

Planned Course: Anatomy & Physiology	Course Number: S406	Department: Science	
Unit: Nervous System and Regulation	Grade Level: 11-12		
Estimated Time: 9 weeks	Level/Track: Honors	Date Approved: 2/12/2018	
PA Academic Standards or PA Assessment Anchors	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>S11.B Biological Sciences</p> <p>S11.B.1 Structure and function of Organisms</p> <p>S11.B.1.1 Explain structure and function at multiple levels of organization.</p>	<p>S11.B.1.1.3 Compare and contrast cellular processes (e.g., photosynthesis and respiration, meiosis and mitosis, protein syntheses and DNA replication).</p> <ul style="list-style-type: none"> ▶ What are the general functions of the nervous system? ▶ How do tissues and organs keep the human body functioning? ▶ How do nerves maintain a stable environment? ▶ How is the nervous system vital to organisms? ▶ How do impulses process through neurons and nerves? ▶ What part do nerve fibers play in this system? ▶ How does the brain and spinal cord interact? 	<ul style="list-style-type: none"> – Lecture – Text Reading – Questions – Class discussion – Diagrams – Barron’s Detailed – Skeleton – Lab – Necturus dissection – one specimen per student – Diagrams – Barron’s Detailed – Worksheets – Lecture – Text Reading – Microscope Slides – Lab – Nervous System – Lab – Structure of the Brain – Lab – Anatomy of a Neuron – Lab – Necturus dissection – one specimen per student 	<ul style="list-style-type: none"> • Homework • Individual Dissection technique • Detailed Plate drawing • Written quiz- subjective • Homework • Individual Lab report – Level 1,2,3 analysis questions • Detailed Plate drawings • Labeled diagrams
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Planned Course: Anatomy & Physiology		Course Number: S406	Department: Science
Unit: Nervous System and Regulation		Grade Level: 11-12	
Estimated Time: 9 weeks		Level/Track: Honors	Date Approved: 2/12/2018
PA Academic Standards or PA Assessment Anchors	▶ Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>S11.B.1.1.1 Explain how structure determines function at multiple levels of organization (e.g., chemical, cellular, anatomical).</p> <ul style="list-style-type: none"> ▶ What is the structure and function of the spinal cord and brain? ▶ What are sensory impulses? ▶ How does the brain stimulate? ▶ How do the glands react to the stimuli? <p>S11.B.2 Continuity of Life</p> <p>S11.B.2.1 Explain the mechanisms of the theory of evolution.</p>	<p>S11.B.1.1.1 Explain how structure determines function at multiple levels of organization (e.g., chemical, cellular, anatomical).</p> <ul style="list-style-type: none"> ▶ What is the structure and function of the spinal cord and brain? ▶ What are sensory impulses? ▶ How does the brain stimulate? ▶ How do the glands react to the stimuli? <p>S11.B.2.1.1 Explain the theory of evolution by interpreting data from fossil records, similarities in anatomy and physiology, or DNA studies that are relevant to the theory of evolution.</p> <ul style="list-style-type: none"> ▶ What are the general 	<p><u>Enrichment</u></p> <ul style="list-style-type: none"> - Medical Journal articles - Lecture - Read text - Color-code diagrams - Overheads - Question-Answer - Lab – Necturus Dissection- one specimen per student - Diagrams- Barron’s detailed - Skeleton - Lecture - Chapter questions - subjective - Read text - Lab – Nervous System - Lab – Necturus Dissection –one specimen per student - Lab – Brain and Cranial Nerves 	<ul style="list-style-type: none"> • Homework • Detailed Plate drawing • Written quiz - subjective • Individual Lab report • Homework • Detailed Plate drawings • Written quiz - subjective • Skeleton ID
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Planned Course: Anatomy & Physiology		Course Number: S406	Department: Science
Unit: Nervous System and Regulation		Grade Level: 11-12	
Estimated Time: 9 weeks		Level/Track: Honors	Date Approved: 2/12/2018
PA Academic Standards or PA Assessment Anchors	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>S11.B.1 Structure and function of Organisms</p> <p>S11.B.1.1 Explain structure and function at multiple levels of organization.</p>	<p>characteristics of the peripheral and autonomic nervous systems?</p> <ul style="list-style-type: none"> ▶ What makes up the peripheral nervous system? ▶ How does this system function independently? ▶ How do reflexes affect this system? <p>S11.B.1.1.3 Compare and contrast cellular processes (e.g., photosynthesis and respiration, meiosis and mitosis, protein syntheses and DNA replication).</p> <ul style="list-style-type: none"> ▶ How are sensory receptors sensitive to their changing surroundings? ▶ What do sensory receptors do? ▶ What makes up the somatic senses? ▶ What makes up the special senses? <p>S11.B.1.1.1 Explain how structure determines function at multiple levels of</p>	<ul style="list-style-type: none"> - Lecture - Read text - Anatomical person - Vocabulary - Diagrams – Barron’s Detailed - Worksheets - Overheads - Charts - Read text - Anatomical man - Questions - Lecture - Vocabulary - Lab –Functional Anatomy of the Endocrine glands 	<ul style="list-style-type: none"> • Homework • Written quiz - subjective • Detailed Diagrams
----------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------

Planned Course: Anatomy & Physiology		Course Number: S406	Department: Science
Unit: Nervous System and Regulation		Grade Level: 11-12	
Estimated Time: 9 weeks		Level/Track: Honors	Date Approved: 2/12/2018
PA Academic Standards or PA Assessment Anchors	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

	<p>organization (e.g., chemical, cellular, anatomical).</p> <ul style="list-style-type: none"> ▶ What are the distinguished differences between the endocrine and exocrine glands? ▶ Where are endocrine gland fluids secreted? ▶ Where are exocrine gland fluids secreted? ▶ What is a hormone and the feedback mechanism it creates? ▶ What are hormone effects on target cells? ▶ How is nerve control and positive and negative feedback systems regulated by hormones? ▶ How do endocrine glands control our physical and psychological activities? 	<ul style="list-style-type: none"> – Lecture – Overhead – Diagrams – Barron’s Detailed – Anatomical man – Read text – Lab – Complete Necturus Dissection, one specimen per student 	<ul style="list-style-type: none"> • Homework • Individual Lab report • Written test – Subjective, definitions, short answer an open ended essay. • Written test – subjective, definitions, short answer, open ended essays, compare and contrast organisms. • ID test- prepared detailed Necturus diagrams • Detailed Diagrams • Homework
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------