

**VIVEKANAND COLLEGE, KOLHAPUR.  
(AUTONOMOUS)**



# **Syllabus**

*For*

*2020-21*

**B. Voc. Part - II**

**Advanced Diploma in  
Animation & Film Making**



## **STRUCTURE OF SYLLABUS:**

**To be implemented from the academic year 2020-2021**

### **1. Title of the course: BACHELOR OF VOCATION (Animation & Film Making)**

#### **A. INTRODUCTION**

B Voc Animation & Film-Making, also known as Bachelor of Vocation in Animation & Film-Making, is an undergraduate degree program designed to provide students with specialized skills and knowledge in the field of animation. The program combines theoretical learning with practical training to equip students with the necessary tools and techniques to create engaging and visually appealing animated content.

The B Voc Animation & Film-Making program aims to bridge the gap between academia and industry by providing students with industry-relevant skills. It focuses on developing a comprehensive understanding of animation principles, digital media production, 2D and 3D animation, character design, storytelling, motion graphics, and visual effects. Students also learn about industry-standard software and tools used in animation production.

The program incorporates practical training through hands-on projects, workshops, and internships, enabling students to apply their theoretical knowledge in real-world scenarios. This practical exposure helps them develop technical expertise, problem-solving skills, teamwork abilities, and a creative mindset required in the animation industry.

By pursuing a B Voc Animation & Film-Making degree, students gain a solid foundation in animation principles, along with specialized skills in specific areas such as character animation, visual effects, or game development. This prepares them for diverse career opportunities as 2D or 3D animators, character designers, storyboard artists, motion graphics artists, visual effects artists, game artists, or animation directors.

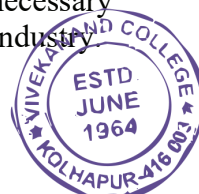
Overall, the B Voc Animation & Film-Making program serves as a comprehensive platform for students to acquire the necessary skills, knowledge, and practical experience needed to excel in the dynamic and ever-evolving field of animation. It empowers individuals to unleash their creativity, express their ideas through animation, and contribute to the growing demand for visually captivating content across various industries.

#### **B. RATIONALE**

This rationale highlights the importance and relevance of the B Voc Animation & Film-Making program, focusing on its industry demand, creative potential, and career opportunities.

##### **1. Industry Demand:**

The animation industry has witnessed tremendous growth due to the increasing demand for animated content in various sectors. Animation is no longer limited to entertainment alone but has expanded into fields like advertising, gaming, education, simulation, and virtual reality. The B Voc Animation & Film-Making program caters to this demand by preparing students for diverse roles such as 2D/3D animators, character designers, storyboard artists, visual effects specialists, and motion graphics artists. The program ensures that graduates are equipped with the necessary technical skills and industry knowledge to meet the evolving demands of the animation industry.



## 2. Creative Potential:

Animation is a powerful medium that offers limitless creative possibilities. The B Voc Animation & Film-Making program encourages students to explore their artistic abilities and develop their unique creative vision. Through courses in drawing, design principles, storytelling, and digital art, students learn to bring their imagination to life. The program also focuses on developing skills in visual aesthetics, color theory, and composition, enabling students to create visually stunning and impactful animations. By nurturing their creativity, the B Voc Animation & Film-Making program prepares students to become skilled animators who can push boundaries and contribute innovative ideas to the industry.

## 3. Technical Skills:

Animation is a blend of artistic expression and technical expertise. The B Voc Animation & Film-Making program provides students with a solid foundation in various technical aspects of animation. Students gain proficiency in industry-standard software and tools used for animation, such as Adobe Creative Suite, Autodesk Maya, and Unity. They learn the principles of 2D and 3D animation, rigging, modeling, texturing, lighting, and rendering. The program also incorporates training in motion capture, virtual reality, and augmented reality, keeping students updated with the latest advancements in the field. The acquisition of these technical skills equips students to handle complex projects and deliver high-quality animation work.

## 4. Industry Collaborations:

To ensure the program's relevance and to bridge the gap between academia and industry, collaborations with animation studios and professionals are crucial. The B Voc Animation & Film-Making program establishes partnerships with industry leaders to provide students with real-world exposure and opportunities. These collaborations offer internships, workshops, guest lectures, and live projects, enabling students to work alongside professionals and gain valuable industry experience. Such interactions not only enhance students' skills but also provide insights into industry practices, workflows, and emerging trends, preparing them for the challenges and expectations of the professional world.

## 5. Career Opportunities:

The animation industry offers a wide range of career opportunities, both nationally and internationally. Graduates of the B Voc Animation & Film-Making program have the potential to pursue careers in animation studios, production houses, advertising agencies, game development companies, film and television industry, e-learning companies, and architectural visualization firms. Additionally, the skills acquired during the program also enable entrepreneurship opportunities, such as starting an animation studio or freelancing as a professional animator. The B Voc Animation & Film-Making program equips students with a versatile skill set, opening doors to various job roles and ensuring long-term career prospects.

## Conclusion:

The Bachelor of Vocation (B Voc) Animation program is a well-rounded and relevant program that addresses the growing demand for skilled animators. By combining artistic creativity with technical proficiency, the program empowers students to become industry-ready professionals. The B Voc Animation & Film-Making program fosters innovation, nurtures talent, and prepares graduates to thrive in the dynamic and exciting field of animation. With its focus on industry



### **C. PROGRAM OUTCOMES (POs)**

By studying animation & film making students will have a wider horizon in the field of art and will

**PO1. Creative Proficiency:** Graduates will demonstrate a strong foundation in art and animation principles, and possess the skills necessary to create visually appealing and engaging digital compositions across various mediums and platforms.

**PO2. Communication Skills:** Graduates will be proficient in written and verbal communication, particularly in the context of business and professional environments, enabling them to effectively communicate ideas, concepts, and narratives to a diverse audience.

**PO3. Animation Knowledge:** Graduates will have a comprehensive understanding of the history and evolution of animation as an art form, and will be able to apply this knowledge to create compelling and technically proficient animated sequences.

**PO4. Technical Expertise:** Graduates will be proficient in the use of digital tools and software commonly used in the animation industry, including 3D modeling, texturing, lighting, rigging, dynamics, and compositing. They will possess the skills necessary to create high-quality, professional-grade animations.

**PO5. Storytelling and Scriptwriting:** Graduates will have the ability to craft engaging stories and develop compelling scripts for animation projects. They will demonstrate proficiency in storyboarding techniques to effectively visualize and plan their narratives.

**PO6. E-Learning and Social Media Competence:** Graduates will possess the skills to create interactive and engaging e-learning materials, utilizing multimedia and animation techniques to enhance the learning experience. They will also be well-versed in leveraging social media platforms to promote and distribute their work effectively.

**PO7. Financial and Project Management Skills:** Graduates will have a fundamental understanding of financial accounting principles and project management methodologies applicable to the animation industry. They will be able to effectively manage budgets, timelines, and resources to ensure successful project completion.

**PO8. Professionalism and Ethical Awareness:** Graduates will demonstrate a strong work ethic, professionalism, and ethical awareness in their practice as animators and artists. They will understand the importance of respecting intellectual property rights and adhering to industry standards and best practices.

### **D. PROGRAM SPECIFIC OUTCOMES (PSOs)**

**PSO1.** Graduates will demonstrate proficiency in using industry-standard animation software and tools to create high-quality 2D and 3D animations.

**PSO2.** Graduates will be able to apply principles of character design, storytelling, and animation techniques to effectively communicate narratives and emotions through their animated creations.



## 2. Duration:

The duration of the B.Voc. Degree Course will be of **Three years.**

- **B.Voc. Part I - Diploma in Animation & Film Making**
- **B.Voc. Part II - Advanced Diploma in Animation & Film Making**
- **B.Voc. Part III - Bachelor of Vocation in Animation & Film Making**

The final B.Voc degree will be awarded only after completion of three year course. The suggested credits for each of the years are as follows:

Year	Awards	Normal Calendar Duration	Skill Component Credits	General Education Credits
1	<b>Diploma in Animation &amp; Film Making</b>	Two Semesters	36	24
2	<b>Advanced Diploma in Animation &amp; Film Making</b>	Four Semesters	36	24
3	<b>B.Voc in Animation &amp; Film Making</b>	Six Semesters	36	24
			<b>TOTAL</b>	<b>108</b>

General Education Component should not exceed 40% of the total curriculum.

Credits can be defined as the workload of a student in

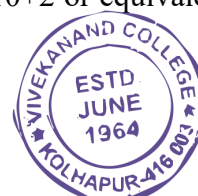
1. Lectures
2. Practical's
3. Seminars
4. Private work in the library/home
5. Examination
6. Other assessment activities.

The following formula should be used for conversion of time into credit hours.

- a) One Credit would mean equivalent of 15 periods of 60 minutes each, for theory, workshops /labs and tutorials;
- b) For internship/field work, the credit weightage for equivalent hours shall be 50% of that for lectures/workshops;
- c) For self-learning, based on e-content or otherwise, the credit weightage for equivalent hours of study should be 50% or less of that for lectures/workshops.

## 3. Eligibility:

The eligibility condition for admission to B.Voc. programme shall be 10+2 or equivalent, in any stream from any recognized board or university.



#### 4. Medium of Instruction:

The medium of instruction of the course will be **Marathi / English**

#### 5. Pattern: Choice based Credit System (CBCS) Semester Pattern.

#### 6. Examination:

##### A. Scheme of examination:

- The semester examination will be conducted at the end of each term (both theory and practical examination)
- Theory paper will be of 50 marks each. The practical examination will be of 200 marks and industrial practical training/project work is of 50 marks.
- Question papers will be set in the view of the entire syllabus and preferably covering each unit of the syllabus.

For each semester there will be four theory papers. Practical Examination will be conducted at the end of every semester.

Paper Number	Title of Paper (For Semester III)	Total Marks
I	Character Design & Props	40+10 = 50
II	Script Writing & Story Boarding	40+10 = 50
III	E-Learning & social media	40+10 = 50
IV	Fundamentals of Financial accounting-I	40+10 = 50
<b>TOTAL</b>		<b>200</b>

The practical examination will be of 200 marks.

Sr. No.	Practical examination	Marks	Internal Assessment	Marks
1	Practical	180	Projects/ Industry Visit	50
2	Portfolio	20		
<b>Total</b>		<b>200</b>		<b>50</b>

The total weightage of first term is of 450 marks, the details of which are-

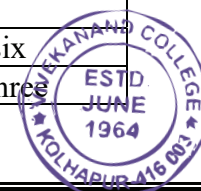
Sr. No.	Title	Marks
1	Theory Examination 50 X 4	200
2	Practical Examination.	200
3	Internal Assessment	50
<b>TOTAL</b>		<b>450</b>

##### B. Nature of question paper:

There will be in all **Three** questions in each paper of which all should be solved.

General nature of the question paper will be:

Question Number	Type	Marks	
Q.1	Multiple Choice Questions	8 marks	No internal options.
Q.2	Short notes	16 marks	Any four out of six
Q.3	Long answer	16 marks	Any two out of three



### C. Standard of Passing:

To pass the examination a candidate must obtain at least 35% i.e 14 marks out of 40 for theory examination and 4 marks out of 10 in internal assessment of each paper. Total minimum 14 marks out of 50 for each paper should be obtained.

For practical examination minimum 50% marks should be obtained.

The result will be declared on the basis of theory and practical examination for each semester during the course.

**D. External Students:** Not applicable as this is a practical oriented course.

**7. University Term:** As per academic calendar of the university.

**For the first year i.e. Diploma in Animation & Film Making practical examination and theory paper assessment will be done at college level.**

### 8. List of equipment and instruments:

1. Computer Machines
2. Projector
3. Internet Connectivity
4. CCTV Camera for Animation Laboratory is must.

### 9. Laboratory Safety Equipment:

**Part I:** Personal Precautions:

1. Except in emergency, **over-hurried activities** are forbidden.
2. **Eating, Drinking and Smoking** in the laboratories is strictly forbidden.
3. **Mobile phones, external hard drives, pen drives are not allowed.**

**Part II:** Use of Safety and Emergency Equipment:

1. First aid Kits
2. Fire extinguishers (dry chemical and carbon dioxide extinguishers)
3. Management of Local exhaust systems.
4. Sign in register if using instruments.

### 10. Workload:

Each skill-based paper (i.e. Paper no. II, III and IV) will have **four theory** periods per week. There are **four practical** per week. Each practical will be of four periods. The practical batch will have maximum 20 students.

The total workload for one batch will be:

1. <b>One Paper</b> on General Education:	=	06 Theory Periods.
2. <b>Three Papers</b> on skill-based Education: 3 X 4	=	12 Theory Periods.
3. <b>Four Practical</b> work per week: 4 X 4	=	16 Practical periods.
4. <b>Project Work</b> per batch per week:	=	02 Periods

**TOTAL** ----- **36 Periods.**

Working hours will be 5 hours (300 minutes) per day i.e. six periods each of 50 minutes.





### 3. MEMORANDUM OF UNDERSTANDING (MOU):

The purpose of this MOU is to clearly identify the roles and responsibilities of each party (i.e. college and industry partner) as they relate to the implementation of the **B.Voc. Program in Animation & Film Making** at the college.

It is recommended to sign at least **FIVE MOUs** with the industry partners in the related field.

### **B.Voc. Part - II (Advanced Diploma in Animation & Film Making)** **Course structure**

#### **General Structure:**

The diploma course has two semesters, each of 450 marks. There will be **four theory** papers for each semester of 50 marks each.

- 1) Paper-I: Character Design & Props - Theory 40 Marks + Internal 10 Marks.
- 2) Paper-II: Script Writing & Story Boarding - Theory 40 Marks + Internal 10 Marks.
- 3) Paper-III: E-Learning & social media - Theory 40 Marks + Internal 10 Marks.
- 3) Paper-IV: Fundamentals of Financial accounting-I - Theory 40 Marks + Internal 10 Marks.

There will be practical examination for each semester. The duration of practical examination will be of six hours and it will be of 100 marks of which 20 marks are reserved for Portfolio. The internal assessment includes industry training via internships, handling live projects, visits to Advertising Agency and Graphic Design Studios etc.

### **SYLLABUS**

N. B.

- (i) Figures shown in bracket indicate the total lectures required for the respective units.
- (ii) The question paper should cover the entire syllabus. Marks allotted to questions should be in proportion to the lectures allotted to respective to units.
- (iii) All units should be dealt with S.I. units.
- (iv) Project / Industrial visit per semester is compulsory.
- (v) Use of recent editions of reference books is essential.
- (vi) Use of Output Devise allowed.





## SEMESTER – III

### Paper-I- Character Design & Props

**50 Hours**

<b>Course Type: Theory / Practical</b>	Theory
<b>Required/Elective</b>	Required
<b>Prerequisite</b>	-
<b>Teaching Scheme (Lecture/Practical/Tutorial/Drawing)</b>	02/02/00/00 Hours
<b>Total contact Hours (Lecture/Practical/Tutorial/Drawing)</b>	50/00/00/00 Hours
<b>Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical</b>	--/--/--/--

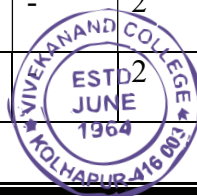
#### Course Outcomes (COs):

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Create unique and visually appealing character designs and props that effectively communicate personality, story, and function.	1,7
CO2	Apply principles of anatomy, proportion, and stylization to develop believable and expressive character designs.	1,7
CO3	Utilize research and reference materials to inform and enhance the design process, ensuring authenticity and creativity.	1,7
CO4	Demonstrate proficiency in translating character designs and props into 3D models, considering technical and aesthetic aspects.	1,7

#### Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	2	-	-	-	-	-	2	-	-	3
CO2	3	-	-	-	-	-	2	-	-	3
CO3	2	-	-	-	-	-	2	-	-	3
CO4	1	-	-	-	-	-	2	-	-	2



## **Course Content:**

### **Unit-1**

**Principles of Character Design:** This topic introduces the foundational principles of character design, including shape language, silhouette, proportion, and anatomy. It covers how to create visually appealing and expressive characters that effectively communicate personality and emotions.

### **Unit-2**

**Character Development and Storytelling:** This topic explores the process of developing characters that fit within a specific narrative context. It covers techniques for establishing character backstories, motivations, and relationships, and how to visually represent these aspects through design choices.

### **Unit-3**

**Props and Environment Design:** This topic focuses on designing and creating props and environments that complement the characters and enhance the storytelling. It covers techniques for creating believable and visually engaging props, as well as designing environments that reflect the mood, tone, and narrative of the animated production.

### **Unit-4**

**Colour Theory and Styling:** This topic delves into the use of colour in character and prop design. It covers colour theory principles, colour psychology, and the application of colour to enhance storytelling and evoke specific emotions or moods. It also explores different stylistic approaches, such as realistic, stylized, and graphic styles.

### **Unit-5**

**Concept Development and Iteration:** This topic focuses on the iterative process of character and prop design. It covers techniques for generating ideas, creating rough sketches, refining designs through multiple iterations, and receiving feedback to improve the final result.

## **References:**

- 1."The Skilful Huntsman: Visual Development of a Grimm Tale at Art Centre College of Design" by Khang Le, Mike Yamada, and Felix Yoon
- 2."Creating Characters with Personality" by Tom Bancroft
- 3."Colour and Light: A Guide for the Realist Painter" by James Gurney
- 4."How to Draw and Paint Fantasy Architecture" by Rob Alexander
- 5."Character Animation Crash Course!" by Eric Goldberg



**Paper –II: Script Writing & Story Boarding****50 Hours**

<b>Course Type: Theory / Practical</b>	Theory
<b>Required/Elective</b>	Required
<b>Prerequisite</b>	-
<b>Teaching Scheme (Lecture/Practical/Tutorial/Drawing)</b>	02/02/00/00 Hours
<b>Total contact Hours (Lecture/Practical/Tutorial/Drawing)</b>	50/00/00/00 Hours
<b>Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical</b>	--/--/--

**Course Outcomes (COs):**

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Develop a working definition of drama that notes its divergence from other narrative forms	2,5
CO2	Understand the techniques, formats and style of story breakdowns, outlines, treatments, and screenplays.	4
CO3	Write screenplays for short film, feature film and television formats.	4,7
CO4	Convey story ideas both orally and in writing with clarity, conviction and style.	4.,6

Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	1	-	-	3	-	-	-	2	-
CO2	-	3	-	2	3	-	-	-	2	-
CO3	2	-	-	-	2	-	-	-	-	1
CO4	-	-	1	-	3	2	-	-	-	2

**Course Content:****Unit-1**

Basics of story: Exploring ideas, Concept, Plot, Structure, Character Theme, Conflicts, Storytelling outline, Building a character, delivering a precise message through the story, Story pacing. Animation story for Children, Adults, Basics of story and Basics of Script writing Action, Scene Headings, Character Name, Screenplay, Titles and End Credits

**Unit-2**

Scriptwriting terminology: Action, Angle, BG close up, Exterior, Fade in fade out, Pan, Parenthetical, POV, Scene Heading, Slug line, SFX, Sotto voce, Track with, Voice over, Character name, Cast List, Dialogue, Script Length, Action Description, Extension, Dual Column Dialogue, Act numbers, Scene Numbers, short lines, dialogue paragraphs, Character Arc.12 Hours



### Unit-3

Story boarding: Introduction to storyboards, Steps of creating a storyboard, Beat board, Storyboarding overview, Contents, Pose, Scenes, Camera, colour scheme, Sound, Lighting, Special fx, Applications, Focus the story and the timing in several key frames, Animatics-Lica reel.

### Unit-4

Techniques to produce fast script, Advantage of script writing with softwares. Script writing for 2D Films, Animations, writing for new media – internet and mobile media.

### Unit-5

Intellectual property and copyrights Public domain material, Protecting the idea, Proof of ownership, Confidentiality agreement, Piracy, Animation Industry in India, Case Study.

### References:

1. Christy Marx, *Writing for Animation Comics & Games*, Elsevier India Pvt. Ltd, 2007.
2. Stephanie Torta, *Storyboarding: Turning Script to Motion*, Mercury Learning & Information, 2011.
3. Prajapati A K, *Computer Graphics & Animation*, Pragati Prakashan, 2005. 4. Harold Whitaker / John Halas, *Timing for Animation*, Focal Press, 2009.

## Paper –III: E-Learning & social media

50 Hours

Course Type: Theory / Practical	Theory
Required/Elective	Required
Prerequisite	-
Teaching Scheme (Lecture/Practical/Tutorial/Drawing)	02/02/00/00 Hours
Total contact Hours (Lecture/Practical/Tutorial/Drawing)	50/00/00/00 Hours
Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical	--/--/--/--

### Course Outcomes (COs):

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Design and develop interactive and engaging e-learning materials using multimedia elements and animation techniques.	4,7
CO2	Utilize social media platforms effectively to promote and distribute animated content, building an online presence and engaging with audiences.	1,2
CO3	Apply instructional design principles to create effective learning experiences through the integration of animation and multimedia elements.	3,6
CO4	Stay updated on emerging trends in e-learning and social media to leverage new technologies and opportunities for animated content creation.	5,8



Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	-	-	2	-	-	2	-	-	2
CO2	2	1	-	-	-	-	-	-	2	-
CO3	-	-	2	-	-	1	-	-	-	3
CO4	-	-	-	-	1	-	-	3	2	1

**Course Content:**

**Unit-1**

New Media, Evolution of Digital Communication, Personal Learning Networks, Digital Economics, online news, online political communication, Access and the Digital Divide.

**Unit-2**

Social Media: Platforms, privacy, culture, identity and reputation, social networking and social capital, interacting visually, technological convergence and rise of mobile technology, measuring, monitoring and analysing social media, social media activism.

**Unit-3**

Layout techniques; showing how design elements combine to create an overall look to the publication (Magazine, newspaper, leaflet, poster, pamphlet etc).

**Unit-4**

Cyber Media, Cyber Journalism, Comparison of cyber media with Print, TV & Radio. Online as a publishing medium, Online as an advertising tool, Impact of Web Journalism on reading habits of people and media industry, Analysis of important Indian newsbased websites, Impact of globalization on Web Journalism, Cyber Laws and debates.

**Unit-5**

Concept of e-governance & e-learning, finding information on the World Wide Web, Writing for blogs.

**Reference**

1. Weinmann, E. & Lourekas, P, *Quark Express 5 for windows*, 2018.
2. Adobe Page Maker 7.0 *Classroom in a book*, BPB Publication, 2002.
3. Altman Rick, *Illustrator 10 Bible*. IDG Books worldwide, 1999.
4. Alur Deepak & Malis Dan, *Mastering Corel Draw 7*, 2005.
5. Fordney Marilyn Takahashi & Deihl Marcy Otis, *Computer Graphics - Principles And Practices*, 2018
6. Krishnan.N. & Saravanan.N, *Introduction To Computer Graphics*, 2018.



**Paper –IV: Fundamentals of Financial accounting-I****50 Hours**

Work Load - 6	Total Marks – 50
Theory – 4 Lectures / Week Practical- 2 Lectures / Week	Theory- 40 Practical- 10

**Course Objectives:**

1. To impart basic accounting knowledge as applicable to business.
2. To help students understand fundamental accounting concepts and principles.
3. To introduce students to accounting, stressing its importance in today's business world
4. To provide students with a theoretical basis upon which they will develop their knowledge in other areas of accounting

**Course Outcomes (COs):**

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Perform the basic accounting functions.	3,8
CO2	Perform the journal entries and leaguer accounts.	3,8
CO3	Use various meaning methods effectively.	3,8
CO4	Prepare Final Accounts of Sole Traders and partnership firms.	3,8

Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2
CF210.1	-	-	1	-	-	-	-	2	-	-	-
CF210.2	-	-	1	-	-	-	-	2	-	-	-
CF210.3	-	-	1	-	-	-	-	2	-	-	-
CF210.4	-	-	1	-	-	-	-	2	-	-	-

**Course contents:****Unit I : Introduction to Accounting**

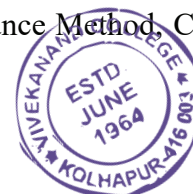
Meaning, Nature and Advantages of Accounting, Branches of Accounting, Accounting Concepts and Conventions, Types of Accounts, Rules of journalizing, Source Documents – Cash Voucher, Petty Cash Voucher, Cash Memo – Receipts, Debit Notes, Credit Note, Paying Slips, Withdrawals, Cheque

**Unit II : Journal and Ledger**

Preparation of Journal entries and Ledger accounts – Subsidiary Books - Purchase Book, Purchase Return Book, Sales Book, Sales Return Book, Cash Book, Bills Receivable Book, Bills Payable Book, Journal Proper

**Unit III : Depreciation**

Meaning, Methods – Straight Line Method – Reducing Balance Method, Change in Depreciation Method.



**Unit IV: Final Accounts**

Preparation of Trial Balance, Preparation of Final Accounts of Sole Traders and partnership firms

**Practical:**

- 1) Preparation of Journal entries and Ledger accounts
- 2) Preparation of subsidiary books
- 3) Preparation of Trial Balance
- 4) Practical problems on Final Accounts of sole traders and partnership firms
- 5) Practical problems on methods of depreciation

**Scheme of Internal Practical Evaluation****10 Marks**

- 1) Submission of Record Book 5 Marks
- 2) Viva – Voce 5 Marks

**Text Books/Reference Books/ Other Books/E-material/Paper**

Sr. No	Title	Author	Publisher	Edition	Year of Edition
1	Advanced Accountancy	M.C. Shukla and T.S. Garewal			
2	Advanced Accountancy	S.C. Jain and K. L. Narang			
3	Advanced Accountancy	S.M. Shukla.			
4	Advanced Accountancy	S. N. Maheshwari.			
5	Advanced Accountancy	R. L. Gupta.			





## Semester- IV

Paper Number	Title of Paper (For Semester IV)	Total Marks
I	Digital Animation	40+10 = 50
II	3D Lighting	40+10 = 50
III	3D Modelling & Texturing	40+10 = 50
IV	Fundamentals of Financial accounting-II	40+10 = 50
<b>TOTAL</b>		<b>200</b>

The practical examination will be of 200 marks.

Sr. No.	Practical examination	Marks	Internal Assessment	Marks
1	Practical	180	Projects/ Industry Visit	50
2	Portfolio	20		
<b>Total</b>		<b>200</b>		<b>50</b>

The total weightage of first term is of 450 marks, the details of which are-

Sr. No.	Title	Marks
1	Theory Examination 50 X 4	200
2	Practical Examination.	200
3	Internal Assessment	50
<b>TOTAL</b>		<b>450</b>

### General Structure:

The diploma course has two semesters, each of 450 marks. There will be **four theory** papers for each semester of 50 marks each.

- 1) Paper-I: Digital Animation - Theory 40 Marks + Internal 10 Marks.
- 2) Paper-II: 3D Lighting - Theory 40 Marks + Internal 10 Marks.
- 3) Paper-III: 3D Modelling & Texturing - Theory 40 Marks + Internal 10 Marks.
- 3) Paper-IV: Fundamentals of Financial accounting-II - Theory 40 Marks + Internal 10 Marks.

There will be practical examination for each semester. The duration of practical examination will be of six hours and it will be of 100 marks of which 20 marks are reserved for Portfolio. The internal assessment includes industry training via internships, handling live projects, visits to Advertising Agency and Graphic Design Studios etc.



**Paper –I- Digital Animation****50 Hours**

<b>Course Type: Theory / Practical</b>	Theory
<b>Required/Elective</b>	Required
<b>Prerequisite</b>	-
<b>Teaching Scheme (Lecture/Practical/Tutorial/Drawing)</b>	02/02/00/00 Hours
<b>Total contact Hours (Lecture/Practical/Tutorial/Drawing)</b>	50/00/00/00 Hours
<b>Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical</b>	--/--/--/--

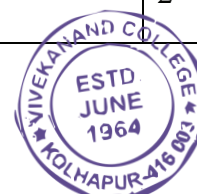
**Course Outcomes (COs):**

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Create dynamic and visually appealing animations using industry-standard software and techniques.	3,7
CO2	Apply principles of timing, spacing, and movement to bring characters and objects to life in digital animations.	2,6
CO3	Implement advanced animation techniques such as rigging, keyframing, and character posing to enhance storytelling.	2,7
CO4	Demonstrate proficiency in rendering and outputting high-quality digital animations for various platforms and purposes.	3,5

**Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)**

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	-	2	-	-	-	1	-	-	3
CO2	-	3	-	-	-	2	-	-	-	3
CO3	-	1	-	-	-	-	3	-	-	3
CO4	-	-	2	-	3	-	-	-	-	2



### **Unit-1**

Introduction to animation, Heritage of Animation, Dawn of Digital Animation, Digital effects of 3D Animation, Rotoscope to Motion Capture, Becoming an Animator, Becoming an Actor, Becoming a Storyteller, Becoming a Creative Practitioner, Applications of Animation Entertainment, Advertisement, Education, Medical Practise and Engineering.

### **Unit-2**

Basic Principles in animation, Squash and stretch, Anticipation, Staging, Straight ahead and pose to pose, Follow through and overlapping action, Slow in and slow out, Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal, Mass and weight, Character acting, Volume, Line of action, Path of action, Walk cycles-animal and human.

### **Unit-3**

Tools of Animation The use of Live Action in Animation Humans and Animals-Quick Studies from real life, Sequential movement drawing, Caricaturing the Action, Thumbnails, Drama and psychological effect,

### **Unit-4**

Motion Studies, Drawing for motion, The Body language, Facial expressions and Lip sync, Introduction to traditional and digital equipment- The animator's drawing tools, The animation table (light box, Field charts, Exercises and warm ups on pegging sheet, Line tests, The exposure sheet ("X" sheet).

### **Unit-5**

3D Animation Pipeline Preproduction- Idea, Story, R&D, Script to screenplay, Storyboards. Production Layout, 3D Model, Texturing(Surfacing), Rigging/setup, Animation, 3D Visual effects, Lighting and Rendering and Post production – Colour Correction, Audio Video Editing, Final Output.

### **References:**

1. Frank Thomas & Ollie Johnston, Illusion of Life, Disney Editions, 1995
2. Richard Williams, Animators Survival Kit, Faber & Faber Publication, 2001
3. Harold Whitaker & John Halas, Timing for Animation, Focal Press, 2002
4. Chris Patmore, The Complete Animation Course, B.E.S.Publishing, 2003
5. Tony White, The Animator's Workbook, Watson-Guption Publication, 1988



## Paper –II: 3D Lighting

50 Hours

Course Type: Theory / Practical	Theory
Required/Elective	Required
Prerequisite	-
Teaching Scheme (Lecture/Practical/Tutorial/Drawing)	02/02/00/00 Hours
Total contact Hours (Lecture/Practical/Tutorial/Drawing)	50/00/00/00 Hours
Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical	--/--/--/--

### Course Outcomes (COs):

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Understand the principles of lighting and its role in creating mood, atmosphere, and realism in 3D scenes.	4, 8
CO2	Apply lighting techniques and tools to effectively illuminate 3D models, characters, and environments.	4
CO3	Create convincing and visually appealing lighting setups that enhance the overall aesthetic and narrative of 3D scenes.	4, 8
CO4	Utilize advanced rendering techniques and software to achieve realistic and high-quality lighting effects in 3D projects.	4, 8

Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	-	-	3	-	-	-	2	2	-
CO2	-	-	-	3	-	-	-	-	3	-
CO3	-	-	-	3	-	-	-	1	2	-
CO4	-	-	-	3	-	-	-	2	3	-

### Course Content:

#### Unit-1

Modifying a bump texture Lights, shadows, and cameras Directional lights Spotlights Editing light attributes Shadows Creating additional cameras in a scene Animating camera moves Global Illumination Caustics Dynamics.

#### Unit-2

Maya Lighting Tools: Introduction to the various lighting tools available in Maya, such as point lights, spotlights, area lights, and image-based lighting (IBL).

#### Unit-3

Photorealistic Lighting: Strategies for achieving photorealistic lighting, including the use of HDR images, physical sky setups, and advanced rendering techniques.



#### Unit-4

Types of Arnold lights in 3D space, Light attributes, 3 Point lighting, 2 Point lighting, Shadows and Raytracing: Understanding shadow types, shadow map settings, raytraced shadows, and soft shadows..

#### Unit-5

Rendering: 3D rendering, advance lighting effects, Shading material for objects: Anisotropic, Blinn, Lambert, aiStandard Surface, Layer Shader, Ocean Shader, Hair tube shader, Ramp shader, Shading Map, Surface shader, Refining shading materials, Arnold rendering and Toon shade rendering. IPR rendering, Software, Hardware rendering, Batch rendering, creating various output as per the end user requirements and maintaining the resolution.

#### References:

1. Matt Lombard, SolidWorks Surfacing and Complex Shape Modelling Bible, Wiley publishers, 2011.
2. Brad Clark, John Hood, Joe Harkins, *Inspired 3D Advanced Rigging and Deformations*, 2013.
3. Von Michael Ford, Alan Lehman, *Inspired 3D Character Setup*, 2002. 4. Chris Maraffi, *Maya Character Creation: Modelling and Animation Controls*, 2003. 5. Tina O'Hailey, *Rig it Right! Maya Animation Rigging Concepts* (Computers and People), 2013.

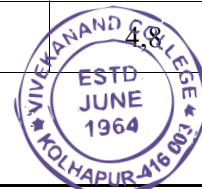
### Paper –III: 3D Modelling & Texturing

50 Hours

Course Type: Theory / Practical	Theory
Required/Elective	Required
Prerequisite	-
Teaching Scheme (Lecture/Practical/Tutorial/Drawing)	02/02/00/00 Hours
Total contact Hours (Lecture/Practical/Tutorial/Drawing)	50/00/00/00 Hours
Evaluation Scheme: Theory Theory Paper /Term Work/Oral/Practical	--/--/--/--

#### Course Outcomes (COs):

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Develop proficiency in creating accurate and detailed 3D models of objects, characters, and environments.	4,8
CO2	Apply principles of topology, anatomy, and composition to produce optimized and visually appealing 3D models.	4
CO3	Utilize texturing techniques to enhance the surface appearance, materials, and details of 3D models.	4,8
CO4	Utilize texturing techniques to enhance the surface appearance, materials, and details of 3D models.	4,8



Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	-	-	3	-	-	-	2	3	-
CO2	-	-	-	3	-	-	-	-	3	-
CO3	-	-	-	3	-	-	-	1	3	-
CO4	-	-	-	3	-	-	-	2	2	-

## Course Content:

### Unit-1

3D Modelling: Introduction to various 3D modelling, working with symmetry, Editing components in orthographic view, editing components in perspective view, Poly editing techniques- Extruding, Bridging, Adding polygon to mesh, Split polygon faces, edge loops, Mirror copying a mesh, Creasing and hardening edges on mesh, Poly Normal, Edge & bevel, Separating & combining geometry, NURBS.

### Unit-2

Modelling techniques: Using 2D reference sketches to model, , Image Planes, Sculpting, Retoplogy and poly modelling workflow, Polygon primitives, Modelling in shaded mode, Model symmetry, Drawing a polygon, Quads, Tris and nGons, Low Poly/High Poly modelling, Exporting the models from scene to scene.

### Unit-3

Texturing: Introduction to texturing, Unfolding/Unwrapping UV mesh, Smoothing and relaxing a mesh interactively, Fixing problem areas, Applying textures, Introduction to Maya Hypershade, Texturing, Materials, Normal mapping, Baking maps. Traditional sculpture principles of form, material, and site and utilize Developing 3D Sculpture, sculpting technology, uses. Animation- Locomotion, Body mechanic- Weight and balance.

### Unit-4

Techniques behind Planning and blocking methods, Understanding Hips, In-depth look of principles of animation, Splining and Polishing methods, Phrasing or bets in shot, Force and forms, Animating Physicality workflow.

### Unit-5

Hyper realistic Character Modeling and digital sculpting: Modeling the hyper realistic Human FaceModeling the hyper realistic Human body -Quadruped Modeling- Adding hyper realistic detail with Digital sculpting tool and Modeling of related Props. Character Texture painting with Photoshop and 3D painting tool- Image based Texturing (Image Projection) and Painting UV seams - Creating Bump, Normal, Displacement and Specular map-Texturing techniques for Characters and Props.

## References:

1. Adam Watkins, *Introduction to 3d graphics & animation using Maya w/cd*, International Thomson Computer pres, 2007.
2. Chris patmore, *Complete animation course*, Barrons educational series inc, 2003.
3. Adam Watkins, *Maya A Professional Guide*, Published by dreamtech, 2003. 4. Danish Derakhshevi, *Introducing Maya 8 3D for Beginners*, Wiley Publishing Inc. 2006 5. Tom Meade and Shinsaka Anima, *The Complete Reference Maya 6*, Hill Publishing Company Limited, 2004.



**Paper –IV: FUNDAMENTALS OF FIANACIAL ACCOUNTING- II****50 Hours**

Work Load - 6	Total Marks – 50
Theory – 4 Lectures / Week Practical- 2 Lectures / Week	Theory- 40 Practical- 10

**Objectives:** To impart basic accounting knowledge as applicable to business.

**Course Outcomes (COs):**

Course Outcomes(COs): Upon completion of this course, students will be able to		Mapping with PO's
CO1	Perform the basic accounting functions.	3,8
CO2	Perform the journal entries and leaguer accounts.	3,8
CO3	Use various meaning methods effectively.	3,8
CO4	Prepare Final Accounts of Sole Traders and partnership firms.	3,8

Correlation matrix of Course outcomes with Programmed outcomes (CO-PO)

1=Low correlation, 2=Medium correlation, 3=High correlation

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	-	-	1	-	-	-	-	2	-	-
CO2	-	-	1	-	-	-	-	2	-	-
CO3	-	-	1	-	-	-	-	2	-	-
CO4	-	-	1	-	-	-	-	2	-	-

**Course contents:**

- Unit I            Computerized Accounting System**  
Introduction – Concept – Components –Features - Importance and Utilization of Computerized Accounting System.
- Unit II            Computer Application through Accounting Package Tally**  
Creation of Company, Group, Ledger Accounts, Feeding of Accounting Data Receipts, Payments, Purchase, Sale, Contra, Journal, Credit Note and Debit Note Inventory Information – Groups, Items and Valuation.  
Generation of various Accounting Reports.
- Unit III           Accounts of Professionals**  
Preparation of Receipts and Payment Account – Income and Expenditure Account and Balance Sheets of Non Profit Organization.
- Unit IV           Single Entry System**  
Conversion of Single Entry System into Double Entry System.





**Practical:**

1. Understanding computerized accounting practices applied in different retail malls in and around Kolhapur city
2. Practical problems based on computerized accounting using Tally
3. Practical problems on preparation of Receipts and Payment Account
4. Preparation of Income and Expenditure account and Balance Sheet of Non-profit making organizations
5. Solving the problems on conversion of Single Entry system into Double entry system.
6. Oral / Seminar

**References:**

1. Advanced Accountancy, M. C. Shukla and T. S. Garewal.
2. Advanced Accountancy, S.C. Jain and K. L. Narang.
3. Advanced Accountancy, S.N. Maheshwari.
4. Theory and practice of Computer Accounting, Rajan Chougule and Dhaval Chougule.

