



MIE-SPPU
Institute of Higher Education
Doha-Qatar

*In
Collaboration
With*



**SAVITRIBAI PHULE
PUNE UNIVERSITY**

MIE – SPPU

INSTITUTE OF HIGHER EDUCATION

DOHA-QATAR

Syllabus Structure

Bachelor of Science

Computer Science



Year-I: Semester-I

Subject Code **	Paper Title	Credits
CS-111	Physics-I	3+2
CS-112	Mathematics-I	3
CS-113	Fundamentals of Computing	3
CS-114	Introduction to Digital Technology	2
CS-115 #	Essentials of Life Sciences	2
CS-116	Scientific Communication Skills	1
CS-117	Hands-on-training/Study Tour/Hands-on Workshop/Activity Based Learning	2
Total credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year-I: Semester – II

Subject Code**	Paper Title	Credits
CS-121	Problem Solving using Computer and 'C' Programming (T)	3
CS-122	Database Management Systems(T)	3
CS-123	Practical course based on corresponding theory (P)	2
CS-124	Mathematics – I, II and III (T)	3
CS-125	Electronics – I, II and III (T)	2
CS-126	Statistics – I, II and III (T)	2
CS-127	Qatar History	1
Total Credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year II: Semester -III

Subject Code**	Paper Title	Credits
CS-231	Advanced 'C' Programming (T)	3
CS-232	Relational Database Management Systems (T)	3
CS-233	Practical course based on corresponding theory (P)	2
CS-234	Mathematics – I, II and III (T)	3
CS-235	Electronics – I, II and III (T)	3
CS-236	Statistics – I, II and III (T)	2
Total Credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year II: Semester-IV

Subject Code**	Paper Title	Credits
CS-241	Data Structures and Algorithms – I (T)	3
CS-242	Software Engineering (T)	3
CS-243	Practical course on CS-241(P)	2
CS-244	Mathematics – I, II and III	2
CS-245	Electronics- I, II and III	2
CS-246	Environment Science – I (T)	2
CS-247	Language Communication – I (T)	2
Total Credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year-III: Semester-V

Subject Code**	Paper Title	Credits
CS-351	Data Structures and Algorithms – II(T)	3
CS-352	Computer Networks - I (T)	3
CS-353	Practical course on CS-351(P)	2
CS-354	Mathematics – I, II and III(T)	2
CS-355	Electronics – I, II and III (T)	2
CS-356	Environment Science – II (T)	2
CS-357	Language Communication – II (T)	2
Total Credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year-III: Semester-VI

Subject Code**	Paper Title	Credits
CS-361	Operating Systems – I (T)	2
CS-362	Computer Networks – II (T)	2
CS-363	Practical course based on CS-361 (P)	1
CS-364	Web Technologies – I (T)	2
CS-365	Foundations of Data Science (T)	2
CS-366	Practical course based on CS-364 (P)	1
CS-367	Object Oriented Programming– I (Core Java) (T)	2
CS-368	Theoretical Computer Science and Compiler Construction -I (T)	1
CS-369	Practical Course based on CS-367 (P)	1
CS-3610	Python Programming /R Programming (T)	2
Total Credits		16

** Subject to change as per the digital requirement of final examination norms.

Audit /optional course



Year-IV: Semester-VII

Subject Code**	Paper Title	Credits
CS-471	Operating Systems – II (T)	2
CS-472	Software Testing (T)	2
CS-473	Practical course based on CS-471 (P)	2
CS-474	Web Technologies – II (T)	2
CS-475#	Data Analytics (T)	2
CS-476	Practical course based on CS- 474 and CS-475(P)	2
CS-477	Object Oriented Programming using – II (Advanced Java) (T)	2
CS-478	Theoretical Computer Science and Compiler Construction-II (T)	2
CS-479	Practical Course based on CS-478 (P)	1
CS-4710	Mobile Application Development OR Software Testing Tools (T)	1
Total Credits		16

Year-IV: Semester-VIII

Subject Code**	Paper Title	Credits
CS-481	Project/Internship***/Participation in training program (Outside agencies/Universities/organizations/industries) *** Learning Outcomes for Internship: <ul style="list-style-type: none"> • To develop professional-level skills in diverse branches of Computer Science. • To develop the ability to work independently. • To apply the concepts & strategies of academic study in a live work environment. • To evaluate and use appropriate methods and professional standards in computing practice. • Familiarize the students with different state-of-the-art hardware/ software. • To develop advanced skills in scholarly and technical report/proposal preparation. • To provide opportunities to interact with fellow co-workers/colleagues in the workstation/workplace. 	18
Total Credits		18

Total Credit Points for 4 years B.Sc. Computer Science

SEMESTER	CREDITS
I	16
II	16
III	16
IV	16
V	16
VI	16
VII	16
VIII	18
GRAND TOTAL	130