

B.S. in Natural Science Pre-Physical Therapy Track (NASC-PPTH)

Advisor: Dr. Lawrence Kupchella, 230 Weyandt Hall, 724-357-2363 (lkup@iup.edu)

“Physical therapists, sometimes called PTs, help injured or ill people improve their movement and manage their pain. These therapists are often an important part of rehabilitation and treatment of patients with chronic conditions or injuries.”¹

“Physical therapists typically do the following:

- *Review patients’ medical history and any referrals or notes from doctors or surgeons*
- *Diagnose patients’ dysfunctional movements by observing them stand or walk and by listening to their concerns, among other methods*
- *Set up a plan of care for patients, outlining the patient’s goals and the expected outcome of the plan*
- *Use exercises, stretching maneuvers, hands-on therapy, and equipment to ease patients’ pain, help them increase their mobility, prevent further pain or injury, and facilitate health and wellness.*
- *Evaluate a patient’s progress, modifying a plan of care and trying new treatments as needed*
- *Educate patients and their families about what to expect from and how best to cope with the recovery process”¹*

“Physical therapists provide care to people of all ages who have functional problems resulting from back and neck injuries; sprains, strains, and fractures; arthritis; amputations; neurological disorders, such as stroke or cerebral palsy; injuries related to work and sports; and other conditions.

Physical therapists are trained to use a variety of different techniques—sometimes called modalities—to care for their patients. These techniques include applying heat and cold and using assistive devices such as crutches, wheelchairs, and walkers and equipment, such as adhesive electrodes which apply electric stimulation to treat injuries and pain.”¹

“The work of physical therapists varies by type of patient. For example, a patient experiencing loss of mobility due to stroke needs different care from that given to an athlete recovering from an injury. Some physical therapists specialize in one type of care, such as orthopedics or geriatrics. Many physical therapists also work at preventing loss of mobility by developing fitness and wellness programs to encourage healthier and more active lifestyles.”¹

“Physical therapists work as part of a healthcare team, overseeing the work of physical therapist assistants and aides and consulting with physicians and surgeons and other specialists.”¹

“In 2015, there were more than 200 programs for physical therapists accredited by the Commission on Accreditation in Physical Therapy Education, all of which offered a Doctor of Physical Therapy (DPT) degree. DPT programs typically last 3 years. Most programs require a bachelor’s degree for admission as well as specific prerequisites, such as anatomy, physiology, biology, chemistry, and physics. Most DPT programs require applicants to apply through the Physical Therapist Centralized Application Service.”¹

In 2014 there were 210,900 physical Therapy positions in the United States with the number of positions projected to grow by 34 percent between 2014 and 2024.¹ That expected growth in demand, coupled with future losses through retirement, has made employment prospects for these professionals “good” through the next decade.¹

IUP does not offer an undergraduate degree in physical therapy. However, students interested in entering a Doctoral of Physical Therapy (DPT) degree program at one of our affiliated institutions (Gannon, Chatham) are encouraged to enroll in the B.S. degree program in Natural Science/Pre-Physical Therapy Track. The program provides all the necessary requirements for admission to physical therapy programs, satisfies the University’s liberal studies requirements and provides maximum course flexibility in planning a college career. A student in this program is encouraged to obtain internship experience with a local physical therapist and/or rehabilitation clinic. The current QPA for admission to graduate programs in physical therapy is in the range from 3.3-3.5 based on a 4.0 scale.

¹ U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, 2014-15 Edition
(<http://www.bls.gov/ooh/healthcare/physical-therapists.htm>)

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(revised fall 2016)

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1st Semester				2nd Semester			
BIOL	201	Principles of Ecol. and Evol.	4sh	BIOL	202	Prin. of Cell and Molec. Biol.	4sh
CHEM	111	General Chemistry I	4sh	CHEM	112	General Chemistry II	4sh
MATH	121	Calculus I for Natural Science	4sh	ARHI	101	Intro to Art (or	3sh
ENGL	101	Composition I	<u>3sh</u>	MUHI	101	Intro to Music or	
			15sh	THTR	101	Intro to Theater or	
				DANC	102	Intro to Dance)	
				HIST	19_	Am, Euro, or Global History	<u>3sh</u>
							14sh
3rd Semester				4th Semester			
BIOL	203	Prin. Genetics & Dev.(W)	4sh	BIOL	150 ¹	Human Anatomy	4sh
CHEM	231	Organic Chemistry I	4sh	CHEM	232	Organic Chemistry II or	
ENGL	121	Humanities: Literature	3sh	CHEM	351	Biochemistry	4sh
MATH	216	Probability & Statistics	3sh	ENGL	202	Composition II	3sh
_____	143	“dimensions of wellness” ²	<u>3sh</u>	PSYC	101	General Psychology	3sh
			17sh	ECON	101	Basic Economics	<u>3sh</u>
							17sh
5th Semester				6th Semester			
PHIL/RLST		Philosophy/Religious Studies	3sh	BIOL	241	General Microbiology	4sh
PHYS	111	Physics I	3sh	PHYS	112	Physics II	3sh
PHYS	121	Physics I Lab	1sh	PHYS	122	Physics II Lab	1sh
BIOL	240	Human Physiology	4sh	_____	_____	Int. Lev. Foreign Lang. ³	3-4sh
_____	_____	Int. Lev. Foreign Lang. ³	3-4sh	COSC	101	Computer Literacy	<u>3sh</u>
_____	_____	Social Science Elective ⁴	<u>3sh</u>				14-15sh
			17-18sh				
4 th Year -- if student elects to remain at IUP the entire 4 years prior to professional school ⁵							
7th Semester				8th Semester			
_____	_____	writing intensive (Non-Maj) ⁶	3sh	_____	_____	free elective	3sh
_____	_____	Psychology Elective ⁷	3sh	_____	_____	Phys. Ed. Elective ⁸	3sh
_____	_____	Phys. Ed. Elective ⁸	3sh	_____	_____	Phys. Ed. Elective ⁸	3sh
_____	_____	free elective	3sh	_____	_____	Biology Elective ⁸	<u>3sh</u>
_____	_____	free elective	<u>3sh</u>				12sh
			15sh				

¹ BIOL 402 (Advanced Human Anatomy) may be used as a substitute here.

² Take either HPED 143, FDNT 143, NURS 143, ECON 143, FIN 143, FCSE 143 or MLSC 101 (Intro to Military Science) and MLSC 102 (Fundamentals of Military Science). Take 1 only! Cannot be taken for duplicate credit!

³ Foreign Language must be passed through the intermediate level (SPAN 201, FRNC 201, GRMN 201, or equivalent. If elementary foreign language is taken prior to the intermediate level, those credits will count as free electives.

⁴ Select a course that will satisfy the “global and multicultural awareness” requirement.

⁵ An articulation agreement between the Gannon U. and IUP allows for academically qualified students to participate in a 3+3 program. A minimum of 90sh of course work must be completed at IUP before consideration for admission to this DPT program (also see footnotes 6 and 7 below). A maximum of 30sh of course work may be transferred to IUP after the student completes their first year in the DPT program. These will be replaced by the first year professional school courses. At the successful completion of the first year at the affiliated institution, the student must send a transcript to the Dean of the IUP College of NS&M with a note requesting application materials for graduation. Read footnotes 6 and 7 below as they list additional requirements by both Gannon and Chatham that are necessary for admission to their DPT programs. The courses must be taken by Gannon bound 3+3 students either during semesters 1-6 or in a summer session before the junior year.

⁶ The non-major writing intensive course requirement is waived for students entering Doctor of Physical Therapy programs at Gannon after their Junior year at IUP.

⁷ PSYC 310 (Developmental Psychology) *is required* by Chatham; Gannon *requires* a psychology course that is 200 or 300 level. The following courses should be considered to meet that requirement: PSYC 310 (Developmental Psychology), PSYC 280 (Psychological Inquiry) (Note this course would fulfill the Writing Intensive (Non-Major requirement), and PSYC 321 (Abnormal Psychology).

⁸ Recommended Health and Physical Education/Biology electives: HPED 343 (Physiology of Exercise) *is required* by Gannon; The following additional courses are recommended: HPED 315 (Biomechanics), HPED 345/346 (Survey of Orthopedic Injuries in Sport and Exercise/Lab), and BIOL 477 (Neurobiology).