



Ref.: SU/BOS/IDS/603

Date: 06 - 10 - 2025

To,

The Principal,
All Concerned Affiliated Colleges/Institutions
Shivaji University, Kolhapur

Subject : Regarding revised syllabi of **B. Voc. Part I (Sem. I & II)** degree programme under the Faculty of Inter- Disciplinary Studies as per NEP-2020 (2.0).

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised syllabi, nature of question paper and equivalence of **B. Voc. Part I (Sem. I & II)** for follower's degree programme under the Faculty of Inter- Disciplinary Studies as per National Education Policy, 2020 (NEP 2.0).

Course
B. Voc. Advanced Diploma In Medical Laboratory Technology Part -1
B. Voc. Building Technology and Interior Design Part -1
B. Voc. Printing & Publishing Part -1
B. Voc. Nutrition and Dietetics Part – I

This syllabus, nature of question and equivalence shall be implemented from the academic year **2025-2026** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in NEP-2020 (Online Syllabus)

The question papers on the pre-revised syllabi of above-mentioned course will be set for the examinations to be held in October /November 2025 & March/April 2026. These chances are available for repeater students, if any.

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours Faithfully

(Dr. S. M. Kubal)
Dy Registrar

Encl. : As above.

Copy to: For Information and necessary action.

1	The Dean, Faculty of IDS	7	Affiliation T. 1 & T. 2 Section
2	Director, Board of Examination and Evaluation	8	Appointment A & B Section
3	The Chairman, Respective Board of Studies	9	P.G.Seminar Section
4	All On Exam Section	10	I.T. Cell
5	Eligibility Section	11	Internal Quality Assurance Cell (IQAC)
6	P. G. Admission Section		

SHIVAJI UNIVERSITY, KOLHAPUR



Accredited By NAAC with 'A++' Grade

Faculty of Interdisciplinary Studies
Structure, Scheme and Syllabus for
Bachelor of Vocation (B. Voc.)

Printing & Publishing

B. Voc. Part I-Sem. I&II

NEP 2.0 PATTERN

Syllabus to be implemented from June,2025 onwards.

(Subject to the modifications that will be made from time to time)

Credit framework for B. Voc. Undergraduate (UG) Program

Level/ Difficulty	Sem	DSC-I	DSC-II	DSC-III	GE-OE	SEC	IKS	AEC	VEC	CC	Total
4.5/ 100	I	2(T)+2(P)	2(T)+2(P)	2(T)+2(P)	2(T)	2 (T/P)	2(T) (Generic)	2(T)	2	--	22
	II	2(T)+2(P)	2(T)+2(P)	2(T)+2(P)	2(P)	2 (T/P)	--	2(T)	2	2	22
Credits		4(T)+4(P) =8	4(T)+4(P) =8	4(T)+4(P) =8	2+2 =4(T/P)	2+2= 4(P)	2(T)	2+2 =4	2+2 =4	2	44

Exit Option: Award of UG Certificate in Major with 44 credits and an additional 4 credits core NSQF course/Internship OR Continue with Major and Minor

Continue Option: Student will select one subject among the (Subject 1, Subject 2 and Subject 3) as major and another as minor and third subject will be dropped.

SHIVAJI UNIVERSITY, KOLHAPUR (NEP-2020)

First Year Bachelor of Vocation (B.Voc.–Diploma) Course Structure for (Level-4.5)

With Multiple Entry and Multiple Exit option

(To be implemented from the Academic Year 2025-26)

Semester I–Duration:6Months (Certificate)											
	Teaching Scheme					Evaluation Scheme					
Sr. No.	Course	No. of Lectures		Hours (T + P)	Credits	Theory	Internal/ Practical	Total Marks	Min Marks (Separate passing)	Exam Duration (Hrs.)	
		T	P							T	P
1.	DSC –A-I	2	4	6	4	30	20/50	100	35	2	3
2.	DSC –A-II	2	4	6	4	30	20/50	100	35	2	3
3.	DSC –A-III	2	4	6	4	30	20/50	100	35	2	3
4.	OE-I	2	-	2	2	30	20	50	18	2	-
5.	SEC-A	-	4	4	2	-	50	50	18	-	3
6.	IKS	2	-	2	2	30	20	50	18	2	-
7.	AEC-A	2	-	2	2	30	20	50	18	2	-
8.	VEC	2	-	2	2	30	20	50	18	2	-
	Total	14	16	30	22	210	190	550	-	-	

Semester II – Duration: 6 Months (Diploma)											
	Teaching Scheme					Evaluation Scheme					
Sr. No.	Course	No. of Lectures		Hours (T + P)	Credits	Theory	Internal/ Practical	Total Marks	Min Marks (Separate passing)	Exam Duration (Hrs.)	
		T	P							T	P
1.	DSC – B -I	2	4	6	4	30	20/50	100	35	2	3
2.	DSC – B-II	2	4	6	4	30	20/50	100	35	2	3
3.	DSC – B -III	2	4	6	4	30	20/50	100	35	2	3
4.	OE-II	-	4	4	2	30	20	50	18	-	3
5.	SEC-B	-	4	4	2	-	50	50	18	-	3
6.	AEC-B	2	-	2	2	30	20	50	18	2	-
7.	VEC	2	-	2	2	30	20	50	18	2	-
8.	CC	2	-	2	2	30	20	50	18	2	-
	Total	12	20	32	22	210	190	550	-	-	
	Grand Total	26	36	62	44	420	380	1100	-	-	

Semester I–Duration:6Months (Certificate)		
Sr. No.	Course	Subject Name
1	DSC–A-I	Basic Printing Techniques-I
2	DSC–A-II	Printing Design
3	DSC-A-III	Screen Printing
4	OE-I	Forms of literature
5	SEC-A	Skill Enhanced
6	IKS	Indian Knowledge System
7	AEC-A	Business Communication in English-I
8	VEC	Democracy, Election and Good Governance

Semester II–Duration:6Months (Certificate)		
Sr. No.	Course	Subject Name
1	..DSC–B-I	Basic Printing Techniques-II
2	...DSC–B-II	Reproduction Photography
3	DSC–B-III	Printing Material Science
4	..OE-II	The essence of Marathi language
5	..SEC-B-I	Basic Printing Techniques-II
6	SEC–B-II	Reproduction Photography
7	...AEC-B	BusinessCommunicationinEnglish-I.....
8	VEC	Democracy, Election and Good Governance
9	CC	

• Student Contact Hrs. Per week: 36 hrs.	• Total marks for B. Voc.- Diploma: 1100
• Theory and Practical Lectures: 60 Minutes Each	• Total credits for B. Voc.- Diploma: 44
• AEC: Ability Enhancement Course, AEC Internal Evaluation should be done at college or respective departmental level	
• Practical workload will for batch of 20 students	
• Practical Examination will be conducted Semester wise for 50 Marks per course (subject).	
• DSC: Discipline Specific Core Course - Candidate can opt three courses (Subjects) from DSC.	
• OE: Open Elective- Chosen compulsorily from faculty other than that of the Major.	
• SEC: Skill Enhancement Courses–Selected from the basket of Skill Courses approved by college.	
• There shall be separate passing for theory and practical courses.	
• Exit option after Level 4.5: Students can exit with Diploma Course in Bachelor of Vocation with the completion of courses equal to minimum of 44 credits and also shall have to acquire additional CCC credits by successfully completing CCC-I and CCC-II courses which are assisted by Compulsory Civic Courses	
• SEC-A& SEC-B are two parts of Vocational Degree Course-I.	

Eligibility:

Eligibility for Admission: For Diploma: 10+ 2 from any faculty/ITI/MCVC or Equivalent
For Advance Diploma: Diploma or equivalent any related stream.

Eligibility for Faculty: 1) Post Graduate with NET / SET/Ph. D. Or
2) Five Year Industry Experienced Personal
2) M. A (English) with NET/SET for Business Communication

Eligibility for Lab Assistant: Graduation with related field

Staffing Pattern: Teaching: In the 1st year of B. Voc. – 1 Full Time and 1 Part Time Lecturer
1 CHB Lecturer for Business Communication

Lab. Assistant: For 1st Year of B. Voc. – 1 Part Time
For 2nd and 3rd Year (Inclusive of 1st Year) of B. Voc. – 2 Full Time

Bachelor of Vocation (B. Voc.) Part I -Sem. I(Certificate)
(Diploma in Printing and Publishing)
Discipline Specific Core Course (DSC–A-I)
Paper Title: Basic Printing Techniques-1

Paper No: III
Theory:4 lectures/week

Credits: 02
Total Marks: 30(Theory)

Course Out comes: The students will acquire knowledge of

1. Principle of Different printing process & Comparison
2. Lithographic offset Printing
3. Screen Printing
4. Substrates

Content of syllabus:

Unit I:(8Hrs)

Basic Principle of letterpress/ Flexography Printing Basic Principle of Offset Printing Basic Principle of Gravure Printing Basic Principle of Screen Printing 12 Comparison of Relief & Intaglio Plano & Intaglio Relief & Plano.

Unit II: (8Hrs)

Lithographic offset Printing

• Sheet feed Machine Units:- Feeding, Inking, • Dampening, Printing& Delivery Unit Image carriers: Plate making metals, needof12graining, effect of exposure, printing down frame •Types of plate: - Wipe on plate, P.S. Plate• Advantages of Offset Process, Application of Offset process

Unit III: (8Hrs)

Screen Printing Introduction: - cloth, clamp, screen• Screen making: -Directmethod&Indirectmethod12• Applications, Advantages & Limitation

Unit IV:(6Hrs)

Substrates •Types of paper, Board, Plastic etc.

Books Recommended:

(ListofMinimum5Books) 01 Herbert Simonn

Introduction to Printing

02IanFauxModernLithographyMacdonad&EvansPlynont. 03

Surjeet Gupta Printing Today Print India Journal, Delhi

04Surjeet Gupta A Guide to Printing Inks Print India Journal, Delhi

05R.Krishna Moorthi Silk Screen Printing Print India Journal, Delhi

Note:(If any-such as)

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
- 2.Studentscan use scientific calculators in theory examination

Bachelor of Vocation (B. Voc .) Part I-Sem. I(Certificate)
(Diploma in Printing and Publishing)
Discipline Specific Core Course (DSC–A-II)
Paper Title: Printing design

Paper No: IV
Theory:4 lectures/week

Credits:04
Total Marks: 30(Theory)

Course Outcomes: The students will acquire knowledge of

1. Graphic Design Fundamentals and Principles
2. Colors in Graphic Design
3. Preparation of Layout for Graphic Reproduction
4. TypographicPrinciples

Content of syllabus:

Unit I:(12Hrs)

Study of Fundamentals of Graphic Design Point, line, space, mass, size, scale, tone, texture, pattern, color. Use, versatility, and purposes of design principles .Study of different media and its substitutes, and economy of graphic design.

Unit II: (12Hrs)

Color Terminology, color wheel Hue, value, Chroma, brightness, shades, tint, color symbolism Color Relationship Cool, warm, contrast, complementary colors and colors schemes

Unit III: (12Hrs)

Definition of layout and attributes of a good layout, Study of stages involved in preparing a good layout such as visualization, thumbnail and rough layout & finally out Definition, types, applications, advantages and limitation of House Style and Dummy. House style rules and basis, qualification of proofreader and copyholder, rules for word division and use of hyphenation

Unit IV:(12Hrs)

Study of Typographic Elements, Understanding face of types, parts of type and type face, types of strokes and serifs, termination. Font style and size of type, text and display faces Definition legibility and readability .Study of factors governing legibility and readability. Study of editing and proof reading of text copy. Study of different types of proof reading marks

Books Recommended:(ListofMinimum5Books)

- 01L.Heath Photo type setting Watson-Guptill Publications.
- 02 Geoff Barlow Typesetting & Composition Blue Print
- 03 Hugh Speirs Introduction to Prepress BPIF Publishing.
- 04 H. S. War ford Design for Print Production JE. Reeve Fowkes
- 05 KailashTakaleAhandbookoftypographyNirmalaSadanPrakashan,NewDelhi

Note:(If any- such as

- (1. In theory examination, the weight agetonumericalproblemsshouldnotexceed30%. 2.
- Students can use scientific calculators in theory examination.)

Bachelor of Vocation (B. Voc.) Part I-Sem. I(Certificate)
(Diploma in Printing and Publishing)
Discipline Specific Core Course (DSC–A-III)
Paper Title: Screen Printing

Paper No: V
Theory:4 lectures/week

Credits:04
Total Marks: 30(Theory)

Course Outcomes: The students will acquire knowledge of

1. Brief idea-Materials
2. Stretching
3. Screen Preparation Methods
4. Machines

Content of syllabus:

Unit I:(12Hrs)

History& development. Comparison with other processes. Advantages, limitations & applications.
Materials Raw materials Physical fabric properties, Elongation characteristics of 12 polyester fabrics
Geometry of screen-printing fabrics Colored screen-printing fabric Frames Materials used for frame-
wooden or metal, frame size C, G clamps screen pretreatments Stretch factor relation.

Unit II: (8Hrs)

HandStretchingMechanicalStretchingPneumaticStretchingMultiple12StretchingCorrectStretching
Recommended Tension measuring instrument

Unit III: (6Hrs)

Stencils, Hand cut, Direct emulsion, Indirect method, Direct-indirect (direct film), capillary y direct.
Comparison of all methods.

Unit IV:(3Hrs)

Sheetfed–semi, full automatic Web fed–flat, rotary

Books Recommended:(ListofMinimum5Books)

1. S .S. Thal I Hand book for screen printers
- 2HandbookonPrinting Technology, NIIR Board of Consultants
- 3.StartYourOwnScreen-Printing Business, Mongiello Anthony

Note:(If any- such as)

- (1.In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

Bachelor of Vocation (B. Voc.) Part I-Sem. I(Certificate)
(Diploma in Printing and Publishing)
Skill Enhancement Courses
(SEC–A-I) Paper Title: Basic Printing
Techniques-1

Paper No: P. I
Practical:4lectures/week

Credits:02
TotalMarks:50(Practical)

Course Outcomes: The students will acquire knowledge of

- 1.Process camera
- 2.Platemaking

Prerequisites Note:(If Any-such as Knowledge of the topics in the theory papers.)

List of Practical: (Minimum10)

1. Camera-Introduction to parts of process camera, chemicals.
2. Negative & positive making
3. Platemaking–Introduction to plate making equipment, chemicals & terms
4. Preparation of P. S. positive plate
5. Introduction of magnifying glass, micrometer, line, halftone & solid printing.
6. Introduction of functions of feeder, inking, dampening, printing, delivery.
7. Plate fixing

Student Instructions:

1. We ran apron be for Eco into the laboratory
2. . Wear hand gloves to avoid direct contact with printing solution and inks.
3. Do not leave grease, oil or printing ink on the floor it may causes lippage.
4. Studentshavetodisposetheusedorwastematerialsinanappropriatecontainer.
5. Wash hands thorough Ly with soap and water.
- 6 Disconnect electronic equipment after use
8. keep your work and clean.

Laboratory Requirements: 1.

Chemical

2. lab instruments.

Bachelor of Vocation (B. Voc.) Part I -Sem. I
(Diploma in Printing and Publishing)
(Certificate) Skill Enhancement Courses (SEC–A-II)
Paper Title: Printing Design

Paper No: P. II
Practical: 4 lectures/week

Credits: 02
Total Marks: 50 (Practical)

Course Outcomes: The students will acquire knowledge of

1. Graphic design

Prerequisites Note: (If Any-such as Knowledge of the topics in the theory papers.)

List of Practical: (Minimum 10)

1. Drawing various typefaces along with their dimensional attributes such as x-height, ascender and descender lines.
2. Graphic design in g for display type (at least two) job.
3. Application and study of design principle a king different types of graphic designs.
4. Preparation of different types of color wheel and scheme and symbol fora given graphic product.
5. Preparation of thumbnail, rough layout, house style specimen and dummy fora given graphic product
6. Presentation of collection of various printed products newspaper, magazine advertisements, letterheads highlighting design and layout making principles
7. Presentation of collection of various printed products newspaper, magazine advertisements, letterheads showing page make up and assembly

Student Instructions:

1. We are apron before coming to the laboratory

2. Disconnect electronic quip me natters

Laboratory Requirements:

1. Computer

2. Software-CorelDraw, Photoshop, illustrator

Bachelor of Vocation (B. Voc.) Part I-Sem. I(Certificate)
(Diploma in Printing and Publishing)
Skill Enhancement Courses (SEC–A-III)
Paper Title: Screen Printing

Paper No :P.III
Practical:4lectures/week

Credits:02
TotalMarks:50(Practical)

Course Outcomes: The students will acquire knowledge of

1.Screen-printing

Prerequisites Note:(If Any-such as Knowledge of the topics in the theory papers.)

List of Practical:(Minimum10)

- 1) To prepare a screen by direct process
- 2) To prepare a screen by Direct-Indirect process
- 3) To prepare a screen by Direct-Indirect process for two color printing
- 4) To prepare a screen by hand drawing method
- 5) To prepare a screen by Direct-Indirect process for two color printing
- 6) Visiting card, letterhead, greeting card.
- 7) Metallic effect, flocking.
- 8) Irregular shape objects
- 9) Stickers–transparent, opaque, water slide, instant transfer
- 10) Ceramic labels–special inks, curing.

Student Instructions:

- 1. We arena on before coming to the laboratory**
- 2. Disconnect electronic equipment after use**

Laboratory Requirements:

- 1. Lab instruments**

B. Voc. Part-I, Semester –I
Open Elective (OE-I)
Paper Title: The essence of Marathi language

Paper No: IV

Time: 90 Minutes

Total Marks: 30 Marks

Bachelor of Vocation (B. Voc.) Part I-Sem. I (Certificate)
(Diploma in Printing and Publishing)

Skill Enhancement Courses (SEC–A-IV)

Paper Title: Project /Field Work/Industrial Visit/Study Tour.

Paper No: IV

Credits: 02

Term Work: 2lectures/week

TotalMarks:50(Internal)

Course Out comes: The students will acquire knowledge of

- 1.
- 2.
- 3.
- 4.
- 5.

Important Note: Field Work/Industrial Visit/Study Tour should be of **minimum five days** in or out of Maharashtra.

Suggested Places:

1. In Maharashtra:
2. Out of Maharashtra:

Student Instructions:

- 1.
- 2.
- 3.

Laboratory Requirements:

- 1.
- 2.

Nature of Evaluation: INTERNAL

-Details

Bachelor of Vocation (B. Voc.) Part I - Sem. I
Indian Knowledge System (IKS)
Paper Title: Interdisciplinary course in Generic IKS

Paper No: VI

Credits: 02

Theory: 2 lectures/week

Total Marks: 50 (30 Theory + 20 Internal)

**Bachelor of Vocation (B. Voc.) Part I-Sem. I
(AECC-A)**

Paper-I: Business Communication-I

Credits:04

Theory:4 lectures/week

Total Marks:50(Theory30 +Internal 20)

Practical:02 lectures per week per batch of 20 students

Units Prescribed for Theory:40 Marks.

Unit1: Use of English in Business Environment

Business Vocabulary: Vocabulary for banking, marketing and for maintaining public relations
What is a sentence?
Elements of a sentence
Types of sentences: Simple, compound, complex

Unit2: Writing a Letter of Application and CV/Resume

Topics:

Structure of a letter of application for various posts
CV/ Resume and its essentials

Unit3: Presenting Information/Data

Topics:

Presenting information/data using graphics like tables, pie charts, tree diagrams, bar diagrams, graphs, flow charts

Unit4: Interview Technique

Topics:

Dos and don'ts of an interview
Preparing for an interview
Presenting documents
Language used in an interview

Practical: Based on the theory units 10 Marks.

Reference Books:

- Sethi, Anjanae & Bhavana Adhikari. *Business Communication*. New Delhi: Tata Mc Graw Hill
- Tickoo, Champa & Jay a Sasikumar. *Writing with a Purpose*. New York: OUP, 1979.
- Sonie, Subhash C *Mastering the Art of Effective Business Communication*. New Delhi: Student
- Aid Publication, 2008.
- Herekar Praksh. *Business Communication* Pune: Mehta Publications, 2007.
- Herekar, Praksh. *Principals of Business Communication*. Pune: Mehta Publications, 2003.
- Rai, Urmila & S.M. Rai. *Business Communication*. Himalaya Publishing House, 2007.
- Pradhan, N.S. *Business Communication*. Mumbai: Himalaya Publishing House, 2005.

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- Pardeshi, P.C. *Managerial Communication*. Pune: Nirali Prakashan, 2008

Bachelor of Vocation (B. Voc.) Part I - Sem. I
Value Education Course (VEC: A)
Paper Title: Democracy, Elections and Good Governance

Paper No: VIII

Credits: 02

Theory: 2 lectures/week

Total Marks: 50 (30 Theory+20 Internal)

Note: This course will be common to all students of all faculties notified separately.

Bachelor of Vocation (B. Voc.) Part I-Sem. II
(Diploma in Printing and Publishing)
Generic Elective Compulsory Course (GEC–B)
Paper Title: Computer Technology

Credits:04
TotalMarks:30

Theory:4 lectures/week
Practical:2lectures/week/batch

Course Outcomes:

- 1 Survey of the technologies**
- 2 Computer to plate/cylinder/screen**
- 3. Computer to press**
- 4. Computer to print**

Content of syllabus:

Unit I:(12Hrs)

Computer to film, Computer to plate, computer to press (Direct imaging and computer to print), The use of computer to technologies and networking for the production of print media. Principle and equipment film material.

Unit II:(6Hrs)

Introduction, Technology of computer to plate system for offset printing, Design principle, Imaging methods and plate punching, computer to plate system for offset, Flexography, Gravure and screen printing, Productivity and Economic efficiency, printing plate for digital imaging, trend stop late to plate.

Unit III:(12Hrs)

Computer to press, expansion and comparison of system, computer to press printing system with re-imaginable master, concepts for re-imaginable Master with application. Printing system based on electrophotography, Ionography , Magnetograph, inkjet. Design principle of computer to print system, digital printing.

Books Recommended:(ListofMinimum5Books)

- 1. Printing technology, NIIR Boards**
- 2. Hand book of print media**

Bachelor of Vocation (B. Voc.) Part I-Sem. II

(Diploma in Printing and Publishing)

Discipline Specific Core Course (DSC–B-I)

Paper Title: Basic Printing Techniques-2

Paper No: VIII

Theory:4 lectures/week

Credits:04

Total Marks: 30(Theory)

Course Outcomes: The students will acquire knowledge of

1. Flexography Printing
2. Gravure Printing
3. Non-Impact Printing
4. Binding

Content of syllabus:

Unit I:(15Hrs)

Flexography Printing Machine Parts & working Applications, Advantages & Limitations Gravure Printing Machine Parts & working, Applications, Advantages & Limitations

Unit II: (15Hrs)

Non-Impact Printing Introduction Type of process- Inkjet & Xerography, Applications, Advantages & Limitations Binding Different types of binding-side sewing/ stitching, centre, Sewing / stitching, Perfect binding

Books Recommended:(ListofMinimum5Books)

1. Herbert Simonn Introduction to Printing
2. Ian Faux Modern Lithography Macdonald & Evans Poynton
3. Surjeet Gupta Printing Today Print India Journal, Delhi
4. Surjeet Gupta A Guide to Printing Inks Print India Journal, Delhi
5. R .Krishna Moorthi Silk Screen Printing Print India Journal, Delhi

Note:(If any-such as

- (1. In theory examination, the weightage to numerical problems should not exceed30%.
2. Students can use scientific calculators in theory examination.)

Bachelor of Vocation (B. Voc.) Part I-Sem. II
(Diploma in Printing and Publishing)

Discipline Specific Core Course (DSC–B-II)
Paper Title: Reproduction Photography

Credits:04

Theory:4 lectures/week

Total Marks: 30(Theory)

Course Outcomes: The students will acquire knowledge of

1. Graphic Reproduction.
2. Optics, Illuminant:
3. Films, Exposure, Developing & Fixing:
4. Densitometry, sensitometer
5. Half tone reproduction
6. Print Layout Preparation Creating Originals

Content of syllabus:

Unit I:(15Hrs)

Definition of Graphic Reproduction. Concept of originals- line, photograph, continuous tone, quarter tone, positive, negative, Classification of original: -Monochrome- high key, low key Multicolor- transparency, reflection, digital, Evaluation & desirable characteristics of original. Sizing & Scaling of original -Conventional and digital, Types of cameras-Conventional, darkroom, auto compact, Horizontal, Vertical, enlarger type, roll film daylight camera, Contact frame. Optics, Illuminant: Definition of lenses, focal length, depth of focus, depth of field, real image, virtual image, conjugate foci, aberrations, Lens aperture & its function- Iris diaphragm, Waterhouse stops, F/ numbers, Flare- cause of flare, flare factor, Lateral reversal- prism, mirror, roof mirror light sources : i) Sunlight ii) Mercury vapour lamp iii) Tungsten filament iv) Arc lamp v) Incandescent lamp vi) Tube gas lamp- pulsed Xenon, Halogen vii) Laser-LED, IR Application related to: Color temperature, Inverse square law, spectral distribution.

Unit II: (4Hrs)

Films, Exposure, Developing & Fixing: Ingredients of emulsion, Types of emulsion: - By contrast- High contrast, low contrast, high speed, low speed, line film, litho film, rapid access film, continuous tone film, By sensitivity - ordinary, orthochromatic, panchromatic, Laser sensitive, Film structure, Latent image theory, Manufacture of emulsions, : Time scale method, intensity scale method, Line exposure: -Basic line exposure, Evaluation of line negative Developers-ingredients & their function, Factors affecting rate of development Fixer - chemistry Concept of effective development – manual Development automatic- programmable processor Verification of output after treatment – Reduction, Intensification, Chemical reversal. Screens Glass screen

Description, screen rulings, screen distance, theories of dot formation Contact screens-Gray, Magenta, contrast with magenta contact screen using magenta & yellow c.c. Filters

Unit III: (7Hrs)

Densitometry, sensitometry Advantages of densitometry, Optical density, Densitometers- Reflection, Transmission, Programmable, Factors affecting Sensitometry, Study of sensitometry curves & characteristic curves, Sensitometry terms- Opacity, specular & diffused density, Reciprocity& it's failure, Intermittency effect, Herschell effect Halftone reproduction Halftone exposure factors – Single stops, 8 multiple stops Main exposure, Flash exposure, Bump exposure Basic density range Screen ruling, screen angle, Moiré pattern, dot shapes A.M. screening, F.M. screening Evaluation of a halftone negative Endpoint dots & programming a computerized camera for half tone exposure Line & half tone positive making using contact frame & punch register system.

Unit VI: (4Hrs)

Print Layout Preparation Creating Originals: Analog and Digital Originals. Basics of page layouting, important considerations: margins, bleeds, marks and print aids. Layout of different print jobs Proofing systems, dummy preparation, instructions for print production Artwork and design Processing Line & halftone techniques, history of film and film processing, basic pre-press Techniques, Half tone theory, methods of converting continuous tone to Halftone - AM, FM & hybrid screening, Dot reproduction, Color correction in DTP

Books Recommended: (List of Minimum 5 Books)

1. J.W. Burden Graphic Reproduction Photography Focal Press Ltd. London
2. John Cogoli, Graphic Arts Photography B&W GATF
3. L. Lobel, M. Dubois, Basic of Sensitometer Focal Press Ltd; London
4. Fred Wentzel, Ray Blair and Tom Destre Graphic Arts Photography Color. GATF
5. Kennards Cloud, Electronic Imaging Applications in Graphic Arts: Proceedings

Note: (If any-such as)

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

Bachelor of Vocation (B. Voc.) Part I- Sem. II
(Diploma in Printing and Publishing)

Discipline Specific Core Course (DSC–B-III)
Paper Title: Printing Material Science

Paper No: X
Theory: 4 lectures/week

Credits: 04
Total Marks: 30 (Theory)

Course Outcomes: The students will acquire knowledge of

1. Polymers used in Printing and Packaging
2. Classification and General Characteristics of Printing Inks
3. Printing Ink Drying and Curing Mechanisms
4. Paper Substrate
5. Properties of Paper

Content of syllabus:

Unit I: (8Hrs)

Introduction to polymer, Thermoset & thermoplastic polymer, natural & synthetic polymer, application of polymers in printing industry as printing substrates, image carrier emulsion, rollers for application of various coatings.

Unit II: (8Hrs)

Ingredients of printing ink—Pigments, Vehicles, Solvents, Additives etc. Manufacturing of printing ink, General formulation of printing ink and factors affecting ink formulation other specialty inks for various applications

Unit III: (8Hrs)

Rheological properties of ink like viscosity, shear, yield, thixotropy, length and tack Subjective & objective ink testing methods. Various ink problems like Set off, trapping, filling, caking, End use properties of ink

Unit IV: (8Hrs)

Importance of paper and paper products in printing industry. Paper manufacturing process and different machines used for manufacturing the paper Different surface finishes obtained in paper selection criteria of paper substrate for printing and converting applications

Unit V: (6Hrs)

Physical properties of paper such as GSM, thickness, density, Strength properties of paper such as tensile, tearing, folding strength. Chemical & Optical properties of paper like pH, color, gloss, brightness and opacity.

Books Recommended: (List of Minimum 5 Books)

1. Lawrence A. Wilson, What Printer Should Know About Paper, GATF Press
2. L. C. Young Materials in Printing Processes Focal Press Publication

3. Leach and Pierce Printing Ink Manual Springer Publication

4. Dr. Nelson R.E lead What Printer Should Know About Ink GATF Press

Note:(If any-such as)

(1.In theory examination, the weightage to numerical problems should not exceed 30%.

2. Students can use scientific calculators in theory examination.)

Bachelor of Vocation (B. Voc.) Part I-Sem. II
(Diploma in Printing and Publishing)

Skill Enhancement Courses (SEC-B-I)
Paper Title: Basic Printing Techniques-2

Paper No: P. V
Practical:4lectures/week

Credits:02
TotalMarks:50(Practical)

Course Outcomes: The students will acquire knowledge of

1. Flexography printing
2. Gravure Printing

Prerequisites Note:(If Any-such as Knowledge of the topics in the theory papers.)

List of Practical :(Minimum10)

Flexography:Introduction to single colour flexo machine, various parts & take a print Out

1. Gravure: Introduction to Gravure machine, various parts & take a print out.
2. Non-Impact Printing Introduction & working of Inkjet printer & Xerography
3. Binding–Brief idea of binding materials, tools, and machines. Different styles of binding. Preparation of tear-off pad.

Student Instructions:

1. Wear an apron before coming to the laboratory
2. . Wear hand gloves to avoid direct contact with printing solution and inks.
3. Do not leave grease, oil or printing ink on the floor it may cause a spillage.
4. Student should dispose the used or waste materials in an appropriate container.
5. Wash hands thoroughly with soap and water
6. Disconnect electronic equipment after use
8. keep your work area clean.

Laboratory Requirements:

1. Chemical
2. Lab instrument

Bachelor of Vocation (B. Voc.) Part I-Sem. II
(Diploma in Printing and Publishing)

Skill Enhancement Courses (SEC–B-II)

Paper Title: Reproduction photograph.

Paper No: P.VI

Practical:4lectures/week

Credits:02

TotalMarks:50(Practical)

Course Outcomes: The students will acquire knowledge of

1. Photograph Scan
2. Densitometer measurement
3. Digital camera operations

Prerequisites Note:(If Any-such as Knowledge of the topics in the theory papers.)

List of Practical:(Minimum10)

- 1 To study various types of conventional Originals, Digital Originals and Resolution
2. To scan a photograph and study the settings and edit the photographs for further processing
3. To scan a pre -printed original to understand and reduce moiré effect
4. To apply UCR, GCR and to Nal gradation curves in Photoshop
5. To study working of Densitometer measurement of ink and paper densities, dot area, dot gain, contrast, trapping
6. To study Halftone dot structures, AM& FM, FAM
7. To study elements of Control strips & measurement
8. To study digital camera operations

Student Instructions:

1. Wear an apron before coming to the laboratory
2. Disconnect electronic equipment after use

Laboratory Requirements:

1. Digital Camera
2. Computer

**Bachelor of Vocation (B. Voc.) Part I-Sem. II
(Diploma in Printing and Publishing)**

**Skill Enhancement Courses (SEC–B-III)
Paper Title: Printing Material Science**

Paper No: P.VII
Practical:4lectures/week

Credits:02
TotalMarks:50(Practical)

Course Outcomes: The students will acquire knowledge of

1. GSM of substrate
2. Caliper thickness of substrate

Prerequisites Note:(If Any-such as Knowledge of the topics in the theory papers.)

List of Practical:(Minimum10)

1. To find GSM of substrate
2. To find caliper thickness of substrate
3. To identify various types of plastic films
4. To measure the viscosity of liquid ink
5. To take a proof of liquid ink by bar coater
6. To take a draw down of paste ink.

Student Instructions:

1. Wear an apron before coming to the laboratory
2. Disconnect electronic equipment after use

Laboratory Requirements:

1. GSM testing machine
2. lab instrument

**Bachelor of Vocation (B. Voc.) Part I - Sem.
II Open Elective (OE-II)
Paper Title: Forms of literature**

Paper No: XII
Practical: 4 lectures/week

Credits: 02
Total Marks: 50 (30Theory+20 Internal)

Bachelor of Vocation (B. Voc.) Part I-Sem. II

(Diploma in Printing & Publishing)

Skill Enhancement Courses (SEC–B-IV)

Paper Title: Project/Field Work/Industrial Visit/Study Tour.

Paper No : P. VIII

Credits: 02

Term Work: 2 lectures/week

Total Marks: 50 (Internal)

Course Outcomes: The students will acquire knowledge of

- 1.
- 2.
- 3.
- 4.
- 5.

Important Note: Field Work/Industrial Visit/Study Tour should be of **minimum five days** in orator Maharashtra.

Suggested Places:

1. In Maharashtra:
2. Out of Maharashtra:

Student Instructions:

- 1.
- 2.
- 3.

Laboratory Requirements:

- 1.
- 2.

Nature of Evaluation: INTERNAL

-Details

Bachelor of Vocation (B. Voc.) Part I -Sem. II

(Diploma in Printing & Publishing)

Skill Enhancement Courses (SEC–B-IV)

Paper Title: Project/Fieldwork/Industrial Visit/Study Tour.

Paper No :P. VIII

Credits: 02

TermWork:2lectures/week

TotalMarks:50(Internal)

Course Outcomes: The students will acquire knowledge of

- 1.
- 2.
- 3.
- 4.
- 5.

Important Note: Field Work/Industrial Visit/Study Tours hold off **minimum five-day** sonorous Maharashtra.

Suggested Places:

3. In Maharashtra:
4. Out of Maharashtra:

Student Instructions:

- 1.
- 2.
- 3.

Laboratory Requirements:

- 1.
- 2.

Nature of Evaluation: INTERNAL

-Details

Bachelor of Vocation (B. Voc.) Part I- Sem. II
(Diploma in Printing and Publishing)
(AECC-B)

Business Communication-II

Paper No: VI

Credits:04

Theory:4 lectures/week

Total Marks:50(Theory30 +Internal 20)

Practical:02 lectures per week per batch of20students

UnitsPrescribedforTheory:40Marks.

Unit1: Group Discussion

Preparing for a Group Discussion
Initiating a Discussion
Eliciting Opinions, Views, etc.
Expressing Agreement/Disagreement
Making Suggestions; Accepting and Declining Suggestions
Summing up.

Unit2: Business Correspondence

Writing Memos, e-mails, complaints, inquiries, etc.
Inviting Quotations
Placing Orders, Tenders, etc.

Unit3: English for Negotiation

Topics:

Business Negotiations
Agenda for Negotiation
Stages of Negotiation

Unit4: English for Marketing

Topics:

Describing/Explaining Product/Service
Promotion of a Product
Dealing/bargaining with Customers
Marketing a Product/Service: Using Pamphlets, Hoardings, Advertisement,
Public Function/ Festival

Practical: Based on the theory units10Marks.

Reference Books:

- He Rekar, Praksh. *Business Communication*. Pune: MehtaPublications,2007.
 - He Rekar, Praksh. *Principals of Business Communication*. Pune: MehtaPublications,2003.
 - John, David. *Group Discussions*. New Delhi: Arihant Publications.
 - Kumar, Varinder. *Business Communication*. New Delhi: KalyaniPublishers,2000.
 - Partnership. C. *Managerial Communication*. Pune: NiraliPrakashan,2008.
 - Pradhan, N. *Business Communication*. Mumbai: HimalayaPublishingHouse,2005
 - Rai, Urmila & S.M.Rai. *Business Communication*. Mumbai: HimalayaPublishingHouse,2007.
 - Sethi, Anjanae & Bhavana Adhikari. *Business Communication*. New Delhi: Tata Mc Graw Hill.
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- Tickoo, Champa & Jaya Sasikumar. *Writing with a Purpose*. New York: OUP,1979.

Bachelor of Vocation (B. Voc.)
Part I - Sem. II Value Education Course (VEC: B)
Paper Title: Constitution of India and Local Self-government

Credits:02

Theory: 2 lectures/week

TotalMarks:50(40Theory+10 Internal)

Note: This course will be common to all students of all faculties notified separately.

Bachelor of Vocation (B. Voc.)
Part I -Sem. II Co-Curricular Courses (CC)
Paper Title: NSS

Theory:2lectures/week

Credits:02
TotalMarks:50

Note: For this course, follow the common syllabus and evaluation guidelines issued by the university separately.

Examination Pattern: -

- | | |
|---|---------|
| 1. Participation in activities | 40marks |
| 2. Seminar, Report, Group Discussion, Viva Voce, etc. | 10marks |

B. Voc. Syllabus (NEP 2.0)

To be Implemented from June 2025 onwards Semester – I &II

Nature of Question Paper

Time : 01 hour.

Total Marks:30

Solve questions from the following.

Q.1 Multiple choice Question

06 Marks

- I.
- II.
- III.
- IV.
- V.
- VI.

Q.2 Long answer Question (Any Two out of three)

12 Marks

- I.
- II.
- III.

Q.3 Short Answer Questions (Any Four out of six)

12 Marks

- I.
- II.
- III.

Internal Assessment

20 Marks

- . Home Assignment
- . Class Assignment (Tutorial type)
- . Quiz
- . Mid – Term Test

Nature of Practical Question paper:

Internal practical examination

- | | |
|-----------------------------------|----------|
| 1.Group I | 20 Marks |
| 2.Group II | 20 Marks |
| 3.Submission of certified journal | 10 Marks |

Assessment:

The NEP 2020 emphasizes upon formative and continuous assessment rather than summative assessment. Therefore, the scheme of assessment should have components of these two types of assessments. Assessment has to have correlations with the learning outcomes that are to be achieved by a student after completion of the course

- a) **Continuous Assessment:** Assignments, projects, presentations, seminars and quizzes
- b) **Examinations:** Midterm, finals, or comprehensive exams.
- c) **Research Projects/Dissertation/Thesis:** Evaluated through submission and viva-voce
- d) **Grading System:** Standardized letter grades, percentages, or CGPA

Letter Grades and Grade Points:

The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester. The SGPA is based on the grades of the current term, while the Cumulative GPA (CGPA) is based on the grades in all courses taken after joining the program me of study. The HEIs may also mention marks obtained in each course and a weighted average of marks based on marks obtained in all the semesters taken together for the benefit of students.

Computation of SGPA and CGPA: UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9
A (Very Good)	8
B+ (Good)	7
B (Above Average)	6
C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

1. The SGPA is the ratio of the sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$\text{SGPA (S}_i\text{)} = \frac{\sum (C_{ix}G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i^{th} course and G_i is the grade point scored by the student in the i^{th} course.

2. The Cumulative Grade Point Average (CGPA) is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$\text{CGPA} = \frac{\sum (C_i S_i)}{\sum C_i}$$

Where S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that.

Date:

To,
The Registrar
Shivaji University, Kolhapur

Subject: **Submission of B. Voc. –I Year Diploma structure as per NEP guidelines**

Dear Sir,

I'm submitting here with First Year **Bachelor of Vocation (B. Voc.-I)-Diploma** Course structure (LEVEL-5) to be implemented from Academic Year 2025-26.

Kindly accept It and Acknowledge.

Thanking You

Yours Faithfully