

Physics Course Planner for 5-Year Urban Secondary Education Students

The College of New Jersey

School of Education ~ Dept. of Educational Administration and Secondary Education - Fall 2021

5-Year Course Sequence

Urban Secondary Education

(boxes in yellow represent courses in the Urban Education program)

Year 1

Fall		Spring	
Course	Goal	Course	Goal
<i>FYW 102 Academic Writing or FYS1XX First Seminar (LL)</i>	<i>FYS</i>	<i>SED 099: College Seminar</i>	<i>Secondary Education</i>
		<i>EFN 299: Schools, Community & Culture (field placement)</i>	<i>Secondary Education</i>
<i>PHY 099 Content Seminar</i>	<i>Physics Core 0 units</i>		
<i>PHY 203</i>	<i>Content Major Core</i>	<i>PHY 204</i>	<i>Physics Core</i>
<i>2nd language 101 (Spanish recommended) or CHE 201</i>	<i>language or physics specialization course</i>	<i>MAT 128 or other MAT</i>	<i>Physics Correlate</i>
<i>MAT 127 or other MAT</i>	<i>Content Major Correlate</i>	<i>FYS 1XX or 2nd language 102 or CHE201</i>	<i>language or physics specialization course</i>

Year 2

Fall		Spring	
Course	Goal	Course	Goal
<i>PHY 321</i>	<i>Content Major Core</i>	<i>PHY 356</i>	<i>Content Major Core</i>
<i>2nd language 103 (Spanish recommended) or elective</i>	<i>Urban Education/Language Requirement</i>	<i>SED 224: Adolescent Development (field placement)</i>	<i>Secondary Education</i>
<i>PHY 306 **Can be substituted by MAT 229 and MAT 205</i>	<i>Physics Core</i>	<i>PHY 299 and/or Major Option 0.25 units</i>	<i>Physics Core</i>
<i>SPE 103: Social and Legal Foundations of Special Education</i>	<i>Secondary Education</i>	<i>2nd language (Spanish recommended) if you started the sequence later or elective</i>	<i>Urban Education/Language Requirement</i>

Year 3

Fall		Spring	
<i>Note: You must select your Urban Concentration (TESL, Special Education, or Literacy) in your 3rd year. See the “Urban Concentrations” document for details.</i>			
Course	Goal	Course	Goal
<i>Liberal Learning</i>	<i>Liberal Learning</i>	<i>PHY 401</i>	<i>Physics Core</i>
		<i>EFN 357: Investigating Systemic Inequalities Impacting Urban Education (field placement)</i>	<i>Urban Education</i>
<i>PHY 421</i>	<i>Physics Core</i>	<i>Physics Option (need one lab and one regular option)</i>	<i>Physics Option</i>
<i>Physics Option (need one lab and one regular option)</i>	<i>Physics Option</i>		
<i>2nd language (Spanish recommended) if you started the sequence later or elective</i>	<i>Urban Education/Language Requirement</i>	<i>EFN 398: Historical and Political Context of Schools</i>	<i>Urban Education</i>

Year 4

Fall		Spring	
**Note: Students who choose the TESL Concentration will need to take ESLM 577 in the Fall (instead of ESLM 578) and take ESLM 587 in the Spring.			
Course	Goal	Course	Goal
<i>ELE 302: Intro to Teacher Research</i>	<i>Professional Education</i>	<i>SED 399: Pedagogy in Schools (field placement)</i>	<i>Secondary Education (1.5 units)</i>
<i>EFN 311: Working within Urban Communities</i>	<i>Urban Education</i>	<i>XXX 390: Discipline-Specific Methods</i>	<i>Secondary Education</i>
<i>ESLM 578: Theory and Practice in ESL (3)</i>	<i>Urban Graduate</i>	<i>RAL 328: Reading in Secondary Education</i>	<i>Secondary Education (0.5 units)</i>
<i>Physics Option (need one lab and one regular option)</i>	<i>Content Major Course</i>	<i>PHY401, Science, Physics options, or liberal learning (whatever is left)</i>	

In order to graduate with a Physics BS, the student will have to come in with credits to fulfill either liberal learnings, MAT127/MAT128, test out of Spanish 101, 102 or 103. Or have taken summer courses. (You can finish the Physics BS on time even without extra entering credits (unless not calculus ready for freshman fall); if you can't finish in time w/o extra summer courses, it would be due to schedule timing/conflict with Urban Ed. concentration courses.) Courses still needed, but not listed:

- One more Physics Option or Physics Lab Option
 - Physics Options, Choose from:
 - PHY 316: Biomedical Physics
 - PHY 336: Introduction to Biophysics
 - PHY 413: General Relativity and Cosmology
 - PHY 422: Electromagnetic Theory II
 - PHY 431: Quantum Mechanics
 - PHY 436: Condensed Matter
 - PHY 361: Galactic and Extragalactic Astronomy
 - PHY XXX: Plasma Physics
 - PHY 426: Particle and Nuclear Physics
 - PHY 466: Introductory Astrophysics
 - Two semesters as Physics Learning Assistant
 - One full course unit of mentored research
 - One half unit of mentored research and one semester as LA
 - Physics Lab Options, Choose from:
 - PHY 220: Advanced Geology
 - PHY 311: Analog and Digital Electronics
 - PHY 345: The Physics of Clouds and Climate
 - PHY 411: Electromagnetic Waves and Optics
 - PHY 451: Advanced Experimental Physics*

SUMMER COURSES: Concentration Course Requirements (2 courses) OR do as overload during undergrad

Year 5

Fall		Spring	
Course	Goal	Course	Goal
SCED 695: Internship II (Student Teaching) (6)	Professional Education	SPED 631: Transition and Community Based Instruction (3)	
SCED 667: Capstone (3)	Professional Education	EDFN 627: Critical Pedagogy	
		SCED 700: Comprehensive Exam (0 credits)	Co-Requisite with EDFN 627
		Concentration Course (3)	
		Concentration Course (3)	

- Students are encouraged to take courses during the May or summer semester.
- The information literacy goal is met through a college-wide experience.
- This course sequence is a recommended sequence, except for your urban education courses in years three to five, which have to be taken as suggested.