Biological & Pre-Professional Sciences AS Course Map (updated for 21-22)

BPPS AS Program	Semester: Fall/Spring/Summer	Courses in Major									
Level of Instruction Criteria	**Program Outcomes**	**BOT 1114**	**ZOO 1114**	**ZOO 2114**	**MATH 1613**	**CHEM 1115**	**PHYS 1114**	**CHEM 1215**	**BIO 2115**	**MATH 2265**	**PHYS 1214**
(I) Introduced At the collegiate level, students ***are not expected*** *to be familiar* with the content or skill. Instruction and learning activities focus on basic knowledge, skills, and/or entry-level complexity.	**PO 1** Illustrate the basic molecular genetic processes of DNA replication and protein synthesis. 1. Replicate a segment of DNA by determining the complimentary sequence of nitrogenous bases. 2. Transcribe mRNA from DNA by determining the sequence of mRNA that would result from a given sequence of DNA. 3. Translate mRNA to protein by determining the sequence of amino acids that would result from a sequence of mRNA.	I	I	A					A		
(R) Reinforced At the collegiate level, students ***are expected*** to possess a *basic level* of knowledge and familiarity with the content or skills. Instruction and learning concentrate on enhancing and strengthening previous collegiate knowledge/skills and complexity	**PO 2** Apply problem solving strategies. 1. Apply appropriate equation to the problem 2. Choose the correct value for each variable 3. Solve the mathematical equation				R	R	R	R		A	A
(A) Advanced At the collegiate level, students ***are expected*** to possess a *strong foundation* in the knowledge, skill or competency. Instruction and learning activities continue to build upon previous competencies with increased complexity and application of use.	**PO 3** Perform safe and appropriate laboratory techniques. 1. Apply appropriate personal protective equipment 2. Demonstrate proper laboratory hygiene 3. Demonstrate proper laboratory safety	I	I			I	I	A	A		A