Computer Science and Physics

Department Information

- **Department Location:**
  258 Quentin Burdick Building or 218 South Engineering Hall
- **Department Phone:**
  701-231-8562 or 8974
- **Department Web Site:**
  www.ndsu.edu/cs/ or www.ndsu.edu/physics/ (http://www.ndsu.edu/cs/ or www.ndsu.edu/physics/)
- **Credential Offered:**
  B.S.; B.A.
- **Official Program Curriculum:**
  catalog.ndsu.edu/undergraduate/program-curriculum/computer-science-physics/ (http://catalog.ndsu.edu/undergraduate/program-curriculum/computer-science-physics/)

Since the dawn of the computer age, Computer Science and Physics have been closely intertwined disciplines. Computational physics is now an established branch of physics, complementing experiment and theory, that develops and applies computer modeling approaches to the solution of a wide range of physical problems. At the same time, software development (e.g., for graphics and data mining applications) is increasingly inspired by physics. Computer modeling, including simulation and numerical analysis, is an essential component of modern research and development. Correspondingly, the demand is growing for scientists with multidisciplinary training that combines fundamental knowledge of physics and computer science with practical skills in programming and computation. The Computer Science and Physics dual major program is designed to allow students to complete the core requirements of both majors in a four-year degree. Graduates of the program will have a unique background qualifying them to work in industry or to pursue graduate studies in physics, computer science, engineering, or other technical fields.

Sample Program Guide

IMPORTANT DISCLAIMER: A Sample Program Guide provides an unofficial guide of program requirements and should be used by prospective students who are considering attending NDSU in the future. It is NOT an official curriculum and should NOT be used by current NDSU students for official degree planning purposes. Note that the official curriculum used by current NDSU students can vary from the Sample Program Guide due to a variety of factors such as, but not limited to, start year, education goals, transfer credit, and course availability.

To ensure proper program completion, enrolled students should utilize Degree Map (https://www.ndsu.edu/registrar/degreemap/) and Schedule Planner (https://www.ndsu.edu/onestop/degree-map-and-planning/) in Campus Connection and consult regularly with their academic advisor to ensure requirements are being met.

Freshman			
Fall	**Credits**	**Spring**	**Credits**
PHYS 171	1	ENGL 120	3
MATH 165	4	PHYS 251 & 251L	5
CSCI 160	4	PHYS 251R	1
CSCI 189	1	MATH 129 or 329	3
ENGL 110 (Based on placement)	3	MATH 166	4
Wellness Gen Ed	2	CSCI 161	4
	15		**20**
Sophomore			
Fall	**Credits**	**Spring**	**Credits**
PHYS 252 & 252L	5	PHYS 350	3
PHYS 252R	1	MATH 266	3
MATH 265	4	COMM 110	3
CSCI 213	3	CSCI 336	3
MATH 270	3	Humanities/Fine Arts Gen Ed	3
	16		**15**

Junior			
Fall	**Credits**	**Spring**	**Credits**
PHYS 360	3	PHYS 370	3
CSCI 366	3	ENGL 324	3
PHYS 355	3	PHYS 361	3
Social/Behavioral Sci and Cult Diversity Gen Ed	3	CSCI 372	3
Humanities/Fine Arts & Global Perspectives Gen Ed	3	CSCI 374	3
	15		**15**
Senior			
Fall	**Credits**	**Spring**	**Credits**
PHYS 462	3	PHYS 489	2
Physics Elective	3	CSCI 467	3
CSCI 474	3	PHYS 486	3
CSCI 4XX Computer Science Elective	3	CSCI 313	3
PHYS 485	3	or CSCI 4XX Computer Science Elective	
PHYS 488	1	Humanities/Fine Arts Gen Ed	3
		Social/Behavioral Science Gen Ed	3
	16		**17**

Total Credits: 129