

## ANNEXURE – I

# St. Vincent Pallotti College of Engineering & Technology, Nagpur

## Department of Vocation (B. VOC) Teaching Scheme for B.VOC Second Year 2025-26 SEMESTER III (CYBER SECURITY)

Sr. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem. Examination	Total
<b>General Education Component (GEC)</b>									
1	25BV301T	Business Communication Skills – III	3			3	40	60	100
2	25BV302T	Applied Computer Skills – III	3			3	40	60	100
3	25BV301P	Business Communication Skills – III Lab			3	3	25	25	50
4	25BV302P	Applied Computer Skills – III Lab			3	3	25	25	50
<b>Total – GEC</b>			<b>6</b>		<b>6</b>	<b>12</b>	<b>130</b>	<b>170</b>	<b>300</b>
<b>Skill Education Component (SEC)</b>									
5	25CY303S	Software Testing (*)	4		8	12	50	100 (***)	150
6	25CY304S	Skill Development –III (**)			4	4	50	--	50
7	25CY305S	Operating systems for Cyber Security	2			2	50	--	50
<b>Total – SEC</b>			<b>6</b>		<b>12</b>	<b>18</b>	<b>150</b>	<b>100</b>	<b>250</b>
<b>Grand Total</b>			<b>12</b>	<b>-</b>	<b>18</b>	<b>30</b>	<b>280</b>	<b>270</b>	<b>550</b>

Assessment Competent Authority: General Education Component 25BV301T/P, 25BV302T, Skill component 25CY304S, 25CY305S: By college,  
(\*) Software Testing:- NASSCOM QP-SSC/Q1301 Test Engineer-ITS, NOS:SSC/N1301, N1302,N1303, NOS:,SSC/N9001, SSC/N9002, SSC/N9003, SSC/N9004, SSC/N9005

(\*\*) Skill Development-III: E – Courses & Skill workshops

(\*\*\*) 25CY303S Assessment by Sector Skill Council – IT-ITeS -NASSCOM

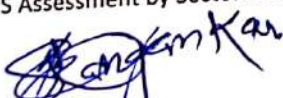
## SEMESTER IV (CYBER SECURITY)


Sr. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem. Examination	Total
<b>General Education Component (GEC)</b>									
1	25BV401T	Business Communication Skills – IV	3			3	40	60	100
2	25BV402T	Employability Skills - I	3			3	40	60	100
3	25BV401P	Business Communication Skills – IV Lab			3	3	25	25	50
4	25BV402P	Employability Skills - I Lab			3	3	25	25	50
<b>Total – GEC</b>			<b>6</b>		<b>6</b>	<b>12</b>	<b>130</b>	<b>170</b>	<b>300</b>
<b>Skill Education Component (SEC)</b>									
5	25CY403S	Application Security (*)	4		8	12	50	100 (***)	150
6	25CY404S	Skill Development- IV (**)			4	4	50	--	50
7	25CY405S	Vulnerability Assessment	2			2	50	--	50
<b>Total – SEC</b>			<b>6</b>		<b>12</b>	<b>18</b>	<b>150</b>	<b>100</b>	<b>250</b>
<b>Grand Total</b>			<b>12</b>	<b>-</b>	<b>18</b>	<b>30</b>	<b>280</b>	<b>270</b>	<b>550</b>


Assessment Competent Authority: General Education Component 25BV401T/P, 25BV402T/P, Skill component 25CY404S, 25CY405S: By college,  
(\*) Application Security:-SSC/QP – SSC/Q0903 Analyst Application Security, SSC/N909, N910, N911, NOS: SSC/N9001, SSC/N9002, SSC/N9003,

SSC/N9004, SSC/N9005 (\*\*) Skill Development-IV: E – Courses & Skill workshops

(\*\*\*) 25CY303S Assessment by Sector Skill Council – IT-ITeS -NASSCOM

  
Dr. Suresh Rangankar  
BOS, Chairman (B.VOC)

  
Dr. Promod Lanjewar  
Dean( Academics)

  
Dr. Vijay Wadhwa  
Principal

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**B.VOC. Scheme of Examination & Syllabus 2025-26****CYBER SECURITY****THIRD SEMESTER**

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV301T	Business Communication Skills-III	3			3	40	60	100

Course Objectives	Course Outcomes
1.To develop communication skills among students from employability point of view.	1. To recall English Grammar. 2. To apply writing skills. 3.To develop Comprehension Skills.. 4. To demonstrate Communication skills..
<b>Unit I</b>	<b>[10 Hrs]</b>
Revisiting Grammar: Forming sentences, using conditionals, question tags, Direct-Indirect Speech, Clauses	
<b>Unit II</b>	<b>[10 Hrs]</b>
Writing Skills: Paragraph Writing, Paraphrasing, Newspaper Reports and Articles, Dialogue Writing	
<b>Unit III</b>	<b>[10Hrs]</b>
Comprehension Skills: Converting Verbal Information to non-verbal and Vice versa, Reproducing Stories and Paragraphs, Expansion of passages.Interpretation of Visuals: Graphs, Charts, Diagrams, Tables.	
<b>Unit IV</b>	<b>[15 Hrs]</b>
Communication Skills 3.0: Situational Conversation, Corporate Role Plays, Corporate Meetings, Etiquette and Mannerism, Short Talks.	

**Text Books**

S.N	Title	Authors	Edition	Publisher
1	Merchant English for Practical purpose	Z. N.Patil, B. S.Valke, Ashok Thorat	Revised	Macmillan
2	Foundation English	Dwivedi & Kumar	Student	Macmillan
3	Grant English Conversational Practice	Grant Taylor	First	Tata McGraw-Hill
4	Strengthen your English	Bhaskaran & Horsburgh	2020	Oxford University Press (1 November 1997)

**Reference Books**

S.N	Title	Authors	Edition	Publisher
1				

		July-2025	2	Applicable for 2025-26
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### CYBER SECURITY

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#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV301P	Business Communication English-III Lab			3	3	25	25	50

Course Objectives	Course Outcomes
1.To develop communication skills among students from employability point of view.	1. To recall English Grammar. 2. To apply writing skills. 3.To develop Comprehension Skills.. 4. To demonstrate Communication skills..

Practical No	Title of the Practical
1	Sentence Formations (Use Conditionals, Question Tags and Direct & Indirect Speech)
2	Paraphrasing - Take 3 Online Articles on any subject and pick paragraphs from them and Paraphrase them in your own words.
3	Write 2 News Articles, one for an Accident you witnessed and one for an Event that was celebrated in your college (Word Limit 300 Words) Use Inverse Pyramid.
4	Write a Dialogue between two people who have just joined a new college and are facing trouble adjusting to new environment.
5	Take 2 Stories of your choice from any source (Online/books) write these stories in your own words.
6	Design a Situational Conversation between an Executive and a Manager (Sales Team).
7	Corporate Meetings - Discuss how a Corporate meeting is conducted. And discuss the Etiquette and Manners you need to know during a Meeting.
8	Explain Visual Representation? Take 1 chart, 1 table and 1 diagram from any source and explain what it depicts in your own words.

#### Text Books

S.N	Title	Authors	Edition	Publisher
1	Merchant English for Practical purpose	Z. N.Patil, B. S.Valke, Ashok Thorat		Macmillan
2	Foundation English	Dwivedi & Kumar		Macmillan
3	Grant English Conversational Practice	Taylor		Tata McGraw-Hill
4	Bhaskaran & Horsburgh	Strengthen your English		Oxford University Press (1 November 1997)

		July-2025	2	Applicable for 2025-26
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**CYBER SECURITY**

**THIRD SEMESTER**

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV302T	Applied Computer skills-III	3			3	40	60	100

Course Objectives	Course Outcomes
1.To learn MIS concepts 2. To design system	1. To understand the System concepts 2. To identify different system life cycle of MIS. 3.To analyse and design system development life cycle. 4. To illustrate E-R diagrams in MIS.
<b>Unit I</b>	<b>[10 Hrs]</b>
MIS – Systems Concepts – Systems approach, characteristics, Types of systems; Elements input, Output, environment, Boundary Interface, Feedback & Control	
<b>Unit II</b>	<b>[12 Hrs]</b>
Systems Life cycle: MIS, TPS, OAS, DSS, KWS, Value of information, information life cycle, data vs information, Components of MIS, Characteristics of MIS.	
<b>Unit III</b>	<b>[11Hrs]</b>
System Analysis & Design : System development life cycle, modeling the required system.	
<b>Unit IV</b>	<b>[12 Hrs]</b>
E-R diagrams, ELHs, ECDs, user view of processing, modeling input output data.	

**Text Books**

S.N	Title	Authors	Edition	Publisher
1	Microsoft office – 2008	Gini Courter,Annelte Marquis		BPB Publications
2	An Introduction To Database Management System	Bipin C. Desai		Galgotia Pub
3	Database Management Design	CSV Murthy		Himalaya
4	Management Information System	Goyal. Jawdekar		TMH Publications

**Reference Books**

S.N	Title	Authors	Edition	Publisher
1	Information Technology Today	S.Jaiswal	4 <sup>th</sup> edition	Galgotia Pub
2	A First Course in Computer	Sanjay Saxena	2003	Vikas publishing house
3	First Text Book On Information Technology	Srikant Patnaik	1st	Dhanpat Rai & Co. (P) Ltd (Publisher)
4	Guide to Microsoft Access	Carl Townsend	1st	Independently published

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### CYBER SECURITY

#### THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV302P	Applied Computer Skills-III Lab			3	3	25	25	50

Course Objectives	Course Outcomes
1.To learn MIS concepts. 2. To design system.	1. To understand the System concepts 2. To identify different system life cycle of MIS. 3.To analyze and design system development life cycle. 4. To illustrate E-R diagrams in MIS.

Practical No	Title of the Practical
1	Study of MIS(Management Information system) using cloud CRM.
2	Understanding database concept inserting, creating, imposing key.
3	Understanding inner join in SQL.
4	Understanding left outer join, right outer join, full outer join in SQL.
5	Understanding the class diagram of banking system.
6	Study of use case diagram.
7	To study the sequence diagram of ATM.
8	To study the ER diagram with the help of library management system.

#### Text Books

S.N	Title	Authors	Edition	Publisher
1	Microsoft office – 2008	Gini Courter,Annelte Marquis	1	BPB Publications
2	An Introduction To Database Management System	Bipin C. Desai	1	Galgotia Pub
3	Database Management Design	CSV Murthy	2	Himalaya
4	Management Information System	Goyal. Jawdekar	2	TMH Publications

#### Reference Books

S.N	Title	Authors	Edition	Publisher
1	Information Technology Today	S.Jaiswal	4 <sup>th</sup> edition	Galgotia Pub
2	A First Course in Computer	Sanjay Saxena	2003	Vikas publishing house
3	First Text Book On Information Technology	Srikant Patnaik	1	
4	Guide to Microsoft Access	Carl Townsend	1	

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**CYBER SECURITY**



**THIRD SEMESTER**

COURSE CODE	COURSE NAME	TH	TU	PR	CREDITS	EVALUATION		
						CA	ESE	TOTAL
25CY303S	Software Testing	4		8	12	50	100	150

COURSE OBJECTIVES	COURSE OUTCOMES
<ul style="list-style-type: none"><li>➤ SSC/N1301 (Design tests for software products/ applications/ modules)</li><li>➤ To provide the quality application to the user with the help of different test types .</li></ul>	<p><b>CO1.</b>To understand the testing concept <b>CO2.</b>Demonstrate Testing Throughout the Software Development Life cycle <b>CO3.</b> Verification of documentation and design using static testing <b>CO4.</b> Choose&amp; select the best test design technique to test the application <b>CO5.</b>Test plan test cases , test execution and test results. Identify severity and priority of defects.</p>
<b>UNIT I:</b>	[25 HRS]
What is testing,Typical Objectives of Testing ,Testing and Debugging ,Why is Testing Necessary? ,Testing's Contributions to Success ,Quality Assurance and Testing ,Errors, Defects, and Failures,Defects, Root Causes and Effects ,Seven Testing Principles ,Software Testing life cycle,Test Process in Context ,Test Activities and Tasks,The Psychology of Testing ,Human Psychology and Testing ,Tester's and Developer's Mind sets	
<b>UNIT II:</b>	[25 HRS]
Software Engineering Concepts,Software Development Lifecycle ,Software Development and Software Testing Software Development Lifecycle Models ,Test Levels ,Component Testing,Integration Testing ,System Testing, Acceptance Testing,Test Types,Functional Testing,Non-functional Testing ,White-box Testing ,Change-related Testing,Test Types and Test Levels,Maintenance Testing ,Triggers for Maintenance,Impact Analysis for Maintenance.	
<b>UNIT III:</b>	[25 HRS]
Static Testing Basics,Work Products that Can Be Examined by Static Testing,Benefits of Static Testing,Differences between Static and Dynamic Testing.,Review Process,Work Product Review Process,Roles and responsibilities in a formal review,Review Types,Applying Review Techniques.	
<b>UNIT IV:</b>	[30 HRS]
Black-box Test Techniques ,Equivalence Partitioning,Boundary Value Analysis,Decision Table Testing,State Transition Testing ,Use Case Testing,White-box Test Techniques,Statement Testing and Coverage,Decision Testing and Coverage ,The Value of Statement and Decision Testing,Experience-based Test Techniques ,Error Guessing , Exploratory Testing ,Smoke and sanity testing,Positive and negative testing,Regression testing and Re-testing,End to End testing,How to choose which testing technique is best.	
<b>UNIT V:</b>	[15 HRS]
Test Organization ,Independent Testing ,Tasks of a Test Manager and Tester ,Test Plan (Practical on Guru99 Bank Project),Defect Management,Types of Defects ,Defect/Bug Life Cycle,Defect Severity and Defect Priority,Types of Defect Severity and Defect Priority	

**TEXT BOOKS**

SR NO	TITLE	AUTHORS	EDITION	PUBLISHER
1	Software Testing Principles and practice	Shrinivasan , Gopalswamy	2006	Pearson
2	Software Testing	Ron Patton	2006	Pearson
3	Introduction to Software Testing	Paul, Jeff	2008	Cambridge
4	Software Testing & Quality Assurance	Kshirsagar, Priyadarshini		Wiley

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Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25CY304S	Skill Development – III			4	4	50		50


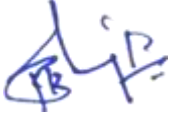
Course Objectives	Course Outcomes
<ol style="list-style-type: none"><li>To categorize, apply and use thought process to distinguish between concepts of Quantitative methods.</li><li>To prepare and explain the fundamentals related to various possibilities and probabilities related to quantitative aptitude.</li><li>To prepare students for TCS Ignite Exam</li></ol>	Students will be able to: <ol style="list-style-type: none"><li>Use their logical thinking and analytical abilities to solve Quantitative aptitude questions from company specific and other competitive tests.</li><li>Demonstrate principles of mathematical problem solving</li><li>Reduce time taken to perform job functions</li><li>Understand and solve puzzle related questions from specific and other competitive tests</li></ol>
<b>Unit I : Numerical Ability -VIII</b>	<b>[15 Hrs]</b>
Speed Distance time, Races and games, Trains, Boats and streams.	
<b>Unit II: Logical Reasoning- III</b>	<b>[15 Hrs]</b>
Syllogisms, Sitting arrangements, Blood Relations.	
<b>Unit III : Data Handling</b>	<b>[15Hrs]</b>
Statistics, Basic Data Calculations, Data Interpretation (DI), Set theory.	
<b>Unit IV : Logical Reasoning- IV</b>	<b>[15 Hrs]</b>
Visual Reasoning, Critical Reasoning, Venn Diagram, Puzzles.	

**Text Books**

S.N	Title	Authors	Edition	Publisher
1	Quantitative aptitude	R S Agarwal	1st	S Chand Publications
2	Verbal and non-verbal Reasoning	R S Agarwal	1st	S Chand Publications

**Reference Books**

S.N	Title	Authors	Edition	Publisher
1	Quantitative Aptitude	Ananta Asisha	Revised	Arihant publications

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**THIRD SEMESTER**

COURSE CODE	COURSE NAME	TH	TU	PR	CREDITS	EVALUATION		
						CA	ESE	TOTAL
25CY305S	OPERATING SYSTEMS FOR CYBER SECURITY	2				50		50

COURSE OBJECTIVES	COURSE OUTCOMES
<p><b>O1.</b> Understanding, Learning and Getting Practical Hands-on experience on Windows OS.</p> <p><b>O2.</b> Understanding, Learning and Getting Practical Hands-on experience on Kali Linux OS.</p>	<p><b>CO1.</b> Understanding the most commonly used OS in India (Windows).</p> <p><b>CO2.</b> Understanding how Windows OS works in Server Environment.</p> <p><b>CO3.</b> Understanding Linux and Kali Linux flavor.</p> <p><b>CO4.</b> Understanding the penetration testing and forensic tools in Kali.</p>



<b>UNIT I: WINDOWS OPERATING SYSTEM - BASICS</b>	[8HRS]
Introduction to Operating Systems, Basics of Virtual Machines, Installing Windows Operating Systems, Basics of Windows 7/8/8.1/10/11/Server 16 & 19 - GUI-based, Basics of Windows 7/8/8.1/10/11/Server 16 & 19 - CMD-based	

<b>UNIT II: WINDOWS OPERATING SYSTEM – ADVANCED</b>	[8HRS]
Users & Permissions in Windows, File Systems in Windows, Package & Software Management in Windows, Windows Registry, Windows Troubleshooting, Security in Windows, Windows Server - Importance of Active Directory & Domain Controller	

<b>UNIT III: LINUX OPERATING SYSTEM (FLAVOR: KALI) - BASICS</b>	[7HRS]
Introduction to Linux Distributions – 1, Linux File Structure, Cybersecurity Oses in Linux, Basics of Kali Linux (GUI), Basics of Kali Linux (Terminal)	

<b>UNIT IV: LINUX OPERATING SYSTEM (FLAVOR: KALI) - ADVANCED</b>	[7HRS]
Users & Permissions in Kali Linux, Text Editors in Linux, Installing & Running Security Tools in Kali Linux, Linux Troubleshooting, Hands-On Practice and Doubt Solving	

TEXT BOOKS				
SR NO	TITLE	AUTHORS	EDITION	PUBLISHER
1	Operating System Concept	Peter Galvin	Ninth Edition	Wiley
2	The Complete reference	Richard Pterson	Sixth	Mc Graw Hill

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