

M.S. Software Engineering (CTS)

Type of Input & Duration :

- Sponsored employees (with adequate work experience) with a B.Sc. Degree or its equivalent with adequate preparation in Mathematics & Physics, for an Eight Semester programme
- Sponsored employees (with adequate work experience) with Integrated First Degree of BITS or its equivalent, for a Four Semester programme

Special Feature:

This is a specially designed programme for Human Resource Development needs of Cognizant Technology Solutions, Chennai.

Year	First Semester		U	Second Semester		U
I	SECT ZC271	Mathematics I	3	SECT ZC272	Mathematics II	3
	SECT ZC221	Structured Programming	3	SECT ZC222	Advanced Programming Techniques	3
	SECT ZC241	Principles of Management	3	SECT ZC213	Probability & Statistics	3
	SECT ZC261	Digital Electronics & Microprocessors	3	SECT ZC252	Discrete Structures for Computer Science	3
	Total		12	Total		12
II	SECT ZC413	Computer Organization & Architecture	3	SECT ZC421	Computer Networks	3
	SECT ZC415	Data Structures & Algorithms	3	SECT ZC362	Programming Languages & Compiler Construction	3
	SECT ZC461	Software Engineering	3	SECT ZC322	Database Management Systems	3
	SECT ZC432	Object Oriented Programming	3	SECT ZC422	Operating Systems	3
	Total		12	Total		12
III	SECT ZG659	Technical Communication	4	SECT ZG651	Software Architectures	5
	SECT ZG512	Object Oriented Analysis & Design	4	SECT ZG652	Software Maintenance Management	4
	SECT ZG511	Design & Analysis of Algorithms	5	SECT ZG552	Software Testing Methodologies	4
	EBCT ZG511	Overview of e-Business	3	SECT ZG641	Management Information & Decision Support Systems	5
	Total		16	Total		18
IV	SECT ZG661	Software Quality Management	4	SECT ZG629T	Dissertation	20
	SECT ZG517	Usability Engineering	5			
	SECT ZG622	Software Project Management	4			
	SECT ZG513	Network Security	4			
	Total		17			

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Cybage India Ltd., Pune)

Type of Input:

Sponsored employees of Cybage India Ltd., Pune with Integrated First Degree of BITS or its equivalent.

Duration

Normally Four Semesters

Special Feature:

This is a specially designed programme for the Human Resource Development needs of Cybage India Ltd., Pune

Year	First Semester		U	Second Semester		U
I	SECY ZG512	Object Oriented Analysis and Design	4	SECY ZC451	Internetworking Technologies	3
	SECY ZG517	Data Structures and Algorithm Analysis	5	SECY ZG514	Data Warehousing	5
	SECY ZG518	Database Design and Applications	5	SECY ZG651	Software Architectures	5
	SECY ZG562	Software Engineering & Management	5	SECY ZG661	Software Quality Management	4
	Total		19	Total		17
II	SECY ZC351	Organizational Behaviour	3	SECY ZG629T	Dissertation	20
	SECY ZG513	Network Security	4			
	SECY ZG531	Pervasive Computing	4			
	SECY ZG623	Advanced Operating Systems	5			
	Total		16			

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (HCL Chennai)

Type of Input: Sponsored employees of HCL Technologies, Chennai with Integrated First Degree of BITS or its equivalent.
Duration: Normally Four Semesters
Special Feature: This is a specially designed programme for the Human Resource Development needs of HCL Technologies, Chennai

Year	First Semester	U	Second Semester	U
I	SEHT ZC421 Computer Networks	3	SEHT ZC462 Network Programming	3
	SEHT ZG516 Computer Organization & Software Systems	4	SEHT ZG512 Object Oriented Analysis & Design	4
	SEHT ZG517 Data Structures & Algorithm Analysis	5	SEHT ZG623 Advanced Operating Systems	5
	SEHT ZG562 Software Engineering & Management	5	SEHT ZG520 Wireless & Mobile Communication or	5
	SEHT ZG562	5	SEHT ZG518 Database Design & Applications	5
	Total	18	Total	17
II	SEHT ZG552 Software Testing Methodologies	4	SEHT ZG629T Dissertation	20
	SEHT ZG573 Digital Signal Processing or	3		
	SEHT ZC451 Internetworking Technologies	5		
	SEHT ZG591 Optical Communication or			
	SEHT ZG514 Data Warehousing	4		
	SEHT ZG513 Network Security or			
SEHT ZG651 Software Architectures	5			
	Total	16/17	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (iGate-Patni, Mumbai)

Type of Input: Sponsored employees of iGate-Patni with Integrated First Degree of BITS or its equivalent.
Duration: Normally Four Semesters
Special Feature: This is a specially designed programme for Human Resource Development needs of iGate-Patni, Mumbai

Year	First Semester	U	Second Semester	U
I	SEPC ZC421 Computer Networks	3	SEPC ZC462 Network Programming	3
	SEPC ZG512 Object Oriented Analysis and Design	4	SEPC ZG514 Data Warehousing	5
	SEPC ZG517 Data Structures and Algorithm Analysis	5	SEPC ZG623 Advanced Operating Systems	5
	SEPC ZG518 Database Design and Applications	5	SEPC ZG651 Software Architectures	5
		Total	17	Total
II	SEPC ZC451 Internetworking Technologies	3	SEPC ZG629T Dissertation	20
	SEPC ZG513 Network Security	4		
	SEPC ZG552 Software Testing Methodologies	4		
	SEPC ZG562 Software Engineering and Management	5		
	Total	16	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Persistent)

Type of Input: Sponsored employees of Persistent Systems Pvt. Ltd., Pune with Integrated first degree of BITS or its equivalent.

Duration Normally Four Semesters

Special Feature: This is a specially designed programme for Human Resource Development needs of Persistent Systems Pvt. Ltd., Pune.

Year	First Semester	U	Second Semester	U
I	SEPS ZG512 Object Oriented Analysis and Design	4	SEPS ZG651 Software Architectures	5
	SEPS ZG517 Data Structures and Algorithm Analysis	5	SEPS ZC451 Internetworking Technologies	3
	SEPS ZG518 Database Design and Applications	5	SEPS ZG514 Data Warehousing	5
	SEPS ZG562 Software Engineering & Management	5	SEPS ZG552 Software Testing Methodologies	4
	Total	19	Total	17
II	SEPS ZC462 Network Programming	3	SEPS ZG629T Dissertation	20
	SEPS ZG623 Advanced Operating Systems	5		
	SEPS ZG513 Network Security	4		
	SEPS ZG531 Pervasive Computing	4		
	Total	16	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Sabre Travel Technologies, Bangalore)

Type of Input Sponsored employees of Sabre Travel Technologies, Bangalore with First Degree of BITS or its equivalent and adequate, relevant work experience.

Duration Normally 4-Semesters.

Special Feature: This is a specially designed programme for Human Resource Development needs of Sabre Travel Technologies, Bangalore.

Year	First Semester	U	Second Semester	U
I	SEST ZC421 Computer Networks	3	SEST ZC473 Multimedia Computing	3
	SEST ZG516 Computer Organization & Software Systems	5	SEST ZG512 Object Oriented Analysis and Design	4
	SEST ZG517 Data Structures and Algorithm Analysis	5	SEST ZG514 Network Security	4
	SEST ZG518 Database Design and Applications	5	SEST ZG652 Software Maintenance Management	4
	Total	18	Total	15
IV	SEST ZC425 Data Mining	3	SEST ZG629T Dissertation	20
	SEST ZG531 Pervasive Computing	4		
	SEST ZG651 Software Architectures	5		
	SEST ZG661 Software Quality Management	4		
Total	16	Total	20	

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (SAP Labs India, Bangalore)

Type of Input & Duration : Sponsored employees (with adequate work experience) with a B.Sc. Degree or its equivalent with adequate preparation in Mathematics & Physics, for an Eight Semester programme

Special Feature: This is a specially designed programme for Human Resource Development needs of SAP Labs India, Bangalore.

Year	First Semester		U	Second Semester		U
I	SESAP ZC211	Mathematics I	3	SESAP ZC212	Mathematics II	3
	SESAP ZC221	Structured Programming	3	SESAP ZC222	Advanced Programming Techniques	3
	SESAP ZC241	Principles of Management	3	SESAP ZC213	Probability & Statistics	3
	SESAP ZC261	Digital Electronics & Microprocessors	3	SESAP ZC252	Discrete Structures for Computer Science	3
	Total		12	Total		12
II	SESAP ZC413	Computer Organization & Architecture	3	SESAP ZC421	Computer Networks	3
	SESAP ZC415	Data Structures & Algorithms	3	SESAP ZC362	Programming Languages & Compiler Construction	3
	SESAP ZC461	Software Engineering	3	SESAP ZC322	Database Management Systems	3
	SESAP ZC432	Object Oriented Programming	3	SESAP ZC422	Operating Systems	3
	Total		12	Total		12
III	SESAP ZC462	Network Programming	3	SESAP ZC451	Internetworking Technologies	3
	SESAP ZG511	Design & Analysis of Algorithms	5	SESAP ZG514	Data Warehousing	5
	SESAP ZG512	Object Oriented Analysis & Design	4	SESAP ZG552	Software Testing Methodologies	4
	SESAP ZG659	Technical Communication	4	SESAP ZG651	Software Architectures	5
	Total		16	Total		17
IV	SESAP ZC425	Data Mining	3	SESAP ZG629T	Dissertation	20
	SESAP ZG513	Network Security	4			
	SESAP ZG622	Software Project Management	4			
	SESAP ZG661	Software Quality Management	4			
	Total		15	Total		20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (SAP Labs India, Bangalore)

Type of Input Sponsored employees of Sap Labs, Bangalore with First Degree of BITS or its equivalent and adequate, relevant work experience.

Duration Normally 4-Semesters.

Special Feature: This is a specially designed programme for Human Resource Development needs of Sap Labs India, Bangalore.

Year	First Semester		U	Second Semester		U
III	SESAP ZC421	Computer Networks	3	SESAP ZG659	Technical Communication	4
	SESAP ZG512	Object Oriented Analysis & Design	4	SESAP ZG514	Data Warehousing	5
	SESAP ZG517	Data Structures and Algorithm Analysis	5	SESAP ZG552	Software Testing Methodologies	4
	SESAP ZG518	Database Design and Applications	5	SESAP ZG651	Software Architectures	5
	Total		17	Total		18
IV	SESAP ZC425	Data Mining	3	SESAP ZG629T	Dissertation	20
	SESAP ZG652	Software Maintenance Management	4			
	SESAP ZG622	Software Project Management	4			
	SESAP ZG661	Software Quality Management	4			
	Total		15	Total		20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Mahindra Satyam, Hyderabad)

Type of Input: Sponsored employees of Satyam Computer Services with Integrated First Degree of BITS or its equivalent.
Duration Normally Four Semesters
Special Feature: This is a specially designed programme for the Human Resource Development needs of Mahindra Satyam, Hyderabad

Year	First Semester	U	Second Semester	U
I	SESL ZC421 Computer Networks	3	SESL ZC462 Network Programming	3
	SESL ZG512 Object Oriented Analysis and Design	4	SESL ZC473 Multimedia Computing	3
	SESL ZG517 Data Structures & Algorithms Analysis	5	SESL ZG513 Network Security	4
	SESL ZG562 Software Engineering & Management	5	SESL ZG518 Data Base Design and Applications	5
	Total	17	Total	15
II	SESL ZG514 Data Warehousing	5	SESL ZG629T Dissertation	20
	SESL ZG531 Pervasive Computing	4		
	SESL ZG552 Software Testing Methodologies	4		
	SESL ZG651 Software Architectures	5		
	Total	18	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Tech Mahindra, Pune)

Type of Input & Duration : Sponsored employees (with adequate work experience) with a B.Sc. Degree or its equivalent with adequate preparation in Mathematics & Physics, for an Eight Semester programme
Special Feature: This is a specially designed programme for Human Resource Development needs of Tech Mahindra, Pune.

Year	First Semester	U	Second Semester	U
I	SEMB ZC211 Mathematics I	3	SEMB ZC212 Mathematics –II	3
	SEMB ZC223 Advanced Programming Techniques	3	SEMB ZC461 Software Engineering	3
	SEMB ZC241 Principles of Management	3	SEMB ZC213 Probability and Statistics	3
	SEMB ZC261 Digital Electronics & Microprocessors	3	SEMB ZC252 Discrete Structures for Computer Science	3
	Total	12	Total	12
II	SEMB ZC413 Computer Organization and Architecture	3	SEMB ZC421 Computer Networks	3
	SEMB ZC415 Data Structure and Algorithms	3	SEMB ZG659 Technical Communication	4
	SEMB ZC432 Object Oriented Programming	3	SEMB ZC351 Organizational Behaviour	3
	SEMB ZC322 Database Management Systems	3	SEMB ZC422 Operating Systems	3
	Total	12	Total	12
III	SEMB ZG651 Software Architectures	5	SEMB ZG514 Data Warehousing	5
	SEMB ZG512 Object Oriented Analysis and Design	4	SEMB ZG513 Network Security	4
	SEMB ZG511 Design and Analysis of Algorithms	5	SEMB ZG582 Telecom Network Management	5
	SEMB ZC473 Multimedia Computing	3	SEMB ZC462 Network programming	3
	Total	17	Total	17
IV	SEMB ZG661 Software Quality Management	4	SEMB ZG629T Dissertation	20
	SEMB ZG552 Software Testing Methodologies	4		
	SEMB ZG622 Software Project Management	4		
	SEMB ZC451 Internetworking Technologies	3		
	Total	15	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Patni)

Type of Input & Duration :

Sponsored employees (with adequate work experience) with a B.Sc. Degree or its equivalent with adequate preparation in Mathematics & Physics, for an Eight Semester programme

Special Feature:

This is a specially designed programme for Human Resource Development needs of Wipro Technologies, Bangalore and iGate-Patni, Mumbai.

Year	First Semester		U	Second Semester		U
I	SE* ZC211	Mathematics I	3	SE* ZC212	Mathematics II	3
	SE* ZC221	Structured Programming	3	SE* ZC222	Advanced Programming Techniques	3
	SE* ZC252	Discrete Structures for Computer Science	3	SE* ZC213	Probability & Statistics	3
	SE* ZC261	Digital Electronics & Microprocessors	3	SE* ZC241	Principles of Management	3
	Total		12	Total		12
II	SE* ZC413	Computer Organization & Architecture	3	SE* ZC421	Computer Networks	3
	SE* ZC415	Data Structures & Algorithms	3	SE* ZC362	Programming Languages & Compiler Construction	3
	SE* ZC461	Software Engineering	3	SE* ZC322	Database Management Systems	3
	SE* ZC432	Object Oriented Programming	3	SE* ZC422	Operating Systems	3
	Total		12	Total		12
III	SE* ZG659	Technical Communication	4	SE* ZG651	Software Architectures	5
	SE* ZG512	Object Oriented Analysis & Design	4	SE* ZG661	Software Quality Management	4
	SE* ZG511	Design & Analysis of Algorithms	5	SE* ZC473	Multimedia Computing	3
	SE* ZC462	Network Programming	3	SE* ZC451	Internetworking Technologies	3
	Total		16	Total		15
IV	SE* ZG514	Data Warehousing	5	SE* ZG629T	Dissertation	20
	SE* ZG552	Software Testing Methodologies	4			
	SE* ZG622	Software Project Management	4			
	SE* ZG513	Network Security	4			
	Total		17	Total		20

Note 1: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

Note 2: For the course number in the above chart the symbol * can be substituted by **PC** for Patni.

M.S. Software Engineering In Collaboration with Wipro Technologies, Bangalore

Type of Input

: Sponsored employees (with adequate relevant work experience) with a B.Sc. Degree or its equivalent with adequate preparation in Mathematics & Physics, for an Eight Semester programme

Duration

: Eight Semesters

Special Feature

: This is a specially designed Work-Integrated Learning Programme for the HRD requirements of sponsored employees of Wipro Technologies, Bangalore.

Semesterwise Pattern

Year	First Semester		U	Second Semester		U
I	SEWP ZC132	Linear Algebra & Optimization	3	SEWP ZC222	Advanced Programming Techniques	3
	SEWP ZC142	Computer Programming	3	SEWP ZC332	Systems Programming	3
	SEWP ZC252	Discrete Structures for Computer Science	3	SEWP ZC413	Computer Organization & Architectures	3
	SEWP ZC261	Digital Electronics & Microprocessors	3	SEWP ZC415	Data Structures & Algorithms	3
	Total		12	Total		12
II	SEWP ZC213	Probability & Statistics	3	SEWP ZC416	Compiler Design	3
	SEWP ZC422	Operating Systems	3	SEWP ZC421	Computer Networks	3
	SEWP ZC322	Database Management Systems	3	SEWP ZC472	Computer Graphics	3
	SEWP ZC461	Software Engineering	3	SEWP ZC424	Software Development for Portable Devices	3
	Total		12	Total		12
III	SEWP ZG514	Data Warehousing	5	SEWP ZG622	Software Project Management	4
	SEWP ZG512	Object Oriented Analysis & Design	4	SEWP ZG552	Software Testing Methodologies	4
	SEWP ZG524	Real time Operating Systems	5	SEWP ZC425	Data Mining	3
	SEWP ZC473	Multimedia Computing	3	SEWP ZG511	Design & Analysis of Algorithms	5
	Total		17	Total		16
IV	SEWP ZG651	Software Architectures	5	SEWP ZG629T	Dissertation	20
	SEWP ZC446	Data Storage Technologies & Networks	3			
	SEWP ZC444	Cloud Computing	4			
	SEWP ZG513	Network Security	4			
	Total		16	Total		20

Note 1: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

M.S. Software Engineering (Yahoo!, Bangalore)

Type of Input Sponsored employees of Yahoo! Software Development India Private Limited, Bangalore with First Degree of BITS or its equivalent and adequate, relevant work experience.

Duration Normally 4-Semesters.

Special Feature: This is a specially designed programme for Human Resource Development needs of Yahoo! Software Development India Private Limited, Bangalore.

Year	First Semester	U	Second Semester	U
I	SEYI ZC421 Computer Networks	3	SEYI ZC473 Multimedia Computing	3
	SEYI ZG516 Computer Organization & Software Systems	5	SEYI ZG512 Object Oriented Analysis and Design	4
	SEYI ZG517 Data Structures and Algorithm Analysis	5	SEYI ZG513 Network Security	4
	SEYI ZG518 Database Design and Applications	5	SEYI ZG623 Advanced Operating Systems	5
	Total	18	Total	16
IV	SEYI ZC425 Data Mining	3	SEYI ZG629T Dissertation	20
	SEYI ZG531 Pervasive Computing	4		
	SEYI ZG651 Software Architectures	5		
	SEYI ZG661 Software Quality Management	4		
	Total	16	Total	20

Note: This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.