

Geneseo Curriculum Map for: B.A. in Physics, Adolescence Education: Physics and General Science

Program Learning Outcomes (one per row): Adolescence Science (NSTA):	These courses introduce material necessary for outcome achievement. (e.g., PSYC 100)	These courses reinforce material necessary for outcome achievement.	These courses provide coverage necessary for mastery of the outcome.
1) Content Knowledge: Effective teachers of science understand and articulate the knowledge and practices of contemporary science. They interrelate and interpret important concepts, ideas, and applications in their fields of licensure.	MATH 221 PHYS 123 MATH 222 PHYS 125 MATH 223 MATH 326	INTD 300 PHYS 223 PHYS 224 PHYS 228	EDUC 340 EDUC 350 PHYS 352 PHYS 3XX
2) Content Pedagogy: Effective teachers of science understand how students learn and develop scientific knowledge. Preservice teachers use scientific inquiry to develop this knowledge for all students.	PSYC 216	INTD 300 INTD 302	EDUC 340 EDUC 350
3) Learning Environments: Effective teachers of science are able to plan for engaging all students in science learning by setting appropriate goals that are consistent with knowledge of how students learn science and are aligned with state and national standards. The plans reflect the nature and social context of science, inquiry, and appropriate safety considerations. Candidates design and select learning activities, instructional settings, and resources--including science-specific technology, to achieve those goals; and they plan fair and equitable assessment strategies to evaluate if the learning goals are met.	EDUC 204 EDUC 215 INTD 203 SPED 205	INTD 302	EDUC 340 EDUC 350
4) Safety: Effective teachers of science can, in a P-12 classroom setting, demonstrate and maintain chemical safety, safety procedures, and the ethical treatment of living organisms needed in the P-12 science classroom appropriate to their area of licensure.	PHYS 124 PHYS 126 PHYS 226	INTD 302 PHYS 362	EDUC 340 EDUC 350
5) Impact on Student Learning: Effective teachers of science provide evidence to show that P-12 students' understanding of major science concepts, principles, theories, and laws have changed as a result of instruction by the candidate and that student knowledge is at a level of understanding beyond memorization. Candidates provide evidence for the diversity of students they teach.	EDUC 204 EDUC 215 SPED 205	INTD 302	EDUC 340 EDUC 350
6) Professional Knowledge and Skills: Effective teachers of science strive continuously to improve their knowledge and understanding of the ever changing knowledge base of both content, and science pedagogy, including approaches for addressing inequities and inclusion for all students in science. They identify with and conduct themselves as part of the science education community.	EDUC 204 EDUC 215 INTD 203 SPED 205	INTD 300 INTD 302	EDUC 340 EDUC 350