HUMAN STRUCTURE AND FUNCTION I
Course Syllabus

Course Number:  RADT-0454A  
OHLAP Credit:  No
OCAS Code:  None
Course Length:  48 Hours
Career Cluster:  Health Science
Career Pathway:  Diagnostic Services
Career Major(s):  Radiologic Technologist

Pre-requisite(s):  Programs can choose to allow students to challenge this course, use transfer credit or teach course within the framework of their program.

Course Description:  Content is designed to establish a knowledge base in anatomy and physiology. Components of the cells, tissues, organs, and systems are described and discussed.

Textbooks:  

Online Resources
Blackboard

Course Objectives:  
A. Discuss the basics of anatomical nomenclature.
B. Describe the chemical composition of the human body.
C. Identify cell structure and elements of genetic control.
D. Explain the essentials of human metabolism.
E. Describe the types and functions of human tissues.
F. Classify tissue types, describe the functional characteristics of each and give examples of their location within the human body.
G. Describe the composition and characteristics of bone.
H. Identify and locate the bones of the human skeleton.
I. Identify bony processes and depressions found on the human skeleton.
J. Describe articulations of the axial and appendicular skeleton.
K. Summarize the functions of the skeletal system.
L. Label different types of articulations.
M. Compare the types, locations and movements permitted by the different types of articulations.
N. Define endocrine.
O. Describe the characteristics and functions of the components that comprise the endocrine system.
P. Describe the composition and characteristics of blood.
Q. List the types of blood cells and state their functions.
R. Differentiate between blood plasma and serum.
S. Outline the clotting mechanism.
T. List the blood types.
U. Explain the term Rh factor.
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V. Explain the antigen/antibody relationship and its use in blood typing.
W. Label the parts of the human heart.
X. Describe the flow of blood through the body and identify the main vessels.
Y. Describe the structure and function of arteries, veins and capillaries.
Z. Differentiate between arterial blood in system circulation and arterial blood in pulmonary circulation.
AA. Label the components of the respiratory system.
BB. Describe the physiology and regulation of respiration.

All objectives are taken from the ASRT (American Society of Radiologic Technologists) curriculum © 2012

Teaching Methods:
The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures:
1. Students are graded on theory and lab practice and performance.
2. Each course must be passed with eighty (80%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.
4. Students wanting to take advantage of college credit/industry agreements must maintain an 80% in their coursework.
5. Career Major grades established during coursework are a major criteria in successfully obtaining certification.

Description of Classroom, Laboratories, and Equipment:
Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit:
The student may be eligible to take state, national or industry exam after completion of the program.

College Credit Eligibility:
All Tulsa Tech students (high school and adult) may have the opportunity to receive college credit upon completion of their program. Our College Relations office will work with students regarding the benefits of Prior Learning Assessments (PLA) toward an Associate of Applied Science (AAS) degree or a technical college certificate at area colleges. For more details call the College Relations office at 918.828.5000.