

St. Vincent Pallotti College of Engineering & Technology, Nagpur

Department of Vocation (B. VOC)
Teaching Scheme for B.VOC First Year 2025-26

SEMESTER I (CYBER SECURITY)

Sr. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem. Examination	Total
General Education Component (GEC)									
1	25BV101T	Business Communication Skills – I	3			3	40	60	100
2	25BV102T	Applied Computer Skills – I	3			3	40	60	100
3	25BV101P	Business Communication Skills – I Lab			3	3	25	25	50
4	25BV102P	Applied Computer Skills – I Lab			3	3	25	25	50
Total – GEC			6		6	12	130	170	300
Skill Education Component (SEC)									
5	25CY103S	Software Development (*)	4		8	12	50	100 (***)	150
6	25CY104S	Skill Development – I (**)			4	4	50	--	50
7	25CY105S	Fundamentals of Cyber Security	2			2	50	--	50
Total – SEC			6		12	18	150	100	250
Grand Total			12		18	30	280	270	550

Assessment Competent Authority: General Education Component 25BV101T/P, 25BV102T/P, Skill component 25CY104S, 25CY105S: By college,

(*) **Software Development :-SSC/QP-SSC/Q0508 Junior Software Developer, NOS:SSC/N0506,SSC/N9001,SSC/N9002,SSC/N9003,SSC/N9004,SSC/N9005**

(**) **Skill Development-I: E-Courses & Skill workshops**

(***) **25CY103S Assessment by Sector Skill Council – IT-ITeS -NASSCOM**

SEMESTER II (CYBER SECURITY)


Sr. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem. Examination	Total
General Education Component (GEC)									
1	25BV201T	Business Communication Skills – II	3			3	40	60	100
2	25BV202T	Applied Computer Skills – II	3			3	40	60	100
3	25BV201P	Business Communication Skills – II Lab			3	3	25	25	50
4	25BV202P	Applied Computer Skills – II Lab			3	3	25	25	50
Total – GEC			6		6	12	130	170	300
Skill Education Component (SEC)									
5	25CY203S	Web Development (*)	4		8	12	50	100 (***)	150
6	25CY204S	Skill Development – II (**)			4	4	50	--	50
7	25CY206S	Network Security	2			2	50	--	50
Total – SEC			6		12	18	150	100	250
Grand Total			12		18	30	280	270	550


Assessment Competent Authority: General Education Component 25BV201T/P, 25BV202T/P, Skill component 25CY204S, 25CY206S: By college,


(*) **Web Development:- SSC/QP – SSC/Q0503 Web Developer, NOS: SSC/N0501, SSC/N9001, SSC/N9002, SSC/N9003, SSC/N9004, SSC/N9005**

(**) **Skill Development-II: E-Courses & Skill workshops**

(***) **25CY203S Assessment by Sector Skill Council – IT-ITeS -NASSCOM**


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


Dr. Promod Lanjewar
Dean (Academics)


Dr. Vijay Wadhwa
Principal

**ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR**

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

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV101T	Business Communication Skills-I	3			3	40	60	100



Course Objectives	Course Outcomes
1. To impart and enhance the employability skills of students as well as communication skills at work place.	1. To recall English Grammar 2. To apply writing skills. 3. To develop Reading Skills. 4. To demonstrate Communication skills.
Unit I	[12 Hrs]
Revisiting English Grammar: articles, Prepositions, adjectives, Subject Verb Agreement, Simple, Compound, Complex Sentences, SCC Sentences.	
Unit II	[15 Hrs]
Written communication: letter writing (customer complaints, general complaints, seeking information, placing orders)	
Unit III	[10 Hrs]
Reading skills: scanning and skimming, reading comprehension, summarizing	
Unit IV	[8 Hrs]
Communication Skills: language functions (greeting, taking leave, thinking, apologizing, introducing self)	

Text Books

S.N	Title	Authors	Edition	Publisher
1	Strengthen your English	Bhaskaran & Horsburgh	Second	Oxford University Press (1 November 1997)
2	Macmillan Foundation English	Dwivedi & kumar.	First	Laxmi Publications (30 January 2005)

Reference Books

S.N	Title	Authors	Edition	Publisher
1				

		July-2025	2	Applicable for 2025-26
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CYBER SECURITY

ARISE & SHINE

FIRST SEMESTER


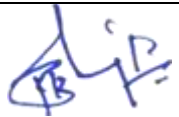
Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV101P	Business Communication Skills-I Lab			3	3	25	25	50

Course Objectives	Course Outcomes
1. To impart and enhance the employability skills of students as well as communication skills at work place.	1. To recall English Grammar 2. To apply writing skills. 3. To develop Reading Skills. 4 To demonstrate Communication skills.

Practical No	Title of the Practical
1	Introduction to self.
2	Personal SWOC Analysis
3	Goal Setting : SMART Goals & Strategic Planning
4	Letter Writing : Formal
5	Summarizing: Listening, Speaking & Written Skills
6	Essay Writing
7	Picture Composition
8	Story Writing using 'Everyday Language Functions' V& Situational drama

Text Books

S.N	Title	Authors	Edition	Publisher
1	Strengthen your English	Bhaskaran & Horsburgh	Second	Oxford University Press (1 November 1997)
2	Macmillan Foundation English	Dwivedi & kumar.	First	Laxmi Publications (30 January 2005)

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CYBER SECURITY

FIRST SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV102T	Applied Computer skills-I	3			3	CA	ESE	Total
						40	60	100

Course Objectives	Course Outcomes
To enable the students to study MS Office and to enrich the practical knowledge in MS. Office	1. To identify different tools in word processing. 2. To demonstrate advance features in word processing. 3. To illustrate different functions of power point presentation. 4. To Apply and make use of graphs,charts and animations in power point presentation..
Unit I	[12 Hrs]
Word processing Introduction, starting word, Creating documents, structure of MS-word window and its application, mouse & keyboard operations, designing a documents, formatting-selection, cut, copy, paste, Toolbars, operating on text: printing, saving, opening, closing of documents; creating a template	
Unit II	[10 Hrs]
Tables, boarders, text-box operations; spelling and grammar check, mail merge, Envelope and Label, protection of document, change the view of documents.	
Unit III	[10 Hrs]
Power point presentation – Working with power point window, standard toolbar, formatting Toolbar, Drawing Toolbar, moving the Frame, Inserting Clip Art, Picture, Slide; Text Styling, Send to Back.	
Unit IV	[13 Hrs]
Entering Data to Graph, Organization Chart, Table, Design Template, Master Slide, Animation setting, Saving and Presentation Auto Content Wizard, Package for CD (Pack & Go Feature).	

Text Books

S.N	Title	Authors	Edition	Publisher
1	Information technology concept	Dr. Madhulika Jain, Shashank & Satish Jain	2nd	BPB Publication, New Delhi
2	Fundamentals of Information Technology	Alexis And Mathews Leon	2nd	Leon Press, Chennai & Vikas Publishing House Pvt Ltd, New Delhi
3	Computer Fundamentals : Concepts, Systems & Applications	P.K Sinha	8th	BPB Publication, New Delhi

Reference Books

S.N	Title	Authors	Edition	Publisher
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CYBER SECURITY

FIRST SEMESTER



Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25BV102P	Applied Computer Skills-I Lab			3	3	25	25	50

Course Objectives	Course Outcomes
To enable the students to study MS Office and to enrich the practical knowledge in MS. Office	1. To identify different tools in word processing. 2. To demonstrate advance features in word processing. 3. To illustrate different functions of power point presentation. 4. To Apply and make use of graphs ,charts and animations in power point presentation..

Practical No	Title of the Practical
1	Creating Word File and Editing Text
2	A] Data of exit Poll Survey for Delhi Assembly Election 2020 is given in the table below. Present this data in the form of suitable chart in MS Word. B] General Election Result of 2019 is given in the table below. Present this data in the form of suitable chart in MS Word.
3	A] Design a certificate of achievement for completing diploma in Computer Engineering using MS Word and attach print out in practical file. B] Design a certificate of an achievement in sport using MS Word and attach print out in practical file.
4	Part1] write an offer letter regarding job in a IT company Part2] Make a excel sheet for information of 20 candidates with name, address, job position and location. Part3] Prepare this offer letter for 20 different candidates using Mailing option. Attach printouts of Excel file and 3 sample documents in a file.
5	Design a bicycle in Power Point Presentation and apply the effect of animation so that it will look like its running on the road.
6	To Design and animate 5 points infographic slides in Power Point Presentation.
7	To design animated magnetic field template in Power Point Presentation.
8	To design quiz in KBC format using Power Point Presentation.

Text Books

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1	Information technology concept	Dr. Madhulika Jain, Shashank & Satish Jain	2nd	BPB Publication, New Delhi
2	Fundamentals of Information Technology	Alexis And Mathews Leon	2nd	Leon Press, Chennai & Vikas Publishing House Pvt Ltd, New Delhi
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CYBER SECURITY

FIRST SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25CY103S	Software Development	4		8	12	50	100	150

Course Objectives	Course Outcomes
To enable the students to learn writing and maintaining code on their own, working on bug fixes.	1. To Design and modify problem solving process flow for software development. 2. To Apply principles of access management, application installation and peripheral installation to identify technical aspects for software designs. 3. To Design methods to execute test cases without using any automation tools or create automation frameworks for the team.
Unit I Basic of Computer	[15 hrs.]
Computer Hardware, Network basics, Internet, Protocols, Flow Chart, Algorithm, Types of Programming Languages.	
Unit II C Programming	[25 hrs.]
Datatype, Variable, Operators, Conditional statements, Loops, Functions, Array, Structure.	
Unit III PHP Programming	[25 hrs.]
Data type, Variables, Constants, Conditional Statements, Loops, Functions, DB connections.	
Unit IV MySQL	[25 hrs.]
SQL and MySQL, SQL Statements, Insert, Select, Update, Delete, Create, Drop, Where, Show, Describe, Truncate, Commit, Rollback.	

Text Books

S.N	Title	Authors	Edition	Publisher
1	Clean Code	Robert C. Martin	1st edition	PHI
2	Programming in ANSI C	Balagurusamy	9 th Edition	McGraw Hill
3	SQL: A Hands-On Approach for Beginners	Thomas Nield	Grayscale	SPD
4	BPB Publication PHP Beginners Practical Guide	Pratyush Guleria	first	BPB publications

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Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25CY104S	Skill Development-I			4	4	50		50

Course Objectives	Course Outcomes
<ul style="list-style-type: none">Develop fundamental mathematical skills.Apply mathematical principles to real-life scenarios.Improve critical thinking and logical reasoning.To prepare students for TCS Ignite ExamBuild a strong foundation for competitive exams.	<ul style="list-style-type: none">Understanding Numerical AbilityAbility to solve Reasoning Ability
Unit I: Numerical Ability-I	[15 hrs.]
Vedic Maths, Simplification (BODMAS/, Fractions and decimals square roots, Cube roots) Surds and Indices Exponents, Algebraic Identities & Substitution	
Unit II: Numerical Ability-II	[15 hrs.]
Ratio & Proportion, Averages, allegations and Mixtures	
Unit III: Numerical Ability-III	[15 hrs.]
Number System, LCM & HCF, divisibility, numbers, and decimal fractions, unit digits.	
Unit IV: Numerical Ability-IV	[15 hrs.]
Quadratic and Linear Equations, Time and Work, Pipes and Cisterns	

Text Books

S.N	Title	Authors	Edition	Publisher
1	Quantitative Aptitude	R.S Agarwal	Latest edition	S. Chand Publication
2	Quantitative Aptitude	Arun Sharma	4 th Edition	Mc Graw Hill

Reference Books

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FIRST SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
25CY105S	Fundamental of Cyber Security	2			2	50		50

Course Objectives	Course Outcomes
To enable the students to learn writing and maintaining code on their own, working on bug fixes.	1. To understand Basic Networking Concepts Introduction to Networking. 2. To learn Security Architecture. 3. To understand different Computer security threats. 4. To understand Cyber Crime Investigation Process.
Unit I :	[8 hrs.]
Basic Networking Concepts Introduction to Networking: Types of Computer Networks, Network Topologies, Basic Terminologies Used in Computer Networks, Classification of Network, Architecture, Network Hardware Components, Transmission Media Networking Models - OSI & TCP/IP, IP Addressing Subnetting & Supernetting. Introduction to Cyber Security :Introduction to cybercrimes & cybersecurity ,Evolution of Information Systems, History of Computer Crimes Cybersecurity Terminology, Elements of Information Security, Classification of hackers. Peek into the criminal mind, Types of ethical hacking, Domains in cybersecurity International laws, standards & regulations Network Troubleshooting. Common Threats & Attacks :Malware attacks, Malware attack case studies, Malware safety tips, Demo Malware attack, Online scams, Safety from scams, DoS attacks, Safety from DoS attacks.	
Unit II	[8 hrs.]
Security Architecture :Overview of security, Architecture, The OSI model, Defense in depth Information flow control Encryption fundamentals. Cybersecurity Assessment :Information security auditing Vulnerability assessment Penetration testing VAPT process Types of penetration testing Case Study - Network security assessment. Application Security :Application-based attacks, OWASP Top 10 Demos, Application security.	
Unit III	[7 hrs.]
Computer Security :Computer security threats Threat propagation modes Demo - Windows OS attack Computer security practices, Network Security Policies. Controls and Protocols :Types of security policies & their significance Security controls - Access control, Authentication, Authorization, Encryption Security protocols - RADIUS, S/MIME, SHTTP, SSL/TLS, PGP Demo - PGP. Network Security Tools :Firewall introduction Types of firewalls Demo - Firewall rules implementation Demo-IDS/IPS VPNs Proxy Servers.	
Unit IV	[7 hrs.]
Cyber Crime Investigation Process :Introduction to cyber forensics Need of cyber forensics Cybercrime investigation process Case Study & Demo - Digital forensics Evidence Preservation and Risk Management : Maintaining evidence Integrity What is incident response? Incident response process Introduction to business continuity & disaster recovery Business continuity basic Plan Disaster recovery plan contents Current Cyber Crime Trends: Technology everywhere Types of cybercrime India's cyberattack scenario Risks from new technologies APTS New age cybercrime & criminals Insider threats Case Study - Famous insider attacks . Mobile security: Mobile security threats case studies- mobile hacking demo - mobile hacking mobile safety tips	

Text Books

S.N	Title	Authors	Edition	Publisher
1	FUNDAMENTAL OF CYBER SECURITY: Principles, Theory and Practices	Mayank Bhusan /Rajkumar Singh Rathore /Aatif Jamshed	first	BPB Publications
			Oct-2022	1
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