

**SECONDARY EDUCATION (K-12)(State Requirement Minimum 3.00 Overall GPA)  
PHYSICAL SCIENCE CERTIFICATION PROGRAM SUMMARY**

Effective for students entering NJCU in Fall 2015 or later (revised Spring 2016)

Student ID: \_\_\_\_\_  
 Telephone : (\_\_\_\_) \_\_\_\_\_  
 Initially Advised by: \_\_\_\_\_  
 Date: \_\_\_\_\_

Name: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Address: \_\_\_\_\_

Categories/Courses			SEMESTER/YEAR
<b>Academic Foundation Courses – Non Degree Semester Hours</b>			
INTD 0090	RWAD (w/INTD 105)	4 semester hours	____ _
ENGL 0095	Developmental Writing (ALP) (w/ENGL 101)	2 semester hours	____ _
ENGL 0096	Developmental Writing (ALP) (w/ENGL 102)	2 semester hours	____ _
MATH 0090	Developmental Mathematics	4 semester hours	____ _
MATH 0096	Beginning Algebra	2 semester hours	____ _
<b>Academic Foundation Courses – Degree Credits</b>			
INTD 0101	Orientation to College	1 credit	____ _
INTD 0105	RWAD (w/INTD 090)	2 credits	____ _
<b>Tier 1 English Composition and Math Courses (7-10 credits)</b>			
ENGL 0101	English Composition I <u>OR</u>	4 credits	____ _
ESL 0101	English Composition I – ESL <u>OR</u>	6 credits	____ _
ESL 0115	EC I for Bilingual Students	6 credits.	____ _
MATH 0114	Contemporary Math <u>OR</u>	3 credits	____ _
MATH 0140	Statistics I <u>OR</u>	3 credits	____ _
MATH 0175	Enhanced Precalculus (for STEM majors) <u>OR</u>	4 credits	____ _
MATH 0164	Precalculus for Business Students	4 credits	____ _
<b>Tier 2 English Composition and Math Courses (4-6 credits)</b>			
ENGL 0102	English Composition II <u>OR</u>	4 credits	____ _
ESL 0102	English Composition II – ESL <u>OR</u>	6 credits	____ _
ESL 0116	EC II for Bilingual Students	6 credits.	____ _

- Students complete four Tier 1 seminars (12 credits) and six Tier 2 seminars (18 credits) with at least two seminars in each of the four Modes of Inquiry; they take a total of ten seminars (30 credits) across Tiers 1 and 2.
- Intermodal seminars count toward two Modes of Inquiry; however, they do not reduce the total number of seminars required in Tiers 1 and 2.
- Students also complete one Tier 3 Capstone (3 credits) in the final semester of Gen Ed.

**Modes of Inquiry Distribution Requirements (30 credits + Capstone)**

Course #	Title	Tier	Intermodal	Semester/Grade/Credits
<b>Creative Process and Production (at least 2 courses)</b>				
_____	_____	____	____	____ _
_____	_____	____	____	____ _
_____	_____	____	____	____ _
<b>Language, Literary, and Cultural Studies (at least 2 courses)</b>				
*PSYC 0152	Adolescence to Adulthood	_1_	____	____ _ 3 credits
_____	_____	____	____	____ _
_____	_____	____	____	____ _
<b>Scientific and Quantitative Inquiries (at least 2 courses)</b>				
*BIOL 0225	Human Sexual Biology for GEP	_2_	____	____ _ 3 credits
CHEM 0105	Gen Chem I Lecture	_1_	____	____ _ 3 credits
_____	_____	____	____	____ _
<b>Social and Historical Perspectives (at least 2 courses)</b>				
*WGST 110	Diversity & Difference	_1_	____	____ _ 3 credits
_____	_____	____	____	____ _
_____	_____	____	____	____ _

\* Meets New Jersey Certification Requirements  
 Students must earn grades of C or higher in all AUR courses

**Physics Major** (A minimum of 36 credits required) (Courses codes with an asterisk have prerequisites or co-requisite courses).

**Required:**

*PHYS 0130	College Physics I (Lecture)	3 credits	_____	_____
*PHYS 1130	College Physics I (Laboratory & Recitation)	1 credit	_____	_____
*PHYS 0131	College Physics II (Lecture)	3 credits	_____	_____
*PHYS 1131	College Physics II (Laboratory & Recitation)	1 credit	_____	_____
*PHYS 0230	College Physics III (Lecture)	3 credits	_____	_____
*PHYS 1230	College Physics III (Laboratory & Recitation)	1 credit	_____	_____
*MATH 0192	Calculus and Analytic Geometry I	4 credits	_____	_____
*MATH 0193	Calculus and Analytic Geometry II	4 credits	_____	_____
*MATH 0292	Calculus and Analytic Geometry III	4 credits	_____	_____
*CHEM 0105	General Chem I, Lecture	3 credits	_____	_____
*CHEM 1105	General Chem I, Laboratory & Recitation	2 credits	_____	_____
*CHEM 0106	General Chem II, Lecture	3 credits	_____	_____
*CHEM 1106	General Chem II, Laboratory & Recitation	2 credits	_____	_____

**Required upper level electives** (For certification purposes, at least 12 credits of 300 or 400 level classes are required. Indicated with \*)

*PHYS 0401	Princ. and Appl. of Modern Optics, Lecture	3 credits	_____	_____
*PHYS 1401	Optics, Laboratory and Recitation	1 credits	_____	_____
PHYS 0240	Digital Technique and Applications	3 credits	_____	_____
PHYS 0301	Thermodynamics and Kinetic Theory	3 credits	_____	_____
PHYS 0321	Theory and Applications of E& M	3 credits	_____	_____
*PHYS 0405	Introduction to Quantum Mechanics	3 credits	_____	_____
CHEM 0305	Physical Chemistry I, Lecture	3 credits	_____	_____
CHEM 3305	Physical Chem I, Laboratory & Recitation	2 credits	_____	_____
CHEM 0306	Physical Chemistry II, Lecture	3 credits	_____	_____
CHEM 3306	Physical Chem II, Laboratory & Recitation	2 credits	_____	_____
*MATH 0330	Mathematical Statistics I	3 credits	_____	_____
*BIOL 0403	Radiation Biology	4 credits	_____	_____

Physics Major Advisor: \_\_\_\_\_

**\*\* CERTIFICATION SEQUENCES (30 credits)** Students must earn grades of B- or higher in all Education courses

Phase I (These two courses must be taken <u>prior</u> to admission to any education program)				
EDU 0280	Challenges in Urban Education	3 credits	_____	_____
LTED 0230	Focus: Reading, Language and Literacy	3 credits	_____	_____
Phase II (These courses may be taken concurrently)				
EDU 0330	Focus: Development, Behavior & Learning	3 credits	_____	_____
EDU 0331	Education Field Experience II	1 credit	_____	_____
Students must pass COE Writing Assessment before registering for EDU 331 - Students must apply for EDU 331 a semester in advance				
Phase III (These courses must be taken concurrently) Courses offered in Fall only				
LTED 0370	Secondary Reading Language & Literacy Workshop	2 credits	_____	_____
EDU 0371	Secondary Curriculum, Methods and Materials Workshop	3 credits	_____	_____
EDU 3372	Secondary Methods of Teaching Science	3 credits	_____	_____
Phase IV (These courses must be taken concurrently)				
EDU 0470	Concurrent Student Teaching Seminar	2 credits	_____	_____
EDU 0485	Classroom Management and Assessment	2 credit	_____	_____
EDU 0480	Internship	8 credits	_____	_____
Students must pass appropriate Praxis II exam before registering for EDU 0480				

**\*Summary of Graduation/Certification**

General Education \_\_\_\_\_

Physics Major (Physical Science) (A minimum of 36 credits required) \_\_\_\_\_

Certification/Education Major (30 credits required) \_\_\_\_\_

TOTAL (120 min. required for graduation): \_\_\_\_\_

All courses below 100 level are not part of the 120 credits needed for graduation.

Graduation/certificate clearance by: \_\_\_\_\_