B.A. in Physics
Academic Plan of Study

College of Liberal Arts & Sciences
Department of Physics and Optical Science
physics.uncc.edu

PROGRAM SUMMARY

- ***Credit Hours:*** 120 hours
- ***Concentrations:*** No
- ***Declaring the Major:*** Students should declare a Physics major in their freshman or sophomore year.
- ***Advising (For the Major):***
  - Dr. Pedram Leilabady (freshmen), email: pleilaba@uncc.edu, 704.687.8140
  - Dr. Yildirim Aktas (sophomores), email: aktas@uncc.edu, 704.687.8130
  - Dr. M. Yasin Raja (juniors), email: raja@uncc.edu, 704.687.8156
  - Dr. Tsinghua Her (seniors), email: ther@uncc.edu, 704.687.8139
- ***Advising (For General Education):*** CLAS Advising Center
- ***Minimum Grades/GPA:*** Students must have a 2.0 or higher average in Physics courses to graduate. A C or better is required in most PHYS classes before students can progress to the next PHYS course.
- ***Teacher Licensure:*** Yes: Physics
- ***Evening Classes Available:*** Yes (lower level only)
- ***Weekend Classes Available:*** No
- ***Other Information:*** The Department offers Honors in Physics (students must complete a research-based project). The Department offers a minor in Physics. The Department also offers duel degree programs for engineering students in Electrical and Computer Engineering and Mechanical Engineering.
- ***Contact(s):*** Dr. Pedram Leilabady (freshmen), pleilaba@uncc.edu, 704.687.8140

PROGRAM REQUIREMENTS

The Department of Physics and Optical Science offers the following degrees: B.A. in Physics, B.S. in Physics. The B.A. degree is intended for students who are interested in double majoring in physics and another discipline or who plan to teach physics in high school. The B.S. degrees are intended for students interested in working in a technical industry or attending graduate school in physics or a related field. All of the degrees in physics are very structured – one class builds on another. Students should declare the major in the freshman or early in the sophomore year so that all required classes can be completed in 4 years.

Areas	Credit Hours	Description
Pre-Major/ Prerequisites	-	
Major	36-51	Some of the required courses in the major will count towards University General Education requirements for Natural Sciences, Oral Communications and Writing Intensive courses.
General Education ***(not satisfied by other major requirements)***	21-24	These hours do not include those requirements which are satisfied within the major. Students with an associate's degree are exempt from most General Education requirements.
Related Work	16	Courses that are required pre-requisites for PHYS courses taken by all majors. These include CHEM and MATH courses.
Foreign Language	0-8	Students must demonstrate competence at the 1202 level. Competence can be demonstrated by transfer courses, placement exam, or courses at UNC Charlotte.
Electives	24-36	As needed to complete 120 hours total.
Total Credit Hours	120	

SUGGESTED PLAN OF STUDY – B.A. IN PHYSICS

Freshman Year					
Course Number	**Course Title**	**Credit Hours**	**General Education**	**W/O Course**	**Notes**
Fall Semester					
PHYS 1000	New Student Seminar	1			
MATH 1241	Calculus I	3	X		
CHEM 1251+L	Principles of Chemistry I & Principles of Chemistry I Laboratory	4	X		
UWRT 1101	Writing and Inquiry I	3	X		
LBST 11XX	LBST 110X Series: Arts and Society	3	X		
Spring Semester					
PHYS 2101	Physics for Scientists and Engineers I	3	X		
PHYS 2101L	Physics for Scientists and Engineers I Laboratory	1			
MATH 1242	Calculus II	3	X		
UWRT 1102	Writing and Inquiry II	3	X		
LBST 2101	Western Cultural and Historical Awareness	3	X		
XXXX XXXX	Social Science (General Education)	3	X		

30 Credit Hours for Year

Sophomore Year					
Course Number	**Course Title**	**Credit Hours**	**General Education**	**W/O Course**	**Notes**
Fall Semester					
PHYS 2102+L	Physics for Scientists and Engineers II & Laboratory	4			
MATH 2171	Differential Equations	3			
LBST 2102	Global and Intercultural Connections	3	X		
XXXX 1201	Foreign Language 1201	4			
Spring Semester					
PHYS 3101	Topics and Methods of Physics	3			
PHYS 3141	Modern Physics	3			
MATH 2241	Calculus III	3			
LBST 22XX	LBST 221X Series: Ethical Issues and Cultural Critique	3	X		
XXXX 1202	Foreign Language 1202	4			

30 Credit Hours for Year

Junior Year					
Course Number	**Course Title**	**Credit Hours**	**General Education**	**W/O Course**	**Notes**
Fall Semester					
PHYS 3121	Classical Mechanics I	3			
PHYS 3283	Advanced Lab in Classical Physics	3	X	W	Or Writing intensive elective if PHYS 3282 taken in following Spring semester
PHYS 3220	Mathematical Methods in Physics	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
Spring Semester					
PHYS 4231	Electromagnetic Theory I	3			
PHYS 3282	Advanced Lab in Modern Physics	3	X	W,O	Or Oral intensive elective if PHYS 3283 taken in previous Fall semester
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			

30 Credit Hours for Year

Senior Year					
Course Number	**Course Title**	**Credit Hours**	**General Education**	**W/O Course**	**Notes**
Fall Semester					
PHYS 4241	Quantum Mechanics I	3			
PHYS XXXX	PHYS elective at 3000 or 4000 level	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
Spring Semester					
PHYS XXXX	PHYS elective at 3000 or 4000 level	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			
XXXX XXXX	Elective	3			

30 Credit Hours for Year

ADVISING RESOURCES

- General Education Requirements for ALL Students: ucol.uncc.edu/general-education
- Undergraduate Catalog: catalog.uncc.edu
- Central Advising website: advising.uncc.edu
- College of Liberal Arts & Sciences advising website: clas.uncc.edu/students/Advising-News/
- University Advising Center website: advisingcenter.uncc.edu