Department of Medical Laboratory Sciences, Public Health, and Nutrition Science

Tarleton State University
Department of Medical Laboratory Sciences, Public Health, and Nutrition Science
1501 Enderly Place
Fort Worth, Texas 76104
(817) 926-1101
(817) 922-8103
www.tarleton.edu/medicallab (http://www.tarleton.edu/medicallab/)

Myoung-Gwi Ryou, Ph.D., M.S., MLS (ASCP)
Department Head, MLS Program Director, and Associate Professor
On-Campus:7123 Off-Campus: (817) 926-1101
ryou@tarleton.edu

Sally Lewis, Ph.D., MLS(ASCP), HTL, MB
DMS Program Director and Professor
On-Campus: 7222 Off-Campus: (817) 926-1101
slewis@tarleton.edu

Allison Kelly, MS, MLS(ASCP), SBB, SQA (ASQ)
MLT Program Director, HPT Program Director, and Instructor
On-Campus:7242 Off-Campus: (817) 926-1101
akelly@tarleton.edu

Maria Artiles, HTL(ASCP)
HT Program Director and Instructor
On-Campus: 7132
MARTILES@ Tarleton.edu

Paula McKeehan, M.S., RDN, LD
NS Program Coordinator and Assistant Professor
On-Campus: 7239
PMCKEEHAN@tarleton.edu

Subi Gandhi, Ph.D., M.S.
Associate Professor and Advisor
254.968.0578
gandhi@tarleton.edu

Heping Han, Ph.D., M.D., MB(ASCP)
Associate Professor
On-Campus: 7239 Off-Campus: (817) 926-1101
heping@tarleton.edu

LeAnne Hutson, Ph.D., MLS(ASCP)
Assistant Professor
On-Campus: 7226 Off-Campus: (817) 926-1101
LHutson@tarleton.edu

Girdhari Rijal, Ph.D., MLS(ASCP)
Assistant Professor
On-Campus:7227 Off-Campus: (817) 926-1101
rijal@tarleton.edu

Hoyeon Kim, B.S.
Program Specialist
On Campus: 7128, Off-Campus: (817) 926-1101
HKIM@tarleton.edu

Ethan Brem, B.S.
Admin Associate IV
On Campus: 7120. Off-Campus: (817) 926-1101
EBREM@tarleton.edu

The Department of Medical Laboratory Sciences, Public Health, and Nutrition Science offers several options of associate, bachelors, and masters degrees for professional laboratory education. All laboratory programs require a program specific application located on the departmental website. The Health Profession Technology option is not an competitive admission program.

Degree and certificate options include the following:

- AAS and/or Certificate in Medical Laboratory Technology (Fort Worth campus)
- AAS and/or certificate in Histotechnology (Fort Worth campus)
- BAT in Health Professions Technology (On-Line)
- BS and/or Certificate in Medical Laboratory Science (Fort Worth campus)
- MS in Medical Laboratory Sciences (Fort Worth campus)

Bachelor of Science Degree in Medical Laboratory Science - Description

The last sixteen months of the Medical Laboratory Science degree/certificate program is completed at the Department of Medical Laboratory Sciences located in Fort Worth, Texas. The Department consists of a teaching center and numerous clinical affiliates located in the Dallas/Fort Worth Metroplex and surrounding areas. The teaching center is housed in the Schaffer Building in Fort Worth, which consists of a lecture room, six laboratories, and a computer lab. The MLS program is accredited by the National Accrediting Agency for Medical Laboratory Sciences (NAACLS) 5600 N. River Road, Suite 720, Rosemont, IL 60018. A continuous 16-month professional laboratory curriculum is offered, totaling 55 semester hours, with 11 months in the teaching center and 5 months in the clinical affiliate.

A maximum of thirty-five students are admitted to the MLS program in the Spring and Fall semesters of each year, with application deadlines of the preceding September 1 and March 15, respectively. Admission is on a competitive basis. An overall minimum GPA of 2.5/4.00, with a minimum GPA of 2.8 in science and math, is required. NAACLS specifies that prerequisite college courses and numbers of credits required shall be those necessary to ensure admission of individuals prepared for the educational program. Prerequisite content area includes general chemistry, organic and/or biochemistry, general biological sciences,

microbiology, and mathematics. Survey courses do not qualify as fulfillment of chemistry and biological science prerequisites. Developmental mathematics courses will not satisfy the mathematics requirements.

Students entering the program from other universities must fulfill the degree requirements of their institution, and that institution must provide a degree statement of the 55 hours awarded by Tarleton State University for graduation requirements. By special arrangement prior to entrance, students may elect to receive the degree from their original university or from Tarleton State University. Students who have already obtained a baccalaureate degree may also enter the program, provided they have met the program's minimum prerequisite requirements. Students articulating from affiliated Universities and post-baccalaureate students may elect to pursue a combined BS/MS MLS concentration. For additional information please see the Master of Science in Medical Laboratory Science catalog page.

Successful completion of courses will be determined with the maintenance of a grade of C or better in lecture, laboratory and practicum courses. All students are admitted on a probationary status and progressive academic achievement must be maintained.

Upon successful completion of the MLS program, the Bachelor of Science degree may also be awarded. The graduated student is eligible to sit for the Medical Laboratory Science Certification examination offered by the American Society for Clinical Pathology.

For further information concerning the Medical Laboratory Science program, contact:

Myoung Ryou Ph.D., M.S., MLS
Associate Professor and MLS Program Director
1501 Enderly Place
Fort Worth, TX 76104
(817) 926-1101
ryou@tarleton.edu

The Bachelor of Science Degree in Medical Laboratory Science

Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
BIOL 1406	Biology for Science Majors	4
BIOL 2300	Cell Biology	3
BIOL 3407	Microbiology	4
BIOL 3485	Immunology	4
BIOL 4460	Animal Physiology	4
CHEM 1311 & CHEM 1111 [shared]	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	
CHEM 1312 & CHEM 1112 [shared]	College Chemistry II (Lecture) and College Chemistry II (Laboratory)	
CHEM 2323 & CHEM 2123	Organic Chemistry I and Organic Chemistry I Laboratory	4
CHEM 2325 & CHEM 2125	Organic Chemistry II and Organic Chemistry II Laboratory	4
MATH 1314 [shared]	College Algebra	
MATH Elective		3
MDLS 4274	Introduction to Lab Safety and Operations	2
MDLS 4148 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Introduction to Medical Genetics	1
MDLS 4276	Clinical Chemistry I Lecture	2
MDLS 4177	Clinical Chemistry I Lab	1
MDLS 4334	Medical Microbiology I Lecture	3
MDLS 4135	Medical Microbiology I Lab	1
MDLS 4364	Immunology and Serology Lecture	3
MDLS 4169	Immunology and Serology Lab	1
MDLS 4324	Hematology I Lecture	3
MDLS 4125	Hematology I Laboratory	1
MDLS 4214	Urinalysis and Body Fluids Lecture	2
MDLS 4115	Urinalysis and Body Fluids Laboratory	1
MDLS 4226	Hematology II Lecture	2
MDLS 4127	Hematology II Laboratory	1
MDLS 4336	Medical Microbiology II Lecture	3
MDLS 4137	Medical Microbiology II Lab	1
MDLS 4378	Clinical Chemistry II Lecture	3
MDLS 4179	Clinical Chemistry II Lab	1
MDLS 4175	Advanced Laboratory Automation, Statistics, and Quality Assurance Concepts	1
MDLS 4444	Immunohematology Lecture	4
MDLS 4149	Immunohematology Lab	1
MDLS 4592	Clinical Laboratory Practicum I	2
MDLS 4593	Clinical Laboratory Practicum II	2
MDLS 4594	Clinical Laboratory Practicum III	2
MDLS 4595	Clinical Laboratory Practicum IV	2
MDLS 4391 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Integrated Clinical Laboratory Practice and Research	2
Total Hours		**120**

Associate of Applied Science in Histotechnology - Description

The A.A.S. in Histotechnology requires a total of 60 credit hours consisting of 23 credit hours of prerequisites, and 37 credit hours of technical program courses. Prerequisite courses may be taken at the university or any one of the thirteen consortium community colleges. The sophomore courses comprising the technical

program will be taken in Fort Worth at the Schaffer Building and affiliated clinical hospital sites. Upon successful completion of the 60 hour program, students are eligible for the AAS Degree in Histotechnology awarded from Tarleton State University.

This program is accredited by the National Accrediting Agency for Medical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018, (773) 714-8880. Successful completion of the program will require a grade of “C” or better in all lecture and laboratory courses and a grade of “P” in all clinical practicum courses. After successful completion of the program students are eligible for the Histotechnician exam administered by the American Society for Clinical Pathology (ASCP) Board of Registry.

Acceptance into the Histotechnology program is on a competitive basis through an evaluation based on letters of recommendation and academic performance. Students must successfully complete prerequisites before the start of the technical program. Applications may be obtained on the program's website at https://www.tarleton.edu/medicallab. Students are accepted into the program three times a year to begin in either August, January or May. Application deadlines are listed on the application.

Students entering with an associate or baccalaureate degree, and who do not wish to earn the AAS in Histotechnology degree, must have the following prerequisites:

- Biology: 8 hours including Microbiology
- Chemistry: 4 hours
- Math: 3 hours
- English: 3 hours

For more information on the Histotechnology Program, contact:

Maria Ariles, HTL(ASCP)CM
HT Program Director, and Instructor
1501 Enderly Place
Fort Worth, Texas 76104
817-926-1101
MARTILES@ Tarleton.edu

Associate of Applied Science in Histotechnology

Required Courses		
Required Histotechnology Courses to be taken in Fort Worth and affiliated clinical sites: [1]		
ENGL 1301 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	3
PSYC 2301	General Psychology	3
MATH 1314	College Algebra	3
Creative Arts or Language, Philosophy and Culture Elective		3
BIOL 2402	Anatomy & Physiology II	4
HPTC 3350	Microbiology for Allied Health Professionals	3
CHEM 1407	Fundamentals of Chemistry	4
HLAB 2182	Introduction to Medical Labratory Sciences [2]	1
HLAB 2414	Introduction to Histotechnology	4
HLAB 2415	Histotechnology I	4
HLAB 2425	Histotechnology II	4
HLAB 2335	Histotechnology III	3
HLAB 2460	Functional Histology	4
HLAB 2364	Immunohistochemistry and Molecular Techniques	3
HLAB 2285	Capstone Cases and Review [4]	2
HLAB 2495	Clinical Histotechnology I [2]	4
HLAB 2496	Clinical Histotechnology II [3]	4
HLAB 2497	Clinical Histotechnology III [4]	4
Total Hours		**60**

1 Students must earn a grade of “C” or better to earn credit for HLAB courses.
2 A student must enroll in these courses during their first semester whether it is Fall, Spring or Summer term.
3 A student must enroll in these courses during their second semester whether it is Fall, Spring or Summer term.
4 A student must enroll in these courses during their final semester whether it is Fall, Spring or Summer term.

Associate of Applied Science in Medical Laboratory Technology - Description

The A.A.S. in Medical Laboratory Technology requires a total of 60 credit hours consisting of 23 credit hours of prerequisites, and 37 credit hours of technical program courses. Prerequisite courses may be taken at the university or any one of the thirteen consortium community colleges. The sophomore courses comprising the technical program will be taken in Fort Worth at the Schaffer Building or TCCC and affiliated clinical hospital sites. Upon successful completion of the 60 hour program, students are eligible for the AAS Degree in Medical Laboratory Technology awarded from Tarleton State University.

This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018, (773) 714-8880. After successful completion of the program students are eligible to take the Medical Laboratory Technician (MLT) exam administered by the American Society for Clinical Pathology (ASCP) Board of Registry.

Acceptance into the Medical Laboratory Technology program is on a competitive basis through an evaluation based on letters of recommendation and academic performance. Students must successfully complete prerequisites before the start of the technical program in Fort Worth. Applications may be obtained on the program's website at https://www.tarleton.edu/medicallab. Students are accepted into the program three times a year to begin in either August, January or May. Application deadlines are listed on the application.

Students entering with an associates or baccalaureate degree must have the following prerequisites:

- Biology: 8 hours including Microbiology
- Chemistry: 4 hours

- Math: 3 hours
- English: 3 hours

For more information on the Medical Laboratory Technology program, contact:

Allison Kelly, MS, MLS(ASCP)[CM], SBB[CM], SQA (ASQ)
MLT Program Director and Instructor
1501 Enderly Place
Fort Worth, Texas 76104
(817) 926-1101
akelly@tarleton.edu (reyes@tarleton.edu)

Associate of Applied Science in Medical Laboratory Technology

Required Courses		
Required Medical Laboratory Technology Courses to be taken in Fort Worth affiliated clinical sites: [1]		
BIOL 2402	Anatomy & Physiology II	4
HPTC 3350	Microbiology for Allied Health Professionals	3
PSYC 2301	General Psychology	3
ENGL 1301 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	3
MATH 1314	College Algebra	3
Creative Arts or Language, Philosophy and Culture Elective (as advised)		3
MLAB 2214	Introduction to Urinalysis	2
MLAB 2424	Introduction to Hematology	4
MLAB 2228	Coagulation	2
MLAB 2534	Introduction of Medical Microbiology	5
MLAB 2444	Introduction to Immunohematology	4
MLAB 2364	Introduction to Immunology-Serology	3
MLAB 2474	Laboratory Operations	4
MLAB 2576	Introduction to Clinical Chemistry	5
MLAB 2182	Introductory Skills for Medical Laboratory Science [2]	1
MLAB 2285	Advanced Topics and Capstone Review [3]	2
MLAB 2292	MLT Field Practicum IV [3]	2
MLAB 2193	MLT Field Practicum III	1
MLAB 2194	MLT Field Practicum I	1
MLAB 2195	MLT Field Practicum II	1
CHEM 1407	Fundamentals of Chemistry	4
Total Hours		**60**

1 Students must earn a grade of “C” or better to earn credit for MLAB courses.
2 A student must enroll in these courses during their first semester whether it is Fall, Spring or Summer term.
3 A student must enroll in these courses during their final semester whether it is Fall, Spring or Summer term.

Bachelor of Applied Technology of Health Professions Technology - Description

Tarleton State University, a member of the Texas A&M University System, offers the professional degree Bachelor of Applied Technology in Health Professions Technology through its Department of Medical Laboratory Sciences, Public Health, and Nutrition Science in Fort Worth, Texas.

The Bachelor's of Applied Technology in Health Professions Technology is designed for the certified/licensed allied health practitioner who has earned an Associate's Degree and who desires or requires further education for professional development or personal satisfaction. This degree will give students who graduated from our Histotechnology or Medical Laboratory Technology programs, and graduates of other allied health associate degree programs, an opportunity to continue their education at Tarleton to earn a four year degree, while applying credit from their Workforce Education (WECM) courses.

Students seeking the Bachelor of Applied Technology in Health Professions Technology degree must hold one of the following Degrees **and** Certification or License:

- AAS Medical Laboratory Technology, MLT (ASCP)
- AAS Histotechnology, HT (ASCP)
- AAS Dental Hygiene, Registered Dental Hygienist
- AAS Emergency Medical Services, EMT Paramedic or equivalent
- AAS Health Information Technology, Appropriate Certification
- AAS Physical Therapy Assistant, Licensed PTA
- AAS Radiologic Technology, Registered Radiology Technologist by American Registry of Radiology Technologists
- AAS Respiratory Care, Registered Respiratory Therapist by National Board for Respiratory Therapy and Texas Department of Health
- AAS Surgical Technology, Certified Surgical Technologist by Association of Surgical Technologists
- AAS Biotechnology (Eligible students may articulate from Temple College, Collin County College or by permission of Department Head

For more information on the Health Professions Technology program, contact:

Allison Kelly, MS, MLS(ASCP)[CM], SBB[CM], SQA (ASQ)
MLT Program Director and Instructor
1501 Enderly Place
Fort Worth, Texas 76104
(817) 926-1101
akelly@tarleton.edu (reyes@tarleton.edu)

The Bachelor of Applied Technology of Health Professions Technology

Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/) [1]		42
ENGL 1301 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	
ENGL 1302 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition II	
COMM 2302 [shared]	Business and Professional Speaking [1]	
Choose one of the following [shared]:		
PSYC 2301 [shared]	General Psychology	
SOCI 1301 [shared]	Introductory Sociology	
HPTC 3320	Biotechnology and Bioethics	3
HPTC 3350	Microbiology for Allied Health Professionals	3
HPTC 4304	Health Care Management	3
HPTC 4305 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Issues and Trends in Health Care	3
HPTC 4349	Pharmacology for the Allied Health Professionals	3
HPTC 4350	Pathophysiology for the Health Professionals	3
MDLS 4360	Introduction to Clinical Immunology	3
SOCI 4314	Medical and Health Care Policy	3
ENGT 3320	Industrial Safety	3
ENGL 3309 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Professional Writing	3
Select 15 hours of the following:		15
BCIS 3315	Web Development	
COMM 4304	Organizational Communication	
BLAW 4334	Employment Law	
MATH 3450	Principles of Bio-Statistics	
MGMT 3350	Organization Behavior	
MGMT 3325	Leadership	
MGMT 3302	Human Resource Management	
PSYC 3301	Psychology of Learning	
PSYC 3303	Educational Psychology	
PSYC 3311	Behavior Analysis and Behavior Management	
Prior Learning Credit:		33
Total Hours		**120**

[1] Please see Academic Information section.

Bachelor of Science in Public Health - Description

The BS in Public Health degree provides a foundation for students wishing to obtain employment in a public health profession or continue their education with graduate studies in public health. This degree has two different concentration areas, which require 42 General Education credit hours, as well as the following 29-30 credits in the Public Health Field of Study

Public Health Educator Concentration

The Public Health Educator concentration will prepare students to provide health education, promote healthy lifestyles, prevent diseases, and enhance quality of life in communities. A strong foundation will be developed to understand distribution of health and illness in diverse populations, the relationship of social determinants to health and illness and disease risks among human populations.

The Public Health Educator curriculum focuses on interdisciplinary efforts to address the physical, social, behavioral, mental, and environmental health concerns of communities and populations at risk for disease and injury. Graduates will plan and evaluate health services in communities, coordinate the community efforts of government agencies, care systems and private organizations and serve as advocates of improved community wellness.

Pre-Graduate Public Health Concentration

Graduates of the Pre-Graduate Public Health program will be prepared to either enter employment as a Health Education specialist or other public health career or pursue a graduate education in public health.

For more information on the Public Health program, contact:

Subi Gandhi Ph.D., MPH
Associate Professor and Advisor
254-968-0578
gandhi@tarleton.edu

The Bachelor of Science in Public Health

Field of Study Courses		
PBHL 1310	Health and Society: An Introduction to Public Health	3
PBHL 2310	Introduction to Epidemiology	3
PBHL 2320	Medical Ethics	3
PBHL 3310	Principles of Health Promotion and Education	3
PBHL 3320	Statistics for Health Care	3

PBHL 4305 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Issues and Trends in Health Care	3
PBHL 4310 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Introduction to Health Management and Policy	3
PBHL 4320	Public Health Policy	3
PBHL 4350	Pathophysiology for the Health Professionals	3
Other Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
BIOL 2401 [shared]	Anatomy and Physiology I [1]	
BIOL 2402 [shared]	Anatomy & Physiology II [1]	
COMM 2302 [shared]	Business and Professional Speaking	
ENGL 1301 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	
ENGL 1302 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition II	
SOCI 1301 [shared]	Introductory Sociology	
Total Hours		**69**

Additional Required Courses for Concentrations

Public Health Educator

MKTG 3312	Marketing	3
MGMT 3302	Human Resource Management	3
HPTC 3350	Microbiology for Allied Health Professionals	3
HPTC 4349	Pharmacology for the Allied Health Professionals	3
HPTC 4304	Health Care Management	3
KINE 1301	Foundations of Kinesiology	3
HECO 1322	Nutrition and Diet Therapy	3
PSYC 3303	Educational Psychology	3
CHFS 3300	Child Development: Theory, Research, and Practice	3
CHFS 4356 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Research Methods in Human Sciences	3
SOCI 3304	Medical Sociology	3
SOCI 4314	Medical and Health Care Policy	3
COMM 2311	News Gathering & Writing I	3
COMM 3311 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Feature Writing	3
Choose from one of the following electives:		3
BCIS 3315	Web Development	
COMM 3308	Digital Video Production	
ENGL 3309 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Professional Writing	
Choose from one of the following CHFS electives:		3
CHFS 4360	Preprofessional Development	
CHFS 3353	Child and Youth Guidance	
CHFS 3333	Family Financial Management	
CHFS 3316	Human Intimacy	
CHFS 4350 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Policies and Ethical Standards	
PBHL 4085	Seminar and Internship in Public Health	3
Total Hours		**51**

Pre-Graduate Public Health

CHEM 1311 & CHEM 1111	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	4
CHEM 1312 & CHEM 1112	College Chemistry II (Lecture) and College Chemistry II (Laboratory)	4
MATH 1314 [shared]	College Algebra	
MATH 1342	Elementary Statistical Methods	3
BIOL 3407	Microbiology	4
MGMT 3302	Human Resource Management	3
CHFS 3300	Child Development: Theory, Research, and Practice	3
CHFS 4356 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Research Methods in Human Sciences	3
PSYC 2301	General Psychology	3
PSYC 3303	Educational Psychology	3
PSYC 3350	Personality	3
Select from the following Electives:		3
MDLS 4360	Introduction to Clinical Immunology	

BIOL 3303	Genetics	
BIOL 3380	Introduction to Virology	
BIOL 3395	Pathogenic Microbiology	
Select two from the following Communications Electives:		6
COMM 2311	News Gathering & Writing I	
COMM 3304	Interpersonal Communication	
COMM 3308	Digital Video Production	
COMM 3310	Communication Law	
COMM 3340	Persuasion	
COMM 3320	Public Relations	
COMM 3332	Intercultural Communication	
COMM 3305	Environmental Communication	
COMM 4304	Organizational Communication	
Select from the following Sociology Electives:		3
SOCI 3304	Medical Sociology	
SOCI 4314	Medical and Health Care Policy	
Choose from one of the CHFS Electives:		3
CHFS 4360	Preprofessional Development	
CHFS 3353	Child and Youth Guidance	
CHFS 3333	Family Financial Management	
CHFS 3316	Human Intimacy	
CHFS 4350 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Policies and Ethical Standards	
PBHL 4085	Seminar and Internship in Public Health	3
Total Hours		**51**

[1] Students in all concentrations are required to take this course as the general education requirement in Life and Physical Sciences

The Minor in Public Health

The minor in Public Health provides a foundation for students wishing to augment their health-related degree or profession. Graduates with the Public Health minor will have a better understanding of issues in community health, giving them a more well-rounded preparation for their careers.

Minor in Public Health

Required Courses		
Students must take PBHL 1310 first		
PBHL 1310	Health and Society: An Introduction to Public Health	3
PBHL 4305 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Issues and Trends in Health Care	3
PBHL 3310	Principles of Health Promotion and Education	3
PBHL 2320	Medical Ethics	3
PBHL 2310	Introduction to Epidemiology	3
Choose one of the following courses:		3
HPTC 3320	Biotechnology and Bioethics	
PBHL 4350	Pathophysiology for the Health Professionals	
PBHL 3320	Statistics for Health Care	
PBHL 4310 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Introduction to Health Management and Policy	
PBHL 4320	Public Health Policy	
Total Hours		**18**

Bachelor of Science in Nutrition Science - Description

The Bachelor of Science in Nutrition Science prepares graduates for a career in health care or community nutrition education and emphasizes:

- Health, wellness, and life style habits related to food choices
- Nutrients required by the body, their food source, functions, deficiencies and toxicities
- Evidence-based medical nutrition therapy practices for disease prevention and treatment

This degree has two different concentration areas requiring 42 general credit hours and a 41-hour required program core.

Dietetics Concentration

The Dietetics concentration is an Accreditation Council for Education in Nutrition and Dietetics (ACEND) accredited Nutrition and Dietetics Didactic Program (DPD) program as part of a Consortium at Stephen F. Austin State University. This program prepares highly qualified graduates for supervised practice leading to eligibility for the CDR credentialing exam to become registered dietitian nutritionists (RDN). Dietetics track graduates will receive a verification statement at the end of the program indicating that they have met the requirements to apply for dietetic internship in preparation to become a RDN.

Food and Nutrition Concentration

The Food and Nutrition concentration incorporates food, nutrition, life science, public health, social science and social work courses to equip students with the knowledge and skills needed to educate a diverse population in the area of health and wellness. This track also provides a pathway for pre-nursing and pre-health students a way to complete a degree and enter a career in nutrition and health promotion in a timely manner.

For more information on the Nutrition Science program, contact:

Paula McKeehan, M.S., RDN, LD
NS Program Coordinator and Assistant Professor
1333 W. Washington
Stephenville, Texas 76402
(254) 968-0577

PMCKEEHAN@tarleton.edu (_PMCKEEHAN@tarleton.edu)

Nutrition Science

Field of Study Courses		
NUTR 1307	Concepts in Food and Nutrition	3
HECO 1322	Nutrition and Diet Therapy	3
NUTR 1316	Principles of Food Preparation	3
FDSC 3304	Food Processing	3
NUTR 3321	Life Cycle Nutrition	3
NUTR 3325	Advanced Meal Management	3
NUTR 3339 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Introduction to Medical Nutrition Therapy	3
NUTR 4335	Food and Culture	3
ANSC 4314	Food Quality Assurance	3
Microbiology		4
BIOL 2420	Microbiology for Non-Science Majors	
BIOL 3407	Microbiology	
Chemistry		4
CHEM 1407	Fundamentals of Chemistry	
CHEM 1311 & CHEM 1111	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	
PBHL 3310	Principles of Health Promotion and Education	3
PBHL 4305 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Issues and Trends in Health Care	3
Other Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/) [1]		42
BIOL 2401 [shared]	Anatomy and Physiology I	
BIOL 2402 [shared]	Anatomy & Physiology II	
PSYC 2301 [shared]	General Psychology	
Total Hours		**83**

Additional Required Courses for Concentrations

Dietetics Track

NUTR 4305	Food Service Management	3
NUTR 4309	Community Nutrition	3
NUTR 4325	Nutrition Counseling	3
NUTR 4339	Advanced Nutrition	3
NUTR 4349	Medical Nutrition Therapy I	3
NUTR 4379	Medical Nutrition Therapy II	3
MATH 1342	Elementary Statistical Methods	3
CHEM 1312 & CHEM 1112	College Chemistry II (Lecture) and College Chemistry II (Laboratory)	4
CHEM 2323	Organic Chemistry I	3
CHEM 2123	Organic Chemistry I Laboratory	1
CHEM 4374	Biochemistry I	3
PBHL 2320	Medical Ethics	3
NUTR 4080	Seminar in Nutrition Science	2
Total Hours		**37**

Food and Nutrition Track

Approved Electives		12
Advanced Nutrition Electives		6
PBHL 4310 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Introduction to Health Management and Policy	3
PSYC 3303	Educational Psychology	3
PSYC 3307	The Human Lifespan	3
SOCW 3303	Social Work with Diverse Populations	3
SOCW 4313	Human Rights	3
NUTR 4080	Seminar in Nutrition Science	4
Total Hours		**37**

[1] Students enrolled in the Dietetics Track concentration are required to take MATH 1314- College Algebra to fulfill general education Mathematics requirement. Students enrolled in the Food and Nutrition Track concentration can take any general education Mathematics course.

Academic Advising Guides

Academic Advising Guides area available at the following website:

https://web.tarleton.edu/majorinfo/

Medical Laboratory Sciences Courses

MDLS 1100. Transitioning to University Studies in Health Professions. 1 Credit Hour (Lecture: 1 Hour, Lab: 1 Hour).
Practical study designed to prepare the student for university life, and in the development of skills for academic success, promote personal growth and responsibility, and encourage active involvement in the learning process from an individual college perspective. Also included will be the development of skills to promote physical and mental health.

MDLS 1111. Surv Allied Health Prof. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
Course description is needed.

MDLS 4086. Clinical Laboratory Science Problems. 1-3 Credit Hours (Lecture: 0 Hours, Lab: 1-3 Hours).
A course open by invitation to capable Clinical Laboratory Science students who wish to pursue a selected problem study. Students are permitted and encouraged to work independently under the guidance of an instructor. May be repeated for credit, subject to the approval of the department head. Lab fee: $2.

MDLS 4091. Integrated Clinical Laboratory Practice and Research. 1-3 Credit Hours (Lecture: 0 Hours, Lab: 5-15 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
An integrated clinical laboratory course designed to introduce the concepts of specimen tracking and processing using a laboratory information system, test result utilization, utilization review, and clinical research. Emphasis will be placed on workload organization; quality control evaluation accuracy; consistency; validity of results generated; and appropriate reporting of results. Lab fee: $2.

MDLS 4092. Clinical Laboratory Practicum I. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 5-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in hematology, hemostasis, and body fluid analysis. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4093. Clinical Laboratory Practicum II. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in medical microbiology and parasitology. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4094. Clinical Laboratory Practicum III. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in immunology, serology, and blood banking. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4095. Clinical Laboratory Practicum IV. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work and solving problems in clinical chemistry, toxicology, and molecular pathology. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4096. Advanced Clinical Practicum. 1-8 Credit Hours (Lecture: 0 Hours, Lab: 3-24 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in the clinical laboratory. Emphasis is given to high complexity testing. Grading in this course is satisfactory/unsatisfactory.

MDLS 4104. Clinical Correlations and Capstone Review Specialty. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
This course employs an integrative approach to laboratory medicine with emphasis on the review of patient cases and appropriate utilization of laboratory tests in diagnosis and case management. A comprehensive review and assessment of the concepts in a specialty area of medical laboratory medicine. Prerequisite: Acceptance to Public Health Microbiology Categorical Certification program.

MDLS 4115. Urinalysis and Body Fluids Laboratory. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised learning experiences using microscopic, chemical, and automated techniques in analysis of urine, synovial, seminal, cerebrospinal, serous, and amniotic fluid.

MDLS 4125. Hematology I Laboratory. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised experiences with emphasis placed on the enumeration, morphology and staining characteristics of normal blood cells as well as analytes to evaluate coagulation and fibrinolysis. Manual and automated techniques will be used. Emphasis will be placed on specimen collection, processing, and generation and evaluation of diagnostic data.

MDLS 4127. Hematology II Laboratory. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised experiences with emphasis placed on the enumeration, morphology, and staining characteristics of abnormal blood cells. Emphasis will be placed on specimen processing and generation and evaluation of diagnostic data. Prerequisite: Co-Requisite: MDLS 4226 or approval of department head Lab fee: $2.

MDLS 4128. Hemostasis. 1 Credit Hour (Lecture: 1 Hour, Lab: 2 Hours).
Discussion and comparison of the hemostatic coagulation and fibrinolytic systems with emphasis on normal and abnormal physiology. Supervised learning experiences with emphasis on analytes to evaluate coagulation and fibrinolysis. Manual and automated techniques will be discussed and used.

MDLS 4135. Medical Microbiology I Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised experience with emphasis on isolation, staining, culture, and differential biochemical characteristics of pathogenic microorganisms and human parasites. Specimen collection, processing and criteria for rejection will also be addressed. Emphasis will be placed on deriving diagnostic laboratory results and evaluation of those results.

MDLS 4137. Medical Microbiology II Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised experience with emphasis on staining, isolation, identification, and antimicrobial susceptibility testing of microorganisms isolated from clinical specimens. Emphasis is also placed on specimen processing and generation and evaluation of diagnostic data. Prerequisite: Students must be admitted into the Medical Laboratory Sciences Master of Science program. Co-requisite MDLS 4336. Lab fee: $2.

MDLS 4148. Introduction to Medical Genetics. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
An introduction to the concepts of gene structure and inheritance patterns. Emphasis will be placed on the types of inheritance patterns associated with different disease conditions in which clinical diagnostics plays a valuable role in disease diagnosis or patient counseling.

MDLS 4149. Immunohematology Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised experiences related to blood grouping and typing and compatibility testing, antibody detection and identification, incompatibility and transfusion reaction resolution; component processing and storage; and selection for therapy. Emphasis is placed on specimen processing, laboratory techniques, and generation and evaluation of diagnostic data.

MDLS 4169. Immunology and Serology Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised learning experience with emphasis on the detection, identification, and characterization of antigens and antibodies involved in autoimmune disease and infectious etiology using serologic techniques. Also emphasis on cells involved in cellular immunity using immunologic techniques, specimen processing and generation and evaluation of diagnostic data.

MDLS 4174. Introduction to Laboratory Safety and Instrumentation. 1 Credit Hour (Lecture: 1 Hour, Lab: 2 Hours).
Introduction to the theories and principles of instrument operation and safety practices commonly used in the clinical laboratory. Supervised learning experience in instrument operation and troubleshooting.

MDLS 4175. Advanced Laboratory Automation, Statistics, and Quality Assurance Concepts. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
Discussion and comparison of operating principles of automated analyzers, complex laboratory techniques, statistical methods and quality assurance concepts applicable to the clinical laboratory. Supervised learning experience in instrument operation, troubleshooting, electrophoresis and chromatography. Application of statistics to quality assurance and evaluation of laboratory results will be discussed.

MDLS 4177. Clinical Chemistry I Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised learning experiences with emphasis on manual, semi-automated, and automated procedures for assaying electrolytes, blood gases, carbohydrates, lipids, proteins, and drugs. Emphasis is placed on specimen processing and generation and evaluation of diagnostic data. Lab fee: $2.

MDLS 4179. Clinical Chemistry II Lab. 1 Credit Hour (Lecture: 0 Hours, Lab: 4 Hours).
Supervised learning experiences with emphasis on manual, semi-automated, and automated procedures for assaying metabolites, drugs, enzymes, hormones, and tumor markers. Emphasis is placed on specimen selection, processing, analyses, and evaluation of diagnostic data. Prerequisite: Students must be admitted into the Medical Laboratory Sciences Master of Science program. Co-requisite MDLS 4378. Lab fee: $2.

MDLS 4202. Molecular Diagnostics. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
An overview of molecular mechanisms including replication, transcription, and translation. Emphasis is placed on the principles of molecular methods and their application in diagnosis of microbiologic, immunologic, genetic, endocrine, hematopoietic, and metabolic disease.

MDLS 4204. Clinical Correlations and Capstone Review Speciality. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
This course employs an integrative approach to laboratory medicine with emphasis on the review of patient cases and appropriate utilization of laboratory tests in diagnosis and case management. A comprehensive review and assessment of the concepts in a specialty area of medical laboratory medicine.

MDLS 4214. Urinalysis and Body Fluids Lecture. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
Discussion in renal physiology, relationship to renal and other systemic diseases, physiologic function and pathophysiology of synovial, seminal, cerebrospinal, serous, and amniotic fluid.

MDLS 4226. Hematology II Lecture. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
Studies on the formation and identification of abnormal cellular blood elements are discussed. Emphasis is placed on abnormal physiology and hematologic manifestations of disease. Prerequisite: MDLS 4224 or approval of department head. Co-Requisite: MDLS 4127 or approval of department head.

MDLS 4274. Introduction to Lab Safety and Operations. 2 Credit Hours (Lecture: 2 Hours, Lab: 1 Hour).
Introduction to the theories and principles of instrument operation and safety practices commonly used in the clinical laboratory. Supervised learning experience in instrument operation and troubleshooting and the use of computers in the scientific and medical fields.

MDLS 4276. Clinical Chemistry I Lecture. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
An introduction to the theories and principles of diagnostic methods used to measure common analytes involved in water and acid base balance, mineral and metabolic homeostasis in serum and other body fluids. Normal physiology and biochemical manifestation of disease are emphasized. Co-requisite : MDLS 4177.

MDLS 4324. Hematology I Lecture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion of the formation, function, physiology, and identification of normal blood cellular elements in all ages and hemostatic coagulation and fibrinolytic systems with emphasis on normal and abnormal physiology.

MDLS 4334. Medical Microbiology I Lecture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion of pathology, growth characteristics, morphology, physiology, and identification criteria of human pathogenic microorganisms, normal flora and parasites causing disease in humans. Opportunistic parasites in the immunocompromised host will also be addressed.

MDLS 4336. Medical Microbiology II Lecture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion of advanced microbiological concepts including anaerobic bacteria, mycobacterium, antimicrobial susceptibility, mycology, virology, and infections by organ system. Emphasis is on epidemiology, pathogenesis, source of isolation, and conventional and molecular methods of diagnosis of human pathogenic organisms. Prerequisite: Students must be admitted into the Medical Laboratory Sciences Master of Science program. Co-requisite MDLS 4137.

MDLS 4360. Introduction to Clinical Immunology. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion of immunological mechanisms fundamental to resistance to disease. Emphasis is placed on the basic humoral and cellular immune response and resistance to microbial disease with particular attention to medical laboratory assay principles.

MDLS 4364. Immunology and Serology Lecture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion of immunological mechanisms fundamentals to resistance to disease including basic humoral and cellular immune responses, mechanisms and pathogenesis involved in microbial, autoimmune, allergic, and immunodeficient disease.

MDLS 4378. Clinical Chemistry II Lecture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Discussion and comparison of diagnostic methods employed in the clinical chemistry laboratory. Emphasis is placed on diagnostic metabolites, enzymology, endocrinology,tumor markers, and advanced methods and technologies. Normal physiology and biochemical manifestations of disease are discussed. Prerequisite: Students must be admitted into the Medical Laboratory Sciences Master of Science program. Co-requisite MDLS 4179.

MDLS 4391. Integrated Clinical Laboratory Practice and Research. 1-3 Credit Hours (Lecture: 0 Hours, Lab: 5-15 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
An integrated clinical laboratory course designed to introduce the concepts of specimen tracking and processing using a laboratory information system, test result utilization, utilization review, and clinical research. Emphasis will be placed on workload organization; quality control evaluation accuracy; consistency; validity of results generated; and appropriate reporting of results. Lab fee: $2.

MDLS 4444. Immunohematology Lecture. 4 Credit Hours (Lecture: 4 Hours, Lab: 0 Hours).
Discussion of the principles of immunohematology in relation to blood grouping, typing, compatibility testing, and antibody detection and identification, transfusion and transplant medicine, donor processing, and component preparation and storage.

MDLS 4592. Clinical Laboratory Practicum I. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 5-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in hematology, hemostasis, and body fluid analysis. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4593. Clinical Laboratory Practicum II. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in medical microbiology and parasitology. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4594. Clinical Laboratory Practicum III. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in immunology, serology, and blood banking. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4595. Clinical Laboratory Practicum IV. 1-5 Credit Hours (Lecture: 0 Hours, Lab: 8-40 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work and solving problems in clinical chemistry, toxicology, and molecular pathology. Emphasis is placed on the analysis of quality assurance data and application of laboratory information systems and automation. Grading in this course is satisfactory/unsatisfactory.

MDLS 4896. Advanced Clinical Practicum. 1-8 Credit Hours (Lecture: 0 Hours, Lab: 3-24 Hours).
Structured clinical experience directed toward development of laboratory skills, organizing work, and solving problems in the clinical laboratory. Emphasis is given to high complexity testing. Grading in this course is satisfactory/unsatisfactory.

Nutrition Courses

NUTR 1307. Concepts in Food and Nutrition. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Principles of food studies and exploration of the role food narratives and exposés play in the consumer's perception of the current food supply. Foundation for understanding the connections among food production, ecology, ethics, cuisine, nutrition and health within the framework of sustainability.

NUTR 1316. Principles of Food Preparation. 3 Credit Hours (Lecture: 2 Hours, Lab: 3 Hours).
Study of food, food composition, and scientific principles involved in food preparation. Can receive credit for either NUTR 1316 or FDSC 1316.

NUTR 3321. Life Cycle Nutrition. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Explores in depth the contribution that diet and nutrition make to support growth and the development process throughout the life cycle. Examines the distinct set of nutritional priorities for each stage of the life cycle with a focus on health promotion and disease prevention as underlying lifetime goals. Prerequisite: WSES 1322 or HECO 1322.

NUTR 3325. Advanced Meal Management. 3 Credit Hours (Lecture: 2 Hours, Lab: 3 Hours).
Fundamentals of nutrition and food preparation in all types of meal service. Special emphasis is on time and money management. Credit will be given for only one of the following: WSES 3325, FDSC 3325, or NUTR 3325.

NUTR 3339. Introduction to Medical Nutrition Therapy. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Physiological basis and application of medical nutrition therapy using the nutrition care process as related to specific health conditions. Medical terminology, nutrition assessment techniques and case studies. Prerequisite: HECO 1322.

NUTR 4080. Seminar in Nutrition Science. 2-4 Credit Hours (Lecture: 2 Hours, Lab: 4 Hours).
Comprehensive and integrated application of knowledge and skills acquired in the food and nutrition program in a practical setting. Designed to provide students with skills of synthesizing and presenting the results of lower-division work. Prerequisite: Approval of instructor.

NUTR 4305. Food Service Management. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Principles of management applied to food service systems including restaurants and institutions.

NUTR 4309. Community Nutrition. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Overview of techniques and procedures for collecting, recording, analyzing and interpreting data for nutritional assessment; program development and presentation techniques for application to individuals and community groups. Prerequisite: HECO 1322.

NUTR 4315. Medical Nutrition Therapy. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Physiological basis and application of medical nutrition therapy using the nutrition care process as related to specific health conditions. Medical terminology, nutrition assessment techniques and case studies. May receive credit for either WSES 4315 or NUTR 4315. Prerequisite: HECO 1322.

NUTR 4325. Nutrition Counseling. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Nutrition counseling and interventions in the nutrition care process; communication skills and application for prevention and treatment of nutrition-related disease states. Prerequisite: NUTR 4315.

NUTR 4339. Advanced Nutrition. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Metabolic processes that involve essential dietary components and methods of evaluating nutrition status. Prerequisites: NUTR 4315 and CHEM 4374 with minimum grade of C or instructor approval.

NUTR 4349. Medical Nutrition Therapy I. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Study of the physiological basis and application of medical nutrition therapy using the nutrition care process to nutrition support, metabolic stress, disorders of energy imbalance, hypertension, cardiovascular disease, and a variety of gastrointestinal disorders encountered in the clinical setting. Prerequisites: NUTR 4315, BIOL 2401 and 2402; MATH 1342 or PBHL 3320.

NUTR 4379. Medical Nutrition Therapy II. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Study of the physiological basis and application of medical nutrition therapy using the nutrition care process to diabetes, renal disease, liver disease, cancer, and HIV as encountered in the clinical setting. Prerequisite: NUTR 4349.

Public Health Courses

PBHL 1310. Health and Society: An Introduction to Public Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An introduction to the structure of the United States health care system and major issues in the delivery of quality health care. The course focus is upon the interaction of individual, societal, and policy aspects of health care in a changing health care delivery system.

PBHL 2310. Introduction to Epidemiology. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course is designed to introduce the public health student to the methodology used to study incidence, prevalence and risk factors associated with human disease. Students will develop practical skills used in public health to design and interpret epidemiologic studies and an understanding of the application of evidence-based medicine to increase quality of medical care.

PBHL 2320. Medical Ethics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course provides a foundation of ethical issues in both medical practice and public health administration. A foundation consisting of concepts from philosophy and political science will be provided in the context of both historical and current events.

PBHL 3310. Principles of Health Promotion and Education. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An overview of the types of programs in the field of health education and health promotion and techniques utilized in a variety of community settings. Discussion includes social behavior in individual health decisions and the role of the educator to provide motivational tools that lead to healthy lifestyles. Ethical issues and measures of success in health interventions are also considered.

PBHL 3320. Statistics for Health Care. 3 Credit Hours (Lecture: 2 Hours, Lab: 3 Hours).
Practical applications of general principles of descriptive and inferential statistics used in health care research. Topics include statistical principles, descriptive statistics, regression analysis, study design, vital statistics and reportable diseases or conditions. Mastery of basic methods in statistical analysis will be enhanced by the utilization of statistical software. Prerequisite: PBHL 2310.

PBHL 4085. Seminar and Internship in Public Health. 1-4 Credit Hours (Lecture: 1-4 Hours, Lab: 0 Hours).
Comprehensive and integrated application of knowledge and skills acquired in the Public Health program in a practical setting. Success will depend upon the ability to demonstrate professional competence in public health practice. The 3 credit hour course is available for Public health Concentrations I and III and the 4 credit hour course is available for Concentration II only. The 2 hour course is available for Concentration IV only. Prerequisite: Approval of Program Director or major in Public Health.

PBHL 4285. Seminar in Nutrition Science. 2 Credit Hours (Lecture: 2 Hours, Lab: 0 Hours).
Comprehensive and integrated application of knowledge and skills acquired in the food and nutrition program in a practical setting. Designed to provide students with skills of synthesizing and presenting the results of lower-division work.

PBHL 4305. Issues and Trends in Health Care. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
This course is designed to explore and discuss concepts and issues that are pertinent to allied health care professionals including legal and regulatory issues, health service reform and cost containment, workforce development, and quality assurance practices. Credit for both HPTC 4305 and PBHL 4305 will not be awarded.

PBHL 4310. Introduction to Health Management and Policy. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Examines the structure of health care systems and policies that impact health programs and financing of health services. Emphasis is placed upon planning and management issues in various health care delivery organizations.

PBHL 4320. Public Health Policy. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Introduction to laws and regulations governing health care professionals and medical institutions. Class discussions examine the balance between individual rights and health care providers' activities with public health powers and community health needs. The course includes bioethical principles underlying public health and health care practice.

PBHL 4350. Pathophysiology for the Health Professionals. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course will focus on presentation of interrelationships between normal body functioning and the physiologic changes that participate in disease production, and occur as a result of disease. Emphasis on major disorders and other selected disorders provides a concise, easy-to-understand introduction to the fundamentals.

PBHL 4385. Seminar in Community Health Education. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Comprehensive and integrated application of knowledge and skills acquired in the Public Health program in a practical setting. Success will depend upon the ability to demonstrate professional competence in public health practice. Prerequisite: Approval of Program Director or major in Public Health.

PBHL 4485. Seminar in Pre-Graduate Public Health. 4 Credit Hours (Lecture: 4 Hours, Lab: 0 Hours).
Comprehensive and integrated application of knowledge and skills acquired in the Public Health program in a practical setting. Success will depend upon the ability to demonstrate professional competence in public health practice. Prerequisite: Approval of Program Director or major in Public Health.