June, 2013

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| Indiana Preservice Standards for Biology | Description | NCATE/NSTA Standards | Hanover Course | Other standards | SPA Key Assessment |
| Standard 1: The Nature and Processes of Science | Life science teachers have a broad and comprehensive understanding of the nature of science and the processes of scientific inquiry | NSTA Standard 1: Content | EDU 337 (r)  BIO 161-Ecology and Evolution (r) |  | Assessment 1: state licensure exam  Assessment 2: comps/GPA course analysis |
| Standard 2: Central Concepts and Connections in Science | Life science teachers have a comprehensive understanding of the core ideas in other science disciplines and of the relationships between science, engineering and society | NSTA standard 1: Content | EDU 337 (r)  CHEM 161 (r)  GEO (r-env) 161/162/261/262  AST 165/166  PSY 161 |  |  |
| Standard 3: Cellular Chemistry and Structure | Life science teachers have a broad and comprehensive understanding of cellular chemistry, structures and functions | NSTA Standard 1: Content | BIO 185- (r) Cellular Chem/structure  BIO 336-Cell Bio |  |  |
| Standard 4: Organisms | Life science teachers have a broad and comprehensive understanding of organization and structures of organisms and the processes involved in growth, maintenance, and reproduction | NSTA Standard 1: Content | BIO 234-Plant Taxonomy  or  BIO 313-Plant Anatomy  and  Bio 317-Vertebrate Bio  or  KIP 215-Human Anatomy  or  KIP 230-Physiology |  |  |
| Standard 5: Interdependence | Life science have a broad and comprehensive understanding of ecological principles, the interactions between living and nonliving components of ecosystems, and the relationships between organisms. | NSTA Standard 1: Content | BIO 161- (r) Ecology and Evolution  BIO 231- (r-env) Biodiversity  BIO 214-Tropical  BIO 226-Aquatic  BIO 315-Ecology |  |  |
| Standard 6: Heredity and Genetics | …Understanding of the molecular basis of heredity, the processes of cell division and the principles of genetics | NSTA Standard 1: Content | BIO 212- (r) Genetics  Bio 312-Conservation BIO  BIO 314-Molecular BIO |  |  |
| Standard 7: Evolution | … Understanding of evolution, the history of life on earth, and the modern taxonomic classification | NSTA Standard 1: Content | BIO 161- (r) Ecology and Evolution  BIO 231-Biodiversity |  |  |
| Standard 8: Science Instruction and Assessment | …understanding of content-specific instruction and assessment in science | Standard 2-content pedagogy  Standard 3-Learning Environments  Standard 4-Safety  Standard 5-impact on student learning  Standard 6-professional knowledge and skills | EDU 337/EDU 455 unit plan  Student Teaching Evaluation  Lesson Series 337  EDU 455  PD-HASTI | ISTE 1a-1d; 2a-d; 3a-d; 4a-b  Common Core literacy (reading and writing): Grades 9-10: 1-10;  Grades 11-12: 1-10; | Assessment #3:  Pedagogical and  Professional  Knowledge and  Skills– Planning  instruction and  assessment  (required)  Assessment #4:  Pedagogical and  Professional  Knowledge and  Skills– Student  Teaching  Assessment with  Legal/Safety/Ethical  Issues (required)  Assessment #5:  Effects on Student  Learning (required)  Assessment #6:  Pedagogical and  Professional  Knowledge and  Skills (required) |

Electives: BIO 316-Animal Behavior; BIO 328-Immunology; BIO 333-Microbiology;