



Course Number and Title: BIO 108 Basic Pharmacology

Campus Location:

Wilmington

Effective Date:

2018-51

Prerequisite:

BIO 100, ENG 090 or ENG 091, MAT 010, SSC 100 or concurrent

Co-Requisites:

None

Course Credits and Hours:

2.00 credits

2.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course introduces pharmacology for healthcare students. Topics include basic drugs as related to diseases, effects of drugs on different systems of the body, interactions of drugs, side effects, contraindications, and effectiveness in relation to dosages.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

Department policy manuals

Schedule Type:

Classroom Course

Hybrid Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Identify the general principles of pharmacology. (CCC 1)
2. Examine selected medications that affect the peripheral nervous system and skeletal muscle. (CCC 1, 5, 6)
3. Examine selected medications that influence the central nervous system. (CCC 1, 5, 6)
4. Examine selected cardiac medications. (CCC 1, 5, 6)
5. Examine selected medications that influence the vascular and renal systems. (CCC 1, 5, 6)
6. Examine selected medications that affect the respiratory system. (CCC 1, 5, 6)
7. Differentiate selected medications that affect the gastrointestinal system. (CCC 1, 5, 6)
8. Examine selected medications that influence the endocrine, reproductive, and skeletal systems. (CCC 1, 5, 6)
9. Examine selected anti-microbial medications. (CCC 1, 5, 6)
10. Differentiate selected anti-neoplastic medications. (CCC 1, 5, 6)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Identify the general principles of pharmacology.
 1. Define *drug*.
 2. List three sources of medications.
 3. List three means of identifying a medication.
 4. Differentiate between an agonist and antagonist.
 5. List three sources of drug information.
 6. List four components of pharmacokinetics.
 7. Demonstrate common abbreviations used in writing prescriptions.
 8. List ten dosage forms.
 9. List five routes of drug administration.

10. List five rights of drug administration.
 11. List five factors that contribute to individual response to medication.
 12. Explain the concept of polypharmacy.
2. Examine selected medications that affect the peripheral nervous system and skeletal muscle.
 1. Discuss the mode of action of selected medications that are used to treat cardiovascular pathologies.
 2. Identify the potential side effects of cardiovascular medications.
 3. Describe the contraindications of cardiovascular medications.
 4. Identify how dosage changes influence the effectiveness of cardiovascular medications.
 5. Classify and differentiate medications affecting the sympathetic, parasympathetic, and autonomic ganglia.
 6. Differentiate selected skeletal muscle relaxants.
 7. Compare and contrast selected local anesthetics associated with the peripheral nervous system.
 3. Examine selected medications that influence the central nervous system.
 1. Discuss the mode of action of selected medications used to treat central nervous system pathologies.
 2. Identify the potential side effects of central nervous system medications.
 3. Describe the contraindications of central nervous system medications.
 4. Identify how dosage changes influence the effectiveness of central nervous system medications.
 5. Differentiate sedative-hypnotic drugs, alcohol, antipsychotic, antianxiety, antidepressant, psychomotor stimulants, and psychotomimetic drugs.
 6. Discuss the drugs used to treat epilepsy and Parkinson's disease.
 7. Compare and contrast anesthetics and opioid analgesics used to treat the central nervous system.
 4. Examine selected cardiac medications.
 1. Discuss the mode of action of selected medications used to treat cardiac pathologies.
 2. Identify the potential side effects of cardiac medications.
 3. Describe the contraindications of cardiac medications.
 4. Identify how dosage changes influence the effectiveness of cardiac medications.
 5. Discuss glycosides and the treatment of congestive heart failure.
 6. Classify and differentiate anti-arrhythmic medications.
 7. Differentiate selected anti-anginal drugs.
 5. Examine selected medications that influence the vascular and renal systems.
 1. Discuss the mode of action of selected medications used to treat vascular and renal pathologies.
 2. Identify the potential side effects of vascular and renal medications.
 3. Describe the contraindications of vascular and renal medications.
 4. Identify how dosage changes influence the effectiveness of vascular and renal medications.
 5. Compare and contrast diuretic and anti-hypertensive medications.
 6. Differentiate selected anticoagulant and coagulant medications.
 7. Discuss medications and nutritional therapy used to manage lipid levels.
 8. Describe medications used to treat anemia.
 6. Examine selected medications that affect the respiratory system.
 1. Discuss the mode of action of selected medications used to treat the respiratory system.
 2. Identify the potential side effects of respiratory medications.
 3. Describe the contraindications of respiratory medications.
 4. Identify how dosage changes influence the effectiveness of respiratory medications.
 5. Differentiate how histamines and anti-allergic agents are used to treat respiratory and integumentary pathologies.
 6. Discuss medications used to treat asthma.
 7. Compare and contrast mucolytics and expectorants.
 7. Differentiate selected medications that affect the gastrointestinal system.
 1. Discuss the mode of action of selected medications used to treat the gastrointestinal system.
 2. Identify the potential side effects of gastrointestinal medications.
 3. Describe the contraindications of gastrointestinal medications.
 4. Identify how dosage changes influence the effectiveness of gastrointestinal medications.
 5. Differentiate the medical therapies used for gastroesophageal reflux disease (GERD), ulcers, and vomiting.
 6. Describe selected medications that affect intestinal motility.
 8. Examine selected medications that influence the endocrine, reproductive, and skeletal systems.
 1. Discuss the mode of action of selected medications used to treat the endocrine, reproductive, and skeletal systems.
 2. Identify the potential side effects of endocrine, reproductive, and skeletal medications.
 3. Describe the contraindications of endocrine, reproductive, and skeletal medications.
 4. Identify how dosage changes influence the effectiveness of endocrine, reproductive, and skeletal medications.
 5. Compare and contrast adrenal steroids, gonadal hormones, and contraceptives.
 6. Discuss drugs that affect the thyroid, parathyroid, and bone degeneration.
 7. Describe the medications used for the treatment of diabetes.
 8. Differentiate posterior pituitary hormones and drugs used to promote uterine contractions.
 9. Examine selected anti-microbial medications.
 1. Discuss the mode of action of selected medications used as anti-microbial agents.
 2. Identify the potential side effects of anti-microbial medications.
 3. Describe the contraindications of anti-microbial medications.
 4. Identify how dosage changes influence the effectiveness of anti-microbial medications.
 5. Compare and contrast medications used to treat bacterial, fungal, and viral infections.

6. Describe medications used to treat parasitic infections.
7. Discuss antiseptics and disinfectants.
10. Differentiate selected anti-neoplastic medications.
 1. Discuss the mode of action of selected medications used as anti-neoplastic agents.
 2. Identify the potential side effects of anti-neoplastic medications.
 3. Describe the contraindications of anti-neoplastic medications.
 4. Identify how dosage changes influence the effectiveness of anti-neoplastic medications.
 5. Compare and contrast immunosuppressive and immunostimulant drugs.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

None

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.