sV - SEMESTER

Design Studio V- Collaborative Design Project			
Course Code	**22BD51**	CIE Marks	50
Teaching Hours/Week (L:T:S:P)	5 hrs (1:0:4:0)	Viva Marks	50
Total Hours of Pedagogy	05 Hours/Week	Exam Hrs	
Credits	05	Total Marks	100

Course Learning objectives:

Collaborative design project would allow for students to work as a group simulating a professional set-up trying to solve system level design issues, assuming different roles and responsibilities.
It involves the students having different skills and strengths working as a team solving a relatively complex design problem. It is open to B Des students to encourage collaboration among cross- discipline.

Module-1
Inter-disciplinary team effort - The learning is on working collaboratively in groups to solve design problems.
Module-2
Group enquiry, ideation and brainstorming.
Module-3
Creating project spaces and environments to facilitate innovation.
Module-4
User participatory design process - Iterative designing with user feedback.
Module-5
The project will encourage collaboration with students from other specializations, disciplines or institutes or with professionals from the industry.

Design Tasks	Design of a system requiring creative explorations The students will take up a common problem and solve it as a group with collaborative efforts.
Teaching-Learning Process	1. Get a perspective on design throughout the globe: Various videos of designers of the design process from different parts of the world. 2. Screening documentaries, videos, films on various Designs in India and Asia. 3. The contents of the courses shall be taught in an application-oriented manner on a scientific and design basis. The course contents shall be taught and learned through the lectures, seminars, labs or workshops, studio exercises and design projects, etc. 4. Site/field visit to folklores areas 5. Submission will include Idea generation, Study models, Sketches and drawings to achieve the desired results.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources: Books

- Stephen A.R. Scrivener, Collaborative Design: Proceedings of Co-Designing 2000, Springer, 2000
- Jesper Simonsen, Routledge International Handbook of Participatory Design, Routledge, 2012
- David Holston, The Strategic Designer: Tools & Techniques for Managing the Design Process, How Books, 2011

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :

  To choose relevant projects where scope of services to be learnt is more.

Course Outcome

The student will be able to:

- Get an Introduction into the field of Design
- The student will be able to generate solutions to design constructs, understand the process of design and be able to find solutions to simple problems.
- Make responsible choices for design development.
- The focus is on being able to identify problems and finding needs.

V - SEMESTER

Applied Ergonomics			
Course Code	**22BD52**	CIE Marks	50
Teaching Hours/Week (L:T:S:P)	4 hrs (1:0: 3: 0)	Viva Marks	50
Total Hours of Pedagogy	04 Hours/Week	Exam Hrs	
Credits	04	Total Marks	100

Course Learning objectives:
The aim of this course is to understand the capabilities and limitations of human body in terms of both performing work as well as for comfort. The course will be useful to many disciplines of design taking into considerations of visual, product and transportation ergonomics.

Module-1

Definition of Ergonomics and its application and overview. The concept of Man Machine Environment system Design.

Module-2

Overview of Human body and its sub systems.
. Understanding musculoskeletal system and its function in terms of manual activities.

Module-3

Understanding nervous system, human sensory organs and their limitations.
. Basic Bio mechanics and its application in design.

Module-4

Anthropometry and its application Understanding nervous system, human sensory organs and their limitations. Issues of cognition, perception and performance.

Module-5

Study of work posture and its impact on human performance.
. Physical environment and their impact on human performance

Design Tasks	The course will involve experimentations to understand the principles of ergonomics. These principles are to be applied in simple design of objects, environments and interfaces.
Teaching-Learning Process	Assign exercises in making different types of models using a variety of materials available in the market. Studios to conduct hands on work with models, sheets, drawings in Basic Design Sketching in various medium to explore visual arts Discussions, presentations, and case studies to cover different typologies. The portfolio covering all the assignments shall be presented for the Viva exam

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.

- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:Books

- D. Chakrabarti, *Indian Anthropometric Dimensions for ergonomic design practice*, National Institute of Design, Ahmedabad, 1997
- M. S. Sanders and E. J. McCormick, *Human Factors in Engineering and Design*, McGraw-Hill, Inc., 1993.
- K. Kroemer, H. B. Kroemer and K. E. Kroemer, *Ergonomics- How to Design for Easy and Efficiency*, - Prentice Hall, Englewood Cliffs, NJ, 1994.
- G. Salvendy (ed.), *Handbook of Human Factors and ergonomics*, John Wiley & Sons, Inc., 1997.
- Bridger, RS: Introduction to Ergonomics, 2nd Edition, Taylor &Francis, 2003.
- J. Dul, and B. Weerdmeester, Ergonomics for beginners, a quick reference guide, Taylor & Francis, 1993.
-E.Grandjean : Fitting the task to the man, Taylor & Francis Ltd.1980.
- P. W. Jordan and W. S. Green (edit): Human Factors in Product Design- current practice and future trends, Taylor Francis, London, 1999.
- W. Karwowski and W. S. Marras, The Occupational Ergonomics handbook, CRC Press, New York, 1999.
- J. Ansel, *Visual ergonomics in the workplace*, Taylor & Francis, London, 1998

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
  To choose relevant projects where scope of services to be learnt is more.

Course Outcome:

Stages of design development and role of ergonomics; User-Product relationship: A design perspective; Principles of fitting design configurations to the users; Ergonomics and methods, criteria and checklists; prototype testing and trials for various applications in design. Principles of component layout in a system. Ergonomic considerations in the of Exhibitions; Equipment, Furniture, Workplace; Hand tools etc. Issues in cognition, perception and performance with respect to Control devices and Visual Display Terminal de Design evaluation techniques and assessment methods for system reliability. Study of Occupational hazards and safety. Ergonomic considerations for people with functional limitations, physical and social-psychological disability. Ergonomic considerations for the aged.

V - SEMESTER

Design, Technology and Innovation			
Course Code	**22BD53**	CIE Marks	50
Teaching Hours/Week (L:T:S:P)	4 hrs(1:0: 3: 0)	Viva Marks	50
Total Hours of Pedagogy	04 Hours/Week	Exam Hrs	
Credits	04	Total Marks	100

Course Learning objectives:
To understand the relation between design and innovation

Module-1
History of Innovation – great innovations that have shaped mankind
Module-2
Relation between Design and Innovation.
Module-3
Factors for Innovation – from problem framing to reframing.
Module-4
Culture of innovation – understanding needs, cross-connections, limits and challenges
Module-5
Problem-solving strategies that lead to innovation and Collaborative methods to enable innovation

Design Tasks:	Design activity leading to seminar paper presentation/submission on a concern that is of importance to the above topic.
Teaching-Learning Process	1. Various exercises to be designed for students, which helps them to learn symbolically, represent a system/ design etc. 2. Various Case studies videos of designers of the design process from different parts of the world. 3. Seminar by students on their learning. 4. Exposure to various softwares and Hands-on experience of 1 or 2 softwares for Image making.

Assessment Details (both CIE and SEE) for PCC
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a

pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

  The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:

Books

H. G. Greet and R. R. Kostellow, Elements of Design and the Structure of Visual Relationships, Architectural Press, NY, 2002 - Livio, Mario; The Golden Ratio: The Story of PHI, the World's Most Astonishing Number, Publisher: Broadway, 2003 - Kimberly Elam, Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :

  To choose relevant projects where scope of services to be learnt is more.

Course Outcome

- Design activity leading to seminar paper presentation/submission on a concern that is of importance to the above topic.

V – SEMESTER

Introduction to Interaction Design			
Course Code	**22BD54**	CIE Marks	50
Teaching Hours/Week (L:T:S:P)	2Hrs (2:0:0:0)	SEE Marks	50
Total Hours of Pedagogy	02 Hours/Week	Exam Hrs	3hrs
Credits	02	Total Marks	100

Course Learning objectives:

To Understand the design process for solving interaction design problems that can involve products, services and environments.

Module-1
Introduction to understanding the user and his requirement.
Module-2
Use of HCI methods (Contextual Enquiry, Focus Groups, Interviews, etc.)
Module-3
Understanding the factors that define user experience.
Module-4
Understanding Design of multi-modal interfaces, expressive interfaces, audio interfaces, tangible interfaces and gestural interfaces.
Module-5
UnderstandingDesign of interactive systems, products for future use and Collaborative products / devices to be used in groupsfor development of applications and devices.

Design Tasks:	The course will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course. The students can take up an interaction design challenge and solve it during the course with discussions and inputs from the faculty mentors.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods • Explore various webpages, videos, blogs in various websites for designs • Case studies of various inventions in media, which has made a difference in advanced design using latest soft wares and technology.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will

be decided by the internal examiner based on the projects.

- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:

Books

- Norman, Donald A.; Invisible Computer: Why Good Products Can Fail, the Personal Computer Is so Complex and Information Appliances Are the Solution; MIT Press (1998)
- Laurel, Brenda; Computer as Theater; Addison-Wesley Pub Co (1993)
- Raskin, Jef; The Humane Interface: New Directions for Designing Interactive Systems; Pearson Education (2000)
- B. Shneiderman, *Designining the User Interface: Strategies for Effective Human-Computer Interaction*, 3rd Ed., Addison Wesley, 2000.
- J. Preece, Y. Rogers and H. Sharp, *Interaction Design: Beyond Human –Computer Interaction*, John Wiley & Sons, Delhi, 2003.
- A. Dix, J. Finlay, G.D Abowd and R. Beale, *Human Computer Interaction* , 3rd Ed., Pearson Education Ltd., 2004.
- W.O. Galitz, *The Essential Guide to User Interface Design of Interaction Design*, John Wiley & Sons, 2002.

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course.
- The students can take up an interaction design challenge and solve it during the course with discussions and inputs from the faculty mentors.

V – SEMESTER

Course Code :	**1. 22BD55x**		
	2. 22BD56x		
	3. 22BD57x		
PROFESSIONAL ELECTIVE - A	**GAME DESIGN AND GRAPHIC NARRATIVES**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:

To make students learn the art and techniques of designing digital / Physical games and document it in a systematic way to provide Students with the opportunity to make meaningful decisions in relation to playing the game. Understand the Fundamentals of Character Design. Learning the process of character creation in visualproviding aspects of 2D and 3D – modelling, texturing and animation techniques for the process of narrations.

Module-1

Introduction to GamesDesign and Graphic Narrative for Games, and Concept
An overview on the nature of narrative design and how it is similar and different from traditional storytelling. A discussion of the techniques in extending or serializing storiesfocusing on the essential storytelling elements found in all powerful and engaging stories.

Module-2

Attention not Immersion -the words ``immersive" and "engaging" all the time when we're discussing the things that are most important about great game experiencesunderstanding the concepts that these words point to in developing the project.
Act Structure and Story - understand the importance of establishing essential storytelling elementsestablish all of the story and character elements that will be developed and complicated for the project. Areas such a characters, relationships, plot, theme, world, rules, wants and needs, as well as the tone and genre are all established in the Set-Up
Open to Graphic Narrative Design - framework for the creation of an underlying philosophy for successful open world narrative game design, drawing on the concepts of the player's competence, relatedness and autonomy.

Module-3

A discussion of narrative tools used to create a great story as well as how to and when to use them. Narrative design for storyboards, animatics and comics requires its own skills in how written words are translated and combined with images. Explores the challenges of writing for free to play multiplayer arena based games. Exploring the rhythms of games its complexity than those of "linear" media, it's influenced by the actions of players. Game designers must plan the possible rhythms of their games, whether single-player narrative games, or online multiplayer games, using a variety of techniquesshowcasing new ways to think about the rhythms of games.

Module-4

The use of emotions and game mechanics hosting its creativity sharing thoughts on game design to elicit emotions from the player, and how thinking about story while designing a game. Discussion of narrative design beyond video games with an emphasis on themed entertainment expressing character arcs and the anatomy of an action sequence**.**

Module-5	
Discussion of character design for games with the writertools and the importance of conflict. Narrative Prototyping presentation.	
Design Tasks:	The course will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course. The students can take up an interaction design challenge and solve it during the course with discussions and inputs from the faculty mentors.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods.Explore various designs aspects building the game you want to play the most. • Case studies of various inventions in media, which has made a difference in advanced design using latest soft wares and technology. • Students will write characters and situations that build to a core narrative design for a video game or immersive attraction, with an eye towards that project's mechanics and audience, supported by strong fundamental storytelling. Each assignment will get feedback and revisions and development will be ongoing.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources: Books

- Basics of Game Design, Michael Moore (2011) CRC Press
- Level Up! - The Guide to Great Video Game Design, Scott Roge(2018)
-The Animator's Survival Kit - Williams, Richard - Faber; 2009
-Animation: The Mechanics of Motion - Webster, Chris - Focal Press; 2005
-Eadweard Muybridge - Horses and other animals in motion - Muybridge, Eadweard - Dover Publications

INC.;1985
-Eadweard Muybridge - The Human Figure in Motion - Muybridge, Eadweard - London Chapman & Hall ;1907
-Cartoon Animation by Preston Blair - Blair, Preston - Walter Foster Publishing;1994
-Action Analysis for Animators - Webster, Chris - Focal Press; 2012
- How to write and script for the game designing- Michael Rogan - Latest
- The game narrative ToolBox- Heussner Tobias - Latest

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- Students will understand the process of designing games
- Students will be able to undertake Game Production
- Learn the different outlook to the game design elements.
- Ability to understand the different production part of the game design.
- Explore different market games available in market and able to analyses it.
- Learning Different Departments of game design

V – SEMESTER

Course Code :	**1. 22BD55x**
	2. 22BD56x
	3. 22BD57x

PROFESSIONAL ELECTIVE - B	**AI IN DESIGN**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:

The course gives a broad perspective on applications of artificial Intelligence to advanced computer based design systems. Applications of techniques like Machine learning, Rule based systems, expert systems, Natural Language Processing in the context of Design. Design generation, analysis and Interpretation through expert systems.

Module-1

Introduction to understanding AI in Design, user and requirement towards Design activity. AI has a creative booster. Meet new creative sidekicks. AI to amplify skills.

Module-2

Cultivation of creative skills with AI, test and develop creativity, enhance combinatorial creativity, improve writing, visualization skills.

Module-3

Inspiration – AI to get better ingredients for fresh ideas, understand audience's motivations, empathize with audience, more inspiring creative brief.

Module-4

Imagination – developing fresh and impactful ideas, directions, analogies, dramatize the benefit, suggest brand spokespeople, flesh out concept.

Module-5

Implementation – AI to improve chances of ideas, sell ideas effectively.

Design Tasks:	The course will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course using AI. The students can take up an design challenge and solve it during the course with discussions and inputs from the faculty mentors.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods with AI • Explore various aspects using AI for designs to spark your imagination. • learn how AI can inspire your work by providing better ingredients for fresh ideas. • Practical uses of AI that can helpimplement ideas.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE

(Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.
The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:Books

- Russell, Stuart J., and Peter Norvig. Artificial intelligence: a modern approach. Malaysia; Pearson Education Limited,, 2016.
- Bentley, Peter. Evolutionary design by computers. Morgan Kaufmann, 1999.

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve with AI tools to help them brainstorm their ideas.
- AI to boost with practical skills to enhanceyour own creative works.
- The students will learn AI as a complementary tool rather than a replacement for human creativity.
- Supportive learning environment encouraging exploration and experimentation.

V – SEMESTER

Course Code :	**1. 22BD55x**		
	2. 22BD56x		
	3. 22BD57x		
PROFESSIONAL ELECTIVE - C	**MOTION GRAPHICS AND ANIMATICS**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:

This course focuses on giving movement to graphic design elements by adding motion. Motion Graphics can be effectively used in Explainer Videos, Logo Animation, Applications, Mixed Reality Experiences, Interactive Installations, Credit Sequences of Films, Digital Marketing, Advertising, Web Graphics, GIF's, Presentations and more. An Animatic is an Animated Storyboard. It is a preliminary version of a film, produced by shooting successive sections of a storyboard and adding a soundtrack.

Module-1

Introduction to Visual Language : Elements of visual design, Colour theory, Principles of visual composition

Module-2

Elements of Motion : Principles of animation, Concept of time and space, Playing with rhythm, mass & weight, Composing foreground & background, Staging and animation.
Motion Emotion : Role of emotion in communication, Sound design, Text in motion / Animate text in composition, Logotype animation

Module-3

Character Design :Introduction to personality & caricature, Character anatomy, Personality & caricature, Bringing life to inanimate objects, Characters in motion.

Module-4

Motion Graphics for Communication :Screens that illustrate, animate and communicate, Gamification, Title sequence, Explainer videos, Channel Packaging

Module-5

Design Project :Understanding brand attributes & characteristic, Elements, components, patterns and assets for brand systems, Developing brand characters.

Design Tasks:	The course will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course. The students focuses on giving movement to graphic design elements by adding motion with Mixed Reality Experiences, Interactive Installations etc. An Animated Storyboardproduced by shooting successive sections of a storyboard and adding a soundtrack.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods • Explore various webpages, videos, blogs in various websites for designs • Case studies of various inventions in media, which has made a difference in advanced design using latest soft wares and technology.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE

minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:Books

-Williams, R. (2001). The Animator's Survival Kit, Faber and Faber
-Shaw, A. (2015). Design for Motion: Fundamentals and Techniques of Motion Design, Routledge
-Williams, R. (2001). The Animator's Survival Kit, Faber and Faber
-Thomas, F. & Johnston, O. (1981). Disney Animation: The Illusion of Life, Abbeville Press

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve in motion graphics course equipped with the skills to create animated visuals for various media, using software like Adobe After Effects.
- The students can take up an interaction design challenge and solve it during the course with discussions and inputs from the faculty mentors.
- Create graphics and characters in motion to narrate the story of the brand.
- Choose a product or a service and convert their traits, motto and attributes into a design vocabulary.
- Illustrate a scientific principle by turning it into a game, with persuasive and emotive techniques like rewards.

V – SEMESTER

Course Code :	**1. 22BD55x**
	2. 22BD56x
	3. 22BD57x

PROFESSIONAL ELECTIVE - D	**DIGITAL STORYTELLING**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:

The module depicts ideas and strategies towards best implementation of learning within the classroom using the Digital Story Telling. It explains how **Digital** stories present in compelling and emotionally engaging formats, and can be interactive and feed learning habits. The module actively explains how **Digital storytelling** targets as a unique blend of video, audio, images, and text to convey **stories**, information, and ideas within the classrooms in totality to enrich the learning outcomes.

Module-1

Introduction to digital storytelling and knowing about digital storytelling.

Module-2

Elements of Digital Storytelling, Digital Story Telling in the Classrooms.

Module-3

Knowing about a DIGITAL Storyboard, Educational Uses of Digital Storytelling.

Module-4

Digital storytelling tools for teachers, storytelling apps.

Module-5

Understanding an in-depth explanation of how digital storytelling can improve outcomes by utilizing a one-of-a-kind combination of video, audio, still pictures, and written text to effectively communicate tales, information, and ideas within the context of a setting.

Design Tasks:	The course will involve doing design projects. Students need to understand building soft prototypes of proposed systems at the end of the course. The students can take up andesign challenge and solve it during the course with discussions and inputs from the faculty mentors.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods • Explore various webpages, videos, blogs in various websites for designs • Case studies of various inventions in media, which has made a difference in advanced design using latest soft wares and technology.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE

marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:Books

-Jonathan Gottschall. The Storytelling Animal: How Stories Make Us Human. Houghton Mifflin Harcourt, 2013

-Alexander, Bryan. The New Digital Storytelling: Creating Narratives with New Media. ABC-CLO, 2017

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve doing information can be represented and narrated in the age of digital experience for a variety purposes from education to journalism.
- The students can take up convergence of media in digital platforms have made it challenging for designers to create sustaining story experiences in digital media.
- The course intends to create compelling narratives using possibilities of multimedia in digital world.

V – SEMESTER

Course Code :	**1. 22BD55x**		
	2. 22BD56x		
	3. 22BD57x		
PROFESSIONAL ELECTIVE - E	**DOCUMENTARY AND PHOTOGRAPHY**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:
This course is a hands on experience through taking challenging topics from society and visually documenting through photography. It includes research and understanding of social circumstances, how to approach stakeholders and effectively tell a visual narrative.

Module-1

Introduction to understanding the world of documentary and photography.Presentation of photography. Documentary Project introduction and overview. Discussion of resources needed. History of documentary photographyfrom andhow it differs in compare to other areas of photography.

Module-2

Ethics and manipulationin the field of Documentary Photography and the endless fight againstmanipulated/faked photographs from the history up to ourdigital age.Presentation and discussion of the individuals ideas andconcepts of Documentary.

Module-3

Understanding the factors that define photographers whostretched the boundaries of their medium in their personal work as streetand documentary photographers.Different approaches in subjective documentary photography.

Module-4

Understanding Different ways to document where projects cross the line in between Documentary and Fine Art photography. Unpredictable: Documentary ideas

Module-5

UnderstandingEditing.How to find and choose the right final images which areworking in a sequence and telling a personal story about the project taken. Final editing and post production, individual advice and feedback.

Design Tasks:	The course will involve doing interactive design projects. Students need to understand building soft prototypes of proposed systems at the end of the course. The students can take up an interaction design challenge and solve it during the course with discussions and inputs from the faculty mentors.
Teaching-Learning Process	• The students need to do the various design assignments using creative design methods • Explore various webpages, videos, blogs in various websites for designs • Case studies of various inventions in media, which has made a difference in advanced design using latest soft wares and technology.

Assessment Details (both CIE and SEE) for PCC

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

The PCC means the professional core course. Project based/ Assignment based/Viva based outcome CIE marks for this component are **50 marks**

CIE for the professional core course PCC

- **50 CIE marks** will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for **25 marks** and the second internal evaluation will be after covering 85-90% of the syllabus for **25 marks**.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for **50 marks.**
- The student has to secure 50% of maximum marks- **20 marks** to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC

- **50 SEE marks** will be viva based assessed by internal examiner and external examiner (appointed by the University. **Note**: Examiners will be from academia as well as industry experts.)
- Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure minimum of 35% of maximum marks- (**18 marks out of 50 marks)** to qualify in the SEE of the professional core course PCC.

Suggested Learning Resources:Books

-Salgado, S. (n.d.). Sebastião Salgado - workers. New York: Aperture Foundation.
-Chéroux, C. (n.d.). Magnum Manifesto.
-A Photography and How To Take It - One Who Knows
-Understanding Street Photography - Bryan Peterson
-On Photography - Susan Sontag
-Understanding a Photograph - John Berger
-Batchen, Geoffrey, et al., eds. Picturing Atrocity: Photography in Crisis. London: Reakton Books, 2012.
-Bogre, Michelle. Photography as Activism: Images for Social Change. Oxford: Focal Press, 2011.
-Gluckstein, Dana. Dignity: In Honor of the Rights of Indigenous Peoples. Brooklyn: PowerHouse Books, 2010.
-Knauer, Kelly. Time: History's Greatest Images. New York: Time Magazine, 2012.
-Linfield, Susie. Cruel Radiance: Photography and Political Violence. Chicago: University of Chicago Press, 2012.
-Sliwinski, Sharon. Human Rights in Camera. Chicago: University of Chicago Press, 2011.

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve doing the history and theory of photography, camera operation and exposure, composition and visual elements, image editing software, documentary filmmaking techniques, ethical considerations in photojournalism, and practical projects like portraiture and photo essays.
- It aims to develop students' skills in visual storytelling, media analysis, and the creation of impactful documentary projects.
- It aims to develop students' skills to become both a keen observer of the world and a skilled visual storyteller. understand the technical aspects of documentary photography but also appreciate its profound impact as a unique form of artistic expression.
- It aims to develop students' skills to explore, capture, and narrate the stories that surround us every day through the lens of documentary photography. Students can curate and produce their own photography book at the end of the course.

V – SEMESTER

Course Code :	**1. 22BD55x**
	2. 22BD56x
	3. 22BD57x

PROFESSIONAL ELECTIVE - F	**DESIGN FOR EDUCATION**	CIE Marks	100
Teaching Hours/Week (L:T:S:P)	3Hrs (1:0:2:0)	SEE Marks	-
Total Hours of Pedagogy	03 Hours/Week	Exam Hrs	-
Credits	03	Total Marks	100

Course Learning objectives:

The course looks at intervention through design tools, thinking and pedagogical methods to improve education. Creating innovative methods to make education fun for all. Analogue and digital methods are explored. typically involves a comprehensive framework for structuring learning, encompassing elements like educational goals, content, instructional methods, and assessment strategies tailored to student needs and broader curriculum goals.

Module-1

Introduction to Define Vision: Determine the overall purpose and intention of the course.
Introduction to Instructional Material Design Review of Instructional Design Theories Criteria for the adequacy of existing instructional materials Developing instructional materials based on an instructional strategy.
Principles of Material Design How do humans learn? Principles of remembering Instructional Approaches Use of Learning objects in Instruction Role of Media and Technology in Learning Visual Design Principles Balance, Harmony, Closure, Proximity.

Module-2

Understanding the factors and Types of Instructional Media Dale's Cone of Learning Functions of Graphics Visual Design Principles Colour, Contrast, Repetition, Alignment.
Self-Learning Materials Characteristics and Production of Self-learning Materials Characteristics of Digital Generation Design of Instructional Materials Domains and Theories of Learning (Behaviourist, cognitivist, constructivist approaches and experiential learning)

Module-3

Understanding the factors forms of Instructional Materials Function and Role of Instructional Materials in education Cos and Pros of Various types of Instructional Materials Factors involved in material selection, evaluation and adaptation. Universal Design of Instructional Materials Types of Instructional Materials Guidelines in the Selection of Instructional Materials.

Module-4

Understanding Design Educational Technology History of Educational Technology Role, Functions and Views about Educational Technology Role of Technology in Education Brief history and evolution of computers Computer Assisted Learning. Audio-Visual Materials Audio formats Selecting and utilizing audio materials.

<table>
<tr><th colspan="2">Module-5</th></tr>
<tr><td colspan="2">Computers Psychological bases of computer-aided-instruction Background of computers in education and instruction Roles of computers in instruction Integration with methods Advantages of computer applications in instruction Limitations of computers Types of computer applications in instruction.Computer basedMultimedia, Hypermedia,Virtual, Reality,Games, Simulations. Communications Technology in Education, Role of Internet in Education.</td></tr>
<tr><td>Design Tasks:</td><td>The course will involve Generate instructional goals by conducting a needs analysis of learner, task, and situational characteristics; Generate an appropriate evaluation of the instructional design project by identifying and following formative evaluation procedures; Choose to follow instructional design procedures; Function independently and cooperatively in team development activities; Compare and contrast various design perspectives and philosophies.Students need to understand building soft prototypes of proposed systems at the end of the course. The students can take up an design challenge and solve it during the course with discussions and inputs from the faculty mentors.</td></tr>
<tr><td>Teaching-Learning Process</td><td>• The students need to do the various design assignments using creative design methods
• Explore various webpages, videos, blogs in various websites for designs
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<tr><td colspan="2">Assessment Details (both CIE and SEE) for PCC
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• The student has to secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

SEE for the professional core course PCC
• 50 SEE marks will be viva based assessed by internal examiner and external examiner (appointed by the University. Note: Examiners will be from academia as well as industry experts.)
• Evaluation pattern will be based on Design portfolio presentations/ seminar/models. Split up marks will be decided by internal & external examiners based on the projects.
The student must secure minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.</td></tr>
</table>

Suggested Learning Resources:Books

-Lupton, Ellen. Design is storytelling. Cooper Hewitt, Smithsonian Design Museum (November 21, 2017)

-Birks, Kimberlie. Design for Children. Phaidon Press(2018)

-Gelman, Debra Levin. Design for Kids: Digital Products for Playing and Learning. Rosenfeld, Media; 1st edition (July 15, 2014)

-Heinich, R., Molenda, M., Russell, J. D., &Smaldino, S. E.(1999).

-Instructional media and technologies for learning. Upper SaddleRiver, NJ: Prentice-Hall.Alessi,S. &Trollip,S.(2001)

-Multimedia for Learning . Needham, MA:Allyn& Bacon, 2001

-Multimedia Learning, New York: CambridgeUnv.Press.Dick, W., Carry, L. & Carey, J. O. (2005),

Web links and Video Lectures (e-Resources):

Skill Development Activities Suggested

- Guest Lecture from expert.
- Case Studies :
- To choose relevant projects where scope of services to be learnt is more. Working on live projects.

Course Outcome

- The students will involve doing prioritize specific knowledge and capabilities to influence the syllabus design.
- The students ensure that the course goals, activities, and assessments are intentionally aligned to support student learning outcomes.
- Prepared to make adjustments to the syllabus based on student needs and progress
- Applying the principles of universal design to instructional materials to ensure accessibility for all learners.