

Format for Curriculum

School: School of Information Technology and Engineering

Programme: MS-Software Engineering

Curriculum

(Applicable to students joining the AY 2012-13)

University Core (UC)

Course Code	Course Title	LTPC	Pre-requisite *
CHY104	Environmental studies	3 0 0 3	None
CHY101	Engineering Chemistry	2 1 2 4	None
ENG 001	Effective English (Optional-If English Eligibility test is not cleared)	3 0 0 -	None
ENG101	English for Engineers – I	3 0 0 3	None
ENG102	English for Engineers- II	3 0 0 3	ENG 101
MAT101	Multivariable Calculus and Differential Equations	3 1 0 4	MAT 001 (or) Maths
MGT301	Ethics and Values	3 0 0 3	None
PHY 101	Modern Physics	3 0 2 4	None
ITE 101	Problem Solving using C (or)Computer Programming and Problem solving(CSE 101)	2 0 2 3	None
SWE 498	Comprehensive Examination	- - - 2	Completion of 180 credits
	Foreign Language	2 0 0 2	None
Total credits under UC			31

Programme Core (PC)

Course Code	Course Title	LTPC	Pre-requisite *
EEE101	Basic Electrical and Electronics Engineering	3 0 2 4	None
ITE 203	Data Structures and Algorithms in C	3 1 0 4	ITE 101
ITE 204	Data Structures and Algorithms Lab	0 0 3 2	ITE 101
ITE 205	Digital Electronics and Microprocessor	3 0 0 3	EEE 101
ITE 206	Digital Electronics and Microprocessor Lab	0 0 3 2	EEE 101
MAT105	Differential and Difference Equations	3 1 0 4	MAT 101
MAT106	Discrete Mathematical Structures	3 1 0 4	None
MAT 202	Linear Algebra	3 1 0 4	Maths at +2 level
MAT207	Applied Probability, Statistics and Reliability	3 1 0 4	MAT 101
SWE 101	Object Oriented Programming using C++	3 0 0 3	ITE 101
SWE 102	Object Oriented Programming Lab	0 0 3 2	ITE 101
SWE 203	Computer Architecture and Organisation	3 0 0 3	ITE 205
SWE 204	Programming in JAVA	3 0 0 3	SWE 101
SWE 205	Programming in JAVA Lab	0 0 3 2	SWE 101
SWE 206	Object Oriented Analysis and Design	3 0 0 3	SWE 101
SWE 207	Object Oriented Analysis and Design Lab	0 0 3 2	SWE 101
SWE 301	Theory of Computation	3 0 0 3	MAT 106
SWE 303	Database Management Systems	3 0 0 3	ITE 203
SWE 304	Database Management Systems Lab	0 0 3 2	ITE 203
SWE 305	Operating Systems	3 0 0 3	ITE 203
SWE 306	Operating Systems Lab	0 0 3 2	ITE 203
SWE 307	Principles of Software Engineering	3 0 0 3	SWE 101
SWE 308	Computer Networks	3 0 0 3	SWE 305, SWE 306
SWE 309	Computer Networks Lab	0 0 3 2	SWE 305, SWE 306
SWE 310	Requirements Engineering and Management	3 0 0 3	SWE 206
SWE 311	Internet and Web Programming	3 0 0 3	SWE 204
SWE 312	Internet and Web Programming Lab	0 0 3 2	SWE 204
SWE 401	Software Architecture and Design	3 0 0 3	SWE 310
SWE 402	Case Tools Lab-I	0 0 3 2	SWE 310
SWE 403	System Programming	3 0 0 3	ITE 203
SWE 404	System Programming Lab	0 0 3 2	ITE 203
SWE 405	Software Construction and Maintenance	3 0 0 3	SWE 307
SWE 406	Software Project Management	3 0 0 3	SWE 310
SWE 407	Open Source Programming	3 0 0 3	SWE 311
SWE 408	Open Source Programming Lab	0 0 3 2	SWE 311
SWE 409	Web Services and Service Oriented Architecture	3 0 0 3	SWE 311

SWE 410	Web Services Lab	0 0 3 2	SWE 311
SWE 497	Mini Project(Team Based)	- - - 8	SWE 307,Completion of 140 Creditis
SWE 411	Software Testing	3 0 0 3	SWE 405
SWE 412	Software Testing Lab	0 0 3 2	SWE 405
SWE 501	Design Patterns	3 0 0 3	SWE 206,SWE 401
SWE 502	Principle of User Interface Design	3 0 0 3	SWE 307,SWE 401
SWE 503	Software Configuration Management	3 0 0 3	SWE 307,SWE 405
SWE 504	Software Quality and Reliability	3 0 0 3	SWE 307,SWE 405
SWE 505	Software Metrics	3 0 0 3	SWE 411
SWE 506	Software Metrics Lab	0 0 3 2	SWE 411
SWE 509	Distributed Computing	3 0 0 3	SWE 305, SWE 306
SWE 510	Artificial Intelligence and Intelligent Systems	3 0 0 3	SWE 301
SWE 599	Major Projcet(Individual)	- - - 20	SWE 502, SWE 498
SWE 511	Information and System Security	3 0 0 3	SWE 308, SWE 309
SWE 512	Software Engineering Process Tools and Methods	3 0 0 3	SWE 411
SWE 513	Case Tools Lab-II	0 0 3 2	SWE 411
Total credits under PC			168

Programme Elective (PE)

Course Code	Course Title	LTPC	Pre-requisite *
SWE 413	Data Warehousing and Data Mining	3 0 0 3	SWE 303, SWE 304
SWE 414	E-Commerce	3 0 0 3	SWE 311,SWE 312
SWE 415	Biometric Systems	3 0 0 3	SWE 307
SWE 416	Enterprise Resource Planning	3 0 0 3	SWE 303, SWE 304
SWE 417	Geographic Information Systems	3 0 0 3	SWE 303, SWE 304
SWE 418	Basic Bioinformatics	3 0 0 3	SWE 307
SWE 419	Multimedia Computing	3 0 0 3	SWE 311,SWE 312
SWE 420	Natural Language Processing	3 0 0 3	IT 203, IT 204
SWE 421	Embedded Systems	3 0 0 3	SWE 203
SWE 422	Semantic Web Technologies	3 0 0 3	SWE 311,SWE 312
SWE 423	Mobile Device Programming	3 0 0 3	SWE 311,SWE 312
SWE 424	Multicore Architectures and Programming	3 0 0 3	SWE 203
SWE 425	Management Information Systems	3 0 0 3	SWE 303, SWE 304
SWE 426	Service Science	3 0 0 3	SWE 307
SWE 427	Formal Methods in Software Engineering	3 0 0 3	SWE 307
SWE 514	Automotive Software Engineering	3 0 0 3	SWE 307
SWE 515	Advanced Database Technologies	3 0 0 3	SWE 303, SWE 304
SWE 516	Domain Engineering	3 0 0 3	SWE 307
SWE 517	Advanced Java Programming	3 0 0 3	SWE 311,SWE 312
SWE 518	Software Inspection	3 0 0 3	SWE 307
SWE 519	Sensor Networks	3 0 0 3	SWE 308,SWE 309
SWE 520	Real Time Systems	3 0 0 3	SWE 305,SWE 306
SWE 521	Industrial Automation Systems	3 0 0 3	SWE 307
SWE 522	Storage Technologies	3 0 0 3	SWE 305,SWE 306
SWE 523	High Performance Computing	3 0 0 3	SWE 506
SWE 524	Linux System Programming	3 0 0 3	SWE 305,SWE 306
SWE 525	Mobile and Pervasive Computing	3 0 0 3	SWE 506
SWE 526	Digital Image Processing	3 0 0 3	ITE 203,ITE 204
SWE 527	Knowledge Management Systems	3 0 0 3	SWE 510
SWE 528	Software Reuse	3 0 0 3	SWE 307
Minimum credits to be earned under PE(5 Course)			15

University Elective (UE)

Course Code	Course Title	LTPC	Pre-requisite *
	University Elective-I	3 0 0 3	None
	University Elective –II	3 0 0 3	None
Total credits under UE			6



VIT
UNIVERSITY



SCHOOL OF INFORMATION TECHNOLOGY & ENGINEERING (SITE)

SOFTWARE ENGINEERING DIVISION

M.S (SOFTWARE ENGINEERING) - FIVE YEAR INTEGRATED PROGRAMME
COURSE FLOW CHART
(2009 – 2010 Onwards)



