# Health Sciences Career Track Prerequisite List

Medicinepage 07
Pharmacypage 08
Dentistrypage 09
Optometrypage 10
Physician Assistantpage 11
Physical Therapypage 12
Occupational Therapypage 13
Dental Hygienepage 14
Medical Technologypage 15
Health Information Managementpage 16

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# Welcome to Health Sciences Career Tracks at Tennessee Tech!

Health Sciences Career Tracks are for students who wish to pursue healthcare careers in fields such as medicine, dentistry, pharmacy, physical therapy, etc. Students with such goals must take certain prerequisite courses required by the professional schools while at Tech, but they can do so while pursuing almost any major. Our role as your Career Track Advisors is to help you become a competitive applicant and reach your goal of entering health professional school. Your Major/Academic Advisor's role is to help you graduate on time while meeting degree requirements for your Major Program of Study.

The purpose of this handbook is to serve as a resource for you during UNPP 1020 and throughout your time at Tech while you pursue your goal of entrance into health professional school!

# **Helpful Tips for New Freshmen:**

- Familiarize yourself with our career tracks website <u>www.tntech.edu/cas/healthsciences</u>
- Check your Tech email **daily**
- Make appointments with your major advisor, career track advisor and with tutors using TechConnect
- Plan to attend workshops and group advising sessions with your career track advisor
- Get involved, especially with the Chem Med Club
- Study every day for your classes
- Form study groups
- Visit Faculty/Advisor office hours

# **TIMELINE**

# **Health Sciences Career Track Students**

There are 3 essential areas that health sciences career track students must address before applying to professional school:

- 1. Academic Excellence
- 2. Health Care Experience
- 3. Extra-Curricular, Service, and Leadership Activities

To prepare for admissions into a health sciences professional program, one should consult the following timeline during each stage of their undergraduate career:

### **FRESHMAN YEAR:**

### ⇒ Academic Excellence:

- Begin the coursework for your career track and your major.
- ♦ Establish good study habits. Academics come first!
- ♦ Interact with your health sciences career track advisor and guest speakers during UNPP 1020 in the fall.
- ♦ Attend workshops and group advising sessions held by your Career Track Advisor.
- ♦ In the spring, attend the Health Sciences Career Track "Freshman Workshop".
- ♦ Get to know your professors. Sit in the front of class, ask questions, and go to office hours. You will need to get good, strong letters of recommendation for professional school.
- Make an appointment in TechConnect to be advised by your academic advisor for next semester.
- ♦ Make a resume; we will help you start one in UNPP 1020.
- ♦ READ! Extensive reading in both science and non-science areas will help to develop your vocabulary, speed, and comprehension.

### ⇒ Health Care Experience:

- ♦ Gather information on all health-care professions. www.ExploreHealthCareers.org is a great resource.
- ♦ Consider health care-related experience such as volunteer work or job shadowing.
- The summer can be an excellent time to begin or continue to gain meaningful health care experience. Volunteer, job shadow, or consider an EMT or CNA training course, etc.
- ♦ Keep a diary of your health profession and related activities.

# ⇒ Extra-Curricular, Service, and Leadership Activities

- Begin attending Chem Med Club meetings on the 1st and 3rd Tuesdays of each month in SLH 126 at 11 am. The club invites guest speakers from many different areas of healthcare.
- Attend visits from health professional program admissions staff hosted by health sciences career track office. This is your chance to network with members of the admissions committees at the professional schools.
- Participate in activities that you enjoy and are meaningful to you. This can include clubs, sports, community service activities, hobbies, etc.
- Fine-tune your time management and interpersonal skills by getting involved and learning to balance your academic and non-academic activities.

### **SOPHOMORE YEAR:**

### ⇒ Academic Excellence:

- ♦ Continue working on the coursework for your career track and your major program of study.
- ♦ Work on study habits and time-management skills that will allow your grades to improve even as courses get more challenging.
- Research health professional programs to learn about specific requirements.
- ♦ Continue to interact with Health Science Career Track Advisors during Chem Med Club meetings, workshops and advisement sessions.
- ♦ Continue building professional relationships with your professors as you will need good, strong letters of reference from them when you apply to professional school.
- ♦ Continue to update your resume as you gain additional experiences.
- ♦ Begin to explore research opportunities, especially if MD/Ph.D. is an interest.
- ♦ Continue to read! This will help you to prepare for the MCAT, PCAT, DAT, OAT, GRE, etc.
- ♦ In the Fall, attend the Health Sciences Career Tracks "Sophomore Workshop".

### ⇒ Health Care Experience:

- ♦ Continue to gain meaningful health care experience. Experiences that allow for direct patient contact tend to be most meaningful.
- ♦ Investigate opportunities for health care programs in the summer and on breaks from school.
- ♦ Think Quality over Quantity during the school year. Job shadow a local pharmacist, dental hygienist, etc. for a few afternoons (or more) during the semester.

### ⇒ Extra-Curricular, Service, and Leadership Activities:

- ♦ Continue attending Chem Med Club meetings and professional school visits.
- ♦ Expand your involvement with student clubs and groups and community service or volunteer programs.
- A Regular participation in extra-curricular activities shows commitment, and these activities will help you develop good time management and interpersonal skills.
- ♦ Take on a small leadership role within a club or group to increase your involvement.

### JUNIOR YEAR:

### ⇒ Academic Excellence:

- Continue to excel in your academic coursework.
- In the fall semester, attend the Health Sciences Career Track "Junior/Senior Workshop" to learn about the process of applying to professional school. Committee interviews for applicants to medical, dental and optometry school will also be discussed. Interviews are conducted during the months of March and April.
- Discuss letters of recommendation with faculty who know you well.
- Prepare a study plan for your MCAT, PCAT, DAT, OAT, or GRE.
- Plan to take the MCAT, PCAT, DAT, OAT, or GRE as early as the spring of junior year.
- Draft, revise, and edit your personal statement.

# ⇒ Health Care Experience:

- Continue and expand your involvement in healthcare related activities. Professional schools are looking for students with a depth and breadth of experience in healthcare.
- Seek out a part-time job in a healthcare setting.
- ⇒ Extra-Curricular, Service, and Leadership Activities:
- Continue attending Chem Med Club meetings and professional school visits.
- Continue and expand your involvement with student groups and community service and volunteer programs.
- Consider a larger leadership role within a group or organization.

### SUMMER BETWEEN JUNIOR AND SENIOR YEAR:

- Begin primary applications to professional schools. Most health professions have a common application online. Applications generally open in April, May, June, or July.
- Perfect your personal statement.
- Complete secondary applications and have letters of recommendation sent.

### **SENIOR YEAR:**

- Fine-tune your interviewing skills.
- Go on professional school interviews.
- Graduate!

Note: This general timeline is set up for students who plan to complete their Bachelor's degree and matriculate directly to a health professional school the fall semester after they graduate from Tech. You may need to adjust your timeline if you plan to apply to professional school prior to completing your bachelor's degree, generally after sophomore or junior year (normally for pharmacy, dental hygiene, or medical technology). In addition, some students wait to apply until after one or more gap/glide/growth years. This basic timeline can be adapted to accommodate your own individual timeline.

# HEALTH SCIENCES CAREER TRACK CURRICULUM GUIDES

Health Sciences Career Track programs are designed to satisfy minimum requirements for admission to health professional schools. Some students complete only these minimum course requirements prior to seeking admission to the professional school and leave without a degree from Tech. The majority of students enroll in degree programs such as biology, chemistry, engineering, psychology, or others, while taking courses to complete the minimum professional school requirements. All Tech students are required to be in a degree-granting major, and many majors satisfy requirements for entrance into professional school. Students should have ongoing discussions with both their major advisor and career track advisor regarding coursework each semester.

Professional school requirements may change from time to time. Check with specific schools and with your health sciences career track advisor to stay up to date with specific requirements.

Application to health professional school is VERY competitive. Completion of the prerequisite coursework alone DOES NOT guarantee admission to professional school.

# **MEDICINE**

### Freshman Year

### **First Semester**

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr: 1.
- Gen. Ed., Major or Elective Courses Cr. 3.

Total: 15

### **Second Semester**

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- MATH 3070 Statistical Methods I Cr: 3. or MATH 1530 Introductory Statistics Cr: 3
- PSY 1030 Introduction to Psychology Cr: 3.

Total: 17

# Sophomore Year

### **First Semester**

- CHEM 3010 Organic Chemistry I Cr: 4.
- Electives (Humanities 3 hours) Cr. 3.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr. 3. or
- ENGL 2330 Topics in World Lit Cr. 3.
- SOC 1010 Introduction to Sociology Cr. 3.
- PHYS 2010 Algebra-based Physics I Cr: 4.

Total: 17

### **Second Semester**

- CHEM 3020 Organic Chemistry II Cr: 4.
- PHYS 2020 Algebra-based Physics II Cr: 4.
- Gen. Ed., Major or Elective Courses Cr: 7.

Total: 15

# **Junior Year**

### **First Semester**

- BIOL Elective Cr: 4.
- CHEM 4610 (5610) Gen. Biochemistry I Cr: 3.
- Gen. Ed., Major or Elective Courses Cr. 9.

Total: 16

### **Second Semester**

- CHEM 4620 (5620) -Gen. Biochemistry II Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 9.

Total: 12

# **Senior Year:**

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Chemistry, etc.).
- A Minimum of 120 credits is required for Graduation.

# **PHARMACY**

### Freshman Year

### **First Semester**

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH 1530 Introductory Statistics Cr. 3. or
- MATH 3070 Statistical Methods I Cr. 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions & Advisement Cr. 1.

Total: 15

### Second Semester

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr. 4.
- ENGL 1020 English Composition II Cr: 3.
- MATH 1830 Applied Calculus Cr: 3. or MATH 1910 Calculus I Cr: 4.

**Total: 14-15** 

# Sophomore Year

### **First Semester**

- CHEM 3010 Organic Chemistry I Cr: 4.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr. 3.
- PHYS 2010 Algebra-based Physics I Cr. 4.
- Social/Behavioral Science Elective Cr. 3.

**Second Semester** 

- BIOL 3230 Health Sci Microbiology Cr: 4.
- CHEM 3020 Organic Chemistry II Cr: 4.
- ECON 2010 Prin of Microeconomics Cr. 3.
- COMM 2025 Fundamentals of Comm. Cr. 3.
- Humanities/Fine Arts Elective Cr. 3.

Total: 17

# **Junior Year**

### **First Semester**

Total: 14

- BIOL 2010 -Human Anatomy & Physio I Cr: 4.
- Social/Behavioral Science Elective Cr. 3.
- Humanities/Fine Arts Elective Cr. 3.
- Gen. Ed., Major or Elective Courses (may include a 2nd communication skills course) Cr: 6.

### **Second Semester**

- BIOL 2020-Human Anatomy & Physio II Cr 4.
- Social/Behavioral Science Elective Cr. 3.
- Gen. Ed., Major or Elective Courses Cr: 6

Total: 16 Total: 13

### **Notes:**

The pre-pharmacy requirements at most pharmacy schools may be completed in two to three years. Many students elect to apply to pharmacy school after completing three years of prerequisite coursework in order to improve their science background, maturity and competitiveness. Others complete a bachelor's degree before matriculating to pharmacy school. Students with an interest in chemistry may elect to follow the first three years of coursework towards the Applied Chemistry major and earn a Bachelor of Science Degree with a major in Chemistry from Tech after completing their first year of coursework from an accredited pharmacy school.

<sup>1</sup>Belmont University College of Pharmacy requires a second communication skills course for applicants without a Bachelor's Degree. This course should be designed to improve communication skills and may include a third writing course.

# **DENTISTRY**

### Freshman Year

### First Semester

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH Cr: 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr: 1.

Total: 15

### **Second Semester**

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- MATH Cr: 3.
- Gen. Ed., Major or Elective Courses Cr. 3.

Total: 17

# Sophomore Year

### **First Semester**

- CHEM 3010 Organic Chemistry I Cr: 4.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr. 3.
- PHYS 2010 Algebra-based Physics I Cr: 4.
- Electives (Humanities 3 hours) Cr. 3.

**Second Semester** 

- CHEM 3020 Organic Chemistry II Cr: 4.
- PHYS 2020 Algebra-based Physics II Cr: 4.
- Gen. Ed., Major or Elective Courses Cr: 9.

Total: 14

Total: 17

### **Junior Year**

### **First Semester**

Total: 15

- BIOL Elective Cr: 4.
- CHEM 4610 (5610) Gen. Biochemistry I Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 8.

**Second Semester** 

- BIOL 3230 Health Science Microbiology Cr. 4.
- CHEM 4620 (5620) -Gen. Biochemistry II Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 6.

Total: 13

# **Senior Year:**

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Chemistry, etc.).
- A Minimum of 120 credits is required for Graduation.

Note: <sup>1</sup> A course in calculus and a course in statistics are recommended.

# **OPTOMETRY**

### Freshman Year

### **First Semester**

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr: 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH 1730 Pre-calculus Mathematics Cr. 5.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr: 1.

Total: 17

### **Second Semester**

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- MATH 1910 Calculus I Cr: 4.

Total: 15

# **Sophomore Year**

### **First Semester**

- CHEM 3010 Organic Chemistry I Cr: 4.
- ENGL 2130 Topics in American Lit Cr: 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr: 3.
- PHYS 2010 Algebra-based Physics I Cr: 4.
- MATH 1530 Introductory Statistics Cr: 3. or MATH 3070 Statistical Methods I Cr: 3.
- Electives (Humanities 3 hours) Cr. 3.

**Second Semester** 

- CHEM 3020 Organic Chemistry II Cr. 4.
- PHYS 2020 Algebra-based Physics II Cr: 4.
- Humanities/Fine Arts Elective Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 9.

Total: 17 Total: 17

### **Junior Year**

### **First Semester**

Total: 15

- CHEM 4610 (5610) Gen. Biochemistry I Cr. 3.
- PSY 1030 Introduction to Psychology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 9.

**Second Semester** 

- BIOL 3230 Health Science Microbiology Cr: 4.
- Social Science Cr: 6.
- Gen. Ed., Major or Elective Courses Cr. 3.

Total: 13

# Senior Year:

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Chemistry, etc.).
- A Minimum of 120 credits is required for Graduation.

Note: BIOL 2010 - Human Anatomy & Physiology I, BIOL 2020 - Human Anatomy & Physiology II, and BIOL 3140 - Cellular Biology are highly recommended at some optometry schools.

# PHYSICIAN ASSISTANT

### Freshman Year

### First Semester

- BIOL 1113 General Biology I Cr. 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr: 1.
- MATH Elective Cr: 3.1

Total: 15

### **Second Semester**

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- PSY 1030 Introduction to Psychology Cr. 3.
- MATH Elective Cr: 3.<sup>1</sup>

Total: 17

# Sophomore Year

### **First Semester**

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- CHEM 3010 Organic Chemistry I Cr. 4.
- PSY 2130 Life Span Develop. Psychology Cr. 3.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr: 3.
- General Education Core or Major Cr. 3.

### **Second Semester**

- BIOL 2020 -Human Anatomy & Physiology II Cr 4.
- CHEM 3020 Organic Chemistry II Cr. 4.
- General Education Core or Major Cr: 3.
- Humanities/Fine Arts Elective Cr. 3.

Total: 17 Total: 14

### **Junior Year**

### **First Semester**

- BIOL 3810 General Genetics Cr: 4.
- CHEM 4610 (5610) Gen. Biochemistry I Cr. 3.
- HEC 2220 Medical Terminology for the Human Sciences Cr: 1. or HIMT 1300 Medical Terminology Cr: 3.
- General Education Core or Major Cr: 6.

### **Second Semester**

- BIOL 3230 Health Science Microbiology Cr. 4.
- COMM 2025 Funds of Communication Cr. 3.
- PSY 4160 (5160) Abnormal Psychology Cr. 3.
- General Education Core or Major Cr. 3.

Total: 14-16 Total: 13

# **Senior Year:**

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Chemistry, etc.).
- A Minimum of 120 credits is required for Graduation.

Note: <sup>1</sup> A course in College Algebra (MATH 1130) or higher and a course in Statistics fulfills the math requirements at most PA schools.

# PHYSICAL THERAPY

### Freshman Year

### First Semester

- BIOL 1113 General Biology I Cr. 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH 1130 College Algebra Cr. 3. or
- MATH 1710 Pre-calculus Algebra Cr. 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr. 1.

Total: 15

### Second Semester

- BIOL 1123 General Biology II Cr. 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- MATH 1530 Introductory Statistics Cr. 3.<sup>1</sup>

Total: 14

# Sophomore Year

### **First Semester**

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- PHYS 2010 Algebra-based Physics I Cr. 4.
- PSY 1030 Introduction to Psychology Cr. 3.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr: 3.
- Gen. Ed., Major or Elective Courses Cr. 3.

**Second Semester** 

- BIOL 2020 -Human Anatomy & Physiology II Cr 4.
- PHYS 2020 Algebra-based Physics II Cr: 4.
- PSY 2130 Life Span Develop. Psychology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 3.

Total: 17 Total: 14

### **Junior Year**

### **First Semester**

- EXPW 4440 Physiology of Exercise Cr. 3.
- Humanities/Fine Arts Elective Cr. 3.
- Gen. Ed., Major or Elective Courses Cr: 10.

**Second Semester** 

• Gen. Ed., Major or Elective Courses Cr: 15.

Total: 16 Total: 15

### **Senior Year:**

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Psychology, etc.).
- A Minimum of 120 credits is required for Graduation.

<sup>1</sup>Note: DPT programs generally require a statistics course; courses from various departments may satisfy this requirement

# OCCUPATIONAL THERAPY

### Freshman Year

### **First Semester**

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr: 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr. 1.
- PSY 1030 Introduction to Psychology Cr. 3.

Total: 15

### **Second Semester**

- BIOL 1123 General Biology II Cr: 4.
- ENGL 1020 English Composition II Cr: 3.
- SOC 1010 Introduction to Sociology Cr: 3.
- Humanities/Fine Arts Elective Cr: 6.

Total: 16

# Sophomore Year

### First Semester

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- PHYS 2010 Algebra-based Physics I Cr. 4.
- PSY 2130 Life Span Develop. Psychology Cr. 3.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr. 3. or
- ENGL 2330 Topics in World Lit Cr. 3.

**Second Semester** 

- BIOL 2020 -Human Anatomy & Physiology II Cr 4.
- COMM 2025 Funds. of Communication Cr. 3.
- PSY 4160 (5160) Abnormal Psychology Cr. 3.
- MATH 1530 Introductory Statistics Cr. 3. <sup>1</sup>
- Gen. Ed., Major or Elective Courses Cr. 3.

Total: 14 Total: 16

# **Junior Year**

### First Semester

- EXPW 4420 Kinesiology Cr: 3.
- PSY 4300 (5300) Adult Psychology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 9.

### **Second Semester**

- HEC 2220 Medical Terminology for the Human Sciences Cr: 1. or HIMT 1300 Medical Terminology Cr: 3.
- Gen. Ed., Major or Elective Courses Cr: 12-14.

Total: 13-15

### Senior Year:

Total: 15

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Psychology, etc.).
- A Minimum of 120 credits is required for Graduation.

<sup>1</sup>Note: OTD/MS programs generally require a statistics course; courses from various departments may satisfy this requirement

<sup>2</sup>Note: TN Wesleyan University MOT Program requires a 3 Cr course in Epidemiology. See your health career track advisor about options for completing this course.

# **DENTAL HYGIENE**

### Freshman Year

### First Semester

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1010 Introductory Chemistry I Cr: 4. or
- CHEM 1110 General Chemistry I Cr. 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH 1130 College Algebra Cr. 3. 1
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr. 1.

Total: 15

### Second Semester

- CHEM 1020 Introductory Chemistry II Cr: 4. or
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr. 3.
- MATH 1530 Introductory Statistics Cr. 3.<sup>1</sup>
- PSY 1030 Introduction to Psychology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 3. <sup>2</sup>

Total: 16

# **Sophomore Year**

### **First Semester**

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- BIOL 3230 Health Science Microbiology Cr: 4.
- COMM 2025 Funds. of Communication Cr. 3.
- ENGL 2130 Topics in American Lit Cr: 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr: 3.
- SOC 1010 Introduction to Sociology Cr. 3.

### **Second Semester**

- BIOL 2020 -Human Anatomy & Physiology II Cr 4.
- HEC 2020 Nutrition for Health Sciences Cr. 3.
- HIMT 1300 Medical Terminology Cr: 3.
- Gen. Ed., Major or Elective Courses Cr. 3.<sup>2</sup>

Total: 17 Total: 13

### **NOTES:**

- ETSU requires MATH 1530 Introductory Statistics; UTHSC requires MATH 1130 College Algebra.
- For students intending to earn a Bachelor's degree before entering professional school, it is recommended that elective courses be taken from core requirements or a selected degree program. HIST 2010 Early United States History and HIST 2020 Modern United States History are required prerequisites at some dental hygiene programs. University of Louisville Bachelor of Science in Dental Hygiene Program requires 3 credits in Western Civilization, 6 credits in Arts and Humanities, and 6 credits in Cultural Diversity.

# **MEDICAL TECHNOLOGY**

### Freshman Year

### **First Semester**

- BIOL 1113 General Biology I Cr: 4.
- CHEM 1110 General Chemistry I Cr: 4.
- ENGL 1010 English Composition I Cr. 3.
- MATH 1130 College Algebra Cr: 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr. 1.

Total: 15

### Second Semester

- BIOL 1123 General Biology II Cr: 4.
- CHEM 1120 General Chemistry II Cr: 4.
- ENGL 1020 English Composition II Cr: 3.
- PSY 1030 Introduction to Psychology Cr: 3.
- Humanities/Fine Arts Elective Cr. 3.

Total: 17

# **Sophomore Year**

### **First Semester**

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- CHEM 3010 Organic Chemistry I Cr. 4.
- COMM 2025 Funds. of Communication Cr. 3.
- ENGL 2130 Topics in American Lit Cr. 3. or
- ENGL 2235 Topics in British Lit Cr. 3. or
- ENGL 2330 Topics in World Lit Cr: 3.

Total: 14

### **Second Semester**

- BIOL 2020 Human Anatomy & Physiology II Cr. 4.
- COMM 2025 Funds. of Communication Cr. 3.
- CHEM 3020 Organic Chemistry II Cr: 4.
- Gen. Ed., Major or Elective Courses Cr. 3. <sup>1</sup>

Total: 14

### **Junior Year**

### **First Semester**

- BIOL 4040 (5040) Immunology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 12.<sup>1</sup>

Total: 15

### **Second Semester**

- BIOL 3230 Health Science Microbiology Cr. 4.
- Gen. Ed., Major or Elective Courses Cr. 11.

Total: 15

<sup>1</sup>Note: For students intending to earn a Bachelor's degree before entering professional school, it is recommended that elective courses be taken from general education core requirements, a selected degree program, or the following recommended electives: HIST 2010, HIST 2020, BIOL 2020, BIOL 3810, CHEM 3410, CHEM 4610 (5610) or CHEM 4500, and CHEM 3420.

# HEALTH INFORMATION MANAGEMENT

### Freshman Year

### **First Semester**

- ENGL 1010 English Composition I Cr. 3.
- MATH 1530 Introductory Statistics Cr. 3.
- Social/Behavioral Sciences Elective Cr. 3.
- UNPP 1020 University Pre-Professional, First-Year Interactions and Advisement Cr. 1.
- Gen. Ed., Major or Elective Courses Cr. 6.1

Total: 16

### **Second Semester**

- ENGL 1020 English Composition II Cr. 3.
- Social/Behavioral Sciences Elective Cr. 3.
- Gen. Ed., Major or Elective Courses Cr: 9.1

Total: 15

# **Sophomore Year**

### **First Semester**

- BIOL 2010 -Human Anatomy & Physiology I Cr: 4.
- COMM 2025 Funds. of Communication Cr. 3.
- ENGL 2130 Topics in American Lit Cr: 3. or
- ENGL 2235 Topics in British Lit Cr: 3. or
- ENGL 2330 Topics in World Lit Cr. 3.
- Gen. Ed., Major or Elective Courses Cr: 6.1

Total: 16 Total: 15

### **Junior Year**

### **First Semester**

- BMGT 3510 Management and Organization Behavior Cr: 3.
- DS 3860 Business Database Management Cr. 3.
- HIMT 1300 Medical Terminology Cr. 3.
- Gen. Ed., Major or Elective Courses Cr: 6.1

### **Second Semester**

- BIOL 2020 -Human Anatomy & Physiology II Cr 4.
- DS 2810 -Computer Applications in Business Cr. 3.
- Gen. Ed., Major or Elective Courses Cr. 8.1

### **Second Semester**

- BMGT 3630 Human Resource Management Cr. 3.
- DS 4330 (5330) Management Information Systems Analysis and Design Cr: 3.
- Gen. Ed., Major or Elective Courses Cr. 9.1

Total: 15

# **Senior Year:**

Total: 15

- Complete Gen Ed Core Classes.
- Complete Bachelor's Degree Requirements for selected major (i.e. Biology, Business, Exercise Science, etc.).
- A Minimum of 120 credits is required for Graduation.

<sup>1</sup>Note: The University of Tennessee Health Science Center's (UTHSC) entry-level Master of Health Informatics and Information Management (MHIIM) program requires a baccalaureate degree and completion of prerequisite courses (above). It is recommended that elective hours be taken from general education core requirements, a selected degree program, and the following suggested electives: ACCT 2110, FIN 3210, LAW 2810 or LAW 4720. 12 credits of electives must be at the 3000-4000 level. The entry-level MHIIM program at UTHSC is online.

# **Student Organizations**

### **Chemical-Medical Sciences Club**

Are you interested in a professional career in health sciences? Do you aspire to become a physician, a dentist or dental hygienist, an optometrist or pharmacist, or one of many other medical professionals? If this is your goal, then you simply must be a member of the Chem-Med Club. This club puts you in touch with the professionals and peers you need to know if you are interested in a health professional career. Medical professionals visit the Chem-Med Club meetings and share the ins and outs of their profession and help you understand what it takes to be successful, and what it takes to get into a professional graduate program as well! The club meets the 1st and 3rd Tuesday of the month at 11:00am in Stonecipher Lecture Hall, Room 126. Contact Mrs. Ann Marie Carrick (acarrick@tntech.edu) for more information.

### Student Chapter of the American Society of Biochemistry and Molecular Biology (ASBMB)

Are you interested in the cross-disciplinary field of Biochemistry and Molecular Biology? If so, then this club may be just for you! The ASBMB is a club that brings together students in Chemistry, Chemical Engineering, Biology and any other majors with interests in the molecular Biosciences. Local and regional speakers provide career advisement through the presentation of symposia, the offering of plant tours and academic curricular decision-making. Plus, it brings students together with similar interests and career goals. Student affiliates receive an online subscription to the Journal of Biological Chemistry, and many more opportunities as an ASBMB member. More information can be found at the ASBMB web site (<a href="https://www.asbmb.org/">https://www.asbmb.org/</a>). Contact Dr. Derek Cashman (<a href="https://dcashman@tntech.edu">dcashman@tntech.edu</a>) for more information. Or you may go to the Tennessee Tech Student Affiliates ASBMB Facebook site (<a href="https://www.facebook.com/ttuasbmb/">https://www.facebook.com/ttuasbmb/</a>).

# **Student Members of the American Chemical Society (SMACS)**

Do you love chemistry? I mean is Chemistry what makes you "tick?" Come learn why chemistry is called the central science. Learn how you can get involved in undergraduate research and get to know others who share your love of chemistry. The ACS student members are not only a cohesive group of chemistry majors, but a group active in outreach as well. After all, we want to inspire others to study chemistry as well, don't we? As a member of SMACS, you'll also have the opportunity to become a student member of the ACS (graduate or undergraduate), the largest organization in the world dedicated to a single discipline. You'll also receive a subscription of the weekly magazine, Chemical and Engineering News. The many other benefits of membership (as well as a lot of great chemistry resources) can be found at the ACS website.

https://www.acs.org/content/acs/en/education/students/college/studentaffiliates.html). Contact **Dr. Amanda Carroll** (acarroll@tntech.edu) for more information.

# **41-Hour General Education Core**

Comr	nunication – 9 hour	<u>s</u>	
	6 hours in English		
	ENGL 1010	English Composition I	3
	ENGL 1020	English Composition II	3
	3 hours in English ora	al presentational communication	
	COMM 2025	Fundamentals of Communication	3
	PC 2500	Communicating in the Professions	3
Math	ematics – 3 hours		
	MATH 1010	Math for General Studies	3
	MATH 1130	College Algebra	3
	MATH 1420	Geometry Concepts for Teachers (ElEd only)	3
	MATH 1530	Introductory Statistics	3
	MATH 1630	Finite Mathematics	3
	MATH 1710	Pre-Calculus Algebra	3
	MATH 1720	Pre-Calculus Trigonometry	3
	MATH 1730	Pre-Calculus Mathematics	5
	MATH 1830	Applied Calculus	3
	MATH 1910	Calculus I	4
	141111111111111111111111111111111111111	Culvatus I	
<u>Histo</u>	<u>ry – 6 hours</u>		
	HIST 2010	Early United States History	3
	HIST 2020	Modern United States History	3
A		Arts – 9 hours literature, selected from those marked with an included in the 9 hours	
	ART 1035	Introduction to Art	3
	*ENGL 2130	Topics in American Literature	3
	*ENGL 2235	Topics in British Literature	3
	*ENGL 2330	Topics in World Literature	3
	FLST 2520 (3520)	The Cultures and Peoples of North Africa	3
	FREN 2510	French Culture and Civilization	3 3 3
	GERM 2520	German Culture and Civilization	3
	HIST 2210	Early Western Civilization	3
	HIST 2220	Modern Western Civilization	3
	HIST 2310	Early World History	3
	HIST 2320	Modern World History	3
	HIST 1310	Science and World Cultures	3
	MUS 1030	Music Appreciation	3
	PHIL1030	Introduction to Philosophy	3
	RELS 2010	Introduction to Religious Studies	3
	SPAN 2510	Spanish Culture and Civilization	3
	SPAN 2550	Latin American Culture and Civilization	3
	THEA 1030	Introduction to Theater	3

# $\underline{Social/Behavioral\ Sciences-6\ hours}$

AGBE 2010	World Food and Society	3
ANTH 1100	Introduction to Anthropology	3
ECON 2010	Microeconomics	3
ECON 2020	Macroeconomics	3
ESS 1100	Introduction to Environmental Studies	3
EXPW 2015	Concepts of Health and Wellness	3
GEOG 1012	Cultural Geography	3
GEOG 1130	Geography of Natural Hazards	3
JOUR 1110	Media and Social Institutions	3
POLS 1030	American Government	3
PSY 1030	Introduction to Psychology	3
SOC 1010	Introduction to Sociology	3
WGS 2010	Women and Gender Studies	3

# <u>Natural Sciences – 8 hours</u>

ASTR 1010	Introduction to Modern Astronomy	4
ASTR 1020	Introduction to Modern Astronomy	4
BIOL 1010	Introduction to Biology	4
BIOL 1020	Diversity of Life	4
BIOL 1113	General Biology I	4
BIOL 1123	General Biology II	4
BIOL 2310	General Botany	4
BIOL 1080	Concepts of Biology	4
BIOL 2010	Human Anatomy and Physiology I	4
BIOL 2020	Human Anatomy and Physiology II	4
CHEM 1010	Introduction to Chemistry I	4
CHEM 1020	Introduction to Chemistry II	4
CHEM 1110	General Chemistry I	4
CHEM 1120	General Chemistry II	4
CHEM 1310	Concepts of Chemistry	3
GEOG 2100	Introduction to Meteorology	4
GEOL 1040	Physical Geology	4
GEOL 1045	Earth Environment, Resources and Society	4
GEOL 1070	Concepts of Geology	3
PHYS 1310	Concepts of Physics	3
PHYS 2010	Algebra-based Physics I	4
PHYS 2020	Algebra-based Physics II	4
PHYS 2110	Calculus-based Physics I	4
PHYS 2120	Calculus-based Physics II	4

# **MATH PLACEMENT**

# TENNESSEE TECH MATH PLACEMENT by Tenn. Tech Mathematics Department

QAS – Quantitative Reasoning, Algebra, and Statistics

AAF - Advanced Algebra and Function

Revised 12-13-18

ACT Math	OLD SAT Math	NEW SAT Math	DSPM	Next Gen. ACCUPLACER Test		Course	
ACT Matri	Before 3/2016			QAS (C34)	AAF (C35)	Course	
<15	<350	<380	1	≤224	N/A	Remedial/Retest	
15-16 Engr. must take Math 1000-L	350-390	380-450	2	225-237	N/A	Math 1000-L 1010-L, 1530-L	
Non-Engr. 17-18	400-450	460-490	3	238-249	N/A	Math 1000, 1010-L, 1530-L	
Non-Engr. SAILS	N/A	N/A	4	N/A	N/A	Math 1010, 1410, 1530	
Non-Engr. (by discretion of Math Dept.) 17-18 or SAILS	400-450	460-490	3	238-249	N/A	Math 1130-L	
Non-Engr. 19+ or SAILS+	460+	510+	4	250-300	N/A	Math 1010, 1130, 1410, 1530, 1630	
Engineering 17-21 or SAILS	400-510	460-530	3/4	238-300	N/A	Math 1000	
Branch to AAF at QAS score of 255					Place by QAS Score		
22-24 or SAILS+	520-560	540-580	N/A	N/A	231-250	Math 1710 & 1720	
25-26	570-600	590-620	N/A	N/A	251-259	Math 1730	
Non-Engr. 25	570-580	590-600	N/A	N/A	251	Math 1830	
27+	610+	630+	N/A	N/A	260-300	Math 1910	

# TYPICAL FRESHMAN SCHEDULE

FALL	Credits	SPRING	Credits
CHEM 1110	4	CHEM 1120	4
BIOL 1113	4	BIOL 1123	4
*ENGL 1010	3	*ENGL 1020	3
**Math (or Gen Ed Core)	3-4	**Math (or Gen Ed Core)	3-4
UNPP 1020	1	Elective/Gen Ed Core	1-3
Elective	0-1		
***TOTAL	16	***TOTAL	15-17

- \* If advanced credit (AP, dual enrollment, etc.) has been awarded for ENG 1010 and/or ENG 1020, courses should be selected from the Gen Ed Core list towards meeting the requirements for a B.S. degree.
- \*\* Regarding Math Courses: Students should take into consideration both health sciences career track prerequisite requirements and B.S. major Program of Study requirements when registering for math classes. Students should strongly consider taking a math course their first semester and continue taking math courses until their math requirements are fulfilled.
- \*\*\* For HOPE lottery scholarship purposes, total credit load each semester should probably be at least 16 credit hours.

# **COURSE DESCRIPTIONS**

Below are descriptions for some common courses that many health sciences career track students take. The entire Tech "Course Description" index is available at http://catalog.tntech.edu/index.php

### BIOL 1113 – General Biology I Lec. 3. Lab. 2. Credit 4.

A basic foundation in biological principles common to all organisms with an emphasis on molecules, cells and organelles, respiration, photosynthesis, metabolism and enzymatic function, genetics and inheritance, cellular reproduction, evolution, and speciation. Credit will not be given for both BIOL 1113 and BIOL 1010.

### **BIOL 1123 - General Biology II** (Formerly BIOL 1114, 1110, 1115) Lec. 3. Lab. 2. Credit 4.

Prerequisite: BIOL 1113 is highly recommended. Introduction to the principles of zoology.

### **BIOL 2010 - Human Anatomy and Physiology I** Lec. 3. Lab. 2. Credit 4.

Structure and function of the human body for nursing and other majors requiring a detailed examination of the topic. First course in a two course sequence. (See BIOL 2020).

### BIOL 2020 - Human Anatomy and Physiology II Lec. 3. Lab. 2. Credit 4.

Prerequisite: BIOL 2010. Continuation of BIOL 2010.

### BIOL 3140 - Cellular Biology Lec. 3. Lab. 2. Credit 4.

Prerequisite: BIOL 1123. An introduction to structure and function of cells.

### BIOL 3230 - Health Science Microbiology Lec. 3. Lab. 3. Credit 4.

Prerequisite: Sophomore standing. Introduction to microbiology. Intended for students majoring in nursing or other pre-professional programs. Credit will not be given for both BIOL 3200 and BIOL 3230.

### **BIOL 4040 (5040) – Immunology** Lec. 3. Credit 3.

Prerequisite: Junior standing. Introduction to basic principles of cellular and molecular immunology.

### **BIOL 4220 (5220) – Biostatistics** Lec. 3. Credit 3.

Prerequisite: MATH 1530 or MATH 1830. Probability and frequency distribution; statistical populations and samples; and tests of hypotheses used in biological research.

### CHEM 1010 - Introductory Chemistry I Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 1010 is prerequisite to CHEM 1020. Overview of chemical principles and applications. Laboratories emphasize general principles of chemistry.

### CHEM 1020 - Introductory Chemistry II Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 1010 is prerequisite to 1020. Overview of chemical principles and applications. Laboratories emphasize general principles of chemistry.

### CHEM 1110 - General Chemistry I Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 1110 is prerequisite to CHEM 1120. Basic course in general chemistry for curricula requiring more than one year of chemistry. Laboratory includes qualitative analysis procedures.

### CHEM 1120 - General Chemistry II Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 1110 with a grade of C or better. Basic course in general chemistry for curricula requiring more than one year of chemistry. Laboratory includes qualitative analysis procedures.

### CHEM 3010 - Organic Chemistry I Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 1120 with a grade of C or better. Study of carbon-containing compounds using the functional group approach and an emphasis in simple mechanisms of aliphatic and aromatic compounds.

### CHEM 3020 - Organic Chemistry II Lec. 3. Lab. 3. Credit 4.

Prerequisite: CHEM 3010 with a grade of C or better. Study of carbon-containing compounds using the functional group approach and an emphasis in simple mechanisms of aliphatic and aromatic compounds.

### CHEM 4610 (5610) - General Biochemistry Lec. 3. Credit 3.

Prerequisite: CHEM 3010 and CHEM 3020. Chemistry of amino acids, proteins, lipids, carbohydrates, membranes and nucleic acids. Includes study of pH, enzyme kinetics, three-dimensional structure and biochemical separation methods and analysis.

### CHEM 4620 (5620) - General Biochemistry Lec. 3. Credit 3.

Prerequisite: CHEM 4610 (5610). Intermediary metabolism and its regulation, bioenergetics and photosynthesis, biosynthesis of proteins and nucleic acids.

### **COMM 2025 – Fundamentals of Communication** Lec. 3. Credit 3.

Introduction to the communication process, interpersonal communication, group discussion, and public speaking. Students are required to prepare and deliver speeches.

### **ECON 2010 - Principles of Microeconomics** Lec. 3. Credit 3.

Supply and demand, theory of demand, principles of production, pricing, and distribution. Output market structures, labor markets and issues, and international trade.

### **ENGL 1010 - English Composition I** Lec. 3. Credit 3.

Introduces students to expressive, expository and persuasive writing. Assignments are based on personal experience and research. Student must earn a grade of C or better to pass.

### **ENGL 1020 - English Composition II** Lec. 3. Credit 3.

Prerequisite: ENGL 1010. Builds on writing and research processes taught in ENGL 1010; emphasizes critical reading, critical thinking, and critical writing (persuasion) about a variety of written texts and other media. Student must earn a grade of C or better to pass.

### **ENGL 2130 - Topics in American Literature** Lec. 3. Credit 3.

Prerequisite: ENGL 1020. Not for ENG or SEEN majors. Representative authors, periods, or themes from the colonial period to the present.

### **ENGL 2235 - Topics in British Literature** Lec. 3. Credit 3.

Prerequisite: ENGL 1020. Not for ENG majors. Representative authors, periods, or themes Old English to present.

### **ENGL 2330 - Topics in World Literature** Lec. 3. Credit 3.

Prerequisite: ENGL 1020. Representative authors, periods, or themes from various world literary cultures.

### **HEC 2020 - Nutrition for Health Sciences** Lec. 3. Credit 3.

Prerequisite: Completion of 15 credit hours. Principles of nutrition. Emphasis upon the function, food sources, recommended intake and assimilation of each of the six nutrient classes. HEC 1030 cannot be substituted for HEC 2020.

### **HEC 2220 - Medical Terminology for the Human Sciences** Credit 1.

Prerequisite: Anatomy & Physiology course. This course provides students with an understanding of the terminology used in health care and wellness programs.

**MATH 1000 – Transitional Algebra** Rec 3. Credit 3. Exponents and roots; polynomials, rational, radical, and absolute value expressions; factoring; linear equations and inequalities; quadratic equations, graphing; functions.

### MATH 1130 - College Algebra Lec. 3. Credit 3.

Review of algebra and coordinate geometry; functions; polynomial, rational, exponential, and logarithmic functions; systems of equations; binomial formula; counting (multiplication principle, permutations, and combinations); and conics. Credit towards graduation will not be given for MATH 1130 and MATH 1710 or for MATH 1130 and MATH 1730.

### MATH 1530 - Introductory Statistics Lec. 3. Credit 3.

Descriptive statistics including measures of central location and variation, frequency distributions, histograms, and frequency polygons. Probability relating to elementary sample spaces, events, conditional probability, discrete and continuous type random variables, mathematical expectation, and the normal probability. Inferential statistics relating to the confidence intervals and hypothesis test related to the mean and proportion.

### MATH 1710 - Pre-calculus Algebra Lec. 3. Credit 3.

Prerequisite: ACT Math score of 22 or higher, or equivalent placement exam score or C or better in MATH 1000. Review of algebra; relations and functions and their graphs, including polynomial and rational functions; conic sections; inequalities, arithmetic, and geometric sequences and series. Credit will not be given for both MATH 1710 and MATH 1130 or for MATH 1710 and MATH 1730.

### MATH 1720 - Pre-calculus Trigonometry Lec. 3. Credit 3.

Prerequisite: ACT Math score of 22 or higher, or equivalent COMPASS score, or C or better in MATH 1000. Circular functions and radian measure, graphs of the trigonometric functions, trigonometric identities, and equations, the inverse trigonometric functions, polar coordinates. Applications involving triangles, vectors in the plane, and complex numbers. Credit will not be given for both MATH 1720 and MATH 1730.

### MATH 1730 - Pre-Calculus Mathematics Lec. 5. Credit 5.

Prerequisite: ACT Math score of 25 or higher or equivalent COMPASS score, Two years of high school algebra, one year of high school geometry, and 12 weeks of trigonometry. Review of algebra and trigonometry; relations and functions and their graphs, including polynomial and rational functions; conic sections; inequalities; polar coordinates; complex numbers; and advanced topics in algebra. Credit will not be given for both MATH 1730 and any of MATH 1130, 1710 and 1720.

### MATH 1830 - Applied Calculus Lec. 3. Credit 3.

Prerequisite: ACT mathematics score of 25 or above and three years of high school mathematics, including algebra and geometry; or, special permission of the Mathematics Department; or, C or better in MATH 1130 or MATH 1710 or equivalent. A survey of limits, continuity, and the differential and integral calculus with applications in business, economics and the life sciences.

### MATH 1910 - Calculus I Lec. 4. Credit 4.

Prerequisite: ACT mathematics score of 27 or above and four years of high school mathematics, including algebra, geometry, trigonometry, and advanced or pre-calculus mathematics, or special permission of the Mathematics Department; or C or better in MATH 1730; or C or better in MATH 1720 and MATH 1710; or equivalent. Limits, continuity, and derivatives of functions of one variable. Applications of differentiation and introduction to the definite integral.

### MATH 3070 - Statistical Methods I Lec. 3. Credit 3.

Prerequisite: Recommended C or better in MATH 1130. Introduction to parametric statistical methods with some non-parametric alternatives, sampling, probability, Type I and Type II error, sample size estimation, confidence interval estimation, test of hypotheses using normal, Student's t, Snedecor's F, Chi-square and the binomial distributions, linear regression, analysis of variance, and data analysis utilizing statistical software.

### **PC 2500 - Communicating in the Professions** Lec. 3. Credit 3.

Prerequisite: ENGL 1020 or concurrent enrollment in ENGL 1020. Overview of skills and principles related to oral communications in various professions.

### PHYS 2010 - Algebra-based Physics I Lec. 3. Lab. 3. Credit 4.

Prerequisite: Background knowledge of high school algebra and geometry. Basic laws of classical mechanics, waves and heat with elementary applications to familiar phenomena. A student may not earn credit in both PHYS 2010 and any of PHYS 1310, PHYS 2109, PHYS 2110.

### PHYS 2020 - Algebra-based Physics II Lec. 3. Lab. 3. Credit 4.

Prerequisite: PHYS 2010. Basic laws of electromagnetism and light with elementary applications and brief introduction to modern physics. A student may not earn credit in both PHYS 2020 and any of PHYS 1310, PHYS 2119, PHYS 2120.

### **PSY 1030 – Introduction to Psychology** Lec. 3. Credit 3.

Introduction to methods and findings of contemporary psychology. Emphasis on psychological basis for understanding human behavior. Consideration of maturation, learning, thinking, motivation, emotion, sensation, perception, and personality.

### **PSY 2130 – Life Span Developmental Psychology** Lec. 3. Credit 3.

Developmental aspects of psychological functioning from the prenatal period to adulthood with emphasis on individual differences.

### PSY 4160 (5160) - Abnormal Psychology Lec. 3. Credit 3.

Prerequisite: PSY 1030 and 3 additional PSY credits. Nature of abnormal behavior, etiology, symptomatology and treatment.

### **SOC 1010 - Introduction to Sociology** Lec. 3. Credit 3.

Fundamental concepts and basic principles underlying human social relations.

### UNPP 1020 - University Pre-Professional, First-Year Interactions and Advisement Credit 1.

This course engages the student in meaningful classroom and out-of-classroom activities. This is intended for pre-professional health science students. It emphasizes information, activities, and requirements important to becoming competitive in a professional school application pool.

### UNPP 2020 - Special Topics Lec. 1-3. Credit 1-3.

Lower Division level study in a specific topic not commonly found in a discipline on campus, not to include work experience. May be repeated if topic is different. No more than a combined total of 9 hours of special topics may be taken.

### UNPP 3020 - Special Topics Lec. 1-3. Credit 1-3.

Upper Division level study in a specific topic not commonly found in a discipline on campus, not to include work experience. May be repeated if topic is different. No more than a combined total of 9 hours of special topics may be taken.