



Board of Advisors
Spring 2007 Committee Meeting

WVU HEALTH SCIENCES CENTER

School of Dentistry
School of Pharmacy
School of Nursing

School of Medicine





Mission of the WVU Health Sciences Center

To improve the health of West Virginians through the education of health professionals, through basic/clinical scientific research and research in rural health care delivery, through the provision of continuing professional education, and through participation in the provision of direct and supportive health care



*National Data and our Own
Experience suggests that:*

The most important way to assure that a population has access to a given health profession is for that state or region to have education/training programs for that profession



Example: Occupational Therapy in WV

- In 1992, West Virginia had 47 registered occupational therapists
 - Ruby Memorial Hospital had 0
- The Occupational Therapy Program at WVU graduated first class in 1999
- In 2003, West Virginia had 390 registered occupational therapists
 - Ruby Memorial Hospital Dept of Rehab Services has 8 OTRs and 2 COTAs



What's the big deal?





Edith





The First scenario

- Edith calls her son who rushes over, calls 911 and an ambulance takes her to RMH
- A team of physicians in the ED recognizes this as a probable stroke and activates the stroke team
- Physicians make a clinical judgment that she is a candidate for tPA, which she receives
- She receives outstanding nursing care



But what if????

- Edith dismisses her symptoms and doesn't call her son...or even worse, her stroke could have been prevented
- The lab is understaffed and there is no one to give the physicians the lab values they need to make the tPA decision
- She is left with a right side (her dominant hand) hemiplegia; she can't walk and she can't use the hand



The message is.....

- Access to quality health care is more than just medicine, nursing, pharmacy and dentistry
- The allied and public health disciplines play an important role
- These are the professional programs in the School of Medicine which make the WVU Health Sciences Center the only comprehensive health sciences center in the state



The Professional Programs

- Department of Community Medicine
 - Master's in public health: Only one in WV
- Department of Pathology
 - B.S. in medical technology: Largest and most complete in WV; only one in North central WV
- Division of Exercise Physiology
 - B.S., M.S., Ph.D: One of few in SOM in country
- Division of Occupational Therapy
 - MOT: Only one in WV
- Division of Physical Therapy
 - DPT: Only one at public institution in WV



School of Medicine

Program	Res	N-Res	R-EL	NR-EL	Total
MOT	76	18	18	11	123
PT	62	7	6		75
MT	37 14	16 7			53+ 21 DA
MPH	39	41			80
MS	4	3			7
ExPh	457	207			683
MS	13	6			
TOTAL					1042



Dept. of Community Medicine

- Degree Programs
 - Master's of Public Health
 - M.S. in Community Health Education (School Health)
 - PhD in Public Health
- Teacher's Certification in School Health Education



Things you should know about the MPH

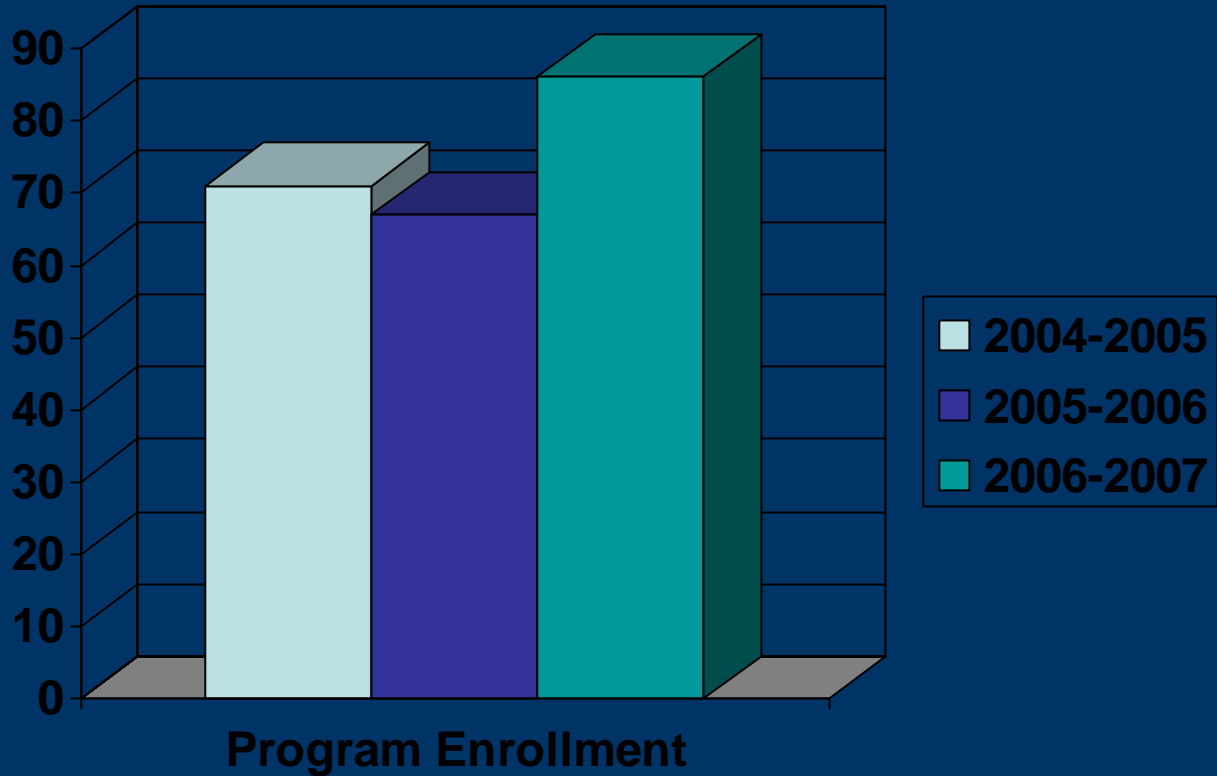
- Five core areas of public health
 - Biostatistics, epidemiology, environmental health science, health services administration and social/behavioral
- Preparation of practitioners who:
 - Improve quality of life and health outcomes for all members of a community
 - Serve the state of WV, which is fully encompassed by Appalachia and has a number of pronounced public health problems, such as obesity and excessive tobacco use



Master's in Public Health (MPH)

- **Accreditation history:**
 - CEPH (Council for Education in Public Health)
 - Initial Program Accreditation: Oct, 1997
 - **Next accreditation: July 2008**
- Degree characteristics
 - 42 credit hours
 - 27 core required courses, including 8 hour practicum and 1 CH seminar
 - Entirely web-based off campus MPH
 - On campus MPH offers specialty tracks including:
 - Epidemiology/Biostatistics
 - Health Policy and Management
 - Social/Behavioral
 - Environmental
 - Wellness
 - Women's Health

Program Growth





Education in the Field

- MPH Practicum
 - 8 hours
- Purpose
 - To give students practical experience in the public health workforce, while providing a meaningful service
- Practicum Sites
 - Largely within West Virginia, including local health departments, WV Bureau for Public Health; NIOSH



Sample Practicum Projects

Spring, 2007

- “Hostile Halls: Experiences of High School Bullying among Freshmen University Students”
- “Subacute Back Pain’s Response to PT: A WV Worker’s Compensation Approach”
- “Evaluation of a Program Designed to Reduce Cardiovascular Disease Risk Factors for School Students in Kanawaha County”
- “Mock Disaster 2006: An Influenza Outbreak”
- Thyroid hormone function and C8 (perflourooctanoic acid) exposure data from the over 65,000 participants in the “C8 Health survey” in Wood County and surrounding areas.



Research Opportunities

- Department has over 4.7 million in extramural funding from sources such as NIH and CDC
- Administrative Units in the Department representing areas of funding success include:
 - Prevention Research Center
 - Office of Drug Abuse and Intervention Studies (ODAIS)
 - Institute for Occupational Medicine and Environmental Health
 - Center on Aging

Service Opportunities

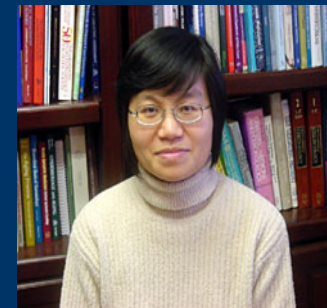
- Community Medicine Student Association (CMEDSA)





Profile of Graduates

- 64% of graduates remain in the state
 - (89% of school health)
- Graduates serve West Virginia
 - Bureau for Public Health-Division of Tobacco Prevention
 - HSTA
 - Health Departments: Marion, Roane, Braxton, Berkeley
- Graduates bring national recognition
 - NIH Grants Management Specialist
 - Division Director Centers for Medicare & Medicaid
 - U.S. Dept of Housing & Urban Dev/Lead Hazard Control
 - Manager, Community Health Programs, Blue Cross
 - NIH: Sr. Management Analyst/Ethics Coordinator
- Graduates are serving state and nation
 - the ***National*** emergency response plan for the use of community volunteers has a component from an MPH practicum in WV



- Dr. Ruth Kershner
 - Honor Award WV Assoc of Health, PE, Recreation & Dance
 - 2005 Am Assoc of Health Ed: Health Professor of the Year
 - SOM Outstanding Teacher
- Dr. Bill Reger-Nash
 - Ethel and Gerry Heebrink Award for Distinguished State Service for 2006
 - 100 most influential people in Morgantown
- Dr. Kim Horn
 - Robert C. Byrd Professorship
- Dr. Bei Wu
 - 2005 Judith Gold Stitzel Endowment for Excellence in Women's Studies



Stay tuned for.....

- Upcoming Accreditation
- Expansion of the Off-Campus Generalist MPH
- First graduates of the PhD in Public Health
 - Anticipated to become leaders in public health research and training both within the state and across the country



Division of Exercise Physiology

Department of Human Performance & Applied Exercise Science

- Degree Programs
 - B.S. in Exercise Physiology
 - M.S. in Exercise Physiology
 - PhD in Exercise Physiology



Things you should know about Exercise Physiology

- The baccalaureate degree has become increasingly popular with the expanding undergraduate student population of WVU because of:
 - Opportunities to work in the wellness & fitness field upon graduation
 - ONLY educational program in the country which certifies students as aquatic fitness specialists
 - Excellent pre-major for professional programs such as medicine and physical therapy
 - Preparation to enter graduate programs in Exercise Physiology
- The master's degree prepares students to work in exercise programs with special populations such as cardiac rehabilitation
- The doctoral program prepares students for careers in research

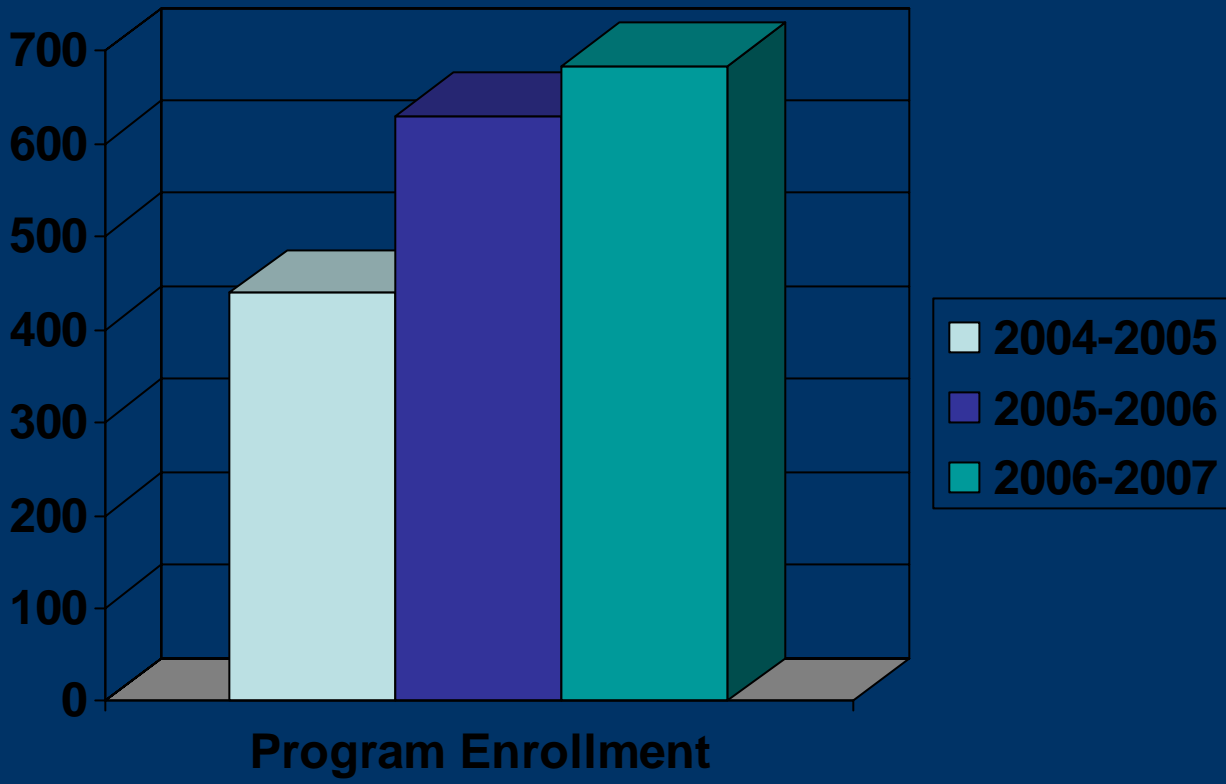


Exercise Physiology Degrees

- **Accreditation**
 - Accreditation is new for exercise physiology programs
 - WVU has received preliminary approval and has applied for full accreditation to CAAHEP; site visit expected Fall, 2007
- **Degrees**
 - Baccalaureate is 128 hours and has 2 specialty tracks
 - Aquatic Therapy & Health Professions
 - Offers an Honors program for exceptional students
 - Master's is 36-40 hours and has 2 options:
 - Clinical: Requires a 200 hour clinical internship
 - Thesis: Requires two years including intensive research
 - Doctoral
 - Collaborative program with WVU with 2 years general (1 core & 1 elective) followed by 2-4 years research in a funded laboratory



Program Growth





Education in the Field

- Human Performance Laboratory & Strength/Conditioning Laboratory
 - Training with adult and elderly patients with diabetes, cardiovascular disease and obesity
- Over 30 clinical sites used
 - 22 in West Virginia
 - 3 in Colorado
 - Also: Michigan, NJ, NY, SC, Texas





Research Opportunities

- Dr. Steve Alway, chairperson, has NIH funding examining the cellular and molecular impact of aging on skeletal and heart muscle
- Dr. Michael Delp has funded research investigating vascular responses to exercise and microgravity in bone
- Dr. John Hollander, recently funded by American Heart Association, to study molecular repair mechanisms after myocardial infarction
- Other areas of research include:
 - Effect of diet (e.g. antioxidants) on aging and diabetic skeletal and heart muscle
 - Genomics and muscle response to exercise



Service Opportunities

- The Human Performance Laboratory
 - Exercise for Special Populations (Elderly, Diabetics, HIV)
 - Wellness Programs
 - Individualized assessment and planning
 - Phase II Cardiac Rehabilitation
 - Contract with PEIA for exercise and weight loss





Profile of Graduates

- Average of 48.6% of graduates stay in West Virginia
- Graduate Profile:
 - Judith Hayes received her bachelor's and master's in exercise physiology from WVU. She is currently chief of NASAs biomedical and research program and has been the director of the exercise physiology laboratory at Johnson Space Center
 - Dr. Emily Spangler-Murphy is a doctoral candidate in Exercise Physiology, receiving both her B.S. and M.S. at WVU. She is involved in the CARDIAC project (Coronary Artery Risk Detection) and is particularly studying kindergarten children for screening and education



Profile of Graduates

- Dr. Parco Siu, completed his Ph.D. degree in 2005 in Exercise Physiology. While in the doctoral program he received the Young Investigator Award from the *Society for Experimental Biology and Medicine (2005)* and was also awarded the National Student Research Award from the *American College of Sports Medicine (2005)*.
- Dr. Emidio Pistilli completed his Ph.D. degree in 2006 after receiving the 2006 graduate research award from the *American College of Sports Medicine*. He is currently working as a postdoctoral fellow at *Children's Medical Center (Washington DC)*.



School of Medicine



- Dr. Stephen Alway
 - NIH Study Section Member; Associate Editor for Exercise and Sports Science Reviews; Sports Scientist of the Year 2000, awarded by the National Strength and Conditioning Association.
- Dr. Paul Gordon
 - NIH Study Section Member
- Dr. Guy Hornsby
 - Member, BOD, Diabetes Exercise and Sport Association; Chair, Exercise Advisory Committee
- Paula Briggs
 - National Aquatic Therapy Professional of the Year in 2000
- Danny Bonner
 - SOM Dean's Award for Excellence in Community Service 2003



Stay tuned for.....

- Upcoming accreditation
- Program expansion in the basic and translational science of exercise



Division of Occupational Therapy

Department of Human Performance & Applied Exercise Science

- Degree Program

- MOT

- Entry level professional master's in occupational therapy



Things you should know about Occupational Therapy

- What is Occupational Therapy??
- Preparation of Practitioners who can provide:
 - Customized treatment programs to improve one's ability to perform daily activities
 - Comprehensive home and job site evaluations with adaptation recommendations
 - Performance skills assessments and treatment
 - Adaptive equipment recommendations and usage training
 - Guidance to family members and caregivers

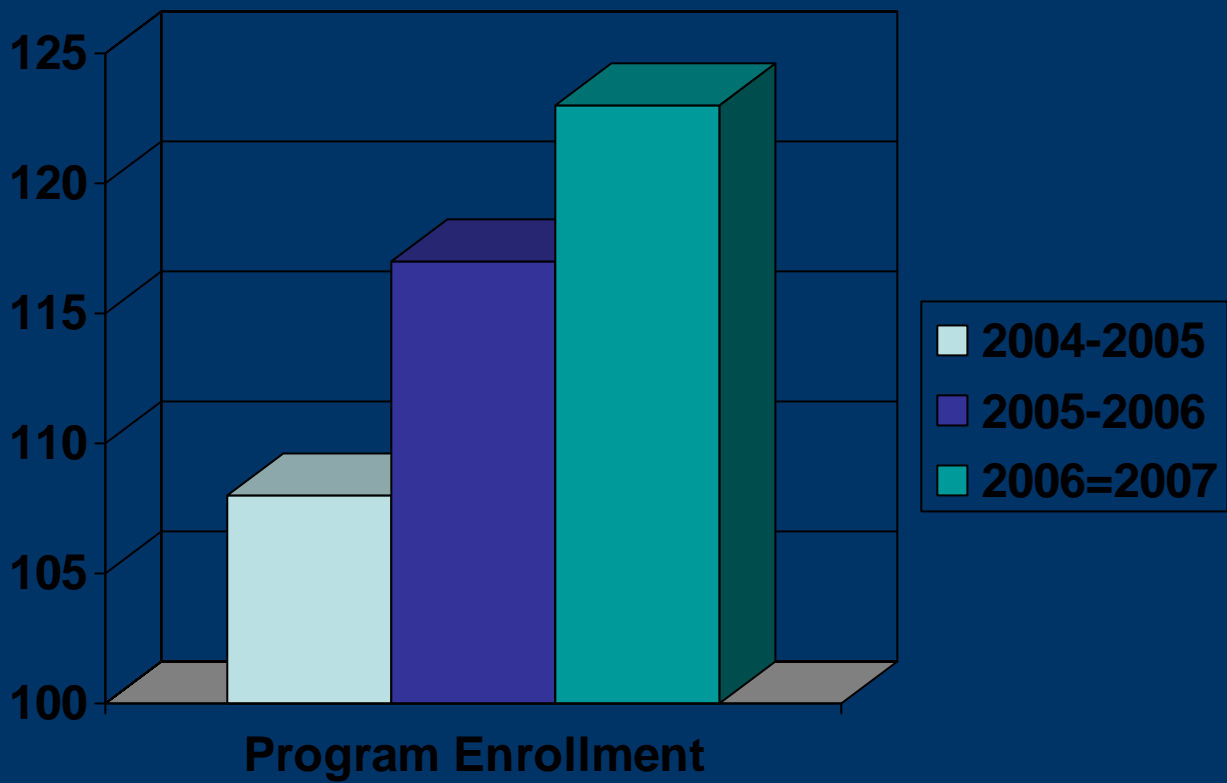


Master's in Occupational Therapy (MOT)

- **Accreditation History**
 - Accrediting Body is the American Occupational Therapy Association (AOTA)
 - Developing Program Status April, 1996
 - Full Accreditation, December 1998
 - Annual Accreditation Reports; Next full accreditation including an on-site visit is scheduled for 2013; new accreditation standards will be in effect
- **Degree Requirements**
 - 2 years pre-occupational therapy courses (may be taken at any University)
 - 3 years professional education, culminating in the entry level professional master's degree
 - There is an extended learning option for Certified Occupational Therapy Assistants (COTAs)



Program Growth





Education in the Field

- Occupational therapy students participate in 23 weeks of full time fieldwork
- There are 350 fieldwork sites by contract, of which 141 are in West Virginia
- Other states highly represented
 - Florida
 - Ohio
 - Maryland
 - Virginia
 - North Carolina



Research Opportunities

- Research on effects of strength training and nutritional supplementation in individuals with hereditary neuropathy (CMT)
- Examining rehabilitation outcomes for individuals following traumatic brain injury with an emphasis on return to community participation



Service Opportunities

- WVU Therapy Group Practice
- WVU Student Occupational Therapy Association (SOTA)





Profile of Graduates

- **Licensure Exam Pass Rate:**
 - Averages 95% compared to national average of 80%
- **Graduates Serve WV**
 - Approximately 73% remain in WV (distributed in 30 out of 55 counties)
- **Graduate Accomplishments**
 - Regional manager for Genesis Rehabilitation Co.
 - Certified Hand therapist
 - Established a facility for therapy and socialization for children with disabilities



- Dr. Bob Chetlin
 - CMT Foundation Award for Outstanding Community Service
- Dr. Anne Cronin
 - Elected as a Fellow to the American Occupational Therapy Association
 - Awarded a Fulbright Senior Specialist 2006
- Diana Davis
 - Past president of WVOTA



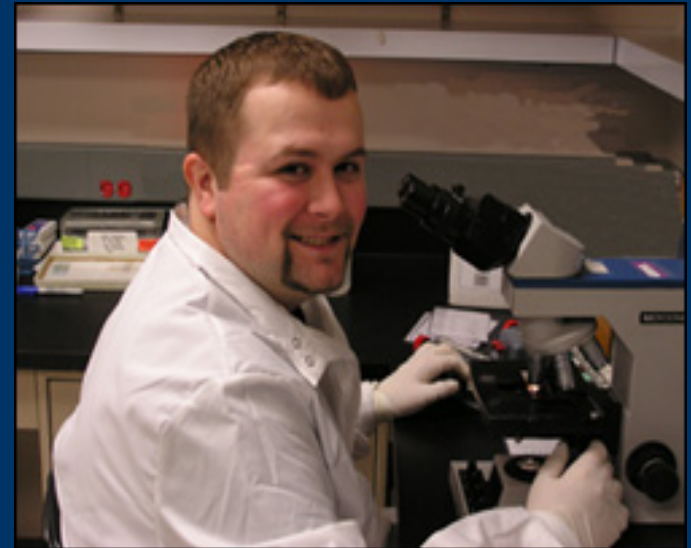
Stay tuned for.....

- Expansion of services in the WVU Therapy Group Practice
- Curricular changes to remain current with the new ACOTE guidelines
- New education offerings including possibly the DOT



Dept. of Pathology

- **Degree Programs**
 - B.S. in Medical Technology
 - M.H.S. in Pathology Assistant
 - (approved by BOG 2/07)





Things you should know about Medical Technology

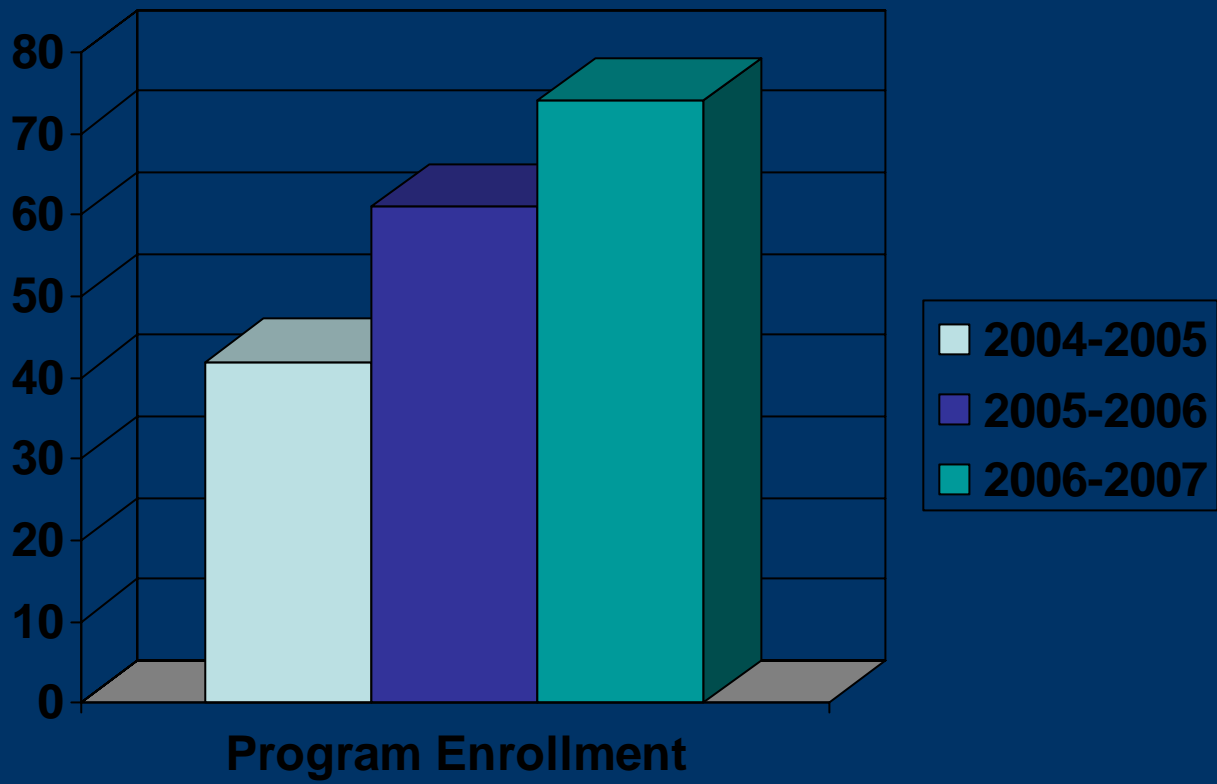
- There is a critical shortage of clinical laboratory scientists due to
 - An aging and retiring work force
 - Educational program closure in late 90s
 - Workforce salary issues
 - Response to special demands (bioterrorism)
- **Areas of study include:**
 - Microbiology, immunology, chemistry, hematology, blood banking



B.S. in Medical Technology

- **Accreditation history**
 - Accrediting body is NACLS (National Association for Clinical Laboratory Science)
 - Last accreditation visit was 2002
 - Next scheduled visit 2009
- **Degree requirements**
 - Two years pre-medical technology (Direct Admit program available for qualified high school graduates)
 - Two years professional program
 - Curricular revision has allowed most of 4th year to take place in the lab, permitting off-site rotations
- **BS in Med technology**
 - Not only leads to excellent job opportunities upon graduation but is also wonderful pre-medical or pre-graduate education

Program Growth





Education in the Field

- Prior to curriculum revision, the clinical laboratory experiences were entirely in Morgantown at Ruby Memorial Hospital
- Beginning in fall 2005, admitted students were assigned to clinical rotations at:
 - WVUH, Monongalia General
 - Allegheny Health System, Pittsburgh, Pa
 - WVUH-Eastern Division



Service Activities

- Medical technology faculty are active in providing continuing education to clinical laboratory scientists in WV
- Faculty are active in recruitment of under-represented minorities through HSTA, HCOP and laboratory camps



Profile of Graduates

- Certification Exam Pass Rate is 88% compared to 81% national pass rate
- 912 graduates over the 60 years of program history
 - Average of 42% remain in WV
- 60% of medical technologists at WVUH are graduates of our medical technology program
- Outstanding graduates include:
 - Dr. Charlotte Gaydos: Nationally known researcher at Johns Hopkins (chlamydia and heart)
 - Connie Rothermal: Pfizer pharmaceutical (antibiotics)
- Graduation may be a family tradition!



- Dr. Martha Lake, Program Chair
 - Vice-Chair of National Accrediting Agency for Clinical Laboratory sciences' Program Review Committee
- Dr. Karen Long
 - Educator of the Year: Department of Pathology



Stay tuned for...

- The admission of the first class in the Path Assistants' Program
- The expansion of the B.S. degree to Clinical Laboratory Sciences, with tracks in Medical Technology or Histotechnology
- Expansion of clinical sites for 4th year experiences and increased enrollment



Division of Physical Therapy
Department of Human Performance and Applied
Exercise Science

- **Degree offered:**
 - Doctor of Physical Therapy (DPT)
 - Last Master's graduates Aug 2007
 - First doctoral graduates May 2008



Things you should know about the DPT

- American Physical Therapy Association Vision Statement of June 2000:
 - “By 2020, physical therapy will be provided by physical therapists who are doctors of physical therapy and who may be board-certified specialists. Consumers will have direct access to physical therapists in all environments for patient/client management, prevention and wellness services. Physical therapists will be practitioners of choice in clients’ health networks and will hold all privileges of autonomous practice.”



Doctor of Physical Therapy Curriculum

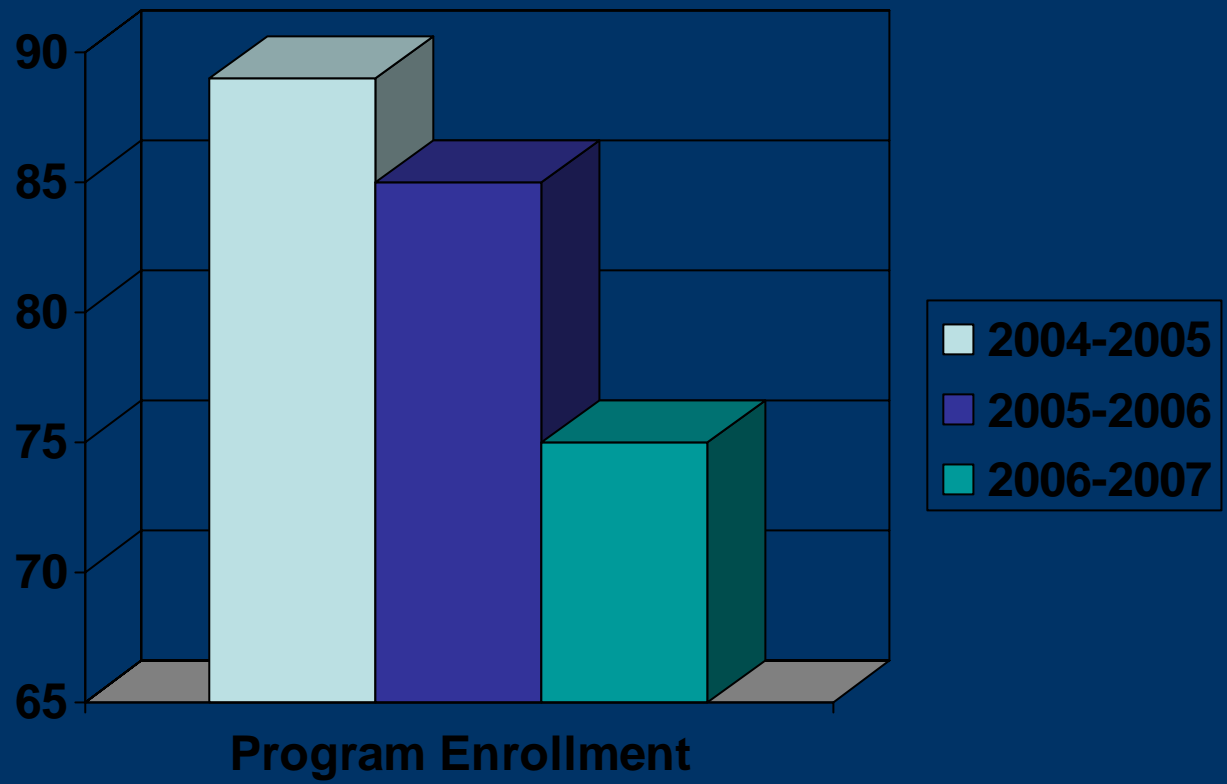
- Requires a bachelor's degree for admission
 - We often recommend exercise physiology
- Three years of professional study post-baccalaureate, including clinical experience
- Curricular changes include:
 - Increased general medicine content
 - Increased pharmacology and radiology content
 - Increased evidence based decision making content



Doctor of Physical Therapy (DPT)

- Accreditation History
 - First accredited with first graduates in 1972
 - Interim accredited for entry level master's in 1998
 - Last accreditation cycle was 2001-2002
 - Next accreditation report due 2010-2011
- Curriculum
 - Three years full time
 - 123 credit hours post-baccalaureate
 - 32 weeks full time clinical experience

Program Growth





Education in the Field

- 4 weeks acute care in 2nd year
- 12 weeks RHEP rotation between years 2 & 3; this is mostly generalist PT & outpatient
- 16 weeks of clinical experience in spring of 3rd year...8 weeks in rehabilitation or skilled setting and 8 weeks in elective, such as pediatrics or orthopedics



Clinical Education in Physical Therapy

- “Affiliation contracts” with 317 sites
 - 160 in WV
 - Maryland, Pennsylvania, Ohio and North Carolina are next
 - Challenges with “closed shop” arrangements
- Particular difficulty in rehabilitation and pediatric settings



Physical Therapy and RHEP



- Most fully integrated of the Professional Programs
- All students participate in a rural rotation and the associated learning experiences:
 - Community service
 - Inter-disciplinary education sessions
- Results
 - Of graduates we could track, since 1997, an average of 23% practice in rural West Virginia



Research Opportunities

- Clinical Trial of Biofeedback Device to Treat Migraine Related Vertigo (with Otolaryngology & funded for \$15K by industry sponsor)
- Collaborative project funded by NIOSH to investigate genomics and chronic low back pain(\$25K NIOSH)
- Effects of having a PT do individual exercise/physical activity counseling on activity levels and quality of life in children with CF (funded from American Academy of Pediatrics--WV Chapter for \$6K)
- Effects of walking program on bone density in prostate cancer survivors who take androgen blockers (funded through Research Corp--PSCoR grant \$26K)

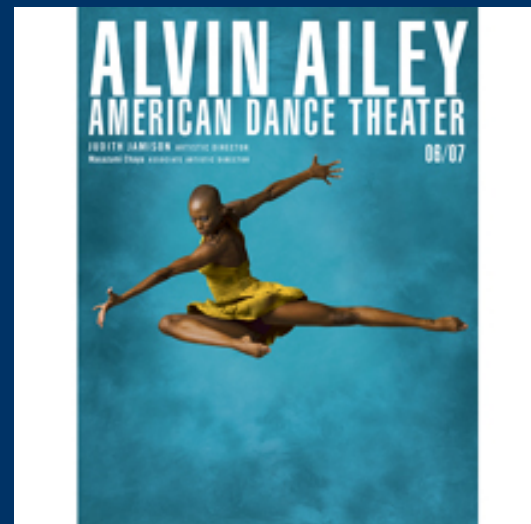


Clinical Service Opportunities

- Lifespan Mobility Clinic
- Cystic Fibrosis
- Parkinson's Disease
- High Risk Neonatology & Follow-Up
- Hand Therapy

Profile of Graduates

- Licensure exam pass rate over last 2 years has averaged 93%; national average is 84.5%
- 748 graduates over program history; 55% remain in West Virginia
- Graduate Profiles





- Dr. Anne Swisher
 - 2007 Fulbright Senior Specialist
- John Petronis
 - SOM Dean's Award for Excellence in Teaching
- Dr. Mia Erickson
 - Author of 2 textbooks on documentation
- Dr. Ralph Utzman
 - Winner of the Judith Kandzari Award for Rural Health



Stay tuned for.....

- First DPT graduates in 2008
- Expansion of clinical practice
- Expansion of research
- New education initiatives such as residencies or fellowships



The Professional Programs in the School of Medicine

- *Play a significant role in making WVU a comprehensive health sciences center*
- *Contributed over 3 million dollars in tuition revenue in FY 07*
- *Provided education for over 1,000 students*
- *Provided research and clinical opportunities in rehabilitation, exercise and public health/health services*



Extended Learning



Information Sessions



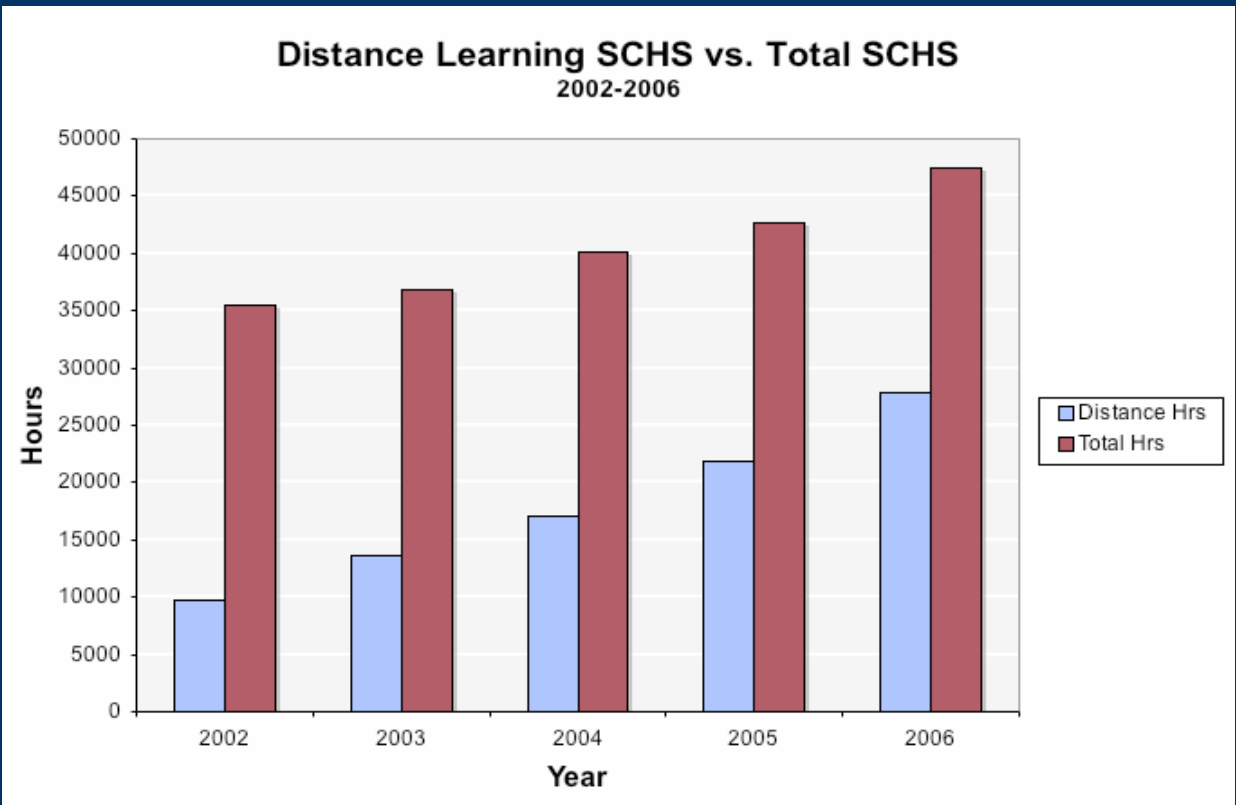
Online Higher Education Market Update

“The degree-led profile of online higher education is in line with consumer demand for postsecondary education with strong career impact, and is indicative of the greater return on investment to institutions of longer, more expensive programs”

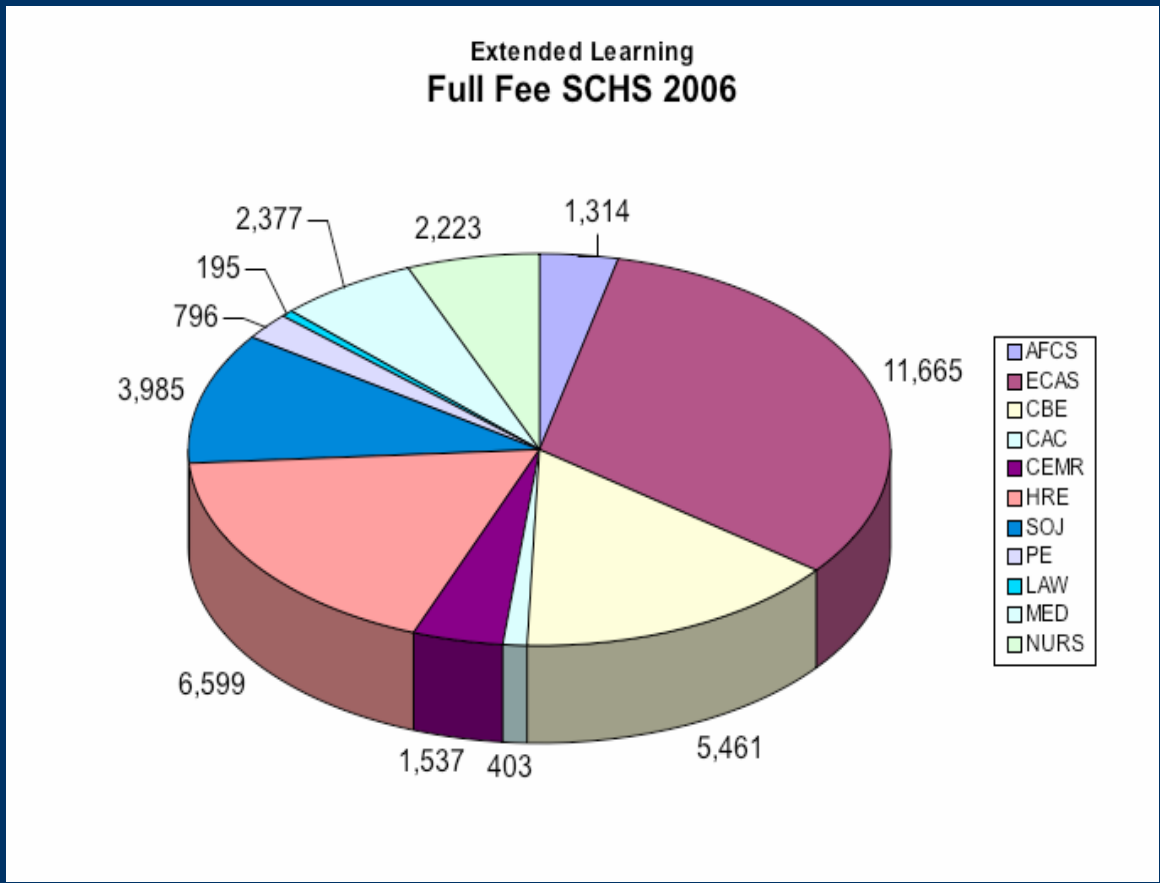
www.educentures.com/about/press_room/04_02_07.cfm?pubnav=about

WVU Office of Extended Learning

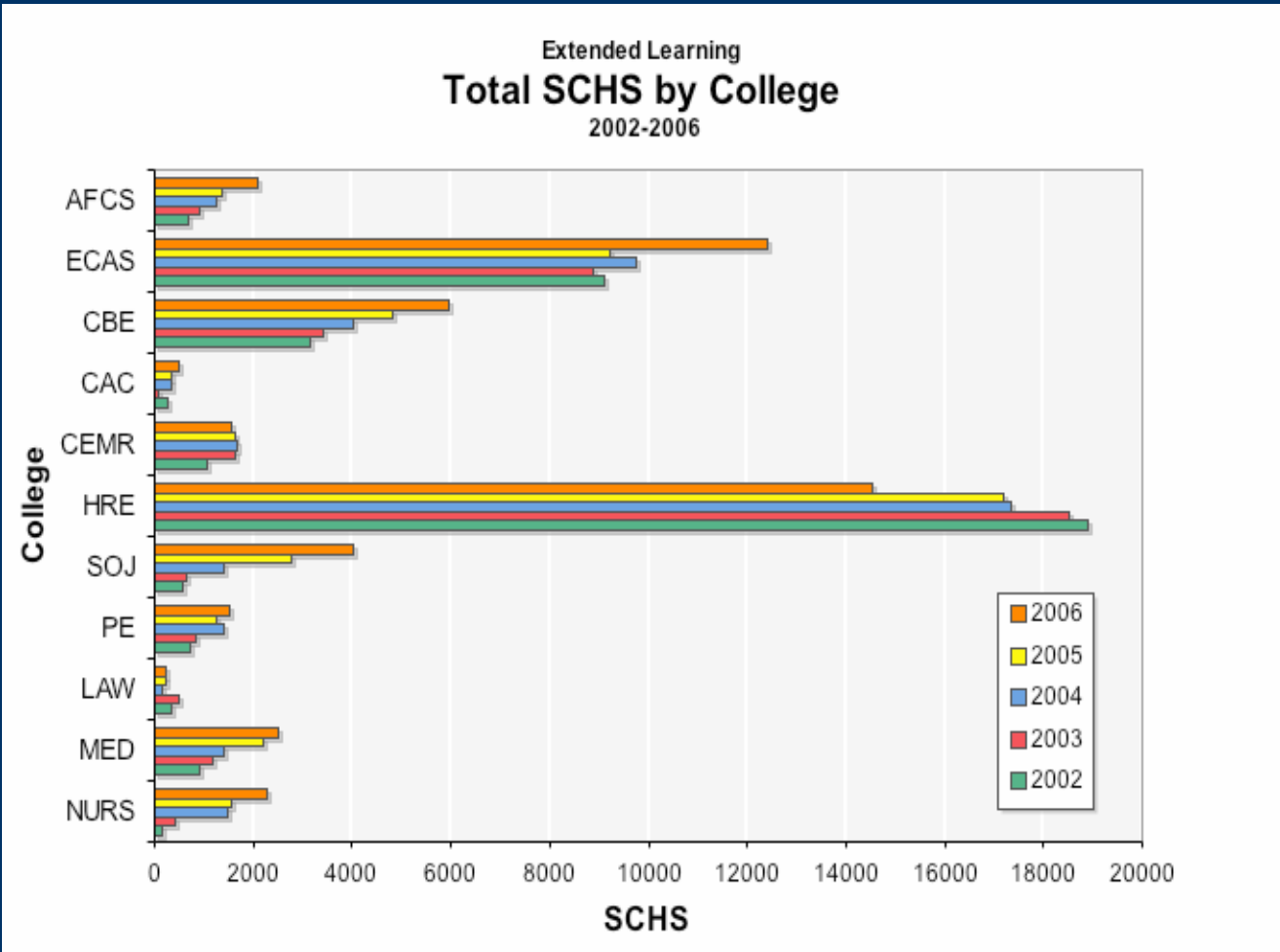
- <http://www.elearn.wvu.edu>



Extended Learning in the School of Medicine



Growth in SOM EL Programs





School of Medicine
Professional Programs
Offered in Extended Learning format

- Master's in Occupational Therapy
- Master's in Public Health
- Transitional DPT



MOT

- Specifically for individuals who are COTAs
- Initially, cohorts were regional, but we are finding a national audience
- Format:
 - 3 years; 4-6 courses per semester; 2-3 for each 7 week period
 - Students come to campus once a month
 - Fieldwork is done based on existing experiences



MPH

- Generalist track
- No on-campus requirement
- Takes approximately 2 years to complete



CHPR 612 - Social and Behavioral Theory - 3
Hrs.

CHPR 634 - Health Promotion Research Methods
- 3 Hrs.

PUBH 611 - Applied Biostatistics for Health - 3
Hrs.

PUBH 630 - Policy and the Health System - 3
Hrs.

PUBH 650 - Environmental Health - 3 Hrs.

PUBH 660 - Public Health Epidemiology - 3 Hrs.

PUBH 689 - Practicum - 8 Hrs.

PUBH 691 - Seminar - 1 Hr.



M.S. in School Health

- For teachers who are already licensed/certified in another area (such as PE) or teachers who are certified in Health but want to obtain the Master's degree
- Can be completed in 2 years
- 2 courses per semester
- + 3 intense one week summer courses



The Transitional DPT (tDPT)

- In its vision statement, APTA stated that “all practitioners would be “doctors of physical therapy”
- Created a need for individuals who were relatively early in their career to obtain credential
- Requirements for admission: must have a master’s in physical therapy



tDPT

- 18 months to complete/10 students per cohort
- Largely on-line with occasional on-campus weekends
- 16 credits
- Majority of curriculum is differential between the master's and doctoral material
 - Increased foundational science
 - Increased pharmacology/radiology
 - Advanced study in integumentary, cardiopulmonary, neurology and orthopedics
 - Increased use of evidence
 - Small clinical research study



Extended Learning Tuition & Fee Structure

- Incentive driven model
- 83% comes to School; 17% extended learning (students pay an EL fee, but don't pay some on-campus fees)
- Students pay Health Professions fee
- SREC is another option



Other Extended Learning Initiatives

- NBAN (Neurobiology and Anatomy)
- Pathology Review
- For future planning:
 - Graduate certificate in Emergency Medicine for PAs
 - Increased use of the professional development/CEU or interest option:
 - <http://www.elearn.wvu.edu/Continuing/CHES.htm>



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School of Medicine

THE END !!!



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