Item for February Meeting)  
Medical Physics Faculty and Chairs of Radiology & Radiation Oncology  
Dean of the School of Medicine  
School of Medicine Executive Committee  
Vanderbilt Faculty Senate
- ▶ Four Year Program
- ▶ Therapy and Diagnostic Tracks
- ▶ 50 Didactic hrs + 6 Research Problem hrs + 36 Clinical Training hrs
- ▶ Clinical Training will be 24 Months
- ▶ Recruiting Students for Fall Semester, 2009
- ▶ Three Current MS Students will Enroll in PDMP Program in May, 2009
- ▶ Alternate Pathway for Former Vanderbilt MS Students

# Vanderbilt PDMP Curriculum Therapy Physics Tract

- ▶ Anatomy & Physiology (8 hrs)
- ▶ Introduction to the Physics of Medical Imaging (3hrs)
- ▶ Health Physics I (3hrs)
- ▶ Radiation Detectors (3hrs)
- ▶ Interactions of Radiation with Matter (3hrs)
- ▶ Elective (3 hrs) Statistics/Math Methods
- ▶ Brachytherapy Physics (3hrs)
- ▶ Brachytherapy Physics Practicum (2hrs) **Clinical (1 month)**
- ▶ Radiotherapy Physics I (3hrs)
- ▶ Radiation Biophysics (2hrs)
- ▶ Radiation Oncology Seminar (1hr)
- ▶ Diagnostic Physics (3hrs)
- ▶ Diagnostic Physics Laboratory (2hrs)

## Curriculum (continued)

- ▶ Radiotherapy Physics II (2hrs)
- ▶ Radiotherapy Physics Laboratory I (2hrs)
- ▶ Health Physics II (3hrs)
- ▶ Radiotherapy Physics Laboratory II (2hrs)
- ▶ Radiotherapy Physics Practicum (4hrs) **Clinical (2 months)**
- ▶ Task Group Reports Seminar (1hr)
- ▶ Elective (3hrs) Tumor Imaging
- ▶ Research Problem (6hrs)
- ▶ Clinical Rotations (30 hrs) **Clinical (21 months)**

## Financial Models

### MS Degree + Residency

- ▶ Research Enterprise Funds Student Tuition and Stipend (limited)
- ▶ Clinical Enterprise Funds Student Tuition and Stipend (limited)
- ▶ Student pays Tuition & Expenses (common)
- ▶ Residency Institution Pays Approximately 50% Salary x 2 Years (common)

### PDMP

- ▶ Student Pays Tuition & Expenses for Year 1 & 2
- ▶ Student pays Shared Expenses for Year 3 & 4
- ▶ Residency Institution Pays Tuition and Shared Expenses for Year 3 & 4



## New Proposed Clinical Training Model

- ▶ Vanderbilt Enters Agreement with Institution(s) Offering Physics Residency
- ▶ Students Receive Didactic instruction in Year 1 and Year 2  
(also 6 hrs of Clinical Training- **3 months equivalent**)
- ▶ Students Attend Off-campus Institution for Year 3 and Year 4  
for Clinical Training- **21 months equivalent**  
and Research Problem – **3 months equivalent**
- ▶ Off-campus Institution Contract with Vanderbilt Includes Tuition, Insurance
- ▶ Student Receives PDMP Degree at the Completion of All Requirements

## Financial Implications

- ▶ Burden of Education/Training is Shared Between the Student and the Educational /Residency Institutions
- ▶ Students Pay Tuition During Year 1 and Year 2
- ▶ Residency Institution Pays Tuition during Year 3 and Year 4
- ▶ Residency Institution's Financial Implication May be a Factor of  $\frac{1}{2}$  Cost of Present Residency Stipends
- ▶ Product is Well-Trained in Medical Physics for the Job Market
- ▶ Since Overall Costs of Training is Shared, Perhaps This is One Alternative to Reaching the Goals Associated with 2014 Initiative