

**B.Voc.**  
**(Multimedia and**  
**Animation)**

**(Effective from June 2015)**

# **Dr. Babasaheb Ambedkar Marathwada University, Aurangabad**

## **Curriculum for B.Voc.(Multimedia and Animation)**

### **UNIVERSITY GRANTS COMMISSION (UGC) PROGRAM UNDER THE NATIONAL SKILLS QUALIFICATIONS FRAMEWORK (NSQF)**

#### **1. Introduction**

It has been a long felt necessity to align higher education with the emerging needs of the economy so as to ensure that the graduates of higher education system have adequate knowledge and skills for employment and entrepreneurship. The higher education system has to incorporate the requirements of various industries in its curriculum, in an innovative and flexible manner while developing a holistic and well groomed graduate.

Ministry of HRD, Government of India has issued a notification for National Skills Qualifications Framework (NSQF). Under the National Skills Development Corporation, many Sector Skill Councils representing respective industries have/are being established. One of the mandates of Sector Skill Councils is to develop National Occupational Standards (NOSs) for various job roles in their respective industries. It is important to embed the competencies required for specific job roles in the higher education system for creating employable graduates.

The University Grants Commission (UGC) has launched a scheme on skills development based higher education as part of college/university education, leading to Bachelor of

Vocation (B.Voc.) Degree with multiple exits such as Certificate/Diploma/Advanced Diploma/ Degree under the NSQF. The B.Voc. programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles and their NOSs alongwith broad based general education. This would enable the graduates completing B.Voc. to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge.

## 2. Objectives

2.1 To provide judicious mix of skills relating to a profession and appropriate content of General Education.

2.2 To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the programme.

2.3 To provide flexibility to the students by means of pre-defined entry and multiple exit points.

2.4 To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry are also expected to be equipped to become part of the global workforce.

2.5 To provide vertical mobility to students coming out of 10+2 with vocational subjects.

## 3. Curriculum

3.1 The curriculum in each of the years of the programme would be a suitable mix of general education and skill development components.

3.2 The curriculum is based on credit based system. The credits for general education and skill development component are as shown with NSQF levels

Exit Point	Duration	No. of credits for General	No. of credits for Skill	Exit point Award	Corresponding NSQF level

		Education component	development component		
First Exit	After Six Months	12	18	Certificate in Multimedia & Animation	Level 4
Second Exit	After One Year	24	36	Diploma in Multimedia and Animation	Level 5
Third Exit	After Two Years	24	36	Advance diploma in Multimedia and Animation	Level 6
Fourth Exit	After Three Years	24	36	B.Voc.(Multimedia and Animation)	Level 7
	<b>Total (I+II+III yr)</b>	<b>72</b>	<b>108</b>		

#### 4. Eligibility

A Candidate shall be admitted to the I year of the B.Voc.(Multimedia and Animation) degree course only if he/she satisfies the following condition:

1. He/ She must have passed the higher secondary (multipurpose) examination conducted by H.S.C. board Government of Maharashtra with science / technical subjects Or an Examination of any statutory University and Board recognized as equivalent thereto.

OR

He/She must have passed examination prescribed at the end of second year of the junior college conducted by the H.S.C. board, Government of Maharashtra with English as compulsory language, or an examination recognized as equivalent thereto.

OR

Candidate having offered prescribed vocational course (MCVC

OR

Three years Diploma Course in engineering conducted by the board of technical Education, Maharashtra State.

OR

Any graduate from recognized University

## 5. Award of Degree/Diploma

As this course is multi-exit course, the award levels are

1. The **Degree of Bachelor of Vocation B.Voc (Multimedia and Animation)** shall be conferred on candidate who has pursued a regular course of study consisting of SIX semesters in the relevant subject as prescribed and has appeared at the end examination and passed under the credit based system in all the examination prescribed for the Degree course in the faculty.

2. The **Advance Diploma in Multimedia and Animation** shall be conferred on candidate who has pursued a regular course of study consisting of FOUR semesters in the relevant subject as prescribed and has appeared at the end examination and passed under the credit based system in all the examination prescribed for the Advance Diploma course in the faculty.
  
3. The **Diploma in Multimedia and Animation** shall be conferred on candidate who has pursued a regular course of study consisting of TWO semesters in the relevant subject as prescribed and has appeared at the end examination and passed under the credit based system in all the examination prescribed for the Diploma course in the faculty.
  
4. The **Certificate in Multimedia and Animation** shall be conferred on candidate who has pursued a regular course of study consisting of ONE semesters in the relevant subject as prescribed and has appeared at the end examination and passed under the credit based system in all the examination prescribed for the certificate course in the faculty.

## 6. The class structure and pattern of the examination

- ❖ The Number of students in a theory class shall not exceed 50.

- ❖ Maximum number of students in a batch for practical in first four semesters shall consist of 20 students and for fifth & sixth semester the batch shall consist of 15 students.
- ❖ The rules for admission to the subsequent (next) semesters will be the same as per the University guidelines.
- ❖ For theory course, there will be 50 % marks for internal (tests, tutorials, assignments) and 50 % marks for Semester End Examination (SEE).
- ❖ The Theory (SEE) and Practical Examinations will be conducted by the University at the end of each semester.
- ❖ The marks of internal and practical exam should be submitted to University in the prescribed format .
- ❖ Assessment of skill component should be done by sector skill council or industry partner.

#### **7. The infra-structure and Teaching Staff to run the course will be as follow:-**

The graduation is very important phase in the life of our young students. The college responsibly is not only to deliver a quality syllabus based education, but also to motivate them to be a good healthy citizen. In this direction, the college must have sufficient facilities to run the course. A guideline is listed below. The College must have following minimum facilities:

**Infrastructure:**

1. One Class room to accommodate 50 students. (approximately 250 sq.ft.)
2. A well equipped computer laboratory having a LAN system of minimum 30 nodes and having internet connectivity with broad band. All legal software, antivirus software, firewall be available for smooth functioning of the laboratory.
3. Staff room of 100 sq.ft. with one table and one Almeria for each faculty member.
4. One office space of 100 sq.ft. with appropriate furniture. .
5. One ladies room of 100 sq.ft. with attached toilet.
6. One reading room of 200 sq.ft. with seating arrangements for at least 30 people. The library may be accommodated in the library.
7. One copy of every text book among five students for each subject be available along with one copy of reference book as per the syllabus.
8. Library must subscribe for computer and scientific magazines. Appropriate general reading materials must be available for overall development of students.
9. An open space for sports activities. The college must be encouraged to have sport equipments.

**Staff:**

1. One Assistant Professor as per UGC-B.Voc guidelines.
2. The minimum number of teachers/visiting faculties must be appointed as per the UGC-B.Voc norms. The work load may be computed on the basis of theory classes and practicals per batch.



3. There must be one clerk in the office to look after administrative work. The record of all staffs must be maintained properly.
4. An appropriate number of class IV employees

## **8. Admission / Promotion process**

In response to the advertisement for registration, interested students will have to register for this course. Admissions will be done on the basis of qualifying exam percentage, performance of students at Common Entrance Test (CET) and personal interview. The CET will be conducted in the month of June every year.

The student will be promoted to next semester of a year with full carry on. For admission to second year (Level 6), he/she has to pass minimum 75% papers of first year (first semester + second semester). For admission to third year (Level 7), he/she has to pass first year and minimum 75% papers of second year (third sem + fourth sem).

## **9. Earning credits and Grade system**

At the end of every semester, a letter Grade will be awarded. The performance of student will be measured by the number of credits that he/she earned by weighted Grade Point Average (GPA). The semester Grade Point Average (SGPA) will be awarded after completion of respective semester and Cumulative Grade Point Average (CGPA) will be awarded at exit point.

The grade reflects student's performance in the course. A ten point rating scale shall be used for the evaluation of the performance of the student to provide letter grade for each course and overall grade for B.Voc.(Multimedia and Animation) Program. The grade points and equivalent range of marks are shown in table.

SN	Marks Obtained(in %)	Grade points	Grade	Description
1	90 -100	9.00 – 10	O	Outstanding
2	80 – 89	8.00 – 8.90	A++	Excellent
3	70 – 79	7.00 – 7.90	A+	Exceptional
4	60 – 69	6.00 6.90	A	Very Good
5	55 – 59	5.50 – 5.90	B+	Good
6	50 – 54	5.00 – 5.40	B	Fair
7	45 – 49	4.50 – 4.90	C+	Average
8	41 – 44	4.10 – 4.40	C	Below Average
9	40	4.00	P	Pass
10	< 40	0.0	F	Fail (Unsatisfactory)

Non-appearance for exam / assessment of any paper shall be treated as fail in that paper.

### Computation of SGPA and CGPA

The Semester Grade Point Average (SGPA) is calculated as

$$SGPA = \frac{\sum(\text{Credits of paper} \times \text{No. of grade points obtained})}{\sum(\text{all paper credits})}$$

The Cumulative Grade Point Average will be used to describe the overall performance of all semesters and will be computed as follows.

$$CGPA = \frac{\sum(SGPA \text{ of all semesters})}{\text{Total No. of Semesters}}$$

**Grade Card :**

The results will be declared by the university and the grade card will be issued after completion of every semester. The cumulative grade card with CGPA will be issued by the University at each exit point.

**10.Statement showing the details of Fees Per Year for B.Voc. (Multimedia & Animation course**

S.N	Particulars	Fees (Rs)
1	Prospectus	25
2	Registration	25
3	e-suvidha	50
4	Medical exam	15
5	I-card	10
6	Admission fee	25
7	Magazine	50
8	Gathering fee	50
9	Student Association Fund	10
10	Student Aid Fund	10
11	College Exam fee	75
12	College Development fee	100
13	Cultural activity/Youth festival	50
14	Disaster Management fee	20
15	Tuition fee	800
16	Gymkhana fee	50

17	Library fee	50
18	Student welfare	20
19	NSS	10
20	Ashwamedha	04
21	Avishkar	04
22	Indradhanushy	04
23	Aavahan	04
24	Abhiyan	04
25	University/college fund	10
26	Computer fee	100
27	Environmental fee	100
28	Vasantrao Kale Earn & Learn	10
29	Laboratory fee	1000
30	Library deposit	100
31	Tutorial/Journal fee	180
	<b>Total</b>	<b>2965</b>
32	University Eligibility fee Marathwada region	50
	For Maharashtra state	100
	Out of Maharashtra	500
	Out of country	12500

**11. Statement showing details of commencement of examination and examination fees.**

Examination	How many times in a year	Submission of exam forms		Commencement of exam		Exam Fees per term
		I Term	II Term	I Term	II Term	
B.Voc. ( Multimedia and Animation) I,II & II year	Twice in a year	September	April	October / November	March / April	Rs. 750/- ( Theory + Pract.)

**12. Curriculum Structure and Scheme of Evaluation: B.Voc.(Multimedia and Animation )****First Year**

S.N	Paper No	Paper Title	No. of Credits	Scheme of Teaching	Scheme of Evaluation				
					Theory / Practical per week (in hours)	Theory / Practical Marks	Univ. Exam duration (in hrs)	Total Marks	
<b>Semester – I</b>					<b>Th</b>		<b>Pr</b>		
					<b>C</b>	<b>U</b>			
					<b>A</b>	<b>A</b>			
<b>General Education Component (12 credits)</b>									
1	VOC101	Linguistic Proficiency-I	4	4	50	50		3	100
2	VOC102	Computer Fundamentals-I (Theory)	2	2	25	25		2	50
3	VOC103	Computer Fundamentals-I (Practicals)	2	4			50	2	50
4	VOC104	Professional Ethics and Management Practices	4	4	50	50		3	100
<b>Skill Education Component ( 18 Credits)</b>									
5	VOC 151	Fundamentals of Computer Graphics and Corporate Branding	2	2	25	25		2	50
6	VOC 152	Web Designing Part –I	2	2	25	25		2	50
7	VOC 153	Working with Photoshop	2	2	25	25		2	50
8	VOC 154	Practical based on Corel Draw	4	8			100	3	100
9	VOC 155	Practical based on Dreamweaver	4	8			100	3	100
10	VOC 156	Practical based on Photoshop	4	8			100	3	100
<b>Total</b>			<b>30</b>	<b>44</b>					<b>750</b>
<b>Semester –II</b>									
<b>General Education Component (12 credits)</b>									

1	VOC201	Linguistic Proficiency-II	4	4	50	50		3	100
2	VOC202	Computer Fundamentals-II (Theory)	2	2	25	25		2	50
3	VOC203	Computer Fundamentals-II (Practicals)	2	4			50	2	50
4	VOC204	Environmental Management	4	4	50	50		3	100
<b>Skill Education Component ( 18 Credits)</b>									
5	VOC 251	Basics of Animation	2	2	25	25		2	50
6	VOC 252	Web Designing Part –II	2	2	25	25		2	50
7	VOC 253	Working with Sound	2	2	25	25		2	50
8	VOC 254	Practical based on Flash	4	4			100	3	100
9	VOC 255	Project based on web designing	4	4			100	3	100
10	VOC 256	Practical based on Sound forge	4	4			100	3	100
<b>Total</b>			<b>30</b>	<b>44</b>					<b>750</b>

**Note :**Theory and practical exam should be conducted at the end of each semester.

### Second Year

S.N	Paper No	Paper Title	No. of Credits	Scheme of Teaching	Scheme of Evaluation				
					Theory / Practical per week (in hours)	Theory / Practical Marks	Univ. Exam duration (in hrs)	Total Marks	
<b>Semester – III</b>					<b>Th</b>		<b>Pr</b>		
					<b>CA</b>	<b>UA</b>			
1	VOC301	Linguistic Proficiency-III	4	4	50	50		3	100
2	VOC302	Business Software Tools –I (Theory)	4	4	50	50		3	100
3	VOC303	Statistical Tools (Probability and	4	4	50	50		3	100

		Statistics)							
4	VOC 351	Animation Art	2	2	25	25		2	50
5	VOC 352	Working with Action Scripts	2	2	25	25		2	50
6	VOC 353	Working with 3D MAX	2	2	25	25		2	50
7	VOC 354	Practical based on Animation Art	4	8			10 0	3	100
8	VOC 355	Practical based on Flash Action Script	4	8			10 0	3	100
9	VOC 356	Practical Based on 3D MAX	4	8			10 0	3	100
		<b>Total</b>	<b>30</b>	<b>42</b>					<b>750</b>
<b>Semester –IV</b>									
1	VOC401	Ethics and Cyber Law	4	4	50	50		3	100
2	VOC402	Business Software Tools –II (Theory)	4	4	50	50		3	100
3	VOC403	Fundamentals of Business and Accounting	4	4	50	50		3	100
4	VOC 451	Video Editing	2	2	25	25		2	50
5	VOC 452	Advertising Media	2	2	25	25		2	50
6	VOC 453	3D Modeling using 3D MAX	2	2	25	25		2	50
10	VOC 454	Practical based on video editing using Adobe Premier Pro	4	8			10 0	3	100
11	VOC 455	Practical based on Advertising	4	8			10 0	3	100
12	VOC 456	Practical based on 3D modeling using 3D MAX	4	8			10 0	3	100



			<b>Total</b>	<b>30</b>	<b>42</b>			<b>750</b>
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**Note** :Theory and practical exam should be conducted at the end of each semester.

**13. Question paper pattern for Semester End Exam****Note : 1. All questions carry equal marks****2. All questions are compulsory**

Q. No.	Format	Marks for 4 credit paper	Marks for 2 credit paper
1  (Based on All Units)	Multiple Choice/Fill in the blank/Match the pair/ one line answer. 1) 2) . . 10)	1 x 10 = 10	1X5=5
2  (Based on Unit –I)	(a) (b)  OR  (a)	10	5
3  (Based on Unit-II )	(a) (b)  OR  (a)	10	5

4 (Based on Unit –III)	(a) (b) OR (a)	10	5
5 (Based on (Based on Unit –IV)	(a) (b) OR (a)	10	5
	<b>Total</b>	<b>50</b>	<b>25</b>

**B.Voc.**  
**(Multimedia and**  
**Animation)**  
**First Year**  
**Semester-I**



## General Education Components

### VOC 101: Linguistic Proficiency-I (English and Marathi) with language lab training

#### Learning Objectives:

1. To facilitate the students to understand the fundamental of communicative English and Marathi
2. To facilitate the students to develop skills of communication in English and Marathi.

#### Learning Outcomes:

1. Expression power, and communication skill of the students in English and Marathi will improve
2. Students will be able to identify the necessities of behavioral and expressive attitudes as per situations.

### **Part A: BASIC STRUCTURE OF THE ENGLISH LANGUAGE**

#### **Module - I**

##### **Tenses:**

1. Present tense (includes all four types of tenses each)
2. Past tense
3. Future tense

## **Module - II**

### **Spoken English:**

1. Basic of pronunciation : Vowels, diphthongs,
2. Certain basic sounds including th, dh, gh sounds, fricatives etc.
3. Differences in the sounds of the letters, especially, w/v, f/ph etc.
4. Phonetic transcriptions.
- 5.

## **Module - III**

1. Introducing yourself (The communicator)
2. Introducing people to others
3. Giving personal information
4. Getting people's attention and interrupting
5. Giving instructions and seeking clarifications
6. Making requests and responding to requests

**References:**

1. Business Communicator – V.K. Jain, O. P. Biyani, S. Chand, New Delhi.
2. The Communicator – Board of Editors , Orient Blackswan Pvt. Ltd
3. The Art of Powerful Communication – Dinesh K. Vohra, Are Maria Publications, Pune

**Part B :BASIC STRUCTURE OF THE MARATHILANGUAGE****उद्दिष्टे -**

- १) संज्ञापनाचे स्वरूप आणि प्रकार, संज्ञापन व्यवहारातील भाषेचे महत्त्व आणि कार्य यांचे महत्त्व समजावून देणे.
- २) भाषा व्यवहाराची अपारंपरिक आणि अनौपचारिक क्षेत्रे, औपचारिक भाषा व्यवहाराची क्षेत्रे आणि त्याचे क्षेत्रनिहाय स्वरूप समजावून देणे.
- ३) विविध स्तरावरील भाषिक कौशल्ये आणि क्षमता विकसित करणे.
- ४) प्रसार माध्यमांचे स्वरूप आणि त्यासाठी आवश्यक असलेल्या भाषा व्यवहाराचे स्वरूप समजावून देणे.
- ५) कार्यालयीन / लेखन व्यवहारातील भाषेचे स्वरूप समजावून घेणे.
- ६) परिभाषानिष्ठ भाषाव्यवहार म्हणजेच निरनिराळ्या शास्त्रीय विषयांवरील लेखना करिता
- ७) भाषाव्यवहारातील आधुनिक तंत्रोपकरणांची (व तंत्रांची) माहिती करून देणे, मराठीतून व्यवहार करणाऱ्या संस्थांना भेटी देणे इत्यादी.

**घटक४****संज्ञापन व भाषिक कौशल्ये**

अ) संज्ञापन म्हणजे काय ? संज्ञापनाचे प्रकार - संज्ञापनातील भाषेचे, महत्त्व आणि कार्य भाषेचे औपचारिक व अनौपचारिक उपयोग.

आ) भाषेची प्राथमिक कौशल्ये (श्रवण, भाषण, वाचन, लेखन)



इ) भाषेची प्रगत कौशल्ये -

- १) वर्णन, कथन, निवेदन, संभाषण, सूत्रसंचालनइ.
- २) आकलन, संक्षेप, विस्तार, भाषांतर, गद्य रूपांतर, संवादलेखन इ.

### औपचारिक भाषाव्यवहाराचे विविध प्रकार

- अ) इतिवृत्त, टिप्पणी, अर्जलेखन, कार्यालयीन पत्रलेखन, निवेदन प्रसिध्दीपत्रक, निविदा इ.
- ब) मुलाखत लेखन

स्मरणिका / गौरविका / संस्थापत्रिका / वार्षिक अहवाल इत्यादींचे संपादन

**Module V :** Tutorials, assignments and presentation based on Module I to IV

### संदर्भ पुस्तके:

- १) मराठी शुध्दलेखन प्रदीप - मो. रा. वाळंबे, गो. य. राणे प्रकाशन
- २) मुद्रित शोधन - य. ए. धायगुडे - वि. पूना प्रेस ऑनर्स असो.
- ३) मराठी शुध्दलेखनविवेक - द. न. गोखले - सोSहं प्रकाशन
- ४) शुध्दशब्दसूची - स्नेहल तावरे - स्नेहवर्धन
- ५) राजभाषापरिचय -
- ६) व्यावहारिक मराठी - पुणेविद्यापीठ
- ७) व्यावहारिक मराठी - ल. रा. नसिराबादकर -फडके बुकसेलर्स,कोल्हापूर
- ८) व्यावहारिक मराठी - प्रकाश परब
- ९) वार्तासंकलन - चंद्रकांत ताम्हणे
- १०) व्यावहारिक मराठी - (संपादकडॉ. स्नेहल सावरे) स्नेहवर्धन प्रकाशन, पुणे



## VOC 102:Computer Fundamentals–I (Information Technology)

### Learning Objectives:

1. To facilitate the students to study Instructional Designing theories, basic IT skills using application software tools,
2. To facilitate the students to make functional use of IT skills in teaching – learning process.

### Learning Outcomes:

1. Students will have command on basic IT skills
2. Students will be able to use computer and internet facilities for their academic and holistic development purpose

### **Software for Hands-on:**

- Windows Vista
- MS Office 2007
- Internet Explorer
- Online collaboration tools

### **This course offers the following modules:**

#### **Module - I: Word Processing**

- Overview of Word Processing
- Creating and Editing a Document (Exercise 1 - Creating Notice)
- Revising and Refining a Document (Exercise 2 - Revise your notice)
- Using Additional Word Features (Exercise 3 – Creating notice for different classes)
- Changing the Display of the Document (Exercise 4 - Changing the display of your notice)
- Using Mail Merge (Exercise 5 – Sending notice using Mail Merge)

- Using Standard Templates (Exercise 6–Create notice using standard templates)
- Word Processing in Other Languages ( Exercise 7 - Creating a notice in Marathi)

### **Module - II: Spreadsheet and Presentation Graphics**

- Overview of Excel
- Creating and Editing ( Exercise 1 – Creating attendance sheet)
- Using Charts (Exercise 2 – Creating a chart)
- Managing a Workbook (Exercise 3 – Managing Attendance Sheet)
- Overview of Presentation Graphics
- Creating a Presentation (Exercise 1 – Creating a Annual Day Presentation)
- Modifying and Refining a Presentation (Exercise 2 – Modifying and Refining Presentation)
- Using Advanced Presentation Features (Exercise 3 – Advanced Features for Presentation)

### **Module - III: Database Management Systems**

- Overview
- Creating a Database (Exercise 1 – Creating a Student Database)
- Modifying a Table (Exercise 2 – Modifying a Student Database)
- Creating Forms ( Exercise 3 – Creating Form for Student Database)
- Queries and Reports (Exercise 4 – Creating Report)
- Protecting the Database (Exercise 5 – Protecting a Student Database)

### **Module - IV: Internet**

- Internet Basics
- Navigating the Web ( Exercise 1 – Navigating the web site)
- Finding Information on the Web (Exercise 2 – Searching result on the web)
- Communication Using E-Mail (Exercise 3 – Communicate result to your friends)

**Module - V** :Tutorials, assignments and presentation based on Module I to IV

**References:**

1. Microsoft Office Word 2007 a Beginners Guide: A Training Book of Microsoft Word 2007, By W.R. Mills, United States of America, Bloomington, Indiana.
2. Microsoft Office Word 2007: Illustrated Co: Illustrated Complete, By Jennifer A. Duffy, Carol M. Cram
3. Sams Teach Yourself Microsoft Office 2007 All in One, By Greg Perry
4. Microsoft Office Excel 2007: Comprehensive Concepts and Techniques, By Greg B. Shelly, Thomas J. Cashman, Jeffrey J. Quasney.
5. Microsoft Office Power Point 2007: Illustrated Introductory: Introductory, By David Beskeen
6. Microsoft Office Power Point 2007: Top 100 Simplified Tips & Tricks, By Paul McFedries.
7. Microsoft Office Access 2007: Comprehensive Concepts and Techniques, By Thomas J. Cashman, Philip J. Pratt
8. New Perspectives on Microsoft Office Access 2007, Comprehensive, Joseph J. Adamski, Kathleen T. Finnegan
9. Basic Internet, By O.H.U. Heathcote
10. Microsoft Office 2007 Power Point: A Training Book for Microsoft Power Point 2007, By W. R. Mills

## VOC 103: Computer Fundamentals-I (Information Technology)

### Laboratory course work

1. Experiment(s) based on word processing
2. Experiment(s) based on spread sheet
3. Experiment(s) based on presentation graphics
4. Experiment(s) based on Database Management
5. Experiments based on Internet

Rather than performing a certain prescribed number of experiments, this laboratory coursework is meant for providing sufficient hands on practice of the students with computer. However, for purpose of evaluation, at least six experiments, more or less equally divided from above listed sectors, are to be performed.

## VOC 104: Professional Ethics and Management Practices

### Learning Objectives:

1. Clarify personal and professional values and recognize their impact on decision making and professional behavior.
2. To appreciate ethical dilemma while discharging duties in professional life.
3. To know the need of business ethics.
4. To be aware of the need for Corporate Social Responsibility.

5. To orient students to Corporate Citizenship; thereby instilling in them Organizational Understanding, principles of Management & behavior that favor Corporate Citizenship Behavior.

### Learning Outcomes:

1. Students will become aware of professional ethics and fundamentals of management practice
2. Students will acquire understanding of responsibilities of corporate sector towards the society
3. This course will improve the leadership quality in the students

### **Pre-requisite:**

The students are expected to come prepared with the basic conceptualization & searching for relevant data through the web / References.

### **Module – I: Moral Values and Ethics:**

*Morals Values:* Definition – Need for Values, Kinds of Values, Value conflicts, value clarification and value acceptance. **Ethics:** Definition and meaning, Elements/components—Autonomy, Integrity, Work ethics, Service Learning, Civic Virtue, Respect of others, Living peacefully, Caring, Sharing, Honesty, Courage, Valuing at Time, Co-operation, Commitment, Empathy, Self Confidence, Character, Spirituality.

### **Module – II: Profession and Ethical Practices:**

**Meaning of Profession:** Two models of Professionalism; Three types of Ethics or morality; Ethics in different professions, Code of Professional Ethics, Implementation of Ethical code in Organization, **Ethical Practices and Issues:** Professional organization statement,



positions, Barriers to ethical practices, Strategies for individuals. Ethical Decision making; Corporate Social responsibilities.

**Module – III: Management Practices - Conceptualization:**

Concept, Management as a function of various Social Sciences, Evolution of Management Thought, Managerial Processes, Functions, Skills & Roles of a Manager organization; Management by Objectives (MBO).

**Module –IV:Individual Behavior, Group Dynamics and Social Citizenship:**

Perception, Personality Types, Values & Ethics, Attitudes, Individual Learning Behaviors Individual Motivation & Work Motivation, Individual & Group Decision Making, Group Communication, Decision Making & Problem Solving, Organizational Leadership, Understanding & managing group processes, Organizational Design & Structure, Recreation & Work Stress, Corporate Social Responsibility; Social Leadership

**Module -V:** Tutorials, assignments and presentation based on Module I to IV

**References:**

- 1) The Professional by Subroto Bagchi
- 2) Mike Martin and Roland Schinzinger, "Ethics in Engineering", McGraw-Hill, New York 1996.
- 3) Govindarajan M, Natarajan S, Senthil Kumar V. S, "Engineering Ethics", Prentice Hall of India, New Delhi, 2004.
- 4) Charles D. Fleddermann, "Engineering Ethics", Pearson Education / Prentice Hall, New Jersey, 2004 (Indian Reprint now available).
- 5) Charles E Harris, Michael S. Protchard and Michael J Rabins, "Engineering Ethics – Concepts and Cases", Wadsworth Thompson Learning, United States, 2000 (Indian Reprint now available)
- 6) John R Boatright, "Ethics and the Conduct of Business", Pearson Education, New Delhi, 2003.
- 7) Edmund G Seebauer and Robert L Barry, "Fundamentals of Ethics for Scientists and Engineers", Oxford University Press, Oxford, 2001.

- 8) Principles of management - Suri, Sontakki and Deshpande, Mcgrow Hill publishing co. Ltd.
- 9) Principles of management - Dr. Davar
- 10) Organization and Management Practices - P. Drucker
- 11) Organization behavior - By Dwivedi
- 12) Management Principles and Practices, By Dr M. SakunthivelMurugan; New age International Publishers, New Delhi
- 13) Consumer Behaviour, By Matin Khan New Age International Publishers, 2<sup>nd</sup> Edition, New Delhi
- 14) Fundamental of Management, Concept, Functions, Role and Profiles : By M. W. Samarth and Pratibha M. Siriya; S. Chand and Co. Ltd
- 15) John R Boatright, "Ethics and the Conduct of Business", Pearson Education, New Delhi, 2003.
- 16) Edmund G Seebauer and Robert L Barry, "Fundamentals of Ethics for Scientists and Engineers", Oxford University Press, Oxford, 2001.

## Vocational Component

### VOC 151: Fundamentals of Computer Graphics And Corporate Branding

#### UNIT-I

##### **Image Representation :**

Introduction ,The Digital Image ,Raster Image Representation ,Hardware Frame Buffers, Greyscale Frame Buffer , Pseudo-colour Frame Buffer ,True-Colour Frame Buffer , Representation of Colour , Additive vs. Subtractive Primaries ,RGB and CMYK colour spaces ,Greyscale Conversion , Can any colour be represented in RGB space? ,CI colour space ,Hue, Saturation, Value (HSV) colour space , Choosing an appropriate colour space .

#### UNIT-II

##### **Geometric Transformation :**

Introduction, 2D Rigid Body Transformations ,Scaling ,Shearing (Skewing), Rotation ,Active vs. Passive Interpretation ,Transforming between basis sets ,Translation and Homogeneous Coordinates , Compound Matrix Transformations, Animation Hierarchies

#### UNIT-III

##### **Computer Graphics on the World Wide Web:**

Image Files:GIF, JPEG, PNG ,Animation Files:Animated GIF,MPEG,Quicktime, The Graphics Process: Geometric Modeling, 3D Animation, Texturing, Rendering, Image Storage and Display.

#### UNIT-IV

##### **Geometric Modelling:**

Lines and Curves :Explicit, Implicit and Parametric forms ,Parametric Space Curves .  
Surfaces :Planar Surfaces ,Ray Tracing with Implicit Planes,Curved surfaces ,Bi-cubic surface patches

**Bringing the corporation into corporate branding:**

Branding, Strategic planning ,Organizational culture, Brand image.

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**Reference Book:**

1.Fundamentals of Computer Graphics - CM20219 Lecture Notes,Dr John  
Collomosse,University  
of Bath, UK

Vocational Component  
VOC152: Web Designing Part - I

**UNIT-I****1.HTML5 Reference :**

HTML5 History ,What is HTML5 ,New Elements ,DOCTYPE Element ,Article Element, Aside Element ,Audio Element ,Bdi Element ,Canvas Element ,Command Element , DatalistElement ,Details Element ,Embed Element ,Figure Element ,Figcaption Element , Footer Element, Header Element , Hgroup Element , Keygen Element .

**UNIT-II****2.HTML5 Reference :**

Mark Element , Main Element , Menu Element , Meter Element , Nav Element , Output Element , Progress Element , Ruby Element , Section Element , Source Element , Summary Element , Svg Element ,Time Element , Track Element ,Video Element , Wbr Element ,Drag and Drop ,Geolocation with HTML5 ,Video/DOM

**UNIT-III****3.CSS3 References:**

CSS3 History ,What is CSS3 ,Animations ,Borders, Backgrounds ,Fonts,Multiple Columns ,Text Effects , Transitions Effects ,User Interface of CSS3 ,2D Transforms , 3D Transforms with CSS3 .

**UNIT-IV****4.Form Attributes and Input Attributes:**

**Form:** Autocomplete Attribute of HTML5 ,Novalidate Attribute of HTML5

**Input Attributes :** Autofocus ,Form ,Formaction ,Formenctype ,Formmethod , Formnovalidate, Formtarget , Height and Width ,List , Min and Max ,Multiple ,Pattern (regex) ,Placeholder , Required ,Step .

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**Reference Book:**

1. Beginner 53 Tutorials by Swapnil Raja

Vocational Component

VOC153: Working with Photoshop

**UNIT-I**

**1. Welcome to Photoshop 6 :**

Introduction:What Is Photoshop?,Image-Editing Theory ,Inside Photoshop ,A First Look at Photoshop 6,The Photoshop Desktop, Navigating in Photoshop, Customizing the Interface,.Image Fundamentals :How Images Work, The Resolution of Screen Images, How to Open, Duplicate, and Save Images, File Format Roundup, Resampling and Cropping.

**2. Painting :**

Defining Colors: Selecting and Editing Colors, Working in Different Color Modes, Using Photoshop's Other Color Selection Methods ,Introducing Color Channels, Painting and Editing , Paint and Edit Tool Basics, Brush Shape and Opacity, Brush Dynamics, Brush Modes

**UNIT-II****3. Retouching:**

Filling and Stroking :Filling Portions of an Image, Filling Selections with Color or Patterns, Applying Gradient Fills, Applying Strokes and Arrowheads, Retouching, Repeating, and Restoring ,Three of the Best ,Cloning Image Elements,Applying Repeating , Patterns.

**UNIT-III****4. Selections, Masks, and Filters .**

Selections and Paths, Selection Fundamentals, Ways to Change Selection Outlines, Moving and

Duplicating Selections,How to Draw and Edit Paths, Corrective Filtering ,Filter Basics ,Blurring an Image

Noise Factors

**UNIT-IV****5. Layers, Objects, and Text**

Working with Layers, Working with Layers, Selecting the Contents of Layers, Moving, Linking,

Aligning Layers ,Applying Transformations, Masking and Layers, The Wonders of Blend Modes ,Mixing Images Together ,Using Opacity and Blend Modes., Applying Advanced Blending Options , Shapes and Styles , Drawing Shapes,The Bold New Layer Styles, Modifying and Saving Effects, Fully Editable Text , The State of Type in Photoshop ,Using the Type Tool, Character Masks and Layer Effects

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**Reference Book:**



1. Photoshop Bible By Deke McClelland

**VOC154 :20PRACTICAL ASSIGNMENTS BASED ON COREL DRAW**

**VOC155: 20 PRACTICAL ASSIGNMENTS BASED ON DREAMWEAVER**

**VOC156: 20 PRACTICAL ASSIGNMENTS BASED ON PHOTOSHOP**

# **B.Voc.**

## **(Multimedia and Animation)**

# First Year

# Semester-II

General Education Components

VOC - 201: Linguistic Proficiency-II

Part - A: English

Learning Objectives:

To improve the writing skills of students

**Learning Outcomes:**

1. Students will be able to write formal letters
2. Presentations skill of students will improve
3. Students will be able to face interviews

**Module –I: Introducing written communication**

1. Writing Notices
2. Drafting Agendas (Synergy)
3. Writing minutes
4. Note taking
5. Basic of spoken English

**Module-II: Writing applications, letters and business CORRESPONDENCE (Introducing**

**Business Correspondence):**

1. Writing applications for various jobs, referring to the ads.
2. Writing letters:
  - a. Letters of inquiry
  - b. Letters of order
  - c. Letters of complaint
  - d. Letters of indent
  - e. Letters of credit
  - f. Bills of lading

(Exercises from Synergy )Orient Longman

### **Module- III: Introducing listening skills**

1. Approaches to listening skills
2. Barriers to effective listening
3. Tips for effective listening
4. Preparing for interview, Interview facing techniques
5. Preparing -
  - a. Speeches
  - b. Presentations
  - c. Meetings
  - d. Surveys
  - e. Report writing
  - f. Making Project reports
  - g. Preparing Proposals
  - h. Seeking financial assistance / loan for your proposal

#### **References:**

- 1) Synergy: Communication in English and study skills (Orient Blackswan) – (2008)
- 2) Macmillan foundation English – R. K. Dwivedi, A. Kumar: Macmillan India Ltd. 2001
- 3) Mastring Communication – Nicky Stanlon: Palgrave Macmillan (2009)
- 4) Scientists must write – Robert Barrass: Routledge Publication, London
- 5) Functional Grammar and Spoken and Communication in English – Bikram K. Das: Orient Longman Publication (2006)

### **PART-B: BASIC STRUCTURE OF THE HINDI LANGUAGE**

**(ON NEXT PAGE.....)**



**Part-B: Hindi****Part-B: Hindi****संप्रेषणमूलक व्यावसायिक हिंदी:****Module- IV:****वाणिज्य व्यवसाय और हिंदी:**

- वाणिज्य व्यापार से तात्पर्य एवं व्यावसायिक व्यापार के साधन
- वाणिज्य व्यापार और भाषिक प्रकार्य
- वाणिज्य-व्यावसायिक संरचनात्मक विशेषताएँ
- भाषा कौशल्यः

श्रवण, भाषण, वाचन, लेखन

**व्यावसायिक - संप्रेषणः**

- संप्रेषण के तात्पर्य एवं स्वरूप
- संप्रेषण के प्रमुख प्रकारः भाषिक तथा भाषेतर
- व्यावसायिक पत्राचार

**क) व्यापारिक-** व्यावहारिक सामान्यपत्रा, आवेदनपत्र, यासाखपत्रा, संदर्भ तथा साखपत्रा के जॉचपत्रा, मुल्य ज्ञापनपत्र, आदेशोके निरसन सम्बंधीपत्रा, शिकायतपत्रा, समायोजनपत्र, तगादायावसूलीपत्र, विक्रय प्रतिनिधित्व संबंधीपत्र,

**ख) विशेष व्यावहारिकपत्रः**

- बीमातथाबीमा - पत्र
- रेल तथा जहाज द्वारा माल परिवहन से संबंधितपत्र

**ग) प्रकल्प / सर्वेक्षण / प्रात्यक्षिकः**

- भाषिक कौशल्य अभ्यास
- वाणिज्य - व्यावसायिके भाषिक प्रकार्या कासर्वेक्षण
- व्यापारिक संप्रेषण - पत्रलेखन का अभ्यास

**सहायक ग्रंथ:-**

१. व्यावसायिक संप्रेषण: डॉ. अनूपचंद्र मायानी, राजपाल एण्ड संस, नईदिल्ली
२. भाषाशिक्षण:सिध्दांतऔरप्रक्रिया - मनोरमागुप्त, केंद्रियहिंदीसंस्थान, आगरा
- ३.मीडियालेखन: सिध्दांतऔरव्यवहार - डॉ. चंद्रप्रकाश
४. व्यावसायिकहिंदी - डॉ. दिलीपसिंह, वाणीप्रकाशन, काशन, नईदिल्ली.
५. संप्रेषणमूलक व्यावसायिक हिंदी - डॉ. माधवसोनटक्के: ओरियण्ट ब्लैक स्वाईन, दिल्ली.



## VOC – 202: Computer Fundamentals-II (Basic Computer Hardware System)

### Learning Objectives:

To introduce students with computer hardware system, troubleshooting techniques

### Learning Outcomes:

1. Students can solve general hardware related issues
2. They can install various devices as well as operating system in the computer
3. Students can build their own computer system

### **Module-I:**

Computer Architecture, Mother Board and its all components, Computer Components (Input/ Output Devices, Primary and Secondary Memory, Power Supply, Monitor).

Observation of all parts of Floppy drives, HDD, CD, and SMPS. Identification of cables and computers. Mounting Motherboard in cabinet, Installation of cards, devices and then connecting cables. Fitting of cabinet. CMOS – Setup, Troubleshooting.

### **Module-II:**

Computer Assembling, Make your own Computer, Operating System Installation, Windows Vista, Software Installation, Trouble Shooting, Bios Setups, Identifications of Components. Advanced Trouble Shooting and Maintenance.

### **Module-III:**

Types of printers and printing mechanism, How printer works, Inject printer, working of laser printer, Fonts/Type faces, Trouble shooting printers. Types of Scanners and its used.

#### **Module-IV**

Introduction to Laptops, Portable System background, System Features, Processors, Mother Boards, Memory, Power, Expansion Bus, Hard Disk & Removable Storage Devices, Laptop Components, Laptop Maintenance & Assembling, Linux, Multimedia, Internet, Computer VIRUS, Wi-Fi Network Trouble Shooting.

#### **Module V : Tutorials, assignments and presentation based on Module I to IV**

##### **Text Books:**

(01) Hardware bible By : Winn L Rosch, Techmedia publications

(02) Trouble shooting, maintaining and repairing PCs By : Stephon J Bigelow Tata McGraw Hill Publication

(03) Modern All about printers By :ManoharLotia, Pradeep Nair, BijalLotia BPB publications.

##### **REFERENCES:**

(01) The complete PC upgrade and maintenance guide By : Mark Minasi, BPB Publications.

**VOC 203: Computer Fundamentals-II (Basic Computer Hardware System)****Laboratory Coursework**

1. Handling of all Computer Peripherals
2. PC Troubleshooting
3. Windows Installation
4. PC Assembling
5. Fault finding in PC and recovering
6. Installation and use of Printers and Scanners
7. Fault Finding and Troubleshooting on Laptop

Rather than performing a certain prescribed number of experiments, this laboratory coursework is meant for providing sufficient hands on practice of the students with computer. However, for purpose of evaluation, at least six experiments, more or less equally divided from above listed sectors, are to be performed.

## VOC 204:Environment Management

### Learning Objectives:

1. To create awareness between the students about our ecosystem, related problems and our role in that.
2. To encourage students to solve the environment related problems

### Learning Outcomes:

1. Students will think on ecosystem and environment problems.
2. They can make other people aware about environment problems
3. They will be introduced to environmental policies and regulations

## **Module - I: Ecosystems and Natural Resources**

**Introduction:** Introduction and scope of environmental science; Need of public awareness.

**Ecosystem:** Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem b) Grassland ecosystem c) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

**Natural Resources:** Land resources and land use change; Land degradation, soil erosion and desertification; Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity; Water: Use and over-exploitation of surface and ground water, floods, droughts; Energy resources: Renewable and non-renewable energy sources, growing energy needs.

## **Module - II: Environment Pollution, Waste Management and Role of Human being**

**Environmental pollution:** types, causes, effects and controls; Air, water, soil and noise pollution, Nuclear hazards and human health risks; Case Studies: Bhopal Tragedy, Chernobyl disaster etc.

**Waste management:** Control and treatment measures of urban and industrial waste; Trade in Wastes; Industrial Ecology and Recycling Industry Waste trade;

**Human population growth:** Impacts on environment, human health and welfare. Growth Limits. Resettlement and rehabilitation of project affected persons; case studies.

**Disaster management:** floods, earthquake, cyclones and landslides. Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan. Environmental ethics

## **Module -III: Biodiversity and Conservation**

**Levels of biological diversity:** Genetic, species and ecosystem diversity; Biogeographic zones of India; India as a mega-biodiversity nation; Endangered and endemic species of India

**Threats to biodiversity:** Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

**Module-IV: Environment Policies & Practices**

**Fundamentals:**Sustainability and sustainable development;

**Urban problems:** global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture; Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act;

**Environment Management System:** EMS Standards, ISO 19011 & ISO 14000 Series, Bharat- II and EURO- II, Eco-Audit Scheme, Clearance/ Permission for establishing Industry

**Module - V :**Tutorials, assignments and presentation based on Module I to IV

**References:**

1. Subramanian.V., "The Factories Act 1948 with Tamilnadu factories rules 1950", Madras Book Agency, 21st ed., Chennai, 2000.
2. C.RayAsfahl" Industrial Safety and Health management" Pearson Prentice Hall,2003.
3. National Safety Council, "Accident Prevention Manual for Industrial Operations", N. S. C. Chicago, 1988.
4. Heinrich H.W. "Industrial Accident Prevention" McGraw-Hill Company, New York, 1980.
5. Krishnan N.V. "Safety Management in Industry" Jaico Publishing House, Bombay, 1997.
6. John Ridley, "Safety at Work", Butterworth & Co., London, 1983.
7. Blake R.B., "Industrial Safety" Prentice Hall, Inc., New Jersey, 1973
8. Bharucha, E. 2003, Textbook for Environmental Studies, University Grants Commission, New Delhi and BharatiVidyapeeth Institute of Environmental Education and Research, Pune. 361.
9. Carson, Rachel. 1962. Silent Spring (Boston: Houghton Mifflin, 1962), Mariner Books, 2002
10. Economy, Elizabeth. 2010. The River Runs Black: The Environmental Challenge to China's Future.

11. Gadgil, M. & Ramachandra, G. 1993. *This fissured land: an ecological history of India*. Univ of California Press.
12. Gleeson, B. and Low, N. (eds.) 1999. *Global Ethics and Environment*, London, Routledge.
13. Grumbine, R. Edward, and Pandit, M.K. Threats from India's Himalaya dams. *Science* 339.6115 (2013): 36-37.
14. Heywood V.H. & Watson, R.T. 1995. *Global Biodiversity Assessment*. Cambridge University Press.
15. McCully, P. 1996. *Silenced rivers: the ecology and politics of large dams*. Zed Books.
16. McNeill, John R. 2000. *Something New Under the Sun: An Environmental History of the Twentieth Century*.
17. Odum, E.P., Odum, H.T. & Andrews, J. 1971. *Fundamentals of Ecology*. Philadelphia: Saunders.
18. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic press, 2011.
19. Rao MN and Datta AK, 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co. Pvt. Ltd.

Vocational Component  
VOC251: Basics Of Animation

**UNIT-I**

**Introduction to Animation:**

History of Animation, The Origins of Animation, Types of Animation, Terms used in Animation, Basic Principles of Animation

**Introduction to equipment required for animation:**

Animator's Drawing Tools, Rapid Sketching & Drawing, Developing Animation Character

**UNIT-II**

**Developing the characters with computer animation:**

Anatomy & Body Language, 2 D virtual drawing for animation

**UNIT-III**

**Motion studies:**

Thumbnails, sequential movement drawing, drawing for motion

**UNIT-IV**

**Essentials & qualities of good animation characters:**

Three dimensional drawings of characters

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**Reference:**

1. The Illusion Of Life by Walt Disney



2. The Complete Animation course by Chris Patmore, By Barons Educational Series(New York)
3. Anatomy for the Artist by Daniel Carter and Michael Courtney

### Vocational Component

## VOC252 : Web Designing Part – II

### UNIT-I

1. Working with Scalable Vector Graphics :

Overview of SVG, Understanding SVG, Scalable Graphics ,Scalable Graphics, Adding SVG to a page, Simple Shapes, Transforming SVG Elements, Reusing Content, Patterns and Gradients, SVG Paths, Using SVG Text, Putting the Scene Together, Building an Interactive Application with SVG, Adding Trees, Adding the updateTrees Function, Adding the CSS Styles, The Final Code.

## UNIT-II

### 2. Working with Audio and Video :

Overview of Audio and Video, Using the Audio and Video API, Understanding Media Elements, Background Noise in a Page.

## UNIT-III

### 3. Using the Forms API:

Overview of HTML5 Forms, Using the HTML5 Forms APIs, New Form Attributes and Functions,

Checking Forms with Validation, Validation Fields and Functions, Building an Application with HTML5 Forms.

### 4. Working with Drag-and-Drop:

Web Drag-and-Drop, Overview of HTML5 Drag-and-Drop, Drag-and-Drop Event Flow, Transfer and Control, Building an Application with Drag-and-Drop, Handling Drag-and-Drop for Files.

## UNIT-IV

### 5. Javascript:

What is JavaScript ?, JavaScript Syntax, Whitespace and Line Breaks, DataTypes, Variables, Operators, Branching and looping statements, Functions, Dialog Boxes, Cookies, Errors & Exceptions Handling, Form Validation Object: String, Arrays , Date , Math .

## UNIT-V

Tutorials, assignments and presentation based on Unit I to IV

**Reference:**

1. Pro HTML5 Programming by Peter Lubbers, Brains Albers and Frank Salim
2. HTML5 & Javascript Web Apps by Wesley Hales.

Vocational Component  
VOC253: Working with Sound

**UNIT-I**

**1. Digitization of Sound**

What is Sound? Digitization ,Nyquist Theorem ,Signal to Noise Ratio(SNR),Signal to quantization Noise Ratio (SQNR)

**UNIT-II**

**2. Working with Audio**

Linear & Non Linear Quantization ,Audio Filtering , Audio Quality VS Data Rate ,Synthetic sound

**UNIT-III**

**3. MIDI : Musical Instrument Digital Interface**

MIDI Interview , Hardware Aspects of MIDI ,Structure of MIDI Messages ,General MIDI, MIDI to WAV Conversion

**UNIT-IV**

**4. Quantization & Transmission of Audio**

Coding of Audio ,Pulse Code Modulation ,Differential Coding of Audio ,Loseless Predictive Coding , DPCM,DM,ADPCM

## **5. Editing Audio**

Copying, Pasting, Cutting, Deleting, Trimming/Cropping, Mixing

### **UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

### **Reference Book:**

Fundamentals of Multimedia by Ze-Nian Li and Mark S. Drew

**VOC254 : 20 PRACTICAL ASSIGNMENTS BASED ON FLASH.**

**VOC255: PROJECT BASED ON WEB DESIGNING**

**VOC256: 20 PRACTICAL ASSIGNMENTS BASED ON SOUND FORGE**

**B.Voc.**  
**(Multimedia and Animation)**  
**Second Year**  
**Semester-III**

**General Education Components**  
**VOC : 301 : Linguistic Proficiency - III**

**Learning Objectives:**

To improve the presentation skills of students

**Learning Outcomes**

1. Students will become good English communicator
2. They can successfully present themselves in seminars, oral presentation, interviews etc.

**Module- I: (1) Presentation skills:**

- (a) Oral Presentation
- (b) Group Discussion/Panel Discussion

- (c) Speech/Lecture
- (d) Visual Presentation
- (e) Use of Internet
- (f) Seminar Presentation
- (g) Commentary/ Reporting
- (h) Language of Present functions
- (i) Ability to answer & questions
- (j) Exercise

**Module- II: (2) Grammar in Use:**

- (a) Sentence Structure
- (b) Verbs-Classifications
- (c) Infinitive and gerunds
- (d) Passivity
- (e) Conditionals
- (f) Concord
- (g) Recapitulation of grammatical items
- (h) Exercises

**Module-III : Written Communication Skill:**

- (a) Forms of written communication
- (b) Developing ideas and logic
- (c) Correspondence Techniques
- (d) Writing paragraph and complete item.
- (e) Exercises
- (f) Writing in different forms proposals surveys, appraisals and Reports
- (g) Language and grammar required

(h) Writing article/paper/news paper/media report

(i) Exercises

**Module- IV: Comparing/Conducting Programmes:**

(a) Positive Attitude

(b) Language /Body Language

(c) Humour

(d) Mastering the terminology

(e) Exercises

**Module-V : Tutorials, assignments and presentation based on Module I to IV**



## VOC 302: Business Software Tools- I : Web Page Design

### Learning Objectives:

To introduce students with multimedia, World Wide Web, HTML and their applications

### Learning Outcomes

Students can create and manage HTML documents

### **Module-I:**

- A. Introduction-The World Wide Web (WWW), HTML History, Hypertext and Hypertext Markup Language, Microsoft Front Page
- B. HTML Documents- Dividing the document into 2 parts, Headers, Body; Tags- Format, Representing 2 types of tag (odd and even); Elements of an HTML Document -Text Elements, Tag Elements, Special Character elements
- C. Structural elements of HTML documents- Header tags; Body tags- Paragraphs, Titles, Lists (Numbered lists, Non-Numbered lists, Definition lists)
- D. Formatting HTML Documents- Logical styles (source code, text enhancements, variables), Physical Styles (Bold, Italic, underlined, crossed)

### **Module-II:**

- A. Managing images in html- Image format (quality, size, type, ...), Importing images (scanners), Tags used to insert images, Frames
- B. Tables in HTML documents- Tags used in table definition, Tags used for border thickness Tags used for cell spacing, Tags used for table size, Dividing table with lines, Dividing lines with cells; Cell types- Titles cells, Data cells

### **Module-III:**

A. Hypertext and Link in HTML Documents- URL/FTP/HTTP; Types of links- Internal Links, External Links, Link Tags, Links with images and buttons, Links that send email messages

B. Special effects in HTML documents- Text fonts, Sensitive Images, Tip tables; Page background- Variable, Fixed; Rotating messages (Marquee); Counters

#### Module- IV:

A. Multimedia- Audio files and acceptable formats (*AIFF, AU, MIDI, WAVE*), Inserting audio files; Video files and acceptable formats (*MPEG, Quick Time, Video for Windows*)- Inserting video files, Screen control attributes (*WIDTH, HEIGHT, ALIGN*), Start control sttributes (*START, FILEOPEN, LOOP, LOOPDELAY, MOUSEOVER*).

B. Managing forms- Interactive forms; Creating data entry forms; Calling JavaScripts for modifying entered data; JavaScript Primer; Handling Form Output with JavaScript; Filling out HTML forms

#### Module- V : Tutorials, assignments and presentation based on Module I to IV

#### References:

- **Special Edition Using Intranet HTML** / *Mark Surfas, Mark Brown and John Juge*
- **Dynamic HTML Web Magic** / *Jef Douyer – Hayden development group*
- **HTML 4 for the World Wide Web** / *Elizabeth Castro*
- Writing HTML Tutorial by Maricopa Center for Learning and Instruction (MCLI)
- <http://www.w3schools.com/html/>

### **VOC 303: Statistical Tools: Probability and Statistics**

#### **Learning Objectives:**

1. To apply the concept of probability and probability distributions in their field. To acquire the concept of estimation theory
2. To do testing of hypothesis that will be useful in solving engineering problems.
3. To design and analyze the statistical experiments.

**Learning Outcomes:**

Students will be able to use statistical models in various aspects of engineering, business, and analysis

**Module- I: Probability and Random Variable**

Probability – Random variables – Moments – Moment generating function – Standard distributions – Functions of random variables – Two-dimensional R.Vs – Correlation and Regression.

**Module- II: Statistics**

Collection of data, types of data, Classification and tabulation of data, Diagrammatic/ graphical representation of data, Measures of central Tendency for ungrouped data, Mean, median, mode of ungrouped data, Brief revision of Tabulation of data, inclusive and exclusive type of tables, Histograms, frequency polygon, frequency curve, pie diagram, Ogives (Cumulative frequency graphs) Applications of ogives in determination of median, Relation between measures of central tendency, Introduction to normal distribution, Properties of normal distribution.

**Module- III:** Introduction of Operation Research (OR), Origin and Development of OR, Scientific Method in OR, advantages and limitation of OR, Application of OR

**Module-IV:** Linear programming problems (LLP), Graphical methods, Simplex method, Transportation problem (TP), Assignment problem (AP).

Sequencing Problem (SP), Game theory, Networking Scheduling by PERT/ CPM, Replacement Problem

**Module-V :** Tutorials, assignments and presentation based on Module I to IV

**References:**

1. Richard Scheaffer, Madhuri Mulekar, James McClave, "Probability and Statistics for Engineers", Cengage Learning, USA, 2010.
2. Gupta, S.C. and Kapur, V.K." Fundamentals of Mathematical Statistics ", Sultan Chand and Sons, New Delhi, 2011.
3. Freund John, E. and Miller, Irwin, "Probability and Statistics for Engineering ", Prentice Hall, 5th Edition, 1994.
4. Jay, L. Devore, "Probability and Statistics for Engineering and Sciences", Brooks/Cole Publishing Company Monterey, California, 1982.
5. Montgomery D.C and Johnson, L.A.," Forecasting and Time Series ", McGraw-Hill. 2005.
6. Anderson, O.D., " Time Series Analysis: Theory and practice ", I. North - Holland, Amsterdam, 1982.
7. Operation Research- K. Swarup, P. L. Gupta, M. Mohan; Sultan Chand & Son
8. Operation Research- Gupta &Kapur; Sultan Chand & Son
9. Operation Research- K. Swarup, P. L. Gupta ; Sultan Chand & Son

**Vocational Component**  
**VOC351: ANIMATION ART**

**UNIT-I**

**1. Skills required for an animation artist:**

Visual and creative development of an artist, How to draw gestures

**2. Basic Proportions:**

Heads, Rotation in Arcs, Key Lines, Perspective

**UNIT-II**

**3. Volume Construction:**

Balance, Muscles, Light & shade

**UNIT-III**

**4. Shape and Action:**

Hands & Legs, Foreshortening, Facial expressions

**UNIT-IV**

**5. Introduction to pose to pose sketching (Action analysis):**

Introduction to Acting, Modelling, Sketching from Acting, Sketching from live models, Introduction to Rapid Sketching Techniques, Sketching from Memory, live action.

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**Reference Books :**

1. Figure Study Made Easy By- Aditya Chari -- Grace Publication
2. Perspective ByMilindMulik -- Jyotsna Prakashan

**Vocational Component**

**VOC352: WORKING WITH ACTION SCRIPT**

**UNIT-I**

**1. Introduction To ActionScript:**

Introducing the Actions Panel, When to Use ActionScript, Working in Normal Mode & ExpertMode, Using the Reference Panel, Understanding ActionScript Syntax, **Creating**

**ActionScriptMovies:** About Flash Symbol Types, Adding an Action to Your Script, Adding an Action to a Key frame, Adding an Action to an Object, Adding an Action to a Button.

## 2. Controlling The Timeline & Movie Content With ActionScript:

Starting and Stopping the Movie, Navigating to Frames and Scenes, Creating an Interactive

Animation, Navigating to URLs, Opening a URL in a Different Browser Window, Creating

Presentations, Working with Flash Levels, Using the LoadMovie and UnloadMovie Action

## UNIT-II

### 3. Creating ActionScript Loops:

About Loops, Looping Between Frames, Creating a For Loop, Creating a While Loop, Creating a Do While Loop, **Working With Variables And Arrays:** About Variables and Arrays, Understanding Variable Data Types, Variable and Array Naming Conventions, Declaring a Variable, Creating an Array, Working with Arrays, Getting Data From an Array

## UNIT-III

### 4. Modifying An Object With ActionScript:

Creating a Movie Clip & Movie Clip Instances, Using the Set Property Action, Changing an Object's, Getting an Object's Properties, **Using ActionScript with Text:** Creating Input Text Blocks, Creating Dynamic Text Blocks, Loading Text From an External Document, Creating Rich Formatted Text

## UNIT-IV

### 5. Flash UI Components:

PushButton, CheckBox, RadioButton, MessageBox, ComboBox, ListBox, Linking a ComboBox with a ListBox, Creating a Master-Detail View, Scrollbars Component, Changing the Look and Feel of Components

## UNIT-V

Tutorials, assignments and presentation based on Unit I to IV



**Reference Books:**

1. Adobe® flash® professional, help & tutorial
2. Adobe flash professional CS5 Bible

## Vocational Component

### VOC353: WORKING WITH 3DS MAX

#### UNIT-I

##### 1. Exploring the Max Interface:

The Interface Elements, Using the Menus, Toolbars, Viewports, Command Panel, Lower Interface Bar Controls, Interacting with the Interface

##### 2. Working with the Viewports Files and XRefs:

Understanding 3D Space, Using the Viewport Navigation Controls, Configuring the Viewports, Working with Viewport Backgrounds, Working with Max Scene Files, Setting File Preferences, Importing and Exporting, Referencing External Objects

#### UNIT-II

##### 3. Creating and Editing Primitive Objects:

Creating Primitive Objects, Exploring the Primitive Object Types, **Selecting Objects and Setting Object Properties:** Selecting Objects, Setting Object Properties, Hiding and Freezing Objects, Using Layers, **Transforming Objects—Translate, Rotate, and Scale:** Translating, Rotating, and Scaling Objects, Working with the Transformation Tools, Using Pivot Points, Using the Align Commands, Using Grids, Using Snap Options.

#### UNIT-III

##### 4. Cloning Objects and Creating Object Arrays:

Cloning Objects, Understanding Cloning Options, Mirroring Objects, Cloning over Time, Spacing Cloned Objects, Creating Arrays of Objects, **Introducing Modifiers for Basic Object Deformation:** Exploring the Modifier Stack, Exploring Modifier Types

#### UNIT-IV

##### 5. Grouping and Linking Objects:

Working with Groups, Building Assemblies, Understanding Parent, Child, and Root Relationships, Displaying Links and Hierarchies, Working with Linked Objects, **Working with the Schematic View:** Using the Schematic View Window, Working with Hierarchies, Setting Schematic View Preferences

#### **UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

#### **Reference Book:**

1. 3Ds Max 6 Bible by Kelly L. Murdock

**VOC354: 20 ASSIGNMENTS BASED ON ANIMATION ART**

**VOC355: 20 PRACTICAL ASSIGNMENTS BASED ON FLASH ACTION SCRIPT**

**VOC356: 20 PRACTICAL ASSIGNMENTS BASED ON 3Ds MAX.**

**B.Voc.**  
**(Multimedia and Animation)**  
**Second Year**  
**Semester-IV**

## General Education Components

### VOC 401: Ethics and Cyber Laws

#### Learning Objectives:

To introduce students with basic industrial ethics and cyber laws in industrial area

#### Learning Outcomes:

1. Students become acquainted with ethics that should be followed at the workplace
2. Students will be able to manage cyber laws.

#### **Module- I: Introduction to Industrial Ethics**

Senses of 'Industrial Ethics'; ethical issues in engineering practice (Legal, Organizational, Individual); Importance of Ethics and moral Standards. Religion and ethics, Source of Ethics; Conflicts between business demands and professional ideals; social and ethical responsibilities; Moral dilemmas, Moral Autonomy, Kohlberg's theory, Gilligan's theory, Consensus and Controversy , Professions and Professionalism, Professional Ideals and Virtues Uses of Ethical Theories; Case studies

#### **Module- II: Ethics at Workplace**

Key factors promoting an ethical workplace, Values; Business Ethics: Scope , Need, Importance, Factors influencing Business Ethics, Ethical Theories, Morality and ethics; Management Ethics: Business Ethics and society, Society expectations from business, Values for Managers, Cultural Contradictions, Spirituality and leadership; Unethical behavior; Case studies; Codes of Professional Ethics - Conflicts of Interest, Protecting Proprietary Information, Fairness in contracting and marketing, Intellectual property and society, Resource allocation by merit/social worth/need; Theft at workplace, Proper use of assets. Whistle Blowing and beyond; Case Studies

**Module- III: Basic Concepts of Technology and Laws**

Basic Concepts of Technology and Law, Understanding, the Technology of Internet, Scope of Cyber Laws, Cyber Jurisprudence. Law of Digital Contracts, The Essence of Digital Contracts, The System of Digital signatures. The Role and Function of Certifying Authorities, The Science of Cryptography, E-Governance Cyber Crimes and Cyber Laws.

**UNIT-IV : IT Act.**

**Information Technology Act 2000 Cyber Law** Issues in E-Business Management Major issues in Cyber Evidence, Management Cyber Law Compliancy Audit, The Ethics of Computer Security.

**Module-V** :Tutorials, assignments and presentation based on Module I to IV

**REFERENCES:**

- Godbole, " Information Systems Security", Willey
2. Merkov, Breithaupt, " Information Security", Pearson Education
3. Yadav, "Foundations of Information Technology", New Age, Delhi
4. Schou, Shoemaker, " Information Assurance for the Enterprise", Tata McGrawHill
5. Sood, "Cyber Laws Simplified", Mc Graw Hill
6. Furnell, "Computer Insecurity", Springer

**VOC- 402: Business Software Tools****Learning Objectives:**

To learn students various business software tools

**Learning Outcomes**

Students will be able to use softwares such as CSS, photoshop, dreamware, flash; as per their application(s)

**Dreamweaver:** Dreamweaver basics, Setting up your workspace, Site management, Text formatting, Images & Media, Links, styles, Inserting Tables, Adding Frames, Rollovers, Putting it all together

**Flash basics:** Introduction to the Flash IDE, Creating a new project, Drawing simple vector shapes, Lines & Fills, Colors, Shape Tweens, Layers

**Flash advance:** Review symbols and instances, Review internal timelines, 3D rotation tool, Mask layers, Deco Brush, Custom mouse pointers

### **Module I: CSS and Photoshop**

**Introduction to CSS:** Concept of CSS, Creating Style Sheet, CSS Properties, divs and spans, ids and classes, CSS Styling, Working with block elements and objects, Working with Lists and Tables, internal CSS declarations, CSS formatting and alignment

**CSS Advanced:** CSS color, Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Image Sprites, Attribute selector, Creating page Layout and Site Designs, Embedded audio files

### **Module II: Dreamweaver and Flash**

**Introduction to Photoshop:** Creating new files, Resizing images, Image transformations, Levels & Color Balance, Cropping, The Ruler Tool, Zooming, History Panel, Saving & file formats.

**Photoshop Advance:** Selections, Extracting regions of an image, Combining images (basic), Introduction to layers, Layer styles, History panel, Setting up your workspace, Frames & Objects, Working with text, Text formatting, Paragraph formatting, Linked text frames.





**Module III: Management System****Content Management System**

Introduction of CMS is Web Development, Configuring a domain name and web hosting, Exploring CMS terminology, including open source, PHP, server-side, client side, Static HTML website, how CMS web pages are generated, Website strategy and planning, site mapping, content planning, Introduction of Joomla, Adding and displaying menus in Joomla, Linking menus to articles and other features Joomla

**Information Management System (IMS)**

Introduction to IMS, IMS DB Structure, DL/I processing, PSB, PCB, QUALIFIED SSA, UNQUALIFIED SSA, Multi positioning, GSAM datasets, Checkpoints ,Restart, Secondary Indexing

**Module IV: Payroll System**

Introduction to Payroll, The Payroll System, Batch and Real-Time Processing Methods, Interfaces, Control Procedures, External, Audits, Paying Employees, Taxes for Employee, The Need For Payroll And Personnel Records, Analyzing And Journalizing Payroll Transactions

**Module V :**Tutorials, assignments and presentation based on Module I to IV

## VOC 403: Fundamentals of Business and Accounting

### Learning Objective:

The course aims to provide basic concepts and knowledge of a business enterprise and with the basic accounting principles and techniques of preparing and presenting the accounts for user of accounting information.

### Learning Outcomes:

Students will get knowledge of fundamentals of business, basic accounting terms, financial accounting etc. This will help them if they start their business in any field

### **Module- I : Introduction to Business**

Concept, Nature and Scope of Business Enterprise; Concept of Business as a System; Business and Environment Interface; Entrepreneurial opportunities in contemporary business environment or emerging trends in business: Networking marketing, Franchising, Business Process Outsourcing, knowledge Process Outsourcing, Ecommerce and M-Commerce. Opportunity and Idea Generation - role of Creativity and Innovation. Feasibility study and preparation of Business Plan Basic considerations in setting up a Business Enterprise. Process of setting up a Business Enterprise.

### **Module- II : Introduction to Financial Accounting**

Accounting-An Introduction: Business transactions, Book-keeping, Accounting and its branches. Nature, functions and objectives of Financial Accounting. Accounting

Assumptions-Accounting Concepts: Meaning, concepts: Matching, Accrual, Realisation and Dual Aspect Concept.

### **Module- III: Accounting Terms, Accounting Equation and Journal**

Accounting Terms-Accounting Equation Need of Accounting equation, Meaning and preparation of Accounting equation. Rules of Accounting -Journal Meaning, classification of journal into General journal and special journals (with examples). Incorporation of journal entries involving different accounts. Cash Book Meaning, types-Simple Cash Book, Two column Cash Book and Three column Cash Book.

### **Module-IV : Voucher Approach in Accounting and Financial Statements**

Vouchers and their preparation - Day Book and Subsidiary Day Books -Recording the vouchers into Day Books -Recording the Vouchers into Subsidiary Day Books -Ledger Posting of Day Book -Posting of Subsidiary Day -Trial Balance -Errors and their Rectification .

Capital and Revenue - Preparation of Trading and Profit and Loss Account and Balance Sheet - Preparation of Trading and Profit and Loss A/c and Balance Sheet (with adjustments).

### **Module-V : Tutorials, assignments and presentation based on Module I to IV**

#### **References:**

1. Anthony, R.N., and J.S. Reece, *"Accounting Principles"*, Richard D. Irwin, Inc.
2. Monga, j.R., *"Financial Accounting: Concepts and Applications"*, Mayoor Paper Backs, New Delhi.
3. Shukla, M.C., T.S. Grewal and S.C.Gupta, *"Advanced Accounts"*, Vol-I, S.Chand & Co., New Delhi.

4. Gupta, R.L. and M. Radhaswamy, "*Advanced Accountancy*", Vol-I, Sultan Chand & Sons,  
New Delhi.

5. Maheshwari, S.N. and. S. K. Maheshwari, "*Financial Accounting*", Vikas Publishing House, New Delhi.

6. Tulsian, P.C., "*Advanced Accounting*", Tata Me Graw Hill, New Delhi.

7. "*Compendium of Statements and Standards of Accounting*", The Institute of Chartered Accountants of India, New Delhi.

**Vocational Component**  
**VOC451: VIDEO EDITING**

**UNIT-I****1.Editing sequences and clips:**

Creating and changing sequences, Editing multi-camera sequences, Creating and playing clips Synchronizing audio and video with Merge Clips (CS5.5 and later), Working with offline clips, Modifying clip properties with Interpret.

**2. Working with clips in a sequence:**

Creating special clips (synthetics), Adding clips to sequences, Trimming clips, Rearranging clips in a sequence, Rendering and previewing sequences, Correcting mistakes, Remove alerts with the Events panel, Working with markers.

**UNIT-II****3.Titling and the Titrer:**

Creating and editing titles, Creating and formatting text in titles, Drawing shapes in titles,

Add images to titles, Working with text and objects in titles, Fills, strokes, and shadows in titles, Titrer text styles, Rolling and crawling titles

**UNIT-III****4. Effects:**

About effects, Applying, removing, finding, and organizing effects, Viewing and adjusting , Effects and keyframes, Applying effects to audio, Working with audio transitions, Effect presets, Creating common results, Motion: position, scale, and rotate a clip, Eliminate flicker

**UNIT-IV****5.Transitions:**

Duration and speed, Interlacing and field order, Color correction and adjustment, Transition overview: applying transitions, Modifying and customizing transitions, Effects and transitions reference, Audio effects and transitions reference

## **UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

### **Reference Book:**

1. Using ADOBE® PREMIERE® PRO CS5 & CS5.5

## Vocational Component

### VOC452: WORKING WITH ADVERTISING MEDIA

#### **UNIT-I**

1. Introduction to Advertising and its Classification:

Definitions, Features, Objectives and Importance of Advertising, Active Participant in Advertising, Role of advertising Marketing Mix, Role of advertising in Society, Classification & Types of Advertising, Difference between National Advertising and Retail Advertising.

**2. Economic and Social Aspects of Advertising:**

Effects of Advertising on Production Cost, Distribution Costs & Consumer Prices, Advertising and Monopoly, Waste, Ethics & “Truth” in Advertising.

**UNIT-II**

**3. Regulation, Control and Planning an Advertising Campaign:**

Advertising Standards Council of India (ASCI), Doordarshan code, Ministry of Information and Broadcasting, Process of Planning the Advertising Campaign, DAGMAR Model, AIDA, Unique Selling Proposition (USP), Advertising Appeal.

**UNIT-III**

**4. Media planning:**

The function of media planning in advertising: Role of media planner, Challenges in media planning, Media planning process, Media planning for consumer goods&industrial goods.

**UNIT-IV**

**5. Selecting suitable media options:**

TV, Advantages of Radio, Magazine, Newspapers, Buying media space for other medium Like Online New etc.

**UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

**References Books:**

1. Advertising Media Planning by Roger Baron and Jack Sissors
2. Media Planning - Business books by James R Adams 1977
3. **ADVERTISING**, Published by Institute of Distance and Open Learning, University of Mumbai.

## Vocational Component

### VOC453: 3D MODELING WITH 3DS MAX

#### UNIT-I

##### 1. Modeling Basics:

Exploring the Modeling Types, Working with Subobjects, Modeling Helpers, **Drawing and Editing 2D Splines and Shapes**: Drawing in 2D, Editing Splines, Using Spline Modifiers.

##### 2. Working with Meshes and Polys:

Creating Editable Mesh and Poly Objects, Editing Mesh Objects, Editing Poly Objects, Using Mesh Editing Modifiers.

#### UNIT-II

##### 3. Creating and Editing Patches:

Introducing Patch Grids, Editing Patches, Using Modifiers on Patch Objects, **Working with NURBS**: Creating NURBS Curves and Surfaces, Editing NURBS, Working with NURBS

#### UNIT-III

##### 4. Building Compound Objects:

Understanding Compound Object Types, Morphing Objects, Creating Conform Objects, Creating a ShapeMerge Object, Creating a Terrain Object, Using the Mesher Object, Working with BlobMeshObjects, Creating a Scatter Object, Creating Connect Objects, Modeling with Boolean Objects, Creating a Loft Object.



## **UNIT-IV**

### **5. Creating Particles and Particle Flow**

Understanding the Various Particle Systems, Creating a Particle System, Using the Spray and Snow Particle Systems, Super Spray Particle System, the Blizzard Particle System, PArray Particle System, PCloud Particle System, Using Particle System Maps, Controlling Particles with Particle Flow.

## **UNIT-V**

Tutorials, assignments and presentation based on Unit I to IV

### **Reference Book:**

1. 3Ds Max 6 Bible by Kelly L. Murdock

**VP454: 20 PRACTICAL BASED ON VIDEO EDITING USING ADOBE PREMIERE PRO**

**VP455: 20 PRACTICAL BASED ON ADVERTISING**

**VP456: 20 PRACTICAL BASED ON 3D MODELING WITH 3DS MAX**

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