

Suggested Study plan for  
**Bachelor of Science BS**  
in  
**Computer Science**  
**N(DU) & PSU**  
**2+2 Dual Degree Program**



(Established under Section 3 of UGC Act, 1956)  
Placed under Category 'A' by MHRD, GoI | Accredited with 'A+' Grade by NAAC

## NMAMIT Bachelor of Computer Science (B.Tech. CSE) Program to the PSU Bachelor of Science in Computer Science (COMP\_BS)

<https://bulletins.psu.edu/undergraduate/colleges/capital/computer-science-bs/>

**Table of Core and Major Specific Courses to be completed at NMAMIT.  
during Semesters I, II, III & IV**

NMAMIT Number	Subject	NMAMIT Credits	PSU Course Equivalent	PSU Credits
CS1004-1	Introduction to C Programming	3	CMPSC 131: Introduction to Prog. Techniques	3
CS1005-1	Introduction to Python Programming	3	CMPSC 132: Programming and Computation II: Data Structures	3
CS2001-1	Data Structures	4	CMPSC 221: OOP with Web Based Applications	3
CS2002-1	Object Oriented Programming	4		
CS1102-1	Front End Web Development	3		
CS2101-1	Computer Organization & Architecture	3	CMPSC 312: Computer Organization and Architecture	3
CS3005-1	Microcontroller and embedded systems	4		
IS1603-1	UNIX and Shell Programming	3	CMPSC 300/400 Technical Elective	3
MA1007-1	Discrete Mathematics & Transform Techniques	4	CMPSC 360: Discrete Mathematics	3
EC1002-1	Applied Digital Logic Design	3	CMPSC 1xx	5
MA1009-1	Engineering Mathematics-I	4	MATH 140: Calc with Analytical Geometry I	4
MA1010-1	Engineering Mathematics II	4	MATH 141: Calc with Analytical Geometry II	4
MA2011-1	Engineering Mathematics- III	3	MATH/STAT 318: Elementary Probability	3
MA2001-1	Statistics and Probability Theory	3		
MA2012-1	Engineering Mathematics- IV	3	MATH 220: Matrices	2

CV1003-1	Elements of Civil Engineering and Engineering Mechanics	4	PHYS 211: General Physics: Mechanics	4
PH1004-1 PH1002-1	Quantum Computing and Modern Physics Engineering Physics III	4 2	GN credits	3.5
HU1501-1 HU1508-1	Elements of Yoga Principles of Physical Education	3 3	Health and Wellness GHW	3
HU1509-1 HU1510-1	Indian Culture- Yakshagana Indian Culture-Music	3 3	Art GA	4.5 –
HU1506-1 HU1511-1 MG1507-1 HU1512-1 or (HU1001-1 and HU2002-1)  MA	Overview of Indian Culture Engineering Ethics Engineering Economics & Financial Management Art of Communication and Interpersonal Skills (Technical English and Enhancing Self-Competence)	3 3 3 3 or (2 and 2)	Humanities GH –  ENGR 320Y Design for Global Society GS/US/IL – GS/Interdomain	3 3 3
Total Credits	NMAMIT	84-85	PSU	60

## Suggested Academic Plan for the Third and Fourth Years of Study at the Pennsylvania State University – Harrisburg

### Bachelor of Science in Computer Science (COMP\_BS)

Courses to be completed at Penn State with suggested sequencing by semester, beginning with the Fall semester.

PSU Course	Title	Credits	Semester
ENGL 015S or 030S	Composition	3	5
CAS 100	Effective Speech	3	5
COMPSC 330*	Advanced Programming in C++	3	5
COMPSC 469	Formal Languages with Applications	3	5
	Interdomain and US	3	5
ENGL 202C	Technical Writing GWS	3	6
COMPSC 430	Database Design	3	6
COMPSC 462	Data Structures	3	6
	General Education Course (GN/GA/GH/GS)	3	6
	Open Electives 300-400 level	3	6
COMPSC 463	Des. and Analysis of Algorithms	3	7
COMPSC 472	Operating System Concepts	3	7
COMPSC 487W	Software Eng. and Design	3	7
	COMPSC technical elective	3	7
	COMPSC/MATH technical elective	3	7
COMPSC 460	Princ. of Prog. Languages	3	8
COMPSC 470	Compiler Construction	3	8
COMPSC 488	Computer Science Project	3	8
	COMPSC technical elective	3	8
	COMPSC/MATH technical elective	3	8
Total Credits		PSU	60 credits

\*C-required course

Note: Students must earn a 2.5 or higher-grade point average in the following courses: COMPSC 330, 360, 430, 460, 462, 463, 469, 470, 472, 487W, and 488.