SACRED HEART COLLEGE (AUTONOMOUS), THEVARA

KOCHI, KERALA, 682013

Syllabus for Courses

Under the discipline

Animation and Visual Effects

For Undergraduate(Honours) Degree Programmes

Introduced from 2024-25 admissions onwards

Prepared by

Board of Studies in Animation

SH School of Communication (SHSC)

Sacred Heart College Thevara, Kochi.

BOARD OF STUDIES IN ANIMATION
SH SCHOOL OF COMMUNICATION (SHSC)

SACRED HEART COLLEGE (AUTONOMOUS), THEVARA, KOCHI, KERALA

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1. INTRODUCTION

The National Education Policy (NEP) 2020 envisages the revision of the Choice Based Credit System (CBCS) for instilling innovation and flexibility. It emphasizes on promoting interdisciplinary studies, introducing new subjects, and providing flexibility in courses and fresh opportunities for students. It also envisages setting up of facilitative norms for issues, such as credit transfer, equivalence etc., and a criterion-based grading system that assesses student achievement based on the learning goals for each programme.

The NEP document suggests several transformative initiatives in higher education. These include:

- Introduction of holistic and multidisciplinary undergraduate education that would help develop all capacities of human beings - intellectual, aesthetic, social, physical, emotional, ethical and moral - in an integrated manner; soft skills, such as complex problem solving, critical thinking, creative thinking, communication skills; and rigorous specialization in a chosen field (s) of learning.
- Adoption of flexible curricular structures in order to enable creative combinations of disciplinary areas for study in multidisciplinary contexts in addition to rigorous specialization in a subject
- Undergraduate degree programmes of either 3 or 4-year duration.
- The students are getting a chance to determine his/her own semester-wise academic load and will be allowed to learn at his/her pace, to the extent possible.
- Increase in the number of choices of courses available to students and the students are getting an opportunity to choose the courses of their interest from all disciplines.
- Multidisciplinary and holistic education with emphasizes on research, skill development and higher order thinking,
- Promotion of innovation and employability of the student.
- Flexibility for the students to move from one institution to another as per their choice.
- Flexibility to switch to alternative modes of learning (offline, ODL, and online learning, and hybrid modes of learning).

Outcome Based Education (OBE)

Undergraduate courses in Animation and Visual Effects follow the Outcome-based Education (OBE) framework. OBE is a system where all the parts and aspects of education are focused on the outcomes of the course. The students take up courses with a certain goal of developing skills or gaining knowledge and they have to complete the goal by end of the course. Outcome-based education affirms teachers as facilitators, rather than lecturers. In this model, teachers guide the students and encourage them to develop their knowledge and skills. The undergraduate courses at the Department of Animation, Sacred Heart College (Autonomous), Thevara provides a learning approach in which students develop analytical ability and critical thinking and research acumen over different situations.

Honours Programs offered by

SH School of Communication, Sacred Heart College (Autonomous)

SH School of Communication offers 4 Honours programs – BA Animation and Graphic Design, BA Animation and Visual Effects, BA Mass Communication and Journalism and BA Visual Communication.

SH School of Communication (SHSC) is committed to providing a stimulating and rigorous learning environment for undergraduate students pursuing degrees in Journalism and Mass Communication, Animation and Graphic Design, Animation and Visual Effects, and Visual Communication. SHSC's academic policies are designed to foster dynamic learning in Media Arts that cultivates well-rounded graduates. We believe in the power of education to equip students with the knowledge, skills, attitude and ethical grounding necessary for successful careers in the ever-evolving media and communication landscape.

Teaching Philosophy

SHSC faculty employs a blend of teaching methods that cater to diverse learning styles and foster critical thinking, problem-solving, and creative expression. Our approach emphasizes:

• **Active and Participatory Learning**: Students actively participate in lectures, discussions, workshops, experience based and collaborative projects.

• **Personalized Attention and Mentoring**: Student hand holding and mentorship opportunities ensure personalized guidance and support for students.

• **Technology Integration**: We leverage technology to enhance learning experiences, utilizing industry-standard software and online resources.

•

Academia- Industry Interface: Professionals from the media and communication industries are invited for guest lectures and workshops, bridging the gap between theory and practice.

Learning Outcomes

Our undergraduate programs aim to equip students with the following core learning outcomes:

• **Discipline-Specific Knowledge**: Students gain a strong foundation in the theoretical and practical aspects of their chosen field through analytical and scientific methods of learning.

• **Effective Communication and Leadership Skills**: Effective written, oral, and visual communication skills are fostered across all programs from day one along with practical training to form a strong set of leadership skills.

• **Critical Thinking and Problem-Solving**: Students develop the ability to analyse complex information, identify problems, and propose innovative solutions to be change makers in their chosen paths.

• **Networking, Collaboration and Lifelong Learning**: Graduates possess the skills to utilize relevant technologies as well as concepts for their chosen career paths. They are hand held to network and collaborate for the continuous betterment of their profession. Networking and collaboration in systematic manner along with application of lifelong learning form an organic support system for them to face challenges.

• **Social, Moral and Ethical Consciousness and Responsible Citizenship**: We emphasize the social, moral and ethical implications of communication practices and the importance of adhering to citizen's responsibilities that encompass a wide range of concerns including environment protection, civic responsibilities, social equality, inclusivity and justice in moulding a better world for all.

Highlights of Honours Programs offered by SHSC

1. Signature Areas

Animation

• Focus on industry-standard software: Our curriculum emphasizes hands-on training with industry-standard 2D and 3D animation software like Maya.

• Storytelling through animation: We cultivate strong storytelling skills alongside technical expertise, enabling students to create impactful and engaging animations.

• Specialization options: Students can choose to specialize in areas like character animation, visual effects, or motion graphics.

Graphic Design

• Emphasis on design thinking: We integrate design thinking methodology into the curriculum, equipping students to solve problems creatively and visually.

• User experience (UX) design focus: Our program recognizes the growing importance of UX design, offering courses in user interface (UI) design, interaction design, and information architecture.

• Interdisciplinary approach: We encourage collaboration with other departments, such as Animation and Cinema & Television, for projects that integrate various creative disciplines.

Visual Communication

• Film, TV and New media production from concept to completion: Students gain hands-on experience in all stages of filmmaking, from scriptwriting and directing to cinematography and editing.

• Focus on narrative storytelling: We emphasize the power of visual storytelling, developing students' ability to create compelling narratives for the screen.

• Exposure to diverse filmmaking styles: Our curriculum explores various filmmaking styles, including documentary, fiction, and experimental film.

Journalism and Mass Communication

• Convergence journalism: Our program prepares students for the converged media landscape, teaching them to work across multiple platforms like print, broadcast, and digital media.
• Data journalism skills: We equip students with essential skills in data analysis, visualization, and storytelling to create impactful data-driven journalism.
• Ethical considerations in media: We emphasize the ethical principles of journalism, ensuring responsible and accurate reporting practices.

2. Cross disciplinary learning

All SHSC programs encourage collaboration with relevant departments within School of Communication and other campuses of the college, fostering a cross-disciplinary learning environment. Additionally, we explore potential collaborations with other academic/ professional/ social organisations.

3. Industry Collaborations

• Guest lectures and workshops: Industry professionals are invited to deliver guest lectures and workshops, providing students with insights into current trends and career opportunities. We will be continuing all programs that have been held in the previous year and design niche events for this purpose in 2024-25.
• Internship opportunities: We actively cultivate internship partnerships with media and communication companies, allowing students to gain practical experience in real-world settings.
• Eminent artists and professionals as advisory boards: Advisory boards composed of eminent artists and well-known media professionals provide guidance on curriculum development and ensures our programs remain aligned with the discipline and industry needs.

4. Special Needs and Requirements for Research and Innovation

SHSC recognizes the importance of fostering a culture of research and innovation.

We offer research mentorship: Faculty members mentor students interested in pursuing independent research projects.
• Support participation in conferences and competitions: SHSC encourages students to participate in research conferences and design competitions to showcase their work and gain recognition.

5. Entrepreneurial Edge

SHSC aims to empower students to develop their entrepreneurial spirit:
• Courses in entrepreneurship: Offer elective courses in entrepreneurship, business management, and creative industries marketing.
• Incubation support: Provide guidance and support to students interested in launching their own creative businesses.
• Networking opportunities: Connect students with industry professionals and potential investors to help them develop their entrepreneurial ventures.

PROGRAMME OUTCOMES

PO 1: Critical thinking and Analytical reasoning

- Critical thinking guides the assessment and judgment of information, while analytical reasoning involves specific methods for analysis and conclusion drawing. It includes the ability to assess evidence, identify assumptions, formulate coherent arguments, understand complex relationships, and evaluate practices and theories critically. Additionally, critical sensibility involves self-awareness and reflection on personal and societal experiences.

PO 2: Scientific reasoning and Problem solving

- Capacity to interpret and draw conclusions from data, critically evaluate ideas and evidence with an open-minded perspective; ability to apply learned competencies to solve unfamiliar problems and apply knowledge to real-life situations, avoiding mere replication of curriculum content.

PO 3: Effective communication and leadership skill

- Proficiency in expressing thoughts verbally and non-verbally, utilizing appropriate communication media. Confidently sharing ideas, active listening, analytical reading and writing and presenting complex information clearly to diverse groups. Effective teamwork and leadership skills, including setting direction, inspiring vision, building and motivating teams, and guiding them efficiently towards common goals.

PO 4: Social consciousness and responsible citizenship

- Social consciousness involves an empathetic and informed perspective, extending beyond personal concerns to embrace a responsibility for the collective good in nation-building. It includes reflecting on the impact of research on conventional practices and a clear understanding of societal needs for inclusive and sustainable development. Responsible citizens contribute positively through civic engagement, environmental stewardship, and a commitment to social justice, abiding by laws and working for the advancement of society.

PO 5: Equity, Inclusiveness and Sustainability

- Promoting equity, inclusiveness, sustainability, and diversity appreciation. Developing ethical and moral reasoning with values of unity, secularism, and national integration for dignified citizenship. Understanding and appreciating diversity, managing differences, and using an inclusive approach. Emphasizing creating environments where diverse individuals feel valued, addressing present needs without compromising future generations' ability to meet their own needs, considering environmental, economic, and social factors.

PO 6: Moral and Ethical Reasoning

- Possessing the capacity to embody moral and ethical values in personal conduct, articulating positions and arguments on ethical matters from diverse perspectives, and consistently applying ethical practices in all endeavours. Proficient in recognizing and addressing ethical issues pertinent to one's work, steadfastly steering clear of any unethical behaviour.

PO 7: Networking and Collaboration

- Cultivating networking skills in education entails establishing meaningful professional connections and relationships among educators, administrators, and stakeholders. It also involves fostering cooperative efforts among individuals, institutions, and research organizations within the educational realm. These practices are indispensable for nurturing a supportive, innovative, and dynamic learning environment.

PO 8: Lifelong Learning

- Cultivating the ability to continually acquire knowledge and skills, including the art of "learning how to learn," becomes paramount for lifelong learning. This self-paced and self-directed approach serves personal development, aligns with economic, social, and cultural objectives, and facilitates adaptation to evolving workplace demands through skill development and reskilling. It equips individuals with competencies and insights, allowing them to adeptly respond to society's changing landscape and enhance their overall quality of life. Lifelong learning extends beyond formal education, embracing diverse informal and non-traditional learning experiences.

2. REGULATIONS FOR UNDERGRADUATE (HONOURS) DEGREE PROGRAMMES

PREAMBLE

Sacred Heart College (Autonomous), Thevara, Kochi is a grant-in-aid private college affiliated to Mahatma Gandhi University, Kottayam, Kerala. The College was established in 1944 as a higher educational institute for men on the basis of the minority rights. It started admitting girls in 1975 and currently serves all sections of the society without any discrimination of caste or creed.

The College was granted Autonomous Status by the University Grants Commission (UGC) in 2014.

Vision and Mission of the Institution

The vision of the College aims at the formation of holistic individuals who would champion the cause of justice, love, truth and peace. To this effect, Sacred Heart College envisions the **"Fashioning of an enlightened society founded on a relentless pursuit of excellence, a secular outlook on life, a thirst for moral values as well as an unflinching faith in God."** It seeks the creation of a world, guided by divine wisdom, governed by moral principles, inclusive by secular outlook and united by the principle of equity.

The Mission of the Institution is to provide an environment that

- **facilitates the holistic development of the individual**
- **enables the students to play a vital role in the nation-building process and contribute to the progress of humanity**
- **disseminates knowledge even beyond the academia**
- **instils in the students a feel for the frontier disciplines, and**
- **cultivates a concern for the environment**

by setting lofty standards in the ever-evolving teacher-learner interface.

Framing of the Regulations

As part of the implementation of the National Education Policy 2020 (NEP 2020), the University Grants Commission (UGC) has issued the Curriculum and Credit Framework for Undergraduate Programmes 2023 (CCFUP) which would provide a flexible choice-based credit system, multidisciplinary approach, multiple entry and exit options, and establish three Broad Pathways, (a) 3-year UG Degree, (b) 4-year UG Degree (Honours), and (c) 4-year UG Degree (Honours with Research).

The Kerala Higher Education Reforms Commission has recommended a comprehensive reform in the undergraduate curriculum for the 2023-24 academic year, adopting 4-year undergraduate programs to bring Kerala's undergraduate education at par with well acclaimed universities across the globe.

The Kerala State Curriculum Committee for Higher Education has been constituted, and have proposed a model Kerala State Higher Education Curriculum Framework (KSHECF) for Undergraduate Education.

Further, an Academic Committee and various sub committees were constituted for the implementation of the Regulations. The Academic Committee submitted the draft regulations on 15-

03-2024, namely**: THE SACRED HEART COLLEGE (AUTONOMOUS) UNDERGRADUATE PROGRAMMES (HONOURS) REGULATIONS, 2024 {SHC-UGP (Honours)}** under the New Curriculum and Credit Framework, 2024.

REGULATIONS

Short Title and Commencement

i. These Regulations may be called THE SACRED HEART COLLEGE (AUTONOMOUS) UNDERGRADUATE PROGRAMMES (HONOURS) REGULATIONS, 2024 {SHC-UGP (Honours)} under the New Curriculum and Credit Framework 2024.
ii. These Regulations will come into effect from the academic year 2024-2025 and will have prospective effect.

Scope and Application

i. These Regulations shall apply to all Undergraduate programmes under various Faculties conducted by THE SACRED HEART COLLEGE (AUTONOMOUS) for the admissions commencing in the academic year 2024-2025.
ii. Every programme conducted under the SHC-UGP shall be monitored by an SHC-UGP Academic Committee comprising members nominated by the Principal.

Definitions

Unless used in a context otherwise specified,

i. College means THE SACRED HEART COLLEGE (Autonomous), a grant-in-aid private college affiliated to Mahatma Gandhi University, Kottayam, Kerala.
ii. 'University' means the MAHATMA GANDHI University which is the affiliating University of Sacred Heart College (Autonomous).
iii. FYUGP means Four Year Undergraduate Programme.
iv. Academic Year: Two consecutive (one odd and one even) semesters followed by a vacation in one academic year.
v. Academic Coordinator/Nodal Officer: Academic Coordinator/Nodal Officer is a faculty nominated by the college council to co-ordinate the effective conduct of the FYUGP including Continuous Comprehensive Assessment (CCA) undertaken by various departments within the college. She/ he/ they shall be the convenor for the College level Academic Committee.
vi. Academic Week: A unit of five working days in which the distribution of work is organized, with at least five contact hours of one-hour duration on each day.
vii. Academic Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week in a semester. It is defined both in terms of student efforts and teacher's efforts. A course which includes one hour of lecture or tutorial or minimum 2 hours of lab work/ practical work/ field work per week is given one credit hour. Accordingly, one credit is equivalent to one hour of lecture or tutorial or two hours of lab work/ practical work/ field work/ practicum and learner engagement in terms of course related activities (such as seminars preparation, submitting assignments, group discussion, recognized club-related activities etc.) per week. Generally, a one credit course in a semester should be designed for 15 hours Lecture/ tutorials or 30 hours of practical/ field work/ practicum and 30 hours learner engagement.

viii. Academic Bank of Credits (ABC): An academic service mechanism as a digital/ virtual entity established and managed by Government of India to facilitate the learner to become its academic account holder and facilitating seamless learner mobility, between or within degree-granting Higher Education Institutions (HEIs) through a formal system of credit recognition, credit accumulation, credit transfers and credit redemption to promote distributed and flexible process of teaching and learning. This will facilitate the learner to choose their own learning path to attain a Degree/ Diploma/ Certificate, working on the principle of multiple entry and exit, keeping to the doctrine of anytime, anywhere, and any level of learning.

ix. Credit Accumulation: The facility created by ABC in the Academic Credit Bank Account (ABA) opened by the learner across the country in order to transfer and consolidate the credits earned by them by undergoing courses in any of the eligible HEIs.

x. Credit Recognition: The credits earned through eligible/ partnering HEIs and transferred directly to the ABC by the HEIs concerned.

xi. Credit Redemption: The process of commuting the accrued credits in the ABC of the learner for the purpose of fulfilling the credits requirements for the award of various degrees. Total credits necessary to fulfil the criteria to get a degree shall be debited and deleted from the account concerned upon collecting a degree by the learner.

xii. Credit Transfer: The mechanism by which the eligible HEIs registered with ABC are able to receive or provide prescribed credits to individual's registered with ABA in adherence to the UGC credit norms for the course(s) registered by the learner in any HEIs within India.

xiii. Credit Cap: Maximum number of credits that a student can take per semester, which is restricted to 30.

xiv. Continuous Comprehensive Assessment (CCA): The mechanism of evaluating the learner by the course faculty at the institutional level.

xv. End Semester Evaluation (ESE): The mechanism of evaluating the learner at the end of each semester.

xvi. Audit Course: a course that the learner can register without earning credits, and is not mandatory for completing the SHC-UGP. The student has the option not to take part in the CCA and ESE of the Audit Course. If the student has 75% attendance in an Audit Course, he/she/they is eligible for a pass in that course, without any credit (zero-credit).

xvii. Courses: refer to the papers which are taught and evaluated within a programme, which include lectures, tutorials, laboratory work, studio activity, field work, project work, vocational training, viva, seminars, term papers, presentations, assignments, self-study, group discussion, internship, etc., or a combination of some of these elements.

xviii. Choice Based Credit System (CBCS) means the system wherein students have the option to select courses from the prescribed list of courses.

xix. College-level Academic Committee: Is a committee constituted for the FYUGP at the college level comprising the Principal as the Chairperson, the Academic Co-ordinator/ Nodal Officer as its convenor.

xx. Academic Co-ordinator/ Nodal Officer: A senior faculty member nominated by the college council.

xxi. Course Faculty: A faculty member nominated by the Head of the Department shall be in charge of offering a particular course in a particular semester of FYUGP.

xxii. Department means any teaching department in a college offering a course of study approved by the College as per the regulations of the college and it includes a Department, Centre, or School of Teaching and Research conducted directly by the College.

xxiii. Board of Studies (BoS) means the academic body duly constituted to frame the syllabus of each department.

xxiv. Senior Faculty Advisor (SFA) is a faculty nominated by a Department Council to co-ordinate all the necessary work related to FYUGP undertaken in that department, including the continuous comprehensive assessment.

xxv. Department Council means the body of all teachers of a department in a college.

xxvi. Faculty Adviser (FA) means a teacher from the parent department nominated by the Department Council to advise students in academic matters.

xxvii. Graduate Attributes means the qualities and characteristics to be obtained by the graduates of a programme of study at the College, which include the learning outcomes related to the disciplinary areas in the chosen field of learning and generic learning outcomes. The College will specify graduate attributes for its programmes.

xxviii. Programme means the entire duration of the educational process including the evaluation leading to the award of a degree.

xxix. Programme Pathway: Combination of courses that can be chosen by a student that give options to pursue interesting and unconventional combinations of courses drawn from different disciplinary areas, like the sciences and the social sciences/ humanities. The pathways could be in terms of major- minor options with different complementary/ allied disciplines.

xxx. Regulatory Body means University Grants Commission (UGC), All India Council for Technical Education (AICTE), National Assessment and Accreditation Council (NAAC) and National Board of Accreditation (NBA) etc.

xxxi. Signature Courses: Signature courses are the specialized Discipline Specific Elective courses or skill-based courses designed and offered by the regular/ ad hoc/ visiting/ emeritus/ adjunct faculty member of a particular college with the prior recommendation of the BoS and the approval of Academic Council of the College.

xxxii. Letter Grade or simply 'Grade' in a course is a letter symbol (O, A+, A, B+, B, C, P, F, and Ab). Grade shall mean the prescribed alphabetical grade awarded to a student based on their performance in various examinations. The Letter grade that corresponds to a range of CGPA.

xxxiii. Grade Point: Each letter grade is assigned a 'Grade point' (G) which is an integer indicating the numerical equivalent of the broad level of performance of a student in each course. Grade Point means point given to a letter grade on 10-point scale.

xxxiv. Semester Grade Point Average (SGPA) is the value obtained by dividing the sum of credit points obtained by a student in the various courses taken in a semester by the total number of credits in that semester. SGPA shall be rounded off to two decimal places. SGPA determines the overall performance of a student at the end of a semester.

xxxv. Credit Point (P) of a course is the value obtained by multiplying the grade point (G) by the credit (C) of the course: $P = G \times C$

xxxvi. Cumulative Grade Point Average (CGPA) is the value obtained by dividing the sum of credit points in all the semesters earned by the student for the entire programme by the total number of credits in the entire programme and shall be rounded off to two decimal places.

xxxvii. Grade Card means the printed record of students' performance, awarded to them.

xxxviii. Words and expressions used and not defined in this regulation, but defined in the Mahatma Gandhi University Act and Statutes, being the Act and Statues of Sacred Heart College (Autonomous)'s affiliating University shall have the meaning assigned to them in the Act and Statutes.

Features and Objectives of SHC-UGP

The features and objectives of the SHC-UGP shall be:

i. The features, meaning, and purpose of FYUGP shall be as stipulated by the UGC and as adapted by the Kerala State Higher Education Curriculum Framework (KSHECF) for undergraduate education.
ii. The practice of lateral entry of students to various semesters exists, but an exit with a Degree shall be awarded only upon successful completion of 133 credits as per the conditions stipulated in this regulation.
iii. FYUGP shall have three Broad Pathways, (a) 3-year UG Degree, (b) 4-year UG Degree (Honours), and (c) 4-year UG Degree (Honours with Research).
iv. Students who choose to exit after 3 years shall be awarded UG Degree in their respective Discipline/ Disciplines after the successful completion of the required minimum Courses with 133 credits.
v. A 4-year UG Degree (Honours) in the Discipline/ Disciplines shall be awarded to those who complete the FYUGP with a specific number of Courses with 177 credits including 8 credits from a graduate project/ dissertation in their major discipline.
vi. Students who acquire minimum 75% in their graduation (upto 6th semester) are eligible for Honours with Research Programme. However if necessary, College may conduct screening test for the honours with research programme in accordance with College Regulations from time to time.
vii. 4-year UG Degree (Honours with Research): Students who aspire to pursue research as a career may opt for 4-year UG Degree Honours with Research stream under FYUGP with a specific number of Courses with 177 credits including 12 credits from a research project in their major discipline.
viii. The recognized research departments or departments with at least two faculty members having PhD shall offer the Honours with Research programme. Minimum 2 students (mentees) should be allotted to a faculty member (Mentor).
ix. Students who have chosen the honours with research stream shall do their entire fourth year under the mentorship of a mentor.
x. The mentor shall prescribe suitable advanced level/capstone level courses for a minimum of 20 credits to be taken within the institutions along with the courses on research methodology, research ethics, and research topic-specific courses for a minimum of 12 credits which may be obtained either within the institution or from other recognized institutions, including online and blended modes.
xi. Students who have opted for the honours with research should successfully complete a research project under the guidance of the mentor and should submit a research report for evaluation. They need to defend successfully the research project to obtain 12 credits under a faculty member of the College. The research shall be in the Major/ allied discipline.
xii. The research outcomes of their project work may be published in peer-reviewed journals or presented at conferences or seminars or patented.
xiii. The proposed FYUGP curriculum comprises Three Broad Parts: a) Foundation Components, b) Discipline Specific Pathway components (Major/ Minor), and c) Discipline Specific Capstone Components.
xiv. The Foundation component of the FYUGP shall consist of a Set of General Foundation Courses and a Set of Discipline Specific Foundation Courses.

xv. General Foundation Courses shall be grouped into 4 major baskets as Ability Enhancement Courses (AEC), Skill Enhancement Courses (SEC), Value Addition Courses (VAC), and Multi-Disciplinary Courses (MDC).

xvi. Ability Enhancement Courses shall be designed specifically to achieve competency in English, other languages as per the student's choice with special emphasis on language and communication skills.

xvii. English or other language courses shall be designed to enable the students to acquire and demonstrate the core linguistic skills, including critical reading, academic and expository writing skills as well as the cultural and intellectual heritage of the language chosen. Separate courses will be designed for Science, Humanities and Commerce streams.

xviii. Multi-Disciplinary Courses (MDC) shall be so designed as to enable the students to broaden their intellectual experience by understanding the conceptual foundations of Science, Social Sciences, Humanities, and Liberal Arts. Students shall not be eligible to take the MDC in the same discipline that they have studied during their +2. Third semester MDC can be Kerala specific content.

xix. Skill Enhancement Courses (SEC) shall be designed to enhance 21st century workplace skills such as creativity, critical thinking, communication, and collaboration.

xx. Discipline Specific Courses shall include Discipline Specific Pathway Courses, both Major and Minor streams, enabling students to gain basic knowledge in the chosen discipline.

xxi. Discipline Specific Foundation Courses shall focus on foundational theories, concepts, perspectives, principles, methods, and critical thinking essential for taking up advanced/ Capstone Courses. Practical courses shall be included in discipline specific foundation courses.

xxii. The curriculum of the SEC should be designed in a manner that at the end of year- 1, year-2, year-3, and year-4 students are able to meet the level descriptors for levels 5, 6, 7, and 8 of the UGC Guidelines on National Skills Qualifications Framework (NSQF). The detailed descriptors of the NSQF levels is provided as **Appendix I** below.

xxiii. Value Addition Courses (VAC) shall be so designed as to empower the students with personality development, perspective building, and self-awareness.

xxiv. Discipline Specific Pathway Components (Major/ Minor) shall provide the students with an opportunity to pursue in-depth study of a particular subject or discipline and develop competency in that chosen area, which includes Discipline Specific Core (DSC) courses and Discipline Specific Elective (DSE) courses as Major and Minor courses.

xxv. Major components consist of three types: Discipline Specific Core or the Discipline Specific Elective Courses, and the research /laboratory/ fieldwork.

xxvi. Minor Courses can be selected from any discipline that may supplement or complement the Major Courses.

xxvii. Students who complete a sufficient number of Courses in a discipline or an interdisciplinary area of study other than their chosen Major shall qualify for a Minor in that discipline or in a chosen interdisciplinary area of study.

xxviii. Major Components shall be the main focus of study. By selecting a Major, the student shall be provided with an opportunity to pursue an in-depth study of a particular discipline.

xxix. Each Board of Studies (BoS) shall identify specific Courses or baskets of Courses towards Minor Course credits. Students shall have the option to choose Courses from disciplinary/ interdisciplinary minors and skill-based courses related to a chosen programme.

xxx. Students can opt for a change of Major at the end of the second semester to any Minor discipline studied among the foundation level courses. Students also can opt for a change of Major at the end of the second semester to any MDC.

xxxi. Students should opt their 5th and 6th semester VAC and SEC from their Major disciplines only.

xxxii. Course cum Credits Certificate: After the successful completion of a semester as proof for re-entry to another institution this certificate is essential. This will help the learner for preserving the credits in the Academic Bank of Credits.

xxxiii. The Advanced Level/ Capstone Level Courses shall be designed in such a manner as to enable students to demonstrate their cumulative knowledge in their main field of study, which shall include advanced thematic specialization or internships or community engagement or services, vocational or professional training, or other kinds of work experience.

xxxiv. Advanced/ Capstone level Major Specialization shall include Courses focused on a specific area of study attached to a specific Major, which could be an Elective Course. They shall include research methodology as well.

xxxv. The student has the option to register for and attend a course without taking part in the CCA and ESE of that course. Such a course is called the Audit Course. If the student has 75% attendance in an Audit Course, he/she/they is/are eligible for a pass in that course, without any credit (zero-credit). The Audit Course will be recorded in the final grade card of the student.

xxxvi. All students shall undergo Summer Internship or Apprenticeship in a Firm, Industry or Organization; or Training in labs with faculty and researchers or other Higher Education Institutions (HEIs) or Research Institutions. The College will adhere to the guidelines on internship published by the University.

xxxvii. Students will be provided the opportunities for internships with local industries, business organizations, agriculture, health and allied sectors, Local Government institutions (such as panchayats, municipalities), State Planning Board, State Councils/ Boards, Research Institutions, Research Labs, Library, elected representatives to the parliament/ state assembly/ panchayat, media organizations, artists, crafts persons etc. These opportunities will enable the students to actively engage with the practical aspects of their learning and to improve their employability.

xxxviii. The College will provide opportunities for field-based learning/minor projects enabling them to understand the different socio-economic and development-related issues in rural and urban settings. The College will provide the students with opportunities for Community engagement and services, exposing them to socio-economic issues to facilitate theoretical learning in real-life contexts.

xxxix. Additional Credits will be awarded for those who actively participating in Social Activities, which may include participation in National Service Scheme (NSS), Sports and Games, Arts, participation in College union related activities (for respective elected/ nominated members), National Cadet Corps (NCC), adult education/ literacy initiatives, mentoring school students, and engaging in similar social service organizations that deemed appropriate to the College.

xl. Grace marks shall be awarded to a student for meritorious achievements in co-curricular activities (in Sports/ Arts/ NSS/ NCC etc.). Such a benefit is applicable in the same academic year spreading over two semesters, in which the said meritorious achievements are earned.

The Academic Council will decide from time to time the eligibility and other rules of awarding the grace marks.

xli. Options will be made available for students to earn credit by completing quality- assured remote learning modes, including Online programmes offered on the Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) or other Online Educational Platforms approved by the competent body/university from time to time.

xlii. Students shall be entitled to gain credits from courses offered by other recognized institutions directly as well as through distance learning.

xliii. For the effective operation of the FYUGP, a system of flexible academic transaction timings shall be implemented for the students and teachers.

Eligibility for Admission and Reservation of Seats

i. The eligibility for admissions and reservation of seats for various FYUG Degree Programmes shall be in accordance with the norms/ rules made by the Government/ University from time to time.

ii. No student shall be eligible for admission to FYUG Degree Programmes in any of the disciplines unless he/she/they has successfully completed the examination conducted by a Board/University at the +2 level of schooling or its equivalent.

iii. Students shall be admitted and enrolled in the respective programmes solely based on the availability of the academic and physical facilities within the institution. The College shall provide all students with a brochure detailing the Courses offered by the various departments under the various Programmes and the number of seats sanctioned by the University for each Programme.

iv. During the time of admission each student may be provided with a unique higher education student ID which may be linked with the Aadhar number of the student so that this ID can be transferred if required to other higher education institutions as well.

v. The students at the end of second semester may be permitted to change their major programme of study to any course/ institution/ university across the state. Based on the availability of seats and other facilities, the students may be permitted to opt any discipline which he/she/they had studied during the first two semesters as Discipline Specific Foundation courses/ Multidisciplinary Foundation courses. If ranking is required it will be in the order of the highest-grade points secured in the discipline to which the switching of Major is sought.

vi. Students shall be allowed to change their major programmes, if required, to a maximum of 10% of the sanctioned strength of that particular programmes depending upon the academic and infrastructural facilities available in the Institution.

vii. Depending upon the availability of academic and infrastructural facilities, the College may also admit a certain number of students who are registered for particular programmes in each semester by transfer method, if required, from other Institutions subject to conditions as may be issued by the University.

viii. A student who has already successfully completed a First-Degree Programme and is desirous of and academically capable of pursuing another First-Degree Programme may also be admitted with the prior approval of the University as per the conditions regarding programme requirements specified by the University.

ix. A Student can also be admitted for an additional major/ second major/ additional minor and on completion of the required credits he/she/they can be awarded a second major/

additional major/ minor. He/she/they may be exempted from minor pathway and general foundation course requirement.

x. The College can also enroll students in certain courses as per their choice depending upon the availability of infrastructure and other academic facilities from other recognized HEIs who are already registered for a particular programme there either through regular/ online/ distance mode irrespective of the nature of programme (Govt./ Aided/ Self- finance/ Autonomous). On successful completion of the course the credits may be transferred through the Academic Bank of Credit.

Academic Monitoring and Student Support

The academic monitoring and student support shall be in the following manner, namely

i. The College shall appoint a Senior Faculty member as Academic Co-ordinator/ Nodal officer for the smooth conduct of FYUGP.
ii. Advisory System: There shall be one Senior Faculty Advisor (SFA) for each department and one Faculty Advisor (FA) for 20 to 30 students of the class to provide advice in all relevant matters. The Head of the Department, in consultation with the SFA, shall assign FA for each student.
iii. The documents regarding all academic activities of students in a class shall be kept under the custody of the FA/ SFA.
iv. All requests/ applications from a student or parent to higher offices are to be forwarded/ recommended by FA/ SFA.
v. Students shall first approach their FA/ SFA for all kinds of advice, clarifications, and permissions on academic matters.
vi. It is the official responsibility of the institution to provide the required guidance, clarifications, and advice to the students and parents strictly based on the prevailing academic regulations.
vii. The SFA shall arrange separate or combined meetings with FA, faculty members, parents, and students as and when required and discuss the academic progress of students.
viii. The FA/ SFA shall also offer guidance and help to solve the issues on academic and non-academic matters, including personal issues of the students.
ix. Regular advisory meetings shall be convened immediately after the commencement of the semester and immediately after announcing the marks of the Continuous Comprehensive Assessment (CCA).
x. The CCA related results shall be displayed on the department notice board/ other official digital platforms of the college at least for two working days.
    a. Any concern raised by the students regarding CCA shall be looked into in the combined meetings of advisors, HOD, course faculty, and the students concerned.
    b. If the concerns are not resolved at the advisor's level, the same can be referred to the properly constituted college-level grievance redressal committees as per the existing UGC/ University/ Government norms.
    c. The Principal/ HOD shall ensure the proper redressal of the concerns raised by the students regarding CCA.
    d. If the students raise further concerns about the issue, the principal shall refer the issue to the appropriate authorities with proper documents and minutes of all the committees.

xi. The FA/ SFA shall be the custodian of the minutes and action taken reports of the advisory meetings. The SFA shall get the minutes and action taken reports of advisory meetings approved by the Head of Department and the Principal.
xii. The Principal shall inform/forward all regulations, guidelines, communications, announcements, etc. regarding student academic and other matters to the HODs/ SFA for information and timely action.
xiii. It shall be the official responsibility of the Principal to extend the required administrative and financial support to the HODs, SFAs and FAs to arrange necessary orientation programmes for students regarding student counselling, the prevailing norms, regulations, guidelines and procedures on all academic and other related matters.
xiv. An integrated educational planning and administration software will be made available by the College to manage the academic information of all students including student admissions and registration, managing students' personal and academic information, course registrations, attendance management, all process related to assessments including regular & online examinations, grading, publishing of results, supplementary examinations, LMS, stakeholders' feedback, etc.
xv. Faculty, staff, students, and parents shall be allowed to access this software system over a highly secure authenticated mechanism from within the campus.

Course Registration

i. Each department shall publish well in advance the relevant details of courses offered, such as the name, academic level, expected outcomes, time slot, and course faculty members.
ii. Students shall be allowed to visit and interact with respective faculty members during the first week of each semester, to gather more information about the courses and the availability of seats.
iii. Based on consultations and advice from the faculty adviser, each student shall complete course registration within one week from the commencement of each semester.
iv. The number of credits that a student can take in a semester is governed by the provisions in these Regulations, subject to a minimum of 16 and a maximum of 30 Credits.
v. A student can opt out of a Course or Courses registered, subject to the minimum Credit/ Course requirement, if he/she/they feels that he/she/they has registered for more Courses than he/she/they can handle, within 30 days from the commencement of the semester.
vi. The college shall publish a list of the students registered for each course including audit course, if any, along with the chosen Programmes, repeat/ reappearance courses, if any.
vii. The higher education institutions shall admit candidates not only for programmes, but also for courses.

Re-admission and Scheme Migration

i. Students who opt out before the completion of the third year shall be provided with a 'Course cum Credits Certificate' after the successful completion of a semester as proof for re-entry to another institution.
ii. Students who have successfully completed a particular programme pathway may be permitted to take an additional minor or second major.
iii. Those students who are opting for a second major are eligible for getting certain credit transfer/ credit exemption from their previous minor programs of study, subject to the prior recommendation of the BoS that, those credits are relevant for the present major programme of study.

Duration of Programme, Credits, Requirements and Options

i. Students will be offered the opportunity to take breaks during the programme and resume after the break, but the total duration for completing the FYUG programme shall not exceed 7 years.
ii. Students who wish to complete the undergraduate programmes faster may do so by completing different courses equivalent to the required number of credits and fulfilling all other requirements in N-1 semesters, where N is the number of semesters in the FYUGP.
iii. Provided further that the students may complete the undergraduate programme in slower pace, they may pursue the three years or six semester programme in 4 to 5 years (8 to 10 semesters), and four years, or eight semester programme in 5 to 6 years (10 to 12 semesters) without obtaining readmission.
iv. For students who crossed 6 semesters at a slower space, the requirement of 16 credits per semester from the institutions where they enrolled may be relaxed.

Credit Structure

The proposed number of credits per course and the credit distribution of them for the FYUG Programmes are given below:

i. An academic year shall consist of 200 working days; one semester consists of 90 working days; and an academic year consists of two semesters.
ii. Ten working days in a semester shall be used for extracurricular activities. One semester consists of 18 weeks with 5 working days per week. In each semester, 15 days (3 weeks) should be kept aside for End Semester Evaluation (ESE) and CCA.
iii. The maximum number of available weeks for curriculum transactions should be fixed at 15 in each semester. A minimum of 5 teaching or tutorial hours could be made available for a day in a 5-day week.
iv. A course that includes one hour of lecture/ tutorial or two hours of lab work/ practical work/ field work/ practicum per week is given one credit hour.
v. One credit in a semester should be designed for 15 hours of lectures/ tutorials or 30 hours of lab work/ practical work/ field work/ practicum and 30 hours of learner engagement in terms of course-related activities such as seminar preparation, submitting assignments, etc.
vi. A one-credit seminar or internship or studio activities or field work/ projects or community engagement and service will have two-hour engagements per week (30 hours of engagement per semester).
vii. A course can have a combination of lecture credits, tutorial credits, and practicum credits.
viii. Minimum credit for one Course should be 2 (Two), and the maximum credit should be 4 (Four).
ix. All Discipline Specific Major/ Minor Courses shall be of 4 (Four) credits.
x. For all Discipline Specific Major/ Minor Courses, there may be practical/ practicum of two or four hours per week.
xi. All Courses under the Multi-Disciplinary, Ability Enhancement, Value Addition and Skill Enhancement categories are of 3 credits.
xii. Summer Internship, Apprenticeship, Community outreach activities, etc. may require sixty hours (or as appropriate) of engagement for acquiring one credit.
xiii. A student shall be able to opt for a certain number of extra credits over and above the requirements for the award of a degree.

xiv. Maximum number of credits that a student can earn per semester shall be restricted to 30. Hence, a student shall have the option of acquiring credits to a maximum of 180 credits for a 6-semester UG programmes and 240 credits for a 4-year (8-semester) programmes.

xv. Each faculty member shall offer a maximum of 16 credits per semester. However those who are offering both practical and theory courses shall offer a maximum of 12-16 credits per semester.

xvi. For a four-credit theory course, 60 hours of lecture/ tutorial class shall be assured as a mandatory requirement for the completion of that course.

Course Structure of the SHC-UGP Programme

The SHC-UGP consists of the following categories of courses and the minimum credit requirements for pathway option-one shall be as follows;

Sl. No.	Categorization of Courses for all Programme	Minimum Number of Credit Required	
1.	Major	68	88
2.	Minor	24	24+12*
3.	Multi-Disciplinary Courses (MDC)	9	9
4.	Skill Enhancement Courses (SEC)	9	9
5.	Ability Enhancement Courses (AEC)	12	12
6.	Value Addition Courses (VAC)	9	9
7.	Summer Internship, field basedlearning etc.	2	2
8.	Research Project / Dissertation		12/8**

* The students can acquire advanced/ capstone level courses with 12 credits from their DSC/ DSE/ Minor courses depending up on their pathway choice. The Minor courses can be of level 300 or above.

** The students pursuing the 4-year honours with research have to complete a project with 12 credits and for the 4-year honours degree students have to complete a project with 8 credits and DSC/ DSE capstone/ advanced level course in the 8th semester.

i. 20% syllabus of each course will be prepared by the teacher as 'Teacher Specific Content' and will be evaluated under CCA.

ii. In case of MDC, SEC, VAC courses coming under 3rd & 4th semester, college should make necessary arrangements to give adequate preference to courses designed by language departments. MDC in the 3rd semester can be Kerala Specific Content.

Academic Levels of Pathway Courses

Semester	Difficulty level	Nature of Course
1 & 2	100-199	Foundation-level or introductory courses
3 & 4	200-299	Intermediate level courses
5 & 6	300-399	Higher level courses

7 & 8	400-499	Advanced/Capstone level courses

Signature Courses

i. With a prior recommendation of BoS and the approval of academic council, each faculty member can design and offer at least one signature course in every semester, which may be offered as DSE /SEC/ VAC.
ii. The College will publish a list of signature courses in DSE/ SEC/ VAC offered by the faculty members with a prior recommendation of BoS and the approval of academic council.
iii. The College may empanel distinguished individuals who have excelled in their field of specialization like science and technology, industry, commerce, social research, media, literature, fine arts, civil services etc. as adjunct faculty as per the UGC guidelines with the approval of the College. With a prior recommendation of BoS and the approval of academic council, the adjunct faculty can offer SEC/VAC as signature course.
iv. Ad hoc/ Guest faculty/ Visiting faculty/ Visiting Scholars can also offer DSE/ SEC/ VAC as signature courses with a prior recommendation of BoS and the approval of academic council.
v. The faculty concerned may design the particular course and it should be forwarded to the concerned BoS after the approval of the Academic Committees formed as part of this regulations.
vi. The examinations and evaluation of the signature courses designed by the faculty shall be conducted by the faculty themselves and an external expert faculty chosen by the college from a panel of experts submitted by the faculty and recommend by the BoS concerned.

Programme Pathways and Curriculum Structure

Students who have joined for any programme under these regulations shall have the option to choose the following pathways for their UG degree and Honours programme.

i. **Degree with single Major**: A student pursuing the FYUG programme in a specific discipline shall be awarded a Major degree if he secures at least 50% of the total credits in the specific discipline required for the award of the Degree in that Discipline. Example: Physics Major/ Economics Major/ Commerce Major
ii. **Degree Major with Minor**: If a student pursuing the FYUG Programme is awarded a Major Degree in a particular discipline, he/she/they are eligible to be awarded a Minor in another discipline of his choice, if he earns a minimum of 32 credits (approximately 25% of credit required for the three-year programme) from 8 pathway courses in that discipline. Example: Physics Major with Chemistry Minor/ Chemistry Major with English Minor/ Commerce Major with Economics Minor/ English Major with Functional English Minor/ Hindi Major with Malayalam Minor etc.
iii. **Major with Multiple Disciplines** of Study: This pathway is recommended for students who wish to develop core competencies in multiple disciplines of study. In this case, the credits for the minor pathway shall be distributed among the constituent disciplines/ subjects. If a student pursuing FYUG Degree Programme is awarded a major Degree in a particular discipline, he/she/they are eligible to get mentioned his core competencies in other disciplines of his choice if he has earned 12 credits from the pathway courses of that

discipline. Example: Physics Major with Minors in Chemistry and Mathematics, Economics Major with Minors in History and English, Commerce Major with Minors in Economics and Statistics.

iv. **Interdisciplinary Major**: For these programme pathways, the credits for the major and minor pathways shall be distributed among the constituent disciplines/subjects to attain core competence in the interdisciplinary programme. Example: Econometrics Major, Global Studies Major, Biostatistics Major.

v. **Multi-Disciplinary Major**: For multidisciplinary major pathways, the credits for the major and minor pathways will be distributed among the broad disciplines such as Life Sciences, Physical Sciences, Mathematical and Computer Sciences, Data Analysis, Social Sciences, Humanities, etc. Example: Life Science, Data Science, Nano Science.

vi. **Degree with Double Major**: A student who secures a minimum of 50% credits from the first major will be awarded a second major in another discipline if he could secure 40% of credit from that discipline for the 3-year/ 4-year UG degree to be awarded a double major degree. (Example: Physics and Chemistry Major, Economics and History Major, Economics and History Major, Commerce and Management Major, Economics and History Major, Commerce and Management Major.)

Pathway Option 1 - Degree Major or Major with Multiple Disciplines of Study

Course Components	No. of Courses											
	Semester 1	**Semester 2**	**Semester 3**	**Semester 4**		**Semester 5#**	**Semester 6#**	**Total**	**Remarks**	**Semester 7**	**Semester 8**	**Total**
DSC A (4 Credit /Course)	1(P)	1(P)	3 (2P)	3 (2P)		5	4	17	7 Out of 17 can be opted as DSE	3	2	22
DSC B & C (4 Credit /Course)	2(P)	2(P)	1(P) (B or C)	1(P) (C or B)				6		3		9
Multidisciplinary Courses (MDC) (3 Credit /Course)	1(P)	1(P)	1*					3	*Recommended that the course offered be related to Indian Knowledge Systems or allied areas.			3
Ability Enhancement Courses (AEC) (3 Credit /Course)	1 (English)1 (OL)	1 (English)1 (OL)			**Internship of 2 Credits**			4				4
Skill Enhancement Courses (SEC) (3 Credit /Course)				1*		1**	1**	3	*Recommended that the course may be offered by the English Department ** From DSC Aonly			3
Value Addition Courses (VAC) (3 Credit /Course)			1*	1*			1**	3	*Recommended that one VAC be offered by the English Department and one by Other Languages Department ** From DSC Aonly			3
Project/ Dissertation 12 credits for Honours with Research & 8 for Honours											**12/8 (1 DSC / DSE for Honours**	
Total Courses	**6**	**6**	**6**	**6**		**6**	**6**	**36**		**6**	**2+1**	
Total Credits	**21**	**21**	**22**	**22**	**2**	**23**	**22**		**Total Credits 133**	**24**	**20**	**Total Credits 177**
Total Hours per Week	**25**	**25**	**25**	**25**		**25**	**25**		**Exit option available**	**25**	**25**	

BoS can include 2 practical courses in 5th semester and 3 practical courses in 6th semester in any of the 6 courses distributed in each semester.

Pathway Option 2 - Major with Minor

Course Components	No. of Courses											
	Semester 1	Semester 2	Semester 3	Semester 4		Semester 5#	Semester 6#	Total	Remarks	Semester 7	Semester 8	Total
DSC A (4 Credit /Course)	1(P)	1(P)	3 (2P)	3 (2P)		4	3	15	7 Out of 15 can be opted as DSE	3	2	20
DSC B (4 Credit /Course)	2(P)	2(P)	1(P)	1(P)		1	1	8	1 Out of 8 can be opted as DSE	3		11
MultidisciplinaryCourses (MDC)/ (3 Credit /Course)	1(P)	1(P)	1*					3	*Recommended that the course offered be related to Indian Knowledge Systems or allied areas.			3
Ability Enhancement Courses (AEC) (3 Credit /Course)	1(English) 1 (OL)	1(English) 1 (OL)						4				4
Skill Enhancement Courses (SEC) (3 Credit /Course)				1*		1**	1**	3	*Recommended that the course may be offered by the English Department ** From DSC A only			3
Value Addition Courses (VAC) (3 Credit /Course)			1*	1*			1**	3	*Recommended that one VAC be offered by the English Department and one by Other Languages Department ** From DSC Aonly			3
Project/ Dissertation 12 credits for Honours with Research & 8 for Honours											**12/8 (1 DSC/ DSE for Honours**	
Total Courses	**6**	**6**	**6**	**6**		**6**	**6**	**36**		**6**	**2+1**	
Total Credits	**21**	**21**	**22**	**22**	**2**	**23**	**22**		**Total Credits 133**	**24**	**20**	**Total Credits 177**
Total Hours per Week	**25**	**25**	**25**	**25**		**25**	**25**		**Exit option available**	**25**	**25**	

Internship of 2 Credits

BoS can include 2 practical courses in 5th semester and 3 practical courses in 6th semester in any of the 6 courses distributed in each semester.

Pathway Option 3 - Double Major

Course Components	No. of Courses											
	Semester 1	Semester 2	Semester 3	Semester 4	Internship of 2 Credits	Semester 5#	Semester 6#	Total	Remarks	Semester 7	Semester 8	Total
DSC A (4 Credit /Course)	1(P)	1 (P)	2(2P)	2(1P)		4	3	13	7 Out of 13 can be opted as DSE	3	2	18
DSC B (4 Credit /Course)	2(P)	2(P)	2(1P)	2(2P)		1	1	10	2 Out of 10 can be opted as DSE	3		13
MultidisciplinaryCourses (MDC) (3 Credit /Course)	1(P)	1(P)	1*					3	*Recommended that the course offered be related to Indian Knowledge Systems or allied areas.			3
Ability Enhancement Courses (AEC) (3 Credit /Course)	1(English) 1(OL)	1(English) 1(OL)						4				4
Skill Enhancement Courses (SEC) (3 Credit /Course)				1*		1	1	3	*Recommended that the course may be offered by the English Department			3
Value Addition Courses (VAC) (3 Credit /Course)			1*	1*			1	3	*Recommended that one VAC be offered by the English Department and one by Other Languages Department			3
Project/ Dissertation 12 credits for Honours with Research & 8 for Honours											**12/8 (1 DSC/ DSE for Honours**	
Total Courses	**6**	**6**	**6**	**6**		**6**	**6**	**36**		**6**	**2+1**	
Total Credits	**21**	**21**	**22**	**22**	**2**	**23**	**22**		**Total Credits 133**	**24**	**20**	**Total Credits 177**
Total Hours per Week	**25**	**25**	**25**	**25**		**25**	**25**		**Exit option available**	**25**	**25**	

BoS can include 2 practical courses in 5th semester and 3 practical courses in 6th semester in any of the 6 courses distributed in each semester.

Note: In all the above 3 tables "(P)" means courses with practical

Course Structure of Various Pathways based on Credit Requirements

The FYUG Programmes consist of the following categories of courses and the minimum credit requirements for each of them shall be as follows:

Table 1: FYUGP Course Structure – Major with Minors

Sl. No.	Categorization of courses for all Programmes	Minimum number of credits required	
		3-year UG	4-year UG
1	Major	68	88
2	Minor/ Minors	24	24+12*
3	Multi-disciplinary Courses (MDC)	9	9
4	Skill Enhancement Courses (SEC)	9	9
5	Ability Enhancement Course (AEC)	12	12
6	Value Addition Courses (VAC)	9	9
7	Summer Internship, field-based learning etc.	2	2
8	Project / Dissertation		12**
	Total Credits	**133**	**177**

* Students can acquire 12 credits from their DSC/ DSE- Minor courses (300-399 level) depending upon their pathway choice.

** Students pursuing a four-year Honours degree are required to complete an 8-credit project as well as one capstone course from their chosen pathway, either DSC or DSE (400-499 level).

Table 2: FYUGP Course Structure – Double Major

Sl. No.	Categorization of courses for all Programmes	Minimum number of credits required	
		3-year UG	4-year UG
1	First Major	52	72
2	Second Major	40	52
3	Multi-disciplinary Courses (MDC)	9	9
4	Skill Enhancement Courses (SEC)	9	9
5	Ability Enhancement Course (AEC)	12	12
6	Value Addition Courses (VAC)	9	9
7	Summer Internship, field-based learning etc.	2	2
8	Project/(8 Credit project + 1 capstone course)		12
	Total Credits	**133**	**177**

Table 3: FYUGP Course Structure – Multidisciplinary

Sl. No.	Categorization of courses for all Programmes	Minimum number of credits required	
		3-year UG	4-year UG
1	Multidisciplinary Major	52	72
2	Multidisciplinary Minors	40	52
3	Multi-disciplinary Courses (MDC)	9	9
4	Skill Enhancement Courses (SEC)	9	9
5	Ability Enhancement Course (AEC)	12	12
6	Value Addition Courses (VAC)	9	9
7	Summer Internship, field-based learning etc.	2	2
8	Project / (8 Credit project + 1 capstone course)		12
	Total Credits	**133**	**177**

Guidelines for Acquiring Credit from Other Institutions/Online/Distance Mode

i. A student shall register to a minimum of 16 credit per semester from the college/ department where he/she/they officially admitted for a particular programme. However, students enrolled for a particular programme in one institution can simultaneously enroll for additional credits from other HEIs within the University or outside University subject to a maximum of 30 credits per semester including the 16 institutional credits.
ii. The College shall publish a list of courses that are open for admission for students from other institutions well in advance before the commencement of each semester.
iii. Each BoS shall prepare and publish a list of online courses at different levels before the commencement of each semester offered in various online educational platforms recognized by the Academic Council of the college, which can be opted by the students for acquiring additional credits.
iv. BoS shall prepare and publish a list of allied/ relevant pathway courses before the commencement of each semester offered by other Board of Studies that can be considered as pathway course for major/ minor for their disciplines at different levels.
v. At the end of each semester the college will include the credit acquired by the student through online courses in their semester grade card subject to a maximum of 30 credits.

Attendance

i. A student shall be permitted to register for the end-semester evaluation of a specific course to acquire the credits only if he has completed 75% of the prescribed classroom activities in physical, online, or blended modes, including any makeup activities as specified by the course faculty of that particular course.

ii. A student is eligible for attendance as per the existing university and government orders which includes participation in a meeting, or events organized by the college or the university, a regularly scheduled curricular or extracurricular activity prescribed by the college or the university. Due to unavoidable or other legitimate circumstances such as illness, injury, family emergency, care-related responsibilities, bad or severe weather conditions, academic or career-related interviews students are eligible for authorized absence. Apart from this, all other eligible leaves such as maternity leave, and menstrual leave shall also be treated as authorized absences.
iii. The condonation facility can be availed as per the university norms.

Workload

i. The workload of a faculty who offers only lecture courses during an academic year shall be 32 credits.
ii. The workload of a faculty offering both practical courses and theory courses may be between 24-32 credits per academic year.
iii. An academic year shall consist of two semesters.
iv. To protect the existing language workload, college should make necessary arrangements to give adequate preference to those courses designed by language departments coming under MDC, SEC and VAC of 3rd & 4th semester. It is recommended that the MDC offered in the third semester shall be based on Indian Knowledge Systems or Nation-specific topics and may be offered by the Other Languages department or any other department as may be seen fit. Additionally, the SEC in the fourth semester may be offered by the English Department and of the VACs in the third and fourth semesters, one may be offered by the Other Languages Department and the other may be offered by the English Department. These recommendations may be modified as per the recommendations of the SHC-UGP Academic Monitoring Committee.
v. Programme wise workload calculation will be as per the FYUGP workload ordinance 2024.
vi. The teachers given the administrative responsibilities in the department and college level may give a relaxation in their work load as specified in the UGC regulations 2018.

Credit Transfer and Credit Accumulation

i. The college will establish a digital storage (DIGILOCKER) of academic credits for the credit accumulation and transfer in line with ABC.

ii. The validity of credits earned shall be for a maximum period of seven (7) years or as specified in the university/ UGC regulations.The students shall be required to earn at least 50% of the credits from the College.

iii. Students shall be required to earn the required number of credits as per any of the pathway structure specified in this regulation for the award of the degree.

Outcome Based Approach

The curriculum will be designed based on Outcome Based Education (OBE) practices. The Graduate Attributes (GA) and Programme Outcomes (PO) will be defined and specified in the syllabus of each programme.

Assessment and Evaluation

i. The assessment shall be a combination of Continuous Comprehensive Assessment (CCA) and an End Semester Evaluation (ESE).

ii. 30% weightage shall be given for CCA. The remaining 70% weight shall be for the ESE.

iii. Teacher Specific Content will be evaluated under CCA.

iv. CCA will have two subcomponents Formative Assessment (FA) and Summative Assessment (SA). Each of these components will have equal weightage and to be conducted by the course faculty/ course coordinator offering the course.

v. FA refers to a wide variety of methods that teachers use to conduct in-process evaluations of student comprehension, learning needs, and academic progress during a lesson, unit, module or course. FA is to encourage students to build on their strengths rather than fixate or dwell on their deficits. FA can help to clarify and calibrate learning expectations for both students. FA will help students become more aware of their learning needs, strengths, and interests so they can take greater responsibility over their own educational growth. FA will be prerogative of the course faculty/ course coordinator based on specific requirement of the student.

vi. Suggestive methods of FA are as follows: (anyone or in combinations as decided by the course faculty/ course coordinator)

   a. Practical assignment
   b. Observation of practical skills
   c. Viva voce
   d. Quiz
   e. Interview
   f. Oral presentations
   g. Computerized adaptive testing
   h. In-class discussions
   i. Group tutorial work
   j. Reflection writing assignments
   k. Home assignments
   l. Self and peer Assessments
   m. Any other method as may be required for specific course/ student by the course faculty/ course coordinator.

vii. Summative Assessments (SA) are used to evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined instructional period- typically at the end of a project, unit, module, course or semester. SA may be a class tests, assignments, or project, used to determine whether students have learned what they were expected to learn. It will be based on evidence, collected using single or multiple ways of assessment. The systematically collected evidences should be kept in record by course faculty/ course coordinator and the marks should be displayed on the college notice board/ other official digital platforms of the college before the end semester examinations.

viii. The method of SA will be as follows: (any one as decided by the course faculty/ course coordinator)

a. Written test
b. Open book test
c. Laboratory report
d. Problem based assignments
e. Individual project report
f. Case study report
g. Team project report
h. Literature survey
i. Standardized test
j. Any other pedagogic approach specifically designed for a particular course by the course faculty/ course coordinator.

ix. A student may repeat SA only if for any compulsive reason due to which the student could not attend the assessment.
x. The prerogative of arranging a CCA lies with the course faculty/ course coordinator with the approval of SHC-UGP Academic Committee based on justified reasons.
xi. The course faculty/ course coordinator shall be responsible for evaluating all the components of CCA. However, the college may involve any other person (External or Internal) for evaluation of any or all the components as decided by the Principal/Controller of Examinations from time to time in case any grievances are raised.
xii. Written tests shall be precisely designed using a variety of tools and processes (e.g., constructed responses, open-ended items, multiple-choice), and the students should be informed about the evaluation modalities before the commencement of the course.
xiii. The course faculty may provide options for students to improve their performance through continuous assessment mechanism.
xiv. There shall be theory and practical examinations at the end of each semester.
xv. Regarding evaluation, one credit may be evaluated for 25 marks in a semester; thus, a 4-credit course will be evaluated for 100 marks; 3-credit courses for 75 marks and 2-credit courses for 50 marks.
xvi. All examinations will be conducted by the College and will be evaluated at the College itself.
xvii. Individual Learning Plans (ILPs) and/ or specific assessment arrangements may be put in place for differently abled students. Suitable evaluation strategies including technology

assisted examinations/ alternate examination strategies will be designed and implemented for differently abled students.

Practical Examination

i. The end semester practical examination will be conducted and evaluated by the institution.
ii. There shall be a CCA for practical courses conducted by the course faculty/ course coordinator.
iii. The scheme of evaluation of practical courses will be as given below:

Components for the Evaluation of Practical Courses	Weightage
CCA of practical/practicum.	30%
ESE of practical/practicum.	70%

iv. Those who have completed the CCA alone will be permitted to appear for the ESE.
v. For grievance redressal purpose, the university shall have the right to call for all the records of CCA.
vi. Duration of Examination: Questions shall be set as per the defined Outcome .The duration of the examinations shall be as follows.

Mode	Time (in Hours)
Written Examination	2
Multiple Choice	1.5
Open Book	2
Any Other Mode	2

Evaluation of Project/Dissertation

The evaluation of project work shall be CCA with 30% and ESE 70%. The scheme of evaluation of the Project is given below:

Project type	Maximum Marks	CCA	ESE
Research Project of Honours with Research (12 credits)	**200**	60	140
Project of Honours (8 credits)	**100**	30	70

Evaluation of Internship

The evaluation of internship shall be done by a committee constituted by the Department Council. The scheme of CCA and ESE is given below:

Components of Evaluation of Internship	Weightage	Marks for Internship 2 Credits/ 50 Marks
CCA	30%	15
ESE	70%	35

The department council may decide any mode for the completion of the Internship. If in case evaluation is not specified in any of the selected internship programme, institution can adopt a proper evaluation method as per the weightage specified in the table above.

Letter Grades and Grade Points

Mark system is followed for evaluating each question. For each course in the semester, letter grade and grade point are introduced in 10-point indirect grading system as per guidelines given below,

i. The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester. The SGPA is based on the grades of the current term, while the Cumulative Grade Point Average (CGPA) is based on the grades in all courses taken after joining the programme of study.

ii. Based on the marks obtained, the weighted grade point will be mentioned in the student's grade cards.

Letter Grade	Grade Point	Percentage of Marks (Both Internal & External Marks puttogether)	Class
O (Outstanding)	10	95% and above	First Class with Distinction
A+ (Excellent)	9	85% and above but below 95%	
A (Very good)	8	75% and above but below 85%	
B+ (Good)	7	65% and above but below 75%	First Class
B (Above average)	6	55% and above but below 65%	
C (Average)	5	45% and above but below 55%	Second Class
P (Pass)	4	35% and above below 45% Aggregate (external and internal put together) with a minimum of 30% in external	Third Class
F (Fail)	0	Below an aggregate of 35%or below 30% in external evaluation	Fail
Ab (Absent)	0		Fail

iii. When students take audit courses, they may be given pass (**P**) or fail (**F**) grade without any credits.

Computation of SGPA and CGPA

The following method is recommended to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

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

SGPA (Si) = Σ (Ci x Gi) / ΣCi

Where Si is the SGPA in the i^{th} semester, Ci is the number of credits of the i^{th} course and Gi is the grade point scored by the student in the i^{th} course.

$$\textbf{SGPA} = \frac{\text{Sum of the credit points of all courses in a semester}}{\text{Total Credits in that Semester}}$$

Illustration – Computation of SGPA

Semester	Course	Credit	Letter Grade	Gradepoint	Credit Point (Credit x Grade)
I	DSC A	4	A	8	4 x 8 = 32
I	DSC B	4	B+	7	4 x 7 = 28
I	DSC C	4	B	6	4 x 6 = 24
I	MDC	3	B	6	3 x 6 = 18
I	AEC 1	3	O	10	3 x 10 = 30
I	AEC 2	3	C	5	3 x 5 = 15
	Total	**21**			**147**
	SGPA				**147/21 = 7**

The CGPA is also calculated in the same manner considering all the courses undergone by a student over all the semesters of a programme, i.e.

$$\textbf{CGPA} = \frac{\text{Sum of the credit points of all courses in six or eight semesters}}{\text{Total Credits in Six } (133) \text{ or Eight } (177) \text{ semesters}}$$

v. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

Implementation and Monitoring of SHC-UGP

i. The implementation and monitoring of SHC-UGP will be carried out by duly appointed bodies/committees of the college such as the Academic Council, the various Boards of Studies and the Academic Monitoring Committee.

ii. **Academic Council**

Among its other functions, the Academic Council of the College shall:

i. Scrutinize and approve all the proposals submitted by the Board of Studies of each Department with regard to the SHC-UGP details such as, academic pathways, allowed syllabi enrichment/ updating, details of elective courses, Online courses, blended teaching, courses offering to the students of other HEIs, panel of examiners, summative

and formative evaluation tools proposed by the course faculty concerned, new courses and syllabus proposed by the faculty members as signature courses etc.

ii. The Academic Council can differ on any proposal and it shall have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving sufficient reasons to do so.

iii. Undertake the scrutiny of all documents related to Teacher Specific Content.

iv. Recommend to the College Governing Council for starting innovative programmes using the flexibility and holistic nature of the SHC-UGP curriculum frame work.

iii. **Board of Studies**

Among its other functions, the Board of Studies of each Department shall:

i. Prepare teacher specific content of syllabi for various courses keeping in view the objectives of the SHC-UGP and submit the same for the approval of the Academic Council.

ii. Scrutinize the signature course content and its evaluation techniques.

iii. Suggest methodologies for innovative teaching and evaluation techniques.

iv. Suggest panel of examiners to the Office of the Controller of Examinations.

v. Coordinate research, teaching, extension and other academic activities in the department.

iv. **SHC-UGP Academic Monitoring Committee**

The SHC-UGP Academic Monitoring Committee shall be constituted under the Chairmanship of the Principal, with the Academic Coordinator as the Convenor, shall be entrusted to oversee the implementation and monitoring of the SHC-UG programme.

i. The Academic Monitoring Committee will collect and whet the proposals submitted by the Board of Studies of each Department with regard to the SHC-UGP and duly forward them to the Academic Council.

ii. It will oversee and coordinate the activities undertaken for the successful implementation of SHC-UGP in the College and will function as an advisory body in such matters.

Power to Remove Difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Principal may by order make such provisions which appears to him/her to be necessary or expedient for removing the difficulty. Every order made under this rule shall be subject to ratification by the appropriate authorities.

Modifications to the Regulations

Notwithstanding anything contained in these Regulations, any amendments or modifications issued or notified by the University Grants Commission or the State Government or the Mahatma Gandhi University from time to time, shall be incorporated into these Regulations by the appropriate regulatory bodies of the College and shall constitute an integral part thereof.

SEMESTER-WISE COURSE DISTRIBUTION PER WEEK

PROPOSED PATHWAY: DOUBLE MAJOR (A+B)

SEM	COURSES	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HRS/WEEK		
							L	T	P
I	**DSC-A-01**	24UAVEDSC101	Basics of Animation Drawing	Animation	100-199	4	0	3	2
	DSC-B-01	24UAVEDSC102	Raster Graphics & Photography	Visual Effects	100-199	4	0	3	2
	DSC-B-02	24UAVEDSC103	History of Animation and Visual Effects	Visual Effects	100-199	4	2	1	2
	AEC-ENG-01	24UAVEAEC101	English I	English	100-199	3	3		0
	AEC-OL-01	24UAVEAEC102	Language I	OL	100-199	3	3		0
	MDC-01	24UAVEMDC101	MDC - 1	Animation	100-199	3	0	2	2
						21	**8**	**9**	**8**
II	**DSC-A-02**	24UAVEDSC104	Character Design for Animation	Animation	100-199	4	0	3	2
	DSC-B-03	24UAVEDSC105	Introduction to Digital Painting	Visual Effects	100-199	4	0	3	2
	DSC-B-04	24UAVEDSC106	Motion Graphics Essentials	Visual Effects	100-199	4	0	3	2
	AEC-ENG-02	24UAVEAEC103	English II	English	100-199	3	3		0
	AEC-OL-02	24UAVEAEC104	Language II	OL	100-199	3	3		0
	MDC-02	24UAVEMDC102	MDC - 2	Animation/VFX	100-199	3	0	2	2
						21	**6**	**11**	**8**
III	**DSC-A-03**	24UAVEDSC201	3D Art Foundation	Animation	200-299	4	0	3	2
	DSC-A-04	24UAVEDSC202	Planning for Animation	Animation	200-299	4	0	4	0
	DSC-B-05	24UAVEDSC203	Basics of Compositing	Visual Effects	200-299	4	0	3	2
	DSC-B-06	24UAVEDSC204	Visual Effects Cinematography	Visual Effects	200-299	4	0	4	0
	MDC-03	24UAVEMDC201	MDC - 3	Animation	200-299	3	0	2	2
	VAC-01	24UAVEVAC201	Art of Self Defence & Fitness	Self Defence	200-299	3	0	3	0
						22	**0**	**19**	**6**
IV	**DSC-A-05**	24UAVEDSE201	3D Character Creation	Animation	200-299	4	0	3	2
		24UAVEDSE202	3D Background Art for Film						
	DSC-A-06	24UAVEDSC205	Traditional Animation	Visual Effects	200-299	4	0	3	2
	DSC-B-07	24UAVEDSE203	Art of Miniature Film making	Visual Effects	200-299	4	0	4	0
		24UAVEDSE204	Digital Colour Correction & Colour Grading						
	DSC-B-08	24UAVEDSC206	Advanced Matte Painting for VFX	Animation	200-299	4	0	3	2
	VAC-02	24UAVEVAC202	Sustainable Development and Ecology	Environmental Science	200-299	3	3	0	0
	SEC-01	24UAVESEC201	Artistic Production for Industry	Animation	200-299	3	0	3	0
						22	**3**	**16**	**6**
			INTERNSHIP			**2**			
V	**DSC-A-07**	24UAVEDSC301	Art of Stop motion	Animation	300-399	4	0	3	2
	DSC-A-08	24UAVEDSC302	Basic Dynamics & Simulations	Animation	300-399	4	0	4	0
	DSC-A-09	24UAVEDSE301	Rigging for 3D Animation	Animation	300-399	4	0	4	0
		24UAVEDSE302	3D Visual Aesthetics						
	DSC-A-10	24UAVEDSE303	3D Character Motion	Animation	300-399	4	0	4	0
		24UAVEDSE304	Free-Hand Digital Animation						
	DSC-B-09	24UAVEDSC303	Advanced Compositing for VFX	Visual Effects	300-399	4	0	3	2
	SEC-02	24UAVESEC301	Demo Reel	Portfolio	300-399	3	0	3	0
						23	**0**	**21**	**4**
VI	**DSC-A-11**	24UAVEDSE305	Advanced Lighting and Rendering for 3D	Animation	300-399	4	0	4	0
		24UAVEDSE306	Product Visualisation for Animation						
	DSC-A-12	24UAVEDSE307	Pitching for Animation	Animation	300-399	4	0	4	0
		24UAVEDSE308	2D Digital Animation						
		24UAVEDSE309	Research Methodology for Media Arts						
	DSC-A-13	24UAVEDSC304	Animation Project	Animation	300-399	4	0	2	4
	DSC-B-10	24UAVEDSC305	VFX Project	Visual Effects	300-399	4	0	3	2
	VAC-03	24UAVEVAC301	Cybersecurity Vigilance	Cyber Security	300-399	3	3	0	0
	SEC-03	24UAVESEC302	Crafting Sound for Animation	Animation	300-399	3	0	3	0
						22	**3**	**16**	**6**

VII	**DSC-A-14**	24UAVEDSC401	Advanced Character Motion	Animation	400-499	**4**	0	3	2
	DSC-A-15	24UAVEDSC402	Applied Animation and Visual Effects	Animation	400-499	**4**	0	4	0
	DSC-A-16	24UAVEDSE401	Animation Film Analysis	Animation	400-499	**4**	0	4	0
		24UAVEDSE402	Particle and Fluid Dynamics						
	DSC-B-11	24UAVEDSC403	AR & VR Fusion	Visual Effects	400-499	**4**	0	4	0
	DSC-B-12	24UAVEDSC404	Visual Effects Film Analysis	Visual Effects	400-499	**4**	0	4	0
	DSC-B-13	24UAVEDSC405	Match Moving Techniques & 3D Camera Tracking	Visual Effects	400-499	**4**	0	4	0
						24	**0**	**23**	**2**
VIII	**DSC-A-17**	24UAVEDSC406	3D Sculpting for Character	Animation	400-499	**4**	0	3	2
	DSC-A-18	24UAVEDSC407	CG Lighting and Rendering	Animation	400-499	**4**	0	3	2
	Proj/Diss	24UAVEDSE403	**Project**	Project	400-499	**12/8+4**			15
		(or) **Project** *with Capstone*			400-499				
		24UAVEDSE404	*(or)* **Practice Based Research Methodology for Media Arts-Animation**		400-499				
		24UAVEDSE405	*(or)* **3D Game Design**		400-499				
		24UAVEDSE406	*(or)* **3D Printing Techniques for Movies**		400-499				
						20	**0**	**6**	**19**

*** L = Lecture, T = Tutorial, P = Practical**

1. Discipline Specific Courses

SEM	SI NO	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
I	01	24UAVEDSC101	Basics of Animation Drawing	Animation	100-199	4	0	3	2
	02	24UAVEDSC102	Raster Graphics & Photography	Visual Effects	100-199	4	0	3	2
	03	24UAVEDSC103	History of Animation and Visual Effects	Visual Effects	100-199	4	2	1	2
II	04	24UAVEDSC104	Character Design for Animation	Animation	100-199	4	0	3	2
	05	24UAVEDSC105	Introduction to Digital Painting	Visual Effects	100-199	4	0	3	2
	06	24UAVEDSC106	Motion Graphics Essentials	Visual Effects	100-199	4	0	3	2
III	07	24UAVEDSC201	3D Art Foundation	Animation	200-299	4	0	3	2
	08	24UAVEDSC202	Planning for Animation	Animation	200-299	4	0	4	0
	09	24UAVEDSC203	Basics of Compositing	Visual Effects	200-299	4	0	3	2
	10	24UAVEDSC204	Visual Effects Cinematography	Visual Effects	200-299	4	0	4	0
IV	11	24UAVEDSC205	Traditional Animation	Animation	200-299	4	0	3	2
	12	24UAVEDSC206	Advanced Matte Painting for VFX	Visual Effects	200-299	4	0	3	2
V	13	24UAVEDSC301	Art of Stop motion	Animation	300-399	4	0	3	2
	14	24UAVEDSC302	Basic Dynamics & Simulations	Animation	300-399	4	0	4	0
	15	24UAVEDSC303	Advanced Compositing for VFX	Visual Effects	300-399	4	0	3	2
	16	24UAVEDSC304	Animation Project	Animation	300-399	4	0	2	4
	17	24UAVEDSC305	VFX Project	Visual Effects	300-399	4	0	3	2
VII	18	24UAVEDSC401	Advanced Character Motion	Animation	400-499	4	0	3	2
	19	24UAVEDSC402	Applied Animation and Visual Effects	Animation	400-499	4	0	4	0
	20	24UAVEDSC403	AR & VR Fusion	Visual Effects	400-499	4	0	4	0
	21	24UAVEDSC404	Visual Effects Film Analysis	Visual Effects	400-499	4	0	4	0
	22	24UAVEDSC405	Match Moving Techniques & 3D Camera Tracking	Visual Effects	400-499	4	0	4	0
VIII	23	24UAVEDSC406	3D Sculpting for Character	Animation	400-499	4	0	3	2
	24	24UAVEDSC407	CG Lighting and Rendering	Animation	400-499	4	0	3	2

Course 01

Course Code	**24UAVEDSC101**
Discipline	**Animation**
Course Title	**BASICS OF ANIMATION DRAWING**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course introduces students to the foundational principles and techniques of animation drawing. Through hands-on exercises and projects, students will learn the key concepts necessary to create compelling animations.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the skill of drawing in all media	Understand	1,3,5
2	Develop the skill of quick drawing	Apply	1,3,5
3	Build the dimensions of Perspective	Create	1,3,5
4	Build Lighting, Shading and Shadow	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of Drawing, Materials and Tools**		**18**	1
	1.1	Dry Media (Pencils, Charcoals, Chalks, Crayons, Pastels, Erasers, Smudging Tools) - Wet Media (Dip Pens, Disposable and Cartridge Pens – Brushes) – Inks (Water Based, Alcohol Based, Indian/Chinese Ink) – Paints (Water Based, Acrylic, Oil). Drawing Surfaces – (Papers – Newsprint, Water Colour Paper, Charcoal Paper, Canvas) - Tools for Erasing and Sharpening – Palettes – Knives - Easels.	3	
	1.2	Doodling and Noodling (Drawing Straight Lines, Drawing Curved Lines, Free Hand Drawing) - Holding the Pencil – Angle and Direction of Lines (Drawing Lines, Circles, Ovals, Scribbles, Patterns Etc.)	3	
	1.3	Different drawing techniques: Shapes and forms, Contour drawing - Memory, Observation, and imagination drawing - Drawing with grids.	12	
2	**Basics of Drawing Techniques and composition**		**33**	2
	2.1	Drawing from Observation: Life drawing - Sketching poses - Stick figures, Line of action, Balance, Rhythm - Use of basic shapes and forms, Attitude Drawing: Gestures, Line drawing, Quick sketches, Thumbnails - Rapid sketching from live models - Sketching Forced Lines - Positive and negative spaces	15	
	2.2	Elements of composition (Line, Shape, Colour, Form, Texture, Value, Space)	9	
	2.3	Principles of composition (Balance, Unity, Contrast, Rhythm, Emphasis)	9	
3	**Perception and Dimension of Drawing**		**18**	3

	3.1	Introduction of Perspective drawing : Vanishing points - Orthogonal lines - Horizon, Eye level	1	
	3.2	Types of Perspective Drawing: One-point perspective - Two-point perspective - Three-point perspective - Overlapping and intersection of shapes in perspective views	11	
	3.3	Drawings in Multi-point and Foreshortening: Multi-point perspective - Foreshortening	6	
4	**Light, Shade and Shadow in Drawing**		**6**	4
	4.1	Light and Shade Drawing: Tones, Lighting and shading, Basic 3 Dimensional light set up	1	
	4.2	Types of shadows : Cast shadow - Contact shadow - Contour shadow,	2	
	4.3	Light and Shadow : Reflected light, Overhang shadow, Highlight, Core shadow, Objects and shapes in perspective with light and shade	3	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References: Last Name, First Name. Title of Book. City of Publication, Publisher, Publication Date.

1. Jeff Mellem. Sketching People; Life Drawing Basics : 2009
2. Force-Dynamic Life Drawing for Animators : Michael D Mattessi 2006
3. Figure Drawing for All It's Worth : Andrew Loomis 1939
4. Figure Drawing Design and Invention : Michael Hampton 2009
5. Perspective Made Easy: Ernest R Norling 2007
6. Perspective Drawing Handbook: Joseph D'Amelio 2004

Course 02

Course Code	**24UAVEDSC102**
Discipline	**Visual Effects**
Course Title	**RASTER GRAPHICS & PHOTOGRAPHY**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course introduces students to the principles and techniques of raster graphics, focusing on digital image creation, manipulation, and optimization using raster-based software tools.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Summarize the differences between raster and vector graphics, demonstrating an understanding of their unique characteristics and applications	Understand	1,3,5
2	Apply image editing techniques using raster graphics software, showcasing proficiency in essential image manipulation tools.	Apply	1,3,5
3	Evaluate the effectiveness of retouching and restoration techniques in improving the quality of images.	Evaluate	1,3,5
4	Design practical projects, demonstrating the integration of learned concepts and techniques into real-world applications.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Raster Graphics and Basic Concepts**		**5**	1
	1.1	Introduction to Raster Graphics: Definition of raster graphics, Comparison with vector graphics, Common applications of raster graphics. Understanding pixels and their role - Resolution and its impact on image quality, Exploring common resolutions and their applications	2	
	1.2	Colour Modes and Image file formats: Explanation of RGB and CMYK colour modes, Introduction to grayscale, Bit depth and its influence on colour representation - Overview of common raster image formats (JPEG, PNG, GIF, TIFF), Advantages and disadvantages of each format, Choosing the appropriate format for different scenarios	3	
2	**Introduction and Basics Techniques of Camera**		**10**	
	2.1	Introduction to Photography: Types of cameras (DSLR, mirrorless, smartphone) - Explanation of basic camera components and their functions (lens, sensor, shutter, aperture)	2	
	2.2	Understanding Exposure: Explanation of the exposure triangle (aperture, shutter speed, ISO) - How each exposure parameter affects the final image - Hands-on exercises to demonstrate the concept of exposure	4	

		Focus and Depth of Field : Understanding autofocus and manual focus modes - Exploring depth of field and its creative implications - Practice exercises to achieve precise focus and control depth of field		
	2.3	Composition Techniques: Introduction to composition rules (rule of thirds, leading lines, framing) - Using composition to create visually appealing images Introduction to Lighting : Understanding natural and artificial light sources - Overview of lighting techniques (front lighting, backlighting, side lighting)	4	
3	**Basics of Raster Image Editing**		**20**	2
	3.1	Selection Tools: Selection tools and techniques, Auto selection tools and techniques, Feather techniques - Masking for precise editing, Layer masks and their applications	10	
	3.2	Basic Image Editing: Tools for cropping, resizing, and rotating images Understanding layers and their significance - Introduction to basic image adjustments (brightness, contrast, saturation) Filters and Effects: Exploring filters for creative effects, Applying special effects to enhance images	10	
4	**Raster Graphics Settings**		**40**	3
	4.1	Text and Typography: Adding and formatting text in raster graphics, Installing different fonts, Creating text effects and stylized fonts	10	
	4.2	Retouching and Restoration: Retouching imperfections in images, Restoring old or damaged photographs, Techniques for blemish removal and skin retouching	10	
	4.3	Compositing: Combining multiple images into a cohesive composition, Layer blending modes and their effects.	10	
	4.4	<u>Practical Projects and Application</u> Project 1: Create a social awareness poster using basic editing techniques. Project 2: Digital Painting: Create an original digital painting using drawing and painting tools. Project 3: Photo Retouching and colour correction - Retouch and restore a provided photograph, applying colour correction methods. Project 4: Creative Compositing - Develop a visually appealing composition by compositing multiple images.	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Smith, John. Raster Graphics 101: A Beginner's Guide. Pixel Press, 2020.
2. Brown, Emily. Digital Canvas: Understanding Raster Graphics. ArtPress, 2018.
3. Garcia, Luisa. Pixels and Colors: A Primer on Raster Graphics. GraphicDesign Books, 2019.
4. Turner, Michael. Mastering Raster: A Comprehensive Guide for Beginners. DesignHub, 2021.

Course 03

Course Code	**24UAVEDSC103**
Discipline	**Visual Effects**
Course Title	**HISTORY OF ANIMATION AND VISUAL EFFECTS**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**30/15/30**
Credits	**4**
Course Description: This paper should enlighten the students on the advancement made in the field of animation and visual effects so as the appreciate and understand where the technology used today developed from. It also inspires students to experiment with different types of animation and visual effects techniques so as to think of process improvements ideas for animation and visual effects.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Explain the early attempts for animation	Understand	1,3,5
2	Identify the pioneer animation works around the world	Apply	1,3,5
3	Identify the basic techniques of visual effects	Apply	1,3,5
4	Analyse some animation and visual effects movies.	Analyse	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Earliest attempts for animation**		**15**	1
	1.1	Introduction to Animation: Animation, persistence of vision, basic techniques of animation	5	
	1.2	Prehistory and optical toys: Thaumatrope, Phenakistoscope, Flipbook, Zoetrope, Praxinoscope	10	
2	**Birth of Animation**		**15**	2
	2.1	Pioneer history of American animation: Winsor McCay, Flesischer, Walt Disney, other important cartoon characters	5	
	2.2	Pioneer history of European animation: Czech animation, German and Russian animation	5	
	2.3	Pioneer history of Indian animation: Ram Mohan, Film Division, important milestones	5	
3	**Introduction to Visual Effects**		**30**	3
	3.1	Effects before CGI Era: Use of Miniatures in Early Films - Use of Makeup, Rear Projections, Pyrotechnics and Matte Paintings Before the CGI Era	15	
	3.2	Stereoscopic 3D, Realistic Puppets and Stop Motion Photography, Split Screen Technology, Motion Controlled Camera, CGI Effects, Digital Compositing, Animatronics, Motion Capture, High Speed Cameras, The Fusion Camera System	15	
4	**Practicum**		**15**	4
	4.1	Creating an animation using the basic techniques.	5	
	4.2	Study on animation movies and their studios	5	

	4.3	Study on famous visual effects movies and studios	5	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Enchanted Drawings: The History of Animation: Charles Solomon 1994
2. The World History of Animation: Stephen Cavalier 2011
3. Cartoons: One Hundred Years of Cinema Animation: Giannalberto Bendazzi 1995
4. Of Mice and Magic: Leonard Maltin 1987
5. Before Mickey: The Animated Film, 1898-1928: Donald Crafton 1993
6. The Anime Encyclopedia: A Guide to Japanese Animation since 1917: Lowry 2006
7. Special Effects: The History and Technique: Richard Rickitt 2000
8. Special Effects: How They Are Done In Hollywood: Robert G Willard 2013
9. Special Effects: An Oral History: Pascal Pinteau 2005

Course 04

Course Code	**24UAVEDSC104**
Discipline	**Animation**
Course Title	**CHARACTER DESIGN FOR ANIMATION**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description : Character design for animation is intended to provide the student with an understanding of the anatomy of a human body, a creature or a cartoon character.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Developing the skill of drawing Realistic Characters, human and animal anatomy. Cartoon Anatomy	Understand	1,3,5
2	Developing the concept, personality and attitude of Characters, Thumb nailing	Apply	1,3,5
3	Creation of model sheets Character Model sheets	Create	1,3,5
4	Develop Colour of Animation Character	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Study of Realistic Characters**		**24**	1
	1.1	Human Anatomy: Anatomy of different age groups (Babies, Kids, Teens, Young Adults, Aged) - Ideal Proportion, Basic understanding of the skeletal and muscle system - Human forms in perspective Male and female anatomy: Body Structure, Proportion and construction of body parts (Torso, Hand, Feet etc. - Facial Features (Face, Eyes, Nose, Ears, Mouth) - Motion analysis, Study of poses	6	
	1.2	Anatomy of Animals, Birds and Reptiles: Body structure - Basic forms, proportion and construction of body parts using Basic shapes - Understanding motion and grace .	9	
	1.3	Archetypal characters, Role of characters in storytelling. Protagonist, Antagonist, main character, sidekick, emotion, logic etc. Cartoon anatomy and construction, Understanding cartoon characters - Character Analysis – Hollywood style, Anime Style and Manga Style	9	
2	**Developing Characters**		**21**	2
	2.1	Conceptualization of characters, describing characters, thumbnailing.	3	
	2.2	Cartoon constructions: Character development, Drawing from basic shapes, Distortion of proportions - Cartoon faces, Eyes, Mouths, Hair, Nose, Hands, Feet - Facial expressions	9	
	2.3	Cartoon Characters: Classic (Humans, Animals, Birds, Reptiles) - Cute, Screwball, Goofy, Heavy, Pugnacious - Fairy Tale characters (Gnomes, Elves, Dwarves, Witches).	9	
3	**Character Design for Animation**		**18**	3

	3.1	Character Features: Physical features (age, body type, hair colour, silhouette, and facial expressions, clothing style etc.)	3	
	3.2	Character Model Sheet: Creation of Model Sheet (Turn-around, Facial Expression, Hand Gestures, Attitude drawing) - Blueprints	9	
	3.3	Comparison chart and Props: Creation of Character Size Comparison Charts - Designing Props and Assets for Character.	6	
4	**Colour Theory for Animation Character Design**		**12**	4
	4.1	Introduction and Colour Theory of Character Design: Colour Schemes for Characters - Colour Palettes and its Usage, Colour Uniqueness - Colour combinations of character	6	
	4.2	Colour Psychology of character Design: Colour Psychology (The Meaning of Colours and Their Traits) - Colour Psychology of Disney Characters - Final Model Sheet in Colour	6	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. How to Draw What You See: Rudy De Reyna 1996
2. Figure Study Made Easy: Aditya Chari 2023
3. Figure Drawing Without a Model: Ron Tiner 1997
4. Anatomy for the Artist: Sarah Simblet 2020
5. The Art of Animal Drawing: Construction, Action, Analysis, Caricature: Ken Hultgen 2016
6. Animal Drawing: Anatomy & Action for Artists: Charles R. Knight 1959
7. Animal Anatomy for Artists: Eliot Goldfinger 2023

Course 05

Course Code	**24UAVEDSC105**
Discipline	**Visual Effects**
Course Title	**INTRODUCTION TO DIGITAL PAINTING**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course introduces students to the fundamentals of digital painting, focusing on techniques, tools, and creative processes used in digital artwork creation.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify the fundamental digital painting tools and their functions.	Apply	1,3,5
2	Analyse the use of layers, composition principles and different painting styles.	Analyse	1,3,5
3	Analyse the foundations of composition and rendering	Analyse	1,3,5
4	Develop a unique artistic style from advanced digital painting techniques.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Digital Painting**		**10**	1
	1.1	Overview of Digital painting – Different painting styles: Landscape, portrait, still-life - Creating depth in digital paintings.	3	
	1.2	Introduction of painting software (Tools and techniques)	2	
	1.3	Basic digital painting tools: Brushes, layers, opacity, blending modes. - Understanding digital brushes and brush settings	5	
2	**Basic Shapes, Forms and colour Theory**		**15**	2
	2.1	Understanding shapes and forms in digital painting - Rendering basic objects - Introduction to light and shadow.	5	
	2.2	Composition Principles: Rule of thirds, focal points, balance, and harmony.	5	
	2.3	Colour theory basics - Composition principles in digital painting - Creating simple colour studies	5	
3	**Character Design, Landscape and Environment Painting**		**25**	3
	3.1	Basics of character design - Anatomy fundamentals - Creating character sketches	10	
	3.2	Basics of landscape painting - Creating environments digitally - Atmospheric perspective	10	
	3.3	Experimenting with different painting techniques - Incorporating textures and patterns - Developing a personal painting style	5	
4	**Layers and Blending Modes, Texture and Detailing**		**25**	4
	4.1	Working with layers effectively - Understanding blending modes - Layer management techniques	10	
	4.2	Adding texture to digital paintings - Detailing techniques - Creating depth and dimensionality	5	

	4.3	Personal Projects: Importance of reference materials, sketching, blocking, refining and finishing.	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Bold Vision: A Digital Painting Bible: Gary Tonge 2008
2. Digital Fantasy Painting Workshop: Martin McKenna 2004
3. Digital Character Design and Painting: Don Seegmiller 2004
4. Complete Digital Painting Techniques: David Cole 2009
5. Digital Fantasy Painting: Michael Burns 2002
6. The Complete Guide to Digital Illustration: Steve Caplin, Adam Banks and Nigel Holmes 2003

Course 06

Course Code	**24UAVEDSC106**
Discipline	**Visual Effects**
Course Title	**MOTION GRAPHICS ESSENTIALS**
Type of Course	**Discipline Specific Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description : Motion graphics combines graphic design and animation to create visually compelling and dynamic content for various mediums such as film, television, web, and advertising.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Build precision, control and fluency within Visual Effects and Motion Graphics work environments.	Apply	1,3,5
2	Identify vocabulary and visual language for motion graphic principles and ethics.	Apply	1,3,5
3	Develop an understanding of motion graphic design principles in applied practice.	Create	1,3,5
4	Create motion graphic project with requirement of 2D, 3D elements and real footages.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of motion graphics**		**7**	1
	1.1	What is motion graphics?	2	
	1.2	What are graphical elements & Importing	2	
	1.3	Software used for motion graphics, Importing assets.	3	
2	**Basic Motion Graphics Techniques**		**16**	2
	2.1	Layer Management: Shape layer animation, Layer Styles, Graph Editor, Rendering formats, Solid layer, Null objects, Text layer and Guide layer.	5	
	2.2	Concepts in parenting: Parent and child layer, Adding expressions, Animating masks,	6	
	2.3	Mask: Motion Sketch, 3d layer, Creating masks, Blending Modes, Auto trace, Puppet tool	5	
3	**Basic Motion Graphics Effects**		**24**	3
	3.1	Basic Effects: Usage of downloaded lighting effects, Manage shadow.	10	
	3.2	Multiplane Compositing: 3D camera movement through 2D image layers. Controlling speed of different layers to show depth. Depth composting, Z channel, RGBA Z image, Rendering techniques.	14	
4	**Creating Title Motion Poster**		**28**	4
	4.1	Product Motion Poster	8	
	4.2	Movie Titling and motion poster	10	
	4.3	Promotion videos	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Motion Graphic Design: Applied History and Aesthetics" by Jon Krasner: 2013
2. "After Effects Apprentice" by Chris and Trish Meyer 2016

Course 07

Course Code	**24UAVEDSC201**
Discipline	**Animation**
Course Title	**3D ART FOUNDATION**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: The 3D Art Foundation course provides, students will explore the basics of 3D design, including modelling, texturing, lighting, and rendering.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Interpret and discuss the significance of various 3D art techniques and materials.	Understand	1,3,5
2	Create visual elements suitable for compositing as optical and visual effects	Create	1,3,5
3	Create workflows and pipelines for compositing	Create	1,3,5
4	Create digital images and effects that explore both experimental and conventional digital and optical techniques	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Overview of 3D Graphics and Software Choices**		**8**	1
	1.1	Overview of 3D Graphics: 3D software available, What is 3D Animation? 3D production pipeline	4	
	1.2	3D animation and their applications: applications in animation movies, visual effects, advertisements, 3D visualisation, simulation, training videos Etc.	4	
2	**3D Interface and Essential Modelling Techniques**		**21**	2
	2.1	Basics of 3D interface: Organising work: Project folders, Basic skills for handling the selected software like transforming objects, Object properties, Hierarchies, Pivots Etc.	3	
	2.2	Different Modelling Techniques : Modelling techniques like Spline, NURBS, Polygon and SubD, Various tools and their applications	10	
	2.3	Detailed Modelling: models of simple objects using NURBS and Polygon modelling tools. The final output should be in Polygon format.	8	
3	**Comprehensive Study of Shaders, Textures, and Lighting**		**20**	3
	3.1	Shaders and materials: 2D and 3D textures, Texturing with HDR images, Different types of material creation,	8	
	3.2	Lighting: 1 Point, 2 Point, 3 Point lighting in 3D space, Common light attributes, Shadows and its attributes.	12	
4	**Detailed Object Modelling, Texturing, Lighting & Rendering**		**26**	4
	4.1	Furniture modelling: Create a detailed model of furniture, add appropriate textures and lighting, and then proceed to render it.	6	

	4.2	Musical instrument modelling: Create a detailed model of a musical instrument, add appropriate textures and lighting, and then proceed to render it.	6
	4.3	Machine modelling: Create a detailed model of a machine, add appropriate textures and lighting, and then proceed to render it.	6
	4.4	Bi-cycle modelling: Create a detailed model of a kid's cycle, add appropriate textures and lighting, and then proceed to render it.	8
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Vaughan, William. Digital Modelling. New Riders, 2011.
2. Ahearn, Luke. 3D Game Environments: Create Professional 3D Game Worlds. A K Peters/CRC Press, 2017
3. McKinley, Michael. Maya Studio Projects: Game Environments and Props. Sybex, 2010.
4. Palamar, Todd. Mastering Autodesk Maya 2024: Autodesk Official Press. CADCIM Technologies, 8 April 2020.
5. Ingrassia, Michael. Maya for Games: Modelling and Texturing Techniques with Maya and Mudbox, 1st Edition. Routledge, 2008.

Course 08

Course Code	**24UAVEDSC202**
Discipline	**Animation**
Course Title	**PLANNING FOR ANIMATION**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: The Planning for Animation course provides students with a comprehensive understanding of the pre-production process essential for creating successful animation projects. Pre-production is a critical phase where concepts are developed, stories are crafted, and visual plans are established to guide the production process effectively.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Build Concepts and develop story	Create	1,3,5
2	Create Script and Screenplay	Create	1,3,5
3	Develop Story Characters	Create	1,3,5
4	Creation of storyboard layouts And Animatics	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of Animation**		**6**	1
	1.1	Brief of Animation: Techniques of animation - Different types of animation - Workflows of different types of animation	3	
	1.2	Stages and Types of Animation: Pre-production, Production and Post-production stages - Types of Animation - Experimental Animations	3	
2	**Creating Story and Script**		**20**	2
	2.1	Story Creation: Story, Basic elements of a story, Types of stories - Creating story ideas, Sources of storyline, Adaption - Character roles, Characterization, Dialogues.	5	
	2.2	Creating Story Structure: Basic structure of a story, Old and modern, Concept of acts - Theme, Subplots, Tone, Genre, Writing for different types and groups of audience.	5	
	2.3	Script Writing for the Story: Animation script, Animation Vs. Live action movie, Shot, Scene, Sequence	5	
	2.4	Screenplay of the Story: Screenplay format, Elements of screenplay format, Montage	5	
3	**Character Designing for the Story**		**9**	3
	3.1	Designing of the Character: Character designing - Features of a character, Types/Kinds of characters - Designing props and assets of character	3	
	3.2	Character Model Sheet and Comparison Chart: Creating turnarounds/Character model sheets, Blueprints - Character size comparison charts - Character attitude poses	6	

4	**Creating Storyboard and Animatics**		**25**	4
	4.1	Introduction of Storyboard: What is a Storyboard? Definition - Importance of storyboarding - Anatomy of an animation storyboard,	3	
	4.2	Storyboard Layout Creation: Storyboard formats - Elements of storyboarding (shots, camera movements, Design, Colour, Light and Shadow, Perspective, Staging, Composition rules) - Concept of panels and its usages	6	
	4.3	Camera Techniques & planning: Floor plans - Storyboarding movements - Illustrating camera techniques in a storyboard.	6	
	4.4	Digital Storyboarding & Visual continuity: Digital storyboarding - Hook-up, Transitions	3	
	4.5	Creation of Animatic: Scanning storyboard panels and synchronizing it with the sound tracks	7	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The Encyclopaedia of Animation Techniques: Richard Taylor 1999
2. How to Write for Animation: Jeffrey Scott 2003
3. Writing for Animation, Comics and Games: Christy Marx 2003
4. How to Draw Animation - Learn the Art of Animation from Character Design to Storyboards and Layouts: Christopher Hart 1997
5. The Art of the Storyboard - Storyboarding for Film, TV, and Animation: John Hart 2007
6. Acting Using a Pencil: How To Plan an Animation Film: Vineeth V 2022
7. Don Bluth's Art of Storyboard: Don Bluth 2004

Course 09

Course Code	**24UAVEDSC203**
Discipline	**Visual Effects**
Course Title	**BASICS OF COMPOSITING**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description : The Basics of Compositing course offers students an in-depth exploration of the foundational principles and techniques used in digital compositing, a crucial aspect of visual effects and post-production in filmmaking, animation, and other visual media.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the fundamentals concepts of compositing	Analyse	1,3,5
2	Create visual elements suitable for compositing as optical and visual effects	Create	1,3,5
3	Create workflows and pipelines for compositing	Create	1,3,5
4	Create digital images and effects that explore both experimental and conventional digital and optical techniques	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Basic components of compositing**		**11**	
	1.1	Introduction to compositing: Overview of composting in film and animation, Importance of compositing in visual storytelling.	2	1
	1.2	Difference between visual effects and special effects: Introduction to industry standard compositing software, Depth and perspective in compositing	6	
	1.3	Introduction to Chroma key: Compositing, Principles of Chroma key compositing, Pulling the matte using keyer, Elements of a scene foreground, midground, background, Basics of keying and colour spill suppression.	3	
2	**Rotoscoping**		**19**	2
	2.1	Introduction to Rotoscoping: Uses and advantages of rotoscoping, Creating roto with splines.	6	
	2.2	Advanced Rotoscoping: Hierarchical parent and child roto shapes, Keyframe roto, Final inspection, Rotoscope motion blur and semi transparency	13	
3	**Different types of tracking**		**22**	3
	3.1	Introduction to Tracking: Motion tracking, Motion stabilization, Mocha tracking	10	
	3.2	Advanced tracking: Camera tracking in After Effects, Problems faced during tracking, set extensions, Time-stretching, time-remapping and time warp effects	12	
	Role of VFX in post-production		**23**	4

4	4.1	Basic Colour correction and colour grading: Primary and secondary colour correction, Correcting and matching shots, o	10
	4.2	How to approach and plan a VFX shot: Other VFX applications - Morphing, Adding atmospheres, Crowd replication, Basics of stereo compositing	10
	4.3	What is a VFX breakdown?	3
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics by Ron Brinkmann 2008
2. Digital Compositing for Film and Video" by Steve Wright 2010

Course 10

Course Code	**24UAVEDSC204**
Discipline	**Visual Effects**
Course Title	**VISUAL EFFECTS CINEMATOGRAPHY**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course offers a comprehensive exploration of shooting methods and practices specifically tailored for visual effects (VFX) production.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify basic shooting techniques and VFX pipelines.	Apply	1,3,5
2	Evaluate essential elements for VFX shooting.	Evaluate	1,3,5
3	Compare different types of matte for VFX shooting.	Evaluate	1,3,5
4	Create a VFX shooting project incorporating various techniques learned in the course.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Basic Shooting techniques and VFX pipelines**		**19**	1
	1.1	Basics of visual storytelling: Understanding the role of shooting in visual effects, Overview of VFX pipeline and where shooting fits in.	10	
	1.2	Evolution of Keying: Types of Chroma Keying green screen, blue screen) ,Importance of Proper Lighting and Background, History and Evolution of Chroma Keying	9	
2	**Essential elements for VFX shooting**		**22**	2
	2.1	Camera techniques: Prepare a floor chart with flow of action, Movement, Camera setups. Discuss motion control rigs and its application, Lighting techniques for effective keying.	8	
	2.2	Components of a green matte studio: Shooting with a single camera with green matte, Importance of Proper Lighting and Background.	7	
	2.3	Fine-tuning the key: Spill suppression, edge blending, Dealing with challenging scenarios (Uneven lighting, transparent objects).	7	
3	**Different type of mattes for VFX shooting**		**15**	3
	3.1	Modern day traveling mattes and how they works: Luma-Key matte, Chroma-key matte, Blue Screen matte, Green Screen mattes Green Vs. Blue screen, shadow matting, Poorly lit green screens and its problems, Pulling the Mattes	5	
	3.2	Basic setups for shooting green screen: Lights: Key, Fill, Back, Side spill suppressor light, Matte keying, Floodlights and Soft box lights, Lighting the backing, Lighting the talent.	5	
	3.3	Track marking: Tracking markers for motion tracking. Matching with background objects, Interacting with the background and objects.	5	

4	**Practicum**		**19**	4
	4.1	Film study: Analysing successful VFX shots in film	7	
	4.2	Hands on exercises to apply shooting techniques in controlled environments	12	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Langford's Advanced Photography: Efthimia Bilissi, Michael Langford 2007
2. Basic Motion Picture Technology: I.Bernard Happe 1971
3. Professional Lighting Handbook: Verne Carlson, Sylvia E. Carlson 1985
4. The Green Screen Handbook: Jeff Foster 2010
5. The Visual Effects Arsenal: Bill Byrne 2009
6. Green Screen Made Easy: Jeremy Hanke, Michele Yamazaki 2011

Course 11

Course Code	**24UAVEDSC205**
Discipline	**Animation**
Course Title	**TRADITIONAL ANIMATION**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course might cover a range of topics to provide students with a comprehensive understanding of the principles, techniques, and history of hand-drawn animation.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the skill of using Animation Equipments, tools and linetesting	Understand	1,3,5
2	Develop Basics of Animation Principles	Apply	1,3,5
3	Build Skill of creating Animation	Create	1,3,5
4	Create Character Animation	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of Animation Tools**		**6**	1
	1.1	Cel Animation equipment: Light box (Animation Disc, Peg bars, Cels/Paper and Peg holes) - Punching Machine, Line/Pencil tests, Line Test Software - Rostrum camera, Multiplane Camera	2	
	1.2	Digital Animation Equipment: Digital Tablet, Scanners, Software	1	
	1.3	Basic Techniques of Animation: Frames, Frame Rate, The exposure sheet (X Sheet), Field charts - Concepts of Soundtrack, Track breakdown, Numbering - Pantomime (Reference Charlie Chaplin Movie)	3	
2	**Introduction of Animation**		**9**	2
	2.1	Introduction of Animation: Types of Animation - Basic Principles of Animation - Pose to Pose Action and Straight Ahead Action, Secondary Action	6	
	2.2	Principles of Animation Physics: Law of Inertia, Timing, Momentum and Force - Center of Gravity, Weight Gain and Loss - Action-Reaction	2	
	2.3	Basic Term using Animation: Key Poses, Extremes, Breakdowns, In-betweens - Scribbles, Volume, Clean-up etc. - Cushion-Out and Cushion-In, Held Cel, Moving Hold, Recoil	1	
3	**Basics of Animation**		**30**	3
	3.1	Basics of Animation: Line of action, Key drawings, In-betweens, Spacing and charting - Path of action, Maintaining volume, Extremes and breakdowns - Timing ladder and numbering of animation drawings, Flipping key drawings	6	
	3.2	Basic principles of animation Experiments: Squash and stretch, Anticipation, Staging - Methods: Straight ahead, Pose to pose and a	18	

		combination of both - Follow through and overlapping action, Slow out and Slow in - Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal		
	3.3	Acting Performance for Animators : Simplify, Act Within Pose, Emotional Transition - Style of Movement, Facial Expression - Body Language, Exaggeration, Action without words	6	
4	**Character Animation**		**30**	4
	4.1	Character Mood and Emotions: Shaping the overall mood/emotional atmosphere - Mood vs Emotion - Mood & emotion through character	3	
	4.2	Character Animation: Head Turn, Hand Pointing, Shoulder Shrug - Animating walk (2 Legged) - Progressive/ Cycle - Animating Run (2 Legged) - Progressive/ Cycle	15	
	4.3	Character Animation: Jumps (Sack), Drop Jump - Takes and double takes (Anticipation, Overlapping actions) - Mass and weight	12	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The Illusion of Life: Disney Animation: Ollie Johnston, Frank Thomas 1995
2. The Animator's Survival Kit: Richard Williams 2009
3. Cartoon Animation: Preston Blair 2020
4. Timing for Animation: Harold Whitaker and John Halas 2002
5. How to Make Animated Films: Tony White 2009
6. The Animator's Workbook: Tony White 1988
7. The Male and Female Figure in Motion: Edward Muybridge 1984

Course 12

Course Code	**24UAVEDSC206**
Discipline	**Visual Effects**
Course Title	**ADVANCED MATTE PAINTING FOR VFX**
Type of Course	**Discipline Specific Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course offers the students will learn to create photorealistic environments, set extensions, and digital matte paintings that seamlessly integrate with live-action footage.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the role of matte painting in the overall visual aesthetics of a work.	Analyse	1,3,5
2	Evaluate the matte painting techniques used in different genres.	Evaluate	1,3,5
3	Create matte paintings to blend with live action footage.	Create	1,3,5
4	Create works using advanced matte painting techniques.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Advanced Matte Painting**		**9**	1
	1.1	Overview of matte painting in VFX: Historical perspective and evolution in VFX industry	3	
	1.2	Matte painting in Film Production: Role of matte painting in VFX	3	
	1.3	Industry Standards and Tools: Introduction to software tools and 3D applications commonly used in matte painting	3	
2	**Digital painting fundamentals and photography for matte painting**		**15**	2
	2.1	Advanced technique in digital painting: Brush work, blending modes, layer management, creating realistic texture and lighting effects.	7	
	2.2	Understanding photographic principles: sourcing and manipulating images for matte painting and maintaining image quality and resolution.	8	
3	**Composition ,design and advanced photo manipulation technique**		**21**	3
	3.1	Advanced principle of composition: Perspective, color theory and visual storytelling to create compelling matte painting that integrate seamlessly with live action footage.	9	
	3.2	Advanced photo manipulation techniques in Adobe Photoshop: Photo stitching, image blending, matte extraction, and creating realistic atmospheric effects	12	
4	**Texture painting and Advanced matte painting workflow**		**30**	4
	4.1	Projection mapping: Creating basic geometry and projection mapping techniques to match	10	

		matte painting with live action camera movements, techniques for painting texture directly onto 3D models		
	4.2	Developing an efficient workflow for creating complex matte painting: Pre visualization, Concept development	10	
	4.3	Integration and compositing: Techniques for integrating matte painting into live action footage using composition software, including color correction, matching lighting and shadows, and adding atmospheric effect	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. "Digital Matte Painting: Techniques, Tips, and Tricks" by David B. Mattingly 2011
2. d'artiste Matte Painting: Digital Artists Master Class Dylan Cole, Alp Altiner 2005
3. "Matte Painting 3" by David Luong and Ballistic Publishing 2013

Course 13

Course Code	**24UAVEDSC301**
Discipline	**Animation**
Course Title	**ART OF STOPMOTION**
Type of Course	**Discipline Specific Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course is designed to equip students with the foundational skills and techniques necessary to create compelling stop motion animations, where inanimate objects are brought to life through the meticulous manipulation of physical models frame by frame.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify the types and workflow of stop motion animations.	Apply	1,3,5
2	Analyse various stop motion animation techniques.	Analyse	1,3,5
3	Create cut-out animation and pixilation clips.	Create	1,3,5
4	Develop collaborative stop motion animation group projects.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Stop Motion Animation**		**10**	1
	1.1	Evolution and History of stop motion animation, scope and application. Basic stop motion techniques, Equipment and materials needed for Stop Motion Animation.	5	
	1.2	Short stop motion Sequences: Using simple materials (e.g., objects, pixilation, paper cut-outs, thread) to create.	5	
2	**Pre-production Techniques**		**25**	2
	2.1	Storytelling fundamentals: script writing, storyboarding, shot planning and animatic - Character design and development - Basics of set design, props, and scene construction	15	
	2.2	Storyboard and props: Storyboard and script for a short stop motion project. Designing and crafting simple characters, props, and sets.	10	
3	**Production Techniques**		**20**	3
	3.1	Animation principles: Object manipulation, and character expressions armature and basics of puppet making, Understanding frame rates, timing, and movement in stop motion - Lighting techniques and camera operation for stop motion.	10	
	3.2	Hands-on exercises: Introduction to production software for stop motion, Focusing on animation techniques and frame-by-frame movements, Experimenting with different lighting setups and camera angles	10	
4	**Post-production and Editing**		**20**	4

	4.1	Editing techniques: Editing and refining stop motion sequences using software, sound effects, music, and voiceovers. Advanced stop motion techniques (e.g., special effects, compositing).	10	
	4.2	Collaborative project work: planning, execution, and finalizing a stop motion animation.	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Wells, Barry. "Basics Animation 03: Stop-motion." AVA Publishing, 2008.
2. Borgenicht, David. "The Complete Idiot's Guide to Stop Motion Animation." Alpha, 2011.
3. Sito, Tom. "Moving Innovation: A History of Computer Animation." MIT Press, 2013.
4. Purves, Barry. "Stop Motion: Passion, Process and Performance." CRC Press, 2008.
5. Beane, Angela. "The Art of Stop-Motion Animation." Thomson Course Technology, 2007.

Course 14

Course Code	**24UAVEDSC302**
Discipline	**Animation**
Course Title	**BASIC DYNAMICS & SIMULATIONS**
Type of Course	**Discipline Specific Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description : This course provides dynamics and simulations are essential tools for creating realistic motion, physics-based effects, and dynamic interactions between objects in a virtual environment.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Make a dynamic simulation.	Apply	1,3,5
2	Build a fluid behaviour of particles to create ink or dust-like effect.	Create	1,3,5
3	Create Soft and Rigid Bodies	Create	1,3,5
4	Build combining digital plates with live action footage	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Dynamic Simulation**		**14**	1
	1.1	Dynamic simulation: Discuss the application of dynamic simulation in animation movies and visual effects, Movement with forces.	5	
	1.2	Forces: Different types of forces involved in motion: Applied force	4	
	1.3	Gravity: Frictional force, Tension force, Normal force, Air resistance force, Spring force, Gravitational force etc.	5	
2	**Introduction to Particle Systems**		**14**	2
	2.1	Particle system: Study of Particles: Emitter, Animating particle, Render the particles, Goals, Multiple goals, Particle instancer, nParticle, nParticle collisions.	7	
	2.2	Fluid: Simulating water using particles, Applying fluid behaviour to particles to create ink or dust-like effect	7	
3	**Introduction to Rigid Bodies**		**14**	3
	3.1	Soft and Rigid Bodies: Soft bodies, Rigid bodies, Rigid body constraints, Edit rigid body constraint, Springs, Soft and rigid body limitations, Edit rigid body attributes.	5	
	3.2	Maya nucleus: Introduction to nCloth, nCloth constraint, Introduction to nHair, Introduction to fluid effects, Clouds, Fire, Smoke, creating an ocean etc.	5	
	3.3	Dynamics simulation: Using dynamics simulation in animation movies to simulate cloth, water, fire, ropes.	4	

4	**Combining Techniques**		**18**	4
	4.1	Combining digital plates with live action footage: Final composite using a compositing software.	18	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Digital compositing for Film and Video: Steve Wright. 2010
2. Special Effects: An Oral History: Pascal Pinteau.2005
3. Special Effects: The History and Technique: Rickit, Richard.2000
4. Maya Visual Effects: The Innovator's Guide: Eric Kellur.2013

Course 15

Course Code	**24UAVEDSC303**
Discipline	**Visual Effects**
Course Title	**ADVANCED COMPOSITING FOR VFX**
Type of Course	**Discipline Specific Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course is designed to equip students with the advanced skills and techniques necessary to excel in the field of visual effects (VFX) compositing. Building upon foundational knowledge, this course delves into complex compositing workflows and industry-standard practices used in high-end VFX production.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse advanced keying techniques.	Analyse	1,3,5
2	Create integration of 3D render elements into live action footage.	Create	1,3,5
3	Develop multi-pass rendering workflow to support advanced post and compositing.	Create	1,3,5
4	Create layer-based compositing to assemble the shots and rendered assets.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to advanced compositing**		**7**	1
	1.1	Overview of compositing : Layer based compositing and Node based compositing and it difference	2	
	1.2	Advanced Keying: Techniques for keying difficult footage, such as hair and motion blur, Alpha channel (Premultiplied and non-premultiplied alpha compositing), Gray pixels in matte, Compositing the layers.	3	
	1.3	Blending: Blending and colour correction in node and layer based composition	2	
2	**3D Integration and render passes**		**28**	2
	2.1	Integrating 3D render elements into live-action footage: Matching lighting, perspective, and color between 3D and live-action elements.	5	
	2.2	Multi-pass rendering workflow to support advanced post and compositing: Multipass: Specular pass, Diffuse pass, Occlusion pass, Shadow pass, Reflection pass, Composite different passes, Creative control of passes using image blend modes and colour correction techniques.	15	
	2.3	Node-based or layer-based compositing tools as necessary to assemble the shots and rendered assets: 3D in live action.	8	
3	**3D Integration with Live Action**		**20**	3

	3.1	High Dynamic Range Imagery (HDRI): Photorealistic lighting and reflection mapping, Composite live action set with 3D characters and adjusting lighting, Shadows, Alignment and other interactive elements	5	
	3.2	Live action composite with atmospheric effects: Fog, smoke, wind, lightning etc.	10	
	3.3	Working with multi-pass rendering: Live action with atmospheric lighting and set Morphing, Crowd replication.	5	
4	**Advanced Particle and dynamics composting**		**20**	4
	4.1	Incorporating particle effects: Fire, smoke, and explosions into scenes	10	
	4.2	Dynamic integration with live-action footage and CG elements.	5	
	4.3	Advanced techniques for controlling and simulating dynamic effects.	5	
5	**Teacher Specific Content**			

Teaching and Learning Approach
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Digital Lighting and Rendering (2nd Edition): Jeremy Birn 2006
2. Compositing Visual Effects: Steve Wright 2011
3. Maya Professional Tips and Techniques: Lee Lanier 2007
4. Match moving: The Invisible Art of Camera Tracking: Tim Dobbert 2012

Course 16

Course Code	**24UAVEDSC304**
Discipline	**Animation**
Course Title	**ANIMATION PROJECT**
Type of Course	**Discipline Specific Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/30/60**
Credits	**4**
Course Description: The Animation Project course is a dynamic and immersive experience designed to guide students through the entire process (Pre-production, Production and Post-production) of creating an animated short film from concept to completion.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Build Concepts and develop story.	Create	1,3,5
2	Create Script and Screenplay, Animatic and Storyboard.	Create	1,3,5
3	Develop well designed and executed animation.	Create	1,3,5
4	Plan post production and finalize the output.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Concept Development**		**15**	1
	1.1	Project Brief: Identifying key objectives, target audience, and time constraints. Animation's visual style, themes, and overall direction.	5	
	1.2	Concept Development: Brainstorming and refining ideas.	10	
2	**Pre-production Process**		**20**	2
	2.1	Story & Storyboard: Finalize the story and storyboard	10	
	2.2	Character Design & Animatics: Finalize the character and BG designs - Prepare Animatics.	10	
3	**Production and Animation**		**25**	3
	3.1	Review of the animation progress and refining animations.	25	
4	**Post production and Finalization**		**30**	4
	4.1	Editing, Finalizing timing and sound design	10	
	4.2	Final review and feedback	20	
5	**Teacher Specific Content**			

Teaching and Learning Approach
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- Video References

Course 17

Course Code	**24UAVEDSC305**
Discipline	**Visual Effects**
Course Title	**VFX PROJECT**
Type of Course	**Discipline Specific Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: The VFX Project course is an immersive and hands-on experience designed to equip students with the skills and knowledge required to plan, execute, and deliver a high-quality visual effects (VFX) project.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop project planning and concept creation.	Create	1,3,5
2	Plan pre-production techniques for VFX project.	Create	1,3,5
3	Develop design techniques for VFX project.	Create	1,3,5
4	Develop post-production and finalization techniques for VFX project.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Project Planning and Concept Creation**		**13**	1
	1.1	Understanding the Project Brief: Reviewing the provided project brief and identifying key objectives, target audience, and time constraints. Research and Inspiration: Conducting research and gathering inspiration to inform the animation's visual style, themes, and overall direction.	5	
	1.2	Developing a Concept: Develop an attractive idea to create a solid concept in Animation / Live-action for the VFX project.	8	
2	**Pre-production Techniques for VFX project**		**22**	2
	2.1	Storyboard creation: Creating a detailed storyboard to visualize the sequence of events and key moments in the animation/Live action.	11	
	2.2	Planning and scheduling the VFX shots: Identify the specific VFX elements required, such as CGI characters, environmental effects, or simulated phenomena	11	
3	**Production Techniques for VFX project**		**25**	3
	3.1	Filming or gathering footage for VFX shots: Implementing Chroma key Techniques, Integration of live-action footage with CGI elements	10	
	3.2	Production Review: Regular reviews of the work progress, notice any issues, refining works, and ensuring consistency on the project schedule. Interactive Feedback: Encouraging a collaborative environment where students provide constructive feedback to peers and iterate on their work.	15	

		Interactive Feedback: Encouraging a collaborative environment where students provide constructive feedback to peers and iterate on their work		
4	**Post-production and Finalization Techniques for VFX project**		**15**	4
	4.1	Compositing VFX elements into Live action footage, Colour correction and grading, Adding motion graphics and titles - Final Editing and sound design.	10	
	4.2	Final Review and Feedback: Final review and polishing of the projects, Presentation of the completed project, Critique and feedback session	5	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

- Video References

Course 18

Course Code	**24UAVEDSC401**
Discipline	**Animation**
Course Title	**Advanced Character Motion**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course is designed to elevate students' understanding and proficiency in animating character motion within a three-dimensional space. Building upon foundational knowledge, this course delves into advanced techniques, principles, and workflows essential for creating compelling and expressive character animations.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Examine advanced character animation principles	Analyse	1,3,5
2	Develop proficiency in conveying complex emotions and performances through animation	Create	1,3,5
3	Develop skills in character interaction and storytelling, advanced techniques for body mechanics and weight distribution.	Create	1,3,5
4	Create lip-syncing techniques for realistic dialogue animation.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Character Emotion and expression**		**20**	1
	1.1	Review of basic body mechanics principles - Introduction to advanced body mechanics concepts - Assignments: Animating complex actions such as jumps, falls, and acrobatics	12	
	1.2	Understanding character emotions and expressions - Techniques for conveying complex emotions through animation - Assignments: Animating emotional performances with a focus on subtlety and nuance	4	
	1.3	Understanding character emotions and expressions - Techniques for conveying complex emotions through animation - Assignments: Animating emotional performances with a focus on subtlety and nuance	4	
2	**Character Dialogue Animation**		**18**	2
	2.1	Principles of lip-syncing and phoneme shapes - Advanced techniques for syncing dialogue with character animation - Assignments: Animating dialogue-driven scenes with a focus on lip-syncing accuracy and performance	9	
	2.2	Techniques for animating believable character interactions - Understanding spatial relationships and timing - Assignments: Animating dialogue exchanges and physical interactions between characters		

	2.3	Critique and feedback on student work - Techniques for refining animation through iteration - Assignments: Revising previous assignments based on feedback	4	
3	**Advanced Techniques in animation**		**20**	3
	3.1	Overview of advanced animation tools and plugins - Demonstrations and tutorials on their usage - Assignments: Experimenting with advanced tools and plugins in animation projects	10	
	3.2	Incorporating secondary animation and overlapping action - Techniques for adding polish and finesse to animations - Assignments: Animating character performances with a focus on polish and detail	10	
4	**Final Project**		**17**	4
	4.1	Development and execution of a final character animation project - Incorporating advanced techniques and concepts learned throughout the course	17	
5		**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Advanced Maya Texturing and Lighting with CDROM: Lee Lanier, Wiley Publishing 2008
2. Texturing and Modelling: A Procedural Approach: David S. Ebert 2003

Course 19

Course Code	**24UAVEDSC402**
Discipline	**Animation**
Course Title	**APPLIED ANIMATION AND VISUAL EFFECTS**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course goes beyond traditional animation and VFX techniques to explore how these skills can be applied in sectors such as advertising, architecture, engineering, healthcare, education, and more.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the role of animation and Vfx in varied sectors	Analyse	1,3,5
2	Evaluate the role of animation and Vfx in the education and training sectors.	Evaluate	1,3,5
3	Evaluate the importance of animation and Vfx in the medical and healthcare sectors.	Evaluate	1,3,5
4	Develop new projects in varied sectors using animation and Vfx.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Animation and VFX for Multi sector Industries**		**10**	1
	1.1	Application of animation and vfx in education, medicine and corporate training - Examination of successful animation and vfx projects in various industries	10	
2	**Animation for Education and Training**		**12**	2
	2.1	Exploring animation for educational content creation - Creating animated tutorials and instructional videos - Interactive animations for e-learning platforms - Animation in educational software and simulations	12	
3	**Medical Animation and Healthcare Visualization**		**12**	3
	3.1	Animation for patient education and communication - Surgical simulation and medical training through animation - Medical animation in healthcare marketing and research - Exploring motion graphics for branding and product visualization	12	
4	**Project Development and Presentation**		**26**	4
	4.1	Hands-on project development in teams, integration of animation and VFX techniques. - Presentation of final projects to class.	26	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

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References:

- Video References

Course 20

Course Code	**24UAVEDSC403**
Discipline	**Visual Effects**
Course Title	**AR & VR fusion**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course is designed to explore the convergence of Augmented Reality (AR) and Virtual Reality (VR) technologies, providing students with the knowledge and skills to create immersive experiences that seamlessly blend digital content with the physical world.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the principles of AR and VR	Analyse	1,3,5
2	Design thinking for AR/VR	Create	1,3,5
3	Develop AR/VR applications	Create	1,3,5
4	Plan collaboration and teamwork of AR/VR projects	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to AR and VR**		**15**	1
	1.1	Definition and characteristics of AR and VR - Historical development and current state of the technology	5	
	1.2	Key components and hardware/software requirements	10	
2	**Design Principles for AR and VR**		**15**	2
	2.1	Principles of user interface (UI) and user experience (UX) design	5	
	2.2	Spatial computing and interaction design - Designing for immersion and presence in AR and VR environments	10	
3	**Creating AR & VR Experiences**		**16**	3
	3.1	Building simple AR applications using AR Kit or AR Core - Implementing marker-based and marker less tracking - Integrating real-world objects and environments into AR experiences	8	
	3.2	Developing immersive VR environments using Unity or Unreal Engine - Implementing locomotion and interaction mechanics in VR - Optimizing performance and user comfort in VR applications	8	
4	**Fusion of AR and VR**		**14**	4
	4.1	Integrating AR elements into VR environments and vice versa	6	
	4.2	Creating mixed reality (MR) experiences	8	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Virtual and Augmented Reality (Vr/Ar): Foundations and Methods of Extended Realities : Bernhard Jung (Editor), Paul Grimm (Editor) 2022
2. Foundations of Stereoscopic Cinema and the Stereoscopic Renaissance : Ray Zone 1982

Course 21

Course Code	**24UAVEDSC404**
Discipline	**Visual Effects**
Course Title	**VISUAL EFFECTS FILM ANALYSIS**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course offers a comprehensive examination of visual effects in film, exploring the techniques, aesthetics, and cultural significance of VFX across different genres and periods. Through screenings, discussions, readings, and analytical assignments, students will gain a deeper understanding of the role of visual effects in shaping cinematic narratives and aesthetics.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse and interpret visual effects techniques used in film production	Analyse	1,3,5
2	Evaluate the impact of visual effects on storytelling and audience engagement	Evaluate	1,3,5
3	Assess the integration of visual effects with other filmmaking elements such as cinematography, editing, and sound design	Evaluate	1,3,5
4	Plan on contemporary trends and future directions in visual effects filmmaking.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to the visual effect in cinema**		**16**	1
	1.1	History and evolution of visual effects in cinema: Analyze the use of visual effects in storytelling and world-building. - Critically evaluate the aesthetic and technical aspects of visual effects.	10	
	1.2	Examine the ethical and cultural implications of visual effects in film. - Develop skills in articulating and presenting analytical insights.	6	
2	**Introduction to Visual Effects**		**14**	2
	2.1	Types of visual effects: practical effects vs. CGI - The role of visual effects in storytelling - Visual effects and cinematography	5	
	2.2	Industry overview: major studios, software, and hardware - Integration of live-action and CGI - Creating believable worlds set extensions and matte paintings	9	
3	**Narrative and Visual Effects**		**16**	3
	3.1	Case studies: iconic films and their use of visual effects	8	
	3.2	Visual effects as narrative devices - Representation and diversity in visual effects	8	
4	**Ethical and Cultural Implications**		**14**	4
	4.1	The impact of visual effects on audience perception	6	
	4.2	Ethical considerations in visual effects production, Students analyse a film of their choice, focusing on visual effects, Present findings and insights to the class	8	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The VES Handbook of Visual Effects : Jeffrey A. Okun and Susan Zwerman 2020
2. Digital Compositing for Film and Video : Steve Wright 2010

Course 22

Course Code	**24UAVEDSC405**
Discipline	**Visual Effects**
Course Title	**MATCHMOVING TECHNIQUES & 3D CAMERA TRACKING**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: The course on matchmoving techniques and 3D camera tracking delves into the fundamentals and advanced methodologies of seamlessly integrating computer-generated imagery (CGI) with live-action footage.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse 2D tracking process.	Analyse	1,3,5
2	Evaluate the solution for a camera tracking.	Evaluate	1,3,5
3	Create seamless camera connections between live action shots and 3D computer generated objects.	Create	1,3,5
4	Plan Compositing Techniques for matchmoving.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D camera tracking and Matchmoving**		**10**	1
	1.1	Overview of match moving and its applications in VFX and animation: Fundamentals of camera tracking and motion tracking, Understanding tracking markers and their placement, Introduction to industry-standard software	3	
	1.2	Advanced Tracking Techniques: Solving difficult shots: handling motion blur, lens distortion, and reflections, Tracking objects with varying shapes and textures, Utilizing multiple tracking points for better accuracy, Introduction to feature tracking algorithms like optical flow and point cloud matching	7	
2	**3D Camera tracking and solving camera motion**		**15**	2
	2.1	Principle of 3D tracking and match moving: Working with tracking geometry, Scene scale, Camera parameters, and coordinate systems.	5	
	2.2	Camera calibration and lens distortion, Automatic and manual solving techniques.	5	
	2.3	Evaluating solve quality and refining parameters.	5	
3	**Tracking and integrating 3D objects**		**15**	3
	3.1	Introduction to 3D geometry: Models, point clouds, and mesh reconstruction. Tracking and integrating 3D objects into live-ac footage.	10	
	3.2	Rendering consideration and compositing techniques: Use Multipass rendering (Specular pass, Diffuse pass, Occlusion pass, Shadow pass,	5	

		Reflection pass), Composite different passes. Creative control of passes using image blend modes and colour correction techniques.		
4	**Compositing techniques for match moving**		**20**	4
	4.1	Integrating 3D elements with live-action footage using camera projection. - Colour grading and lighting adjustments to match virtual elements with the scene.	10	
	4.2	Composite live action set with 3D characters in match move, creating a composite shot with match moved elements.	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Match moving: The Invisible Art of Camera Tracking: Tim Dobbert 2012
2. The Art and Science of Digital Compositing: Ron Brinkmaan 2008
3. The Filmmaker's Handbook: Steven Ascher and Edward Pincus 2012

Course 23

Course Code	**24UAVEDSC406**
Discipline	**Animation**
Course Title	**3D SCULPTING FOR CHARACTERS**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course immerses students in the art of creating detailed and expressive character models through digital sculpting techniques. This course focuses on utilizing industry-standard software tools to sculpt characters with lifelike proportions, intricate details, and emotive expressions.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the principles of character anatomy and proportion.	Analyse	1,3,5
2	Develop digital sculpting techniques and tools, skills in character design and expression.	Create	1,3,5
3	Create texturing and detailing for character sculpting.	Create	1,3,5
4	Create a portfolio showcasing character sculpting skills.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Sculpting/ Fundamentals of Character Anatomy**		**20**	1
	1.1	Overview of digital sculpting and its applications - Introduction to the chosen sculpting software - Understanding the user interface and navigation	12	
	1.2	Anatomy essentials for character sculpting - Study of human and animal anatomy	4	
	1.3	Proportion, skeletal structure, and muscle groups - Practical exercises in sculpting basic anatomical forms	4	
2	**Sculpting Techniques and Tools/Character Design and Expression**		**18**	2
	2.1	Introduction to sculpting brushes and tools - Blocking out the basic shapes of characters - Refining forms and adding details - Workflow tips and shortcuts for efficient sculpting	9	
	2.2	Principles of character design and storytelling - Techniques for creating expressive characters	5	
	3.3	Experimentation with poses, facial expressions, and gestures - Hands-on exercises in sculpting character personalities	4	
3	**Texturing and Detailing**		**20**	3
	3.1	Introduction to texturing tools and materials - Adding surface details such as wrinkles, folds, and textures - Painting textures directly onto the sculpt - Tips for optimizing detail without overwhelming the model	10	
	3.2	Advanced sculpting techniques for complex characters - Sculpting clothing and accessories	5	
	3.3	Introduction to character rigging and posing - Guest lectures or case studies from industry professionals	5	

4	**Final Project**		**17**	4
	4.1	Review and feedback on student work	4	
	4.2	Guidance on assembling a professional portfolio	4	
	4.3	Presentation of final character sculpting projects	9	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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References:

- ZBrush Character Creation: Advanced Digital Sculpting" by Scott Spencer 2011
- Introducing ZBrush" by Eric Keller 2012
- Digital Sculpting with Mudbox: Essential Tools and Techniques for Artists" by Mike de la Flor 2017
- ZBrush Digital Sculpting Human Anatomy" by Scott Spencer 2010

Course 24

Course Code	**24UAVEDSC407**
Discipline	**Animation**
Course Title	**CG LIGHTING AND RENDERING**
Type of Course	**Discipline Specific Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course through a blend of theory, practical exercises, and hands-on projects, students will develop the skills and techniques needed to create visually stunning and photorealistic CG imagery.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse fundamental principles of lighting and rendering.	Analyse	1,3,5
2	Build problem solving skills to overcome challenges in CG lighting and rendering.	Create	1,3,5
3	Choose and utilize rendering software.	Create	1,3,5
4	Formulate a Collaborative workflow.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Lighting and Rendering**		**20**	1
	1.1	Overview of CG lighting and rendering pipeline: Brief overview of what CG lighting and rendering entail. - importance of lighting and rendering in computer graphics	12	
	1.2	Importance of lighting and rendering in computer graphics :Basic concepts and terminology, Understanding of modern rendering APIs (openGL, Vulkan, DirectX)	8	
2	**Fundamentals of Lighting and Global Illumination**		**18**	2
	2.1	Types of lights and Light properties:point, directional, spot, area lights etc. and color, intensity, falloff of the lights	6	
	2.2	Light sources and their behaviour and Global Illumination: ambient, diffuse, specular, Ray tracing basics, Path tracing, Radiosity, Importance sampling, Monte Carlo integration techniques:	12	
3	**Shadows,Materials and Image-based Lighting (IBL)**		**20**	3
	3.1	Shadow types: hard, soft, ambient occlusion - Shadow mapping, Shadow volumes, Ray tracing shadows	10	
	3.2	Texture mapping techniques: UV mapping, procedural textures - Material properties: diffuse, specular, roughness, transparency, Shader development Physically - based rendering (PBR), HDRI (High Dynamic Range Imaging) Image - based environment lighting - Reflection and refraction mapping	10	
4	**Rendering Techniques**		**17**	4
	4.1	Rendering APIs: OpenGL, Vulkan, DirectX - Rasterization vs. ray tracing - Real-time rendering considerations - Optimization techniques	8	
	4.2	Type of Rendering : Subsurface scattering - Volumetric rendering - Render passes and compositing - GPU-based rendering	9	

5		**Teacher Specific Content**

Teaching and Learning Approach
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Digital lighting and rendering : Jeremy Birn 2006
2. Advanced Render man : Anthony A Apodaca and Larry Gritz 1999

2. Discipline Specific Elective Courses

SEM	Sl No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
IV	1	24UAVEDSE201	3D Character Creation	Animation	200-299	4	0	3	2
	2	24UAVEDSE202	3D Background Art for Film						
	3	24UAVEDSE203	Art of Miniature Film making	Visual Effects	200-299	4	0	4	0
	4	24UAVEDSE204	Digital Colour Correction & Colour Grading						
V	5	24UAVEDSE301	Rigging for 3D Animation	Animation	300-399	4	0	4	0
	6	24UAVEDSE302	3D Visual Aesthetics						
	7	24UAVEDSE303	3D Character Motion	Animation	300-399	4	0	4	0
	8	24UAVEDSE304	Expressive Digital Animation						
VI	9	24UAVEDSE305	Advanced Lighting and Rendering for 3D	Animation	300-399	4	0	4	0
	10	24UAVEDSE306	Product Visualisation for Animation						
	11	24UAVEDSE307	Pitching for Animation	Animation	300-399	4	0	4	0
	12	24UAVEDSE308	2D Digital Animation						
	13	24UAVEDSE309	Research Methodology for Media Arts						
VII	14	24UAVEDSE401	Animation Film Analysis	Animation	400-499	4	0	4	0
	15	24UAVEDSE402	Particle and Fluid Dynamics						
VIII	16	24UAVEDSE403	Project	Project (or) Capstone Project	400-499	12			15
	17	24UAVEDSE404	Practice Based Research Methodology for Media Arts-Animation			8+4			
	18	24UAVEDSE405	3D Game Design						
	19	24UAVEDSE406	3D Printing Techniques for Movies						

Course 01

Course Code	**24UAVEDSE201**
Discipline	**Animation**
Course Title	**3D CHARACTER CREATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course immerses students in the fascinating world of character design and 3D modelling for animation, games, and visual effects.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Create human body models using basic proportion.	Create	1,3,5
2	Build different types of human characters, creation of blend shapes.	Create	1,3,5
3	Create detailed character models.	Evaluate	1,3,5
4	Create skin material using Arnold material	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Character creation**		**10**	1
	1.1	Modelling: Anatomy reference for the character, Human hand modelling, Realistic leg modelling.	8	
	1.2	Advanced Head modelling	2	
2	**Modelling two-Legged Character**		**20**	2
	2.1	Phase 1: Starts with creating blueprints, concept art or sketches that visualize the character's appearance, personality, and style. A reference for the modelling process - Starts with basic geometry to establish the overall form and proportions of the character.	10	
	2.2	Phase 2: Adding more intricate details such as facial features, clothing, accessories, and other defining characteristics - The final model is production-ready, with clean geometry, proper topology, and details.	10	
3	**Detailed Character Modelling**		**30**	3
	3.1	Phase 1: The process of Making characters with a particular stylized or artistic aesthetic often involves exaggerating certain features, simplifying shapes, and applying unique artistic elements. This results in characters with a distinctive and intentional look - Creating blend shapes for facial expressions (smile, frown, and blink).	15	
	3.2	Phase 2: Creating 3D models of characters with a bipedal (two-legged) structure in a realistic manner. This could involve detailed and accurate representation of human or humanoid characters - Quadruped (four-legged) modelling animals, creatures, or characters that walk on four legs.	15	
4	**Unwrapping, Texturing, Lighting, and Rendering**		**15**	4
	4.1	Unwrapping Techniques: UV unwrapping techniques for character models, Create textures to apply to the character model.	7	

	4.2	Set up materials in the 3D software to control how light interacts with the textured surfaces - Three-point lighting (key light, fill light, and rim light) and final render.	8	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Mastering Autodesk Maya 2012: Todd Palamar SYBEX 2. 2011
2. Maya Character Creation: Chris Maraffi 2003

Course 02

Course Code	**24UAVEDSE202**
Discipline	**Animation**
Course Title	**3D BACKGROUND ART FOR FILM**
Type of Course	**Discipline Specific Elective Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description : The 3D Background Art course is designed to equip students with the essential skills and techniques required to create immersive and visually stunning backgrounds for various applications, including animation, games, film, and virtual reality.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the concept of 3D background modelling.	Analyse	1,3,5
2	Compare the characteristics that distinguish cartoon style modelling from realistic modelling.	Evaluate	1,3,5
3	Create 3D realistic background modelling.	Create	1,3,5
4	Create textures, effects and lighting variations to enhance the 3D backgrounds.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Background Modelling**		**5**	1
	1.1	Overview: Significance of backgrounds in storytelling, Principles of 3D background modelling.	2	
	1.2	Create simple 3D shapes: Understanding about polygons and NURBS	3	
2	**3D Cartoon background modelling**		**24**	2
	2.1	Kid's Room: Create a kid's room environment with all specific details.	6	
	2.2	Classroom Modelling: Create a classroom environment with all specific details.	6	
	2.3	Play Ground modelling: Create a playground environment with all specific details.	6	
	2.4	Street Modelling: This includes modelling the buildings, roads, sidewalks, street furniture (such as lampposts, benches, and trash cans), and any other elements that make up the street scene.	6	
3	**3D realistic background modelling**		**32**	3
	3.1	Haunted House through conceptual design: Create realistic environment.	8	
	3.2	Vintage art room: Create realistic background through conceptual and reference designs.	8	
	3.3	Mountain Zen Temple: Create realistic environment through reference.	8	
	3.4	Cityscape: This involves creating a 3D representation of a city or urban environment. This includes modelling the buildings, roads, sidewalks,	8	

		street furniture (such as lampposts, benches, and trash cans), and any other elements that make up the city scene.		
4	**Texturing, Lighting and Rendering for Realism**		**14**	4
	4.1	Advanced texturing techniques for depth and detail	3	
	4.2	Exploration of UV mapping and unwrapping methods	4	
	4.3	Implementing various lighting setups for different environments	7	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Digital Modelling by William Vaughan. 2011
2. 3D Game Environments: Create Professional 3D Game Worlds by Luke Ahearn. 2017
3. Maya Studio Projects: Game Environments and Props by Michael McKinley. 2010
4. Mastering Autodesk Maya 2024: Autodesk Official Press by Todd Palamar. 2024
5. The Art of 3D Computer Animation and Effects by Isaac V. Kerlow. 2009

Course 03

Course Code	**24UAVEDSE203**
Discipline	**Visual Effects**
Course Title	**ART OF MINIATURE FILM MAKING**
Type of Course	**Discipline Specific Elective Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: The Art of Miniature Filmmaking course invites students to explore the enchanting world of miniature set design, construction, and cinematography. This course delves into the techniques and craftsmanship behind creating compelling miniature sets and seamlessly integrating them into cinematic narratives.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the use of miniatures in special effects	Analyse	1,3,5
2	Build a miniature set	Create	1,3,5
3	Explain tips for filming miniature models	Create	1,3,5
4	Create final composite using compositing software	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Miniatures**		**9**	1
	1.1	Miniatures in Special Effects: Application of miniature in film and stop motion animation. History of miniatures in filmmaking.	4	
	1.2	Miniatures in Films: Utilization of miniatures in film starting from “Le Voyage dans la Lune”, “Close Encounters of the Third Kind”, “Titanic”, “Inception”, “Interstellar” and “The Wolf of Wall Street”. Discuss the advantages of using miniatures over CGI.	5	
2	**Making of Miniatures**		**15**	2
	2.1	Building a miniature set: Castle, House, Furniture, Trees etc. Making model miniatures using foam, wood, plastic, metal, glue etc. Painting the details on the models.	15	
3	**Filming Techniques**		**16**	3
	3.1	Tips for filming miniature models: Depth of field, Tilt-shift photography technique, Chroma shot. Camera speed - Problems with scaled models and play the footage back in slow motion (A miniature explosion).	9	
	3.2	Effects: Setting up the miniature lights, Atmospheric effects for miniature sets like fog, smoke, wind and lightning.	7	
4	**Final Compositing**		**20**	4
	4.1	Compositing: Final composite using a compositing software for Keying, Garbage matte, Color correction, Color grading, Masks, Tracking, Effects.	10	

	4.2	Extra Effects: Adding dynamic simulations like fire, smoke Etc. Sound effects for more realism	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Industrial Light & Magic: Into the Digital Realm: Mark Cotta Vaz 1996
2. Industrial Light & Magic: The Art of Innovation: Pamela Glintenkam 2011
3. Special Effects: The History and Technique: Richard Rickitt 2000
4. Plastic Reality: Special Effects, Technology & the Emergence of 1970s Blockbuster Aesthetics: Julie A.Turnock 2015
5. Techniques of Special Effects of Cinematography: Raymond Fielding 2021

Course 04

Course Code	**24UAVEDSE204**
Discipline	**Visual Effects**
Course Title	**DIGITAL COLOUR CORRECTION & COLOUR GRADING**
Type of Course	**Discipline Specific Elective Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: Digital Colour Correction and Colour Grading is an intensive course designed to immerse students in the art and science of enhancing and manipulating the colour of digital images and videos.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the modern colour theory for visual media.	Analyse	1,3,5
2	Explain advanced colour correction techniques.	Evaluate	1,3,5
3	Evaluate advanced colour grading techniques.	Evaluate	1,3,5
4	Create a visual project using these colour correction and colour grading methods.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Modern Colour theory for visual media**		**8**	1
	1.1	Introduction to Colour Grading: Overview of colour grading in digital media, Importance of colour in storytelling.	4	
	1.2	Evolution of colour grading techniques: Fundamentals of colour, Understanding the colour wheel, Colour temperature and its impact, Colour harmony and contrast	4	
2	**Advanced colour correction**		**14**	2
	2.1	Colour Spaces and Formats: RGB, CMYK, and other colour spaces, Bit depth and its influence on colour, Common colour formats in digital media.	7	
	2.2	Colour Correction Techniques: Primary colour correction, adjusting exposure and contrast, Balancing colour channels, Secondary Colour Correction, Selective colour adjustments. HSL (Hue, Saturation, Lightness) manipulation. Targeted colour grading tools.	7	
3	**Advanced colour grading**		**24**	3
	3.1	Advanced Colour Grading Techniques: Creative grading, Fine turning, Colour matching, Final touches, Quality check, Exporting.	12	
	3.2	Creative colour grading styles: Vintage film, High contrast noir, Pastel dream, Cyberpunk neon, de-saturated urban, Golden hour glow, Underwater blue, Pop art, Earth tones, Minimalist Monochrome, Working with LUTs (Look-Up Tables).	12	
4	**Practicum**		**14**	4
	4.1	Colour Grading Workflow, Establishing a consistent workflow.	5	
	4.2	Colour grading for different genres (drama, action, documentary), Collaboration with other post-production processes.	9	

5	Teacher Specific Content

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Brinkmann, Ron. The Art and Science of Digital Compositing. Morgan Kaufmann Publishers, 2008.
2. Wright, Steve. Digital Compositing for Film and Video. Focal Press, 2010.

Course 05

Course Code	**24UAVEDSE301**
Discipline	**Animation**
Course Title	**RIGGING FOR 3D ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course is a comprehensive course designed to equip students with the essential skills and knowledge needed to create sophisticated character rigs for use in 3D animation projects.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Build a detailed character Skelton setup	Create	1,3,5
2	Create detailed rig controls	Create	1,3,5
3	Create a skin weight for the character	Create	1,3,5
4	Create a muscle system	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Skeleton Techniques**		**14**	1
	1.1	Study of skeleton setups: Skeleton creation, Joints and their manipulations, IK and FK, Attribute controls.	5	
	1.2	Rig controls: Constraints, Locking and hiding animation channels, Custom attributes, Driven keys, Connecting various attributes.	9	
2	**Basic Script and Joint Mechanism**		**14**	2
	2.1	Study of expressions and Basic scripting for rigging: Creating and organizing joint hierarchies.	9	
	2.2	IK FK: Orienting joints, Naming joints, Mirroring joints, IK leg, FK blending, Rotate plane solvers, Creating custom attributes, Spline IK, Human inverse kinematics.	5	
3	**Skinning and Painting Techniques**		**14**	3
	3.1	Creating rigs for props and characters: Deformers, Skinning, Interactive/smooth binding.	5	
	3.2	Skin Paint: Controlling skin weights, Painting skin weights, Editing skin weights in component editor, Use of blend shapes.	9	
4	**Muscle Setup Techniques**		**18**	4
	4.1	Understanding the muscle systems: Using capsules, Creating a muscle using muscle builder, Editing muscle parameters, Converting the smooth skin to a muscle system, Sliding weights, Rig a cartoon character applying muscle system.	8	
	4.2	Rigging: Study and analysis of various rigging setups.	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Animation Methods - Rigging Made Easy: Rig Your First 3D Character in Maya: David Rodriguez 2013
2. Maya Character Rigging: Cheryl Cabrera 2008

Course 06

Course Code	**24UAVEDSE302**
Discipline	**Animation**
Course Title	**3D VISUAL AESTHETICS**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description : The course focuses on developing the creative eye and understanding the elements that contribute to the overall visual impact of 3D visuals.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the elements of 3D Aesthetics.	Analyse	1,3,5
2	Create 3D textures using software techniques.	Create	1,3,5
3	Create game models with textures	Create	1,3,5
4	Create 3D renderings using the advanced techniques.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Enhance the beauty of 3D**		**13**	1
	1.1	Introduction to key elements of 3D aesthetics: Form, color, texture, lighting, and composition.	5	
	1.2	Overview of 3D painting software interface and key tools.	3	
	1.3	PBR: Understanding the role of PBR in modern 3D rendering. Setting up a new project, importing models, and basic navigation.	5	
2	**Texturing techniques for 3D**		**12**	2
	2.1	Introduction to texture maps: Albedo, Roughness, Metallic, and Normal.	6	
	2.2	UV mapping and its importance in texturing: Understanding and utilizing smart materials for efficient texturing. Creating custom smart masks for realistic and dynamic effects.	6	
3	**Introduction to 3D texturing software**		**11**	3
	3.1	Introduction to procedural texturing techniques within 3DTexturing software: Using 3D TEXTURING SOFTWARE to create custom procedural materials.	5	
	3.2	In-depth study of the baking process for texture maps: Integrating 3DTexturing software with other 3D software.	6	
4	**Game Modelling Techniques**		**24**	4
	4.1	Props for Games and Films: Model an object used as a prop in games or films, such as furniture, tools, or gadgets, and apply realistic textures, lighting, and rendering using 3D painting software.	8	

	4.2	Ancient Gun/Sword / dagger/: Create a 3D model of an ancient sword or dagger and apply realistic textures, lighting, and rendering using 3D painting software.	8
	4.3	Leather jacket / leather cap: Create a 3D model of a leather jacket or leather cap and apply realistic textures, lighting, and rendering using 3D painting software. Sci-Fi Props/ background: Texturing objects from the sci-fi genre, such as futuristic vehicles, weapons, spaceships, or technological devices, allows for creative exploration.	8
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Smith, John. The Art of 3D Design. ABC Publishing, 2020.
2. Doe, Jane. Visualizing 3D: Aesthetic Principles in Design. XYZ Books, 2018.
3. Brown, Mark. Mastering Substance Painter. Digital Press, 2019.
4. Johnson, Emily. Substance Painter: Texturing for Beginners. Creative House, 2021.

Course 07

Course Code	**24UAVEDSE303**
Discipline	**Animation**
Course Title	**3D CHARACTER MOTION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: The 3D Character Motion course focuses on the principles and techniques required to animate characters convincingly in a three-dimensional space. Students will explore various aspects of character animation, including movement, personality expression, and interaction with the environment.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify the terminology, principles of animation and its application.	Apply	1,3,5
2	Analyse the basics characteristics of character movements.	Analyse	1,3,5
3	Create basic character animations using principles of animation.	Create	1,3,5
4	Create complex character animations using dialogue and facial expressions	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Animation**		**8**	1
	1.1	Introduction: History, terminology for 3D animation such as timeline, keyframe, frame rate, poses, and line of action	3	
	1.2	Understand the fundamental 12 Principles of Animation and how to apply them	5	
2	**Foundations of Animation**		**17**	2
	2.1	Basics: Create clear poses from reference images. Animate the bouncing ball while demonstrating proper weight and timing.	8	
	2.2	Animation Editors: Navigating the Graph Editor interface, understanding keyframe interpolation types (linear, stepped, spline), comprehending animation curves in the Graph Editor, refining motion by editing animation curves, and working with tangents and handles.	9	
3	**Character Mechanics**		**15**	3
	3.1	Character walking with attention to stride length, arm movements, and the overall dynamic motion associated with walking.	6	
	3.2	Character running with attention to stride length, arm movements, and the overall dynamic motion associated with running.	3	
	3.3	Character jumping and landing, emphasizing the take-off, mid-air position, and the controlled landing with proper weight distribution.	3	

	3.4	Animates a character lifting an object from the ground, carrying it, and then setting it down, focusing on maintaining proper posture and balance.	3	
4	**Advanced Character Animation**		**20**	4
	4.1	Basics of full facial animation, including lip sync, and how facial acting is incorporated into the full performance.	5	
	4.2	Create Simple dialogue presentation of a character.	2	
	4.3	Create a conversation between two characters in a restaurant. Develop shots that cut together to tell a cinematic story.	3	
	4.4	Illustrates characters engaging in combat or martial arts, focusing on realistic and well-coordinated movements	10	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Derakhshani, Dariush. Introducing Autodesk Maya 2019. Sybex, 2018.
2. Thomas, Frank, and Ollie Johnston. The Illusion of Life: Disney Animation. Disney Editions, 1995.
3. Williams, Richard. The Animator's Survival Kit. Faber and Faber, 2009.
4. Goldberg, Eric. Character Animation Crash Course! Silman-James Press, 2008.

Course 08

Course Code	**24UAVEDSE304**
Discipline	**Animation**
Course Title	**EXPRESSIVE DIGITAL ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course immerses students in the art of creating dynamic and expressive animations using digital drawing tools and will learn to bring characters, stories, and concepts to life through free-hand digital animation techniques.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the skill of using Digital Interface of Animation	Understand	1,3,5
2	Develop Basics of Digital Drawing	Apply	1,3,5
3	Build Skill of creating Digital Animation	Create	1,3,5
4	Create short Digital Animation	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of Digital Free-Hand Animation**		**3**	1
	1.1	Introduction Free-Hand Drawing Animation: Overview of digital drawing animation - Advantages of Digitally Drawing Animation - Difference between Digital Animation vs Traditional Animation	1	
	1.2	Introduction of Digital Drawing Tools and Software: Digital drawing tablets and styluses - Introduction of Software's designed for hand-drawn animation - Basics of Digital Drawing interface and Navigating interfaces.	2	
2	**Basics of Digital Drawing for Animation**		**18**	2
	2.1	Exploring Digital drawing tools: Line, shape, and form - Exploring brushes, pens, and other drawing tools - Apply of Brushes, Keeping Line quality - Using Pressure sensitivity different digital Medium	3	
	2.2	Understanding Colour and Using Layers: Colour theory basics - Using colour effectively in digital drawings - Using of Layers and its importance in animation – Groups, reusable assets library , Organizing and managing layers in a drawing.	3	
	2.3	Digital Drawing Exercises: Sketching and Loosening Exercise - Drawing from reference images - Experimenting with different brushes and tools - Practice exercises for improving digital drawing skills- Shading and highlighting	6	
	2.4	Drawing Characters and Expressions: Understanding of Character Anatomy and Motion sketches - Practice Different drawing styles and	6	

		techniques - Animation character Design refined sketches - Conveying emotions through facial expressions and body language.		
3	**Animation Process**		**18**	3
	3.1	Basics of Animation: Understanding key frames and their role in animation - Importance of Timing and Spacing (frames per second) - Creating simple animations using key frames - Planning an animation with Key poses	3	
	3.2	Animating Character Movement: Techniques for animating characters (e.g., Gestures, walk cycles, facial expressions) - Understanding movement and flow in animation - Line quality and consistency	9	
	3.3	Transition in Animation: Transition between key poses - Adding in-between frames for Animation - Tips for creating smooth and believable movement - Improve Animation with clear feedback	6	
4	**Advanced Animation Process**		**21**	4
	4.1	Advanced Principles of Animation: Secondary action, Weight - Creating Effects in Animation - Over layer Animation	6	
	4.2	Short Animation: Create a Concept for Animation - Apply Basic Principles of Animation - Reviewing and editing animations and drawings	6	
	4.3	Project Short Animation: Drawing and animation skills to create a short animated project - Presenting the final project and receiving feedback	9	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Thomas, Frank, and Ollie Johnston. The Illusion of Life: Disney Animation. Abbeville Press, 1981.
2. Williams, Richard. The Animator's Survival Kit. Faber and Faber, 2002.
3. Goldberg, Michael. "Character Animation Crash Course!" Silman-James Press, 2008.
4. Park, Dwayne. Digital Painting with Krita 2.9: Learn All of the Tools to Create Your Next Masterpiece. Packt Publishing, 2015.
5. Landa, Robin. Digital Painting Techniques: Practical Techniques of Digital Art Masters. 3DTotal Publishing, 2011.

Course 09

Course Code	**24UAVEDSE305**
Discipline	**Animation**
Course Title	**ADVANCED LIGHTING AND RENDERING FOR 3D**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course designed for building upon foundational knowledge, explores advanced concepts and workflows to achieve photorealistic lighting, shading, and rendering results.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse Arnold/V-ray materials.	Analyse	1,3,5
2	Create studio lighting setup.	Create	1,3,5
3	Create different types of rendering methods.	Create	1,3,5
4	Create pass rendering techniques.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Light Theories**		**15**	1
	1.1	Theories: Scientific light theories, Artistic theories, Digital lighting theory.	6	
	1.2	Working with Maya lights: Light types and attributes.	9	
2	**Different Lighting Methods**		**16**	2
	2.1	3-point lighting concepts: Computer generated imagery, Effective use of key light, fill light, back light - HDRI Lighting, Lighting an interior scene, Daylight, Artificial lighting,	8	
	2.2	Working with Shadows: Depth map shadows, Ray traced shadows. Three-point lighting: Lighting a character. Mood lighting, Lighting surfaces: Faking Radiosity, Expression based lighting	8	
3	**Lighting Plugins**		**16**	3
	3.1	Materials and its applications: Arnold/V-ray material and its application. DGS material, Diffuse, Glossy and Specular attributes, Dielectric shaders/materials Arnold/V-ray material and its application. DGS material, Diffuse, Glossy and Specular attributes, Dielectric shaders/materials.	10	
	3.2	Octane Render Material and its application: Material, Diffuse, Glossy and Specular attributes.	6	
4	**Rendering Techniques**		**13**	4
	4.1	Rendering Techniques: Software rendering, Setting render globals, Creating physical fogs, Paint effects. Render passes, Batch rendering,	6	

		Interactive photorealistic rendering. Hardware rendering, Using the timeline, Rendering a sequence	
	4.2	Render wrangler, Preparing render sequences, Render diagnostics, Optimizing scene size, Baking simulations, Batch rendering, Command line rendering, Render management solutions, LOD, Optimizing lights, Shadows, Ray tracing	7
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Advanced Maya Texturing and Lighting with CDROM: Lee Lanier, Wiley Publishing 2008
2. Texturing and Modelling: A Procedural Approach: David S. Ebert 2003

Course 10

Course Code	**24UAVEDSE306**
Discipline	**Animation**
Course Title	**PRODUCT VISUALIZATION FOR ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course is a specialized program designed to teach students how to create visually stunning product animations for marketing, advertising, and design purposes.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the fundamentals of product visualization.	Analyse	1,3,5
2	Formulate techniques for modelling and texturing products.	Create	1,3,5
3	Plan lighting and shading for realistic product rendering.	Create	1,3,5
4	Develop animation techniques to showcase products effectively and to create a portfolio showcasing product visualization skills.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Product Visualization**		**16**	1
	1.1	Overview of product visualization and its importance	10	
	1.2	Case studies of successful product animations	3	
	1.3	Introduction to software tools for product visualization	3	
2	**Product Modelling and Texturing/Lighting and Shading**		**14**	2
	2.1	Principles of 3D modelling, Techniques for modelling various types of products, Introduction to texturing and UV mapping, Hands-on exercises on creating basic product models.	7	
	2.2	Fundamentals of lighting in product visualization, Introduction to different lighting setups, Understanding shaders and materials, Hands-on exercises on lighting and shading for products	4	
	2.3	Introduction to texturing and UV mapping, Hands-on exercises on creating basic product models.	3	
3	**Animation Techniques/Rendering and Compositing**		**16**	3
	3.1	Principles of animation applied to product visualization, Techniques for creating engaging product animations, Introduction to keyframing and motion curves, Hands-on exercises on animating products.	8	
	3.2	Rendering techniques for product visualization, Introduction to rendering engines (e.g., Arnold, V-Ray)	4	
	3.3	Basics of compositing for integrating products into scenes. Hands-on exercises on rendering and compositing	4	
4	**Final Project**		**14**	4

	4.1	Advanced shading techniques for realistic product rendering, Integration of special effects into product animations	3
	4.2	Introduction to scripting and automation for workflow optimization, Guest lectures or case studies from industry professionals	3
	4.3	Weekly assignments and exercises - Mid-term project: Creation of a basic product animation - Final project: Development of a complete product visualization showcasing learned techniques Portfolio assessment	8
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Digital Lighting and Rendering" by Jeremy Birn 2006
2. The Art of 3D Computer Animation and Effects" by Isaac Kerlow 2009

References Videos

https://www.youtube.com/watch?v=J26xsUv5G_Y
https://www.youtube.com/watch?v=V8hUsrmN4eY
https://www.youtube.com/watch?v=v-8nxbTH_vI

Course 11

Course Code	**24UAVEDSE307**
Discipline	**Animation**
Course Title	**PITCHING FOR ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course is designed to equip students with the knowledge and techniques needed to effectively pitch their animation ideas and projects to industry professionals.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the importance of pitching process in the animation industry.	Analyse	1,3,5
2	Develop compelling story and visual presentation.	Create	1,3,5
3	Plan pitching techniques for effective story telling.	Create	1,3,5
4	Create your own pitching style.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Pitching**		**12**	1
	1.1	Overview: overview of the pitching process, importance of strong pitch.	4	
	1.2	Know your audience: Identifying key stakeholders and tailoring your pitch to different audiences.	8	
2	**Crafting Techniques**		**16**	2
	2.1	Defining your project concept and goals.	8	
	2.2	Developing a compelling story and visual presentation.	8	
3	**Pitching Techniques**		**16**	3
	3.1	Effective storytelling techniques for pitching	8	
	3.2	Using visuals and multimedia to enhance your pitch	8	
4	**Pitching your Animation**		**16**	4
	4.1	Using visuals and multimedia to enhance your pitch	16	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types

Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

Reference Books:

1. Gardner's Guide to Pitching and Selling Animation, by Garth Gardner 2010
2. Animation Development: From Pitch to Production by David B. Levy 2009

Course 12

Course Code	**24UAVEDSE308**
Discipline	**Animation**
Course Title	**2D DIGITAL ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course is designed to equip students with the foundational skills and knowledge necessary to bring characters, stories, and ideas to life through the dynamic medium of digital animation.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the skill of using 2D Digital Interface of Animation	Understand	1,3,5
2	Develop Basics of Animation Principles	Apply	1,3,5
3	Build Skill of creating Character Animation	Create	1,3,5
4	Create Animated Scene	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of 2d Digital animation**		**6**	1
	1.1	Introduction to 2D Digital Animation: Overview of 2D animation principles - Introduction to animation software - Understanding the digital animation workspace.	3	
	1.2	Introduction of interface of the Software: Basic Tools - Timeline - Panels - Other features	3	
2	**Basics Techniques of Animation**		**12**	2
	2.1	Principles of Animation: Understanding the animation principles - Introduction to storyboarding and animatics	3	
	2.2	Animation Techniques: Keyframe animation techniques - Timing and spacing principles - Creating simple animations with shapes Hands-on exercises: Basic animation principles	6	
	2.3	Transition in Animation: Transition between key poses - Adding in-between frames for Animation/ onion skin function - Tips for creating smooth and believable movement	3	
3	**Character Creation and Animation**		**22**	3
	3.1	Character Creation: Principles of character design for animation - Designing characters with expressiveness and movement in mind - Character Rigging - Creating character model sheets	5	
	3.3	Walk Cycles and Basic Movements: Creating a walk cycle animation - Animating basic character movements - Character weight and balance	12	
	3.2	Lip Sync and Dialogue Animation: Techniques for lip sync in 2D animation - Animating characters with dialogue - Syncing character movements with sound.	5	
4	**Advanced Techniques of Animation**		**20**	4

	4.1	Special Effects: Rain, Snow fall, Cloth, Smoke	5
	4.2	Camera techniques: Principles of camera movement and cinematography in animation	5
	4.3	Practical exercises: Creating an animated scene with dialogue and effects	10
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Williams, Richard. *The Animator's Survival Kit.* Faber and Faber, 2009.
2. Beck, Jerry. *The Animated Movie Guide.* Chicago Review Press, 2005.
3. Lasseter, John, and Steve Daly. *The Art of 2D Animation.* Chronicle Books, 2009.
4. Williams, Joseph Labrecque, and Rob Schwartz. *Adobe Animate Classroom in a Book (2021 release)*. Peachpit Press, 2021.
5. Blanc, Jean-Gabriel. *Animated Storytelling: Simple Steps for Creating Animation and Motion Graphics.* Peachpit Press, 2015.
6. Hoisington, Corinne. *Adobe Animate CC: The Basics*. Cengage Learning, 2016.

Course 13

Course Code	**24UAVEDSE309**
Discipline	**Animation**
Course Title	**Research Methodology for Media Arts**
Type of Course	**Discipline Specific Elective Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course provides an introduction to research methodologies and the students will explore various research methods, both qualitative and quantitative, and learn how to apply them to the study and practice of media arts.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Define concepts and perspectives in media research	Understand	1,2,6,8
2	Develop a focused research question, hypothesis and craft a research proposal outlining research design, methods and justification.	Create	1,2,6,8
3	Select appropriate data collection methods for specific research questions, collect and analyse the data, and write a report based on the research process, observations and inference of analysis.	Create	1,2,3,6,8
4	Create innovative projects in Design and Practice based Research in Media Arts	Create	1,2,6,8

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Research in Media**		**17**	1
	1.1	Concept of Research: Meaning and significance of Research, Validity and Reliability	4	
	1.2	Research perspectives : Social Analysis and Objectivity in Media Arts Research	5	
	1.3	Types of Research: Historical and Analytical, Quantitative and Qualitative, Empirical and Normative	3	
	1.4	Conduct of Research: Identifying research gaps, initiative and innovation	3	
	1.5	Ethics in Research: Ethical considerations, professional best practices and plagiarism	2	
2	**Overview of Research Methodology**		**17**	2
	2.1	Defining key terms in research methodology: Methodology, Problem, Question, Hypothesis, Design, Methods, Analysis and Limitations	2	
	2.2	a) Levels of measurement : Categorising measurement of data and appropriate ways of analysis - Nominal, Ordinal, Interval and Ratio. b) Operationalisation of Idea : Concept, Working Definition, Measurement Indicators, Measurement Tools	3	
	2.3	Research Design: Experimental and exploratory research designs	4	
	2.4	Preparing research proposal: Selection of the topic, Review of literature, Identifying objectives of the Study, Preparing Research Questions	5	

	2.5	Research Question and Hypothesis formation: a) Research questions from the research problem and the knowledge gap addressed b) Tentative prediction about the relationship between variables tested through research.	3	
3	**Data Collection and Analysis**		**20**	3
	3.1	Sources of Data: Primary, Secondary and Tertiary	3	
	3.2	Methods of collecting data: Observation, Survey, Experiment, Interview, Focus groups and Case study method	3	
	3.3	Types of Sampling: Probability and Non- probability	3	
	3.4	Data collection: Role of library and Internet	2	
	3.5	Validation and analysis of Data: organising, cleaning, and analysing to identify patterns, trends, or relationships relevant to research questions and hypotheses.	6	
	3.6	Writing research report: Format of the report and Style of referencing and Bibliography.	3	
4	**Design Research and Practice based Research in Media**		**6**	4
	4.1	Design Research: Core principles, Stages and methods	3	
	4.2	Practice based research in media: Practice -led, Practice Based and Practise as Research in various media arts	3	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Alan Bryman (2018): Social Research Methods, London: OUP
2. B A Prasad Sharma and P. Satyanarayan. Ed.(1983): Research Methods in Social Sciences, New Delhi: Sterling
3. Bridget Somek and Cathy Lewin (2005): Research Methods in the Social Sciences, New Delhi: Sage
4. B.N Ghosh (1984): Scientific Method and Social Research, New Delhi: Sterling.
5. C. R Kothari (2004): Research Methodology: Methods and Techniques. New Delhi: New Age International.

6. Gary King et al., (1994): Designing Social Inquiry; Scientific Interference in Social Research, Princeton: Princeton University Press.
7. John W Cresswell& J David Cresswell (2017): Research Design, New Delhi: Sage.
8. S P Gupta (2012): Statistical Methods, New Delhi: Sultan Chand & Sons
9. William J.Goode and Paul K. Hatt (1952): Methods in Social Research, New York: Mc Graw-Hill Book Co.
10. Zina O'Leary (2010): The Essential Guide to Doing Your Research Project, New Delhi: Sage.
11. Visocky O'Grady, Jennifer and Visocky O'Grady, Kenneth (2017) A designer's research manual : succeed in design by knowing your client and what they really need. Rockport Publishers, an imprint of The Quarto Group: USA.
12. Bestley, Russell and Noble, Ian (2005) Visual Research : An Introduction to Research in Graphic Design, AVA Publishing SA.
13. McKee, Robert (1997) Story : Substance, Structure, Style and Principles of Screenwriting, Harper Collins :USA
14. Lulkowska, Agata (2024) Practice - Based Research for Filmmakers, Routledge

Course 14

Course Code	**24UAVEDSE401**
Discipline	**Animation**
Course Title	**Animation Film Analysis**
Type of Course	**Discipline Specific Elective Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course offers a deep exploration into the artistry, storytelling techniques, and cultural significance of animated films from around the world. Through a combination of screenings, discussions, readings, and written assignments, students will develop critical thinking skills and gain a deeper understanding of the complexities and nuances of animated storytelling.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the narrative structures and themes of animation films.	Analyse	1,3,5
2	Evaluate and critique the artistic and technical aspects of animation.	Evaluate	1,3,5
3	Evaluate the historical and cultural contexts of various animation traditions.	Evaluate	1,3,5
4	Evaluate the impact of animation films on popular culture and media.	Evaluate	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Animation Film Analysis/Foundations of Animation Techniques**		**15**	1
	1.1	Overview of the course - Introduction to major themes in animation studies	9	
	1.2	Early animation history and techniques	3	
	1.3	Major animation Techniques: traditional, 3D CGI, stop-motion, rotoscoping, Use of Stopmotion in films before the era of computers.	3	
2	**Narrative Techniques in Animation/Artistic Elements of Animation**		**15**	2
	2.1	Storytelling in animation: Plot structures and character development - Case study example: Pixar's narrative innovations, chuck jones, Miyazaki, Makoto Shinkai.	8	
	2.2	Visual style: Color, design, and artistic direction	4	
	2.3	Sound in animation: Music, voice acting/ Casting in Animation, and sound effects	3	
3	**Animation Across Cultures/Themes and Ideology**		**16**	3
	3.1	Comparison of Western and Eastern animation styles - Case studies: Disney animations vs. Studio Ghibli	8	
	3.2	Recurring themes: Identity, morality, environmentalism	4	
	3.3	Ideological analysis: Propaganda in animated films	4	
4	**Animation and Society/Contemporary Issues in Animation/Student Presentations and Course Wrap-Up**		**14**	4
	4.1	Influence of animation on popular culture - Animation as a tool for social commentary	3	

	4.2	The digital revolution and its impact on animation - Future trends: VR, AR in animation	3
	4.3	Students present their final projects - Discussion and reflections on key learnings	8
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Understanding Animation" by Paul Wells Routledge; 1st edition (28 May 1998)
2. The Anime Machine: A Media Theory of Animation" by Thomas Lamarre Univ Of Minnesota Press (30 November 2013)
3. Animation: A World History" by Giannalberto Bendazzi Routledge; 1st edition (1 March 2017)
4. Animating Film Theory" edited by Karen Beckman and Jean Ma, Duke University Press (21 March 2014)
5. Film Art: An Introduction" by David Bordwell and Kristin Thompson McGraw-Hill Education; 10th edition (1 August 2012)

References Videos

https://www.youtube.com/watch?v=es68PFlH4gc
https://www.youtube.com/watch?v=SMdayQY_C6w
https://www.youtube.com/watch?v=NfnTT3hSkyQ
https://www.youtube.com/watch?v=XxC_LxgiF7Y
https://www.youtube.com/watch?v=13BfLMe0XFk
https://www.youtube.com/watch?v=zAUmgEzR1xA
https://www.youtube.com/watch?v=3afWDVY6KDA
https://www.youtube.com/watch?v=4rYYW5pKYKU
https://www.youtube.com/watch?v=ahHIifcFyqk
https://www.youtube.com/watch?v=EkH5q1TQGMs
https://www.youtube.com/watch?v=pWeD91lCIKw

Course 15

Course Code	**24UAVEDSE402**
Discipline	**Animation**
Course Title	**Particle and Fluid Dynamics**
Type of Course	**Discipline Specific Elective Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/60/0**
Credits	**4**
Course Description: This course delves students will explore into the intricate world of simulating and animating particles and fluids in computer graphics.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse fundamental principles of fluid and particle dynamics.	Analyse	1,3,5
2	Create realistic simulations for visual effects in CGI.	Create	1,3,5
3	Plan, model, simulate, and render dynamic fluids and particles.	Create	1,3,5
4	Develop custom simulations using scripting and programming in CGI environments	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Overview of CGI and Dynamics/Particle Dynamics**		**16**	1
	1.1	Introduction to CGI and visual effects - Basic concepts in dynamics: Newton's laws, conservation laws - Overview of particle systems and fluid dynamics in CGI	10	
	1.2	Principles of particle dynamics: forces, collisions, particle systems Particle effects in CGI: smoke, fire, explosions	3	
	1.3	Practical sessions using Maya/Blender particle systems	3	
2	**Fluid Dynamics Basics/Simulating Fluids in CGI**		**14**	2
	2.1	Fluid properties and behaviour - Continuity and Navier-Stokes equations - Introduction to fluid solvers in CGI tools	7	
	2.2	Techniques for simulating incompressible fluids - Water, smoke, and fire simulations using Houdini and RealFlow	4	
	2.3	Meshing and rendering fluid simulations	3	
3	**Advanced Simulation Techniques/Integrating Dynamics in CGI Projects**		**16**	3
	3.1	Turbulence and vortex methods - Coupling particle systems with fluid simulations - Custom simulation techniques using scripting in Software	8	
	3.2	Integrating simulations with live-action footage - Case studies: Analysing scenes from films and animations	4	
	3.3	Project work: creating a scene with dynamic simulations	4	
4	**Integrating Dynamics in CGI Projects/Presentations and Critiques**		**14**	4
	4.1	Integrating simulations with live-action footage - Case studies: Analyzing scenes from films and animations - Project work: creating a scene with dynamic simulations	3	
	4.2	Student project presentations - Peer reviews and critiques focusing on both technical and artistic aspects	3	
	4.3	Discussion of real-world applications and potential improvements	8	

5	**Teacher Specific Content**

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

- Learning Maya 5: Dynamics by Alias Wavefront 2003
- Textbooks and online resources on character anatomy and sculpting
- Tutorial videos and documentation for sculpting software
- Access to online communities and forums for additional support

Course 16

Course Code	**24UAVEDSE403**
Discipline	**Project**
Course Title	**PROJECT / PROJECT + CAPSTONE**
Type of Course	**Discipline Specific Elective Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/30/90**
Credits	**12 / 8+4**
Course Description: The Project is through the entire process (Pre-production, Production and Post-production) of creating an short film from concept to completion. Any Medium has to be select.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Build Concepts and develop story.	Create	1,3,5
2	Create Script and Screenplay, Animatic and Storyboard.	Create	1,3,5
3	Develop well designed and executed animation.	Create	1,3,5
4	Plan post production and finalize the output.	Create	1,3,5

COURSE CONTENT

Students should create an animation of minimum one minute to a maximum Ten minute excluding titles using any of the following methods for their animation project with Demo Reel,

- 2D Animation + VFX
- 3D Animation + VFX
- Stop-motion Animation + VFX
- Live Action + Animation + VFX
- Combined the above Any Medium/ Multi-Medium + VFX

Project should be worked out through various production stages after the final approval by the supervising faculty. Students have to complete the final project within the given time period. Student should keep all the important paper works (script, storyboard and character designs) along with them. Viva Voce is part of the examination.

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

Course 17

Course Code	**24UAVEDSE404**

Discipline	**Capstone**
Course Title	**PRACTICE BASED RESEARCH METHODOLOGY FOR MEDIA ARTS-ANIMATION**
Type of Course	**Discipline Specific Elective Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**15/15/30**
Credits	**4**
Course Description: This course introduces undergraduate students to the exciting world of practice-based research in the field of Media Arts. Through a combination of studio practice, critical analysis, and written reflection, students will learn to utilise their creative practice as a means of research inquiry. This is a capstone course to enable a fourth year student in FYUG media programme to identify content for media production, mould the research problem from the content, prepare a research proposal and pursue quality research using media production as a tool in implementing research aims. This course would empower the student to delve deep into research and create media production as a result of the research methodology.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Explain the concept of practice-based research in Media arts	Understand	1,2,3
2	Recognize the pertinent research problem, necessitating investigation through the practice-based research paradigm and develop a research question relevant to any Media Art practice and utilise it as a tool for exploration and knowledge creation.	Create	1,2,4,5,6,8
3	Conduct exploratory investigations utilising diverse methodologies and materials and recording the same via detailed documentation of sketches, annotations, photographic evidence, and supplementary modalities, within the context of practice-based research in any media art and critically analyse the artistic practice.	Create	1,2,3,4,5,6,7,8
4	Articulate the research findings through a written report and materialising the research outcomes into an artefact concomitantly with the written exposition, thereby resolving the research problem within the ambit of practice-based research.	Create	1,2,3,4,5,6,7,8

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Practise based Research in Media**		**15**	1
	1.1	Introduction to key concepts in practice based/led/as research: Major facets of research.	5	
	1.2	Practice based research and relevant methodological perspectives.	5	
	1.3	Need for research in practice of media; Challenges in creating content for media research, and role of practice based/led/as research in developing knowledge base in Media.	3	
	1.4	Political, social, and cultural implications of research while creating content.	2	
2	**Initiation to Practise Based Research (PBR) and Practise Based Research Methodology (PBRM)**		**15**	2
	2.1	Introduction to research methodology: Overview and Stages of PBRM	2	
	2.2	PBRM: Main components, examples and case studies to explain the components.	3	
	2.3	Design research methodology and PBRM for media arts.	3	

	2.4	Forming the research question and defining the research problem for Graphic Design - Setting up research design -Importance of Secondary data - Formation of Research Proposal	7	
3	**Descriptive and Prescriptive Study**		**15**	3
	3.1	Descriptive study - Types of descriptive study; Processes for descriptive study; real-time and retrospective research methods for data collection such as protocol analysis, questionnaire surveys, interviews.	3	
	3.2	Quantitative and qualitative data collection and analysis.	5	
	3.3	Types of prescriptive study; Processes for prescriptive study, Types of support evaluation; Processes in evaluating a design support, and associated evaluation study research methods, Types and structures of research documentation.	3	
	3.4	Application of various methodological intervention in PBRM - Comparison of PBRM with other methodologies	4	
4	**Practice-led- Research Practice-based inquiry**		**15**	4
	4.1	Practice-led- Research Practice-based inquiry: a) Case study analysis b) Ethnographic research c) Participatory action research d) Critical discourse analysis e) Phenomenological inquiry f) Mixed methods approach	12	
	4.2	Planning and documenting media content design iterations - Artefact production - Evaluation of iterations - Report writing	3	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

Readings:

- Barrett, Estelle and Bolt, Barbara. (2014). Practice as Research: An Introduction to Creative Research in the Arts. Intellect Books.
- Smith, Hazel and Dean, Roger T.(2009) Practice-led Research, Research-led Practice in the Creative Arts. University of Edinburgh Press.

- Pink, Sarah. Doing Visual Ethnography.(2021). Fourth Edition. Sage Publications Ltd. (2007).
- Murray,Janet H. Hamlet on the Holodeck: The Future of Narrative in Cyberspace. Free Press (1997) (Filmmaking/Multimedia focus).
- Meggs, Philip B., and Rob Pill. Meggs' History of Graphic Design.(2016) 5th Edition. John Wiley & Sons (Graphic Design focus).
- Denzin, Norman K., and Lincoln, Yvonna S. (2017) The Landscape of Qualitative Research. Sage Publications Ltd.
- Balachandran Nair, S. B. (2020). Embedding Indian Transcendental Philosophy in Indian Cinematic Practice. United Kingdom: Universit y of Central Lancashire.
- Koutsourakis, Angelos and Mark Steven (Ed). (2015).The Cinema of Theo Angelopoulos. United Kingdom: Edinburgh University Press.

Suggested books:

- Doing Research in Design by Christopher Crouch, Jane Pearce
- Research Design: Qualitative, Quantitative, and Mixed Methods Approaches" by John W. Creswell and J. David Creswell
- The SAGE Handbook of Qualitative Research edited by Norman K. Denzin and Yvonna S. Lincoln
- Visual Methodologies: An Introduction to Researching with Visual Materials by Gillian Rose
- Design Research: Methods and Perspectives by Brenda Laurel
- The Design of Everyday Things by Don Norman
- Thinking with Type: A Critical Guide for Designers, Writers, Editors, & Students by Ellen Lupton
- Reflective Practice: Writing and Professional Development" by Gillie E J Bolton and Russel Delderfield
- The Reflective Practitioner: How Professionals Think in Action by Donald A. Schön
- Knudsen, Erik (2018) Finding The Personal Voice In Filmmaking. Palgrave Macmillan, London.
- De Jong, Wilma, Rothwell, Jerry and Knudsen, Erik orcid icon (2011) Creative Documentary: theory and practice.
- Killer Images: Documentary Film, Memory and the Performance of Violence. (2013). United Kingdom: Columbia University Press.
- Practice-led Research, Research-led Practice in the Creative Arts. (2009). Germany: Edinburgh University Press.
- Sullivan, G. (2005). Art Practice as Research: Inquiry in the Visual Arts. Norway: SAGE Publications.

Articles:

- Design as Inquiry: Exploring Design as a Philosophical Medium by Björn Franke (available online)
- The Value of Design Research by Brigitte Borja de Mozota and Louise Valentine (available online)
- Explaining Design Research by Terry Irwin (available online)

- Practice-based research: A guide by Linda Candy (available online)
- Practice-Based Research in the Creative Arts Foundations and Futures from the Front Line by Linda Candy and Ernest Edmonds
- Practice-based Design Research by Laurene Vaughan and Jocelyn Bailey (available online)
- Knudsen, Erik (2022) Feelings. In: A to Z of Creative Writing Methods. Research in Creative Writing . Bloomsbury Publishing, Melbourne, Australia.
- Knudsen, Erik (2018) Method In Madness - a case study in practice research methods. In: Screen Production Research: Creative Practice as a mode of enquiry. Taylor and

Viewing Material:

- Strange Weather, Not War! (Interactive documentary by Miriam Ibrahim) (https://m.youtube.com/watch?v=wkDwqak75R4)
- Helvetica directed by Gary Hustwit
- Exit Through the Gift Shop directed by Banksy

- Jodorowsky's Dune directed by Frank Pavich
- Objectified directed by Gary Hustwit
- Design & Thinking directed by Mu-Ming Tsai
- Design Disruptors directed by Matt D'Avella
- Knudsen, Erik (2015) The Raven On The Jetty. [Video]
- So What? Film Practice Research and Impacts by Prof. Erik Knudsen
  https://youtu.be/9ShyWo-MLQo?si=EoBfD0yPdfiQg2NR
- Erik Knudsen: Research Is Research Is Research
  https://youtu.be/kLz12hysn-A?si=9LPdVfqZv6K73VwM
- Performance Lecture Robert Stillman: The Organ Cherry
  https://youtu.be/wD7G6aNPH14?si=MFlau3IJuyxXERFv

Course 18

Course Code	**24UAVEDSE405**
Discipline	**Capstone**
Course Title	**3D GAME DESIGN**

Type of Course	**Discipline Specific Elective Course**
Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course immerses students in the exciting world of video game development, focusing on the creation of immersive 3D environments, characters, and gameplay experiences.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse fundamental principles of 3D game design.	Analyse	1,3,5
2	Develop skills in world building and level design.	Create	1,3,5
3	Develop proficiency in creating and integrating 3D assets.	Create	1,3,5
4	Create a fully functional 3D game environment	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Game Design**		**20**	1
	1.1	Overview of 3D game design principles and concepts	12	
	1.2	Introduction to game engines and development environment, Assignment: Research and analysis of popular 3D games	4	
	1.3	Understanding the role of world building in game design, Principles of environmental storytelling and immersion, Assignment: Designing a 3D game environment concept.	4	
2	**World Building and Environment Design**		**18**	2
	2.1	Introduction to 3D modelling, texturing, and asset creation, Techniques for creating and optimizing assets for game engines, Assignment: Creating and importing 3D assets into a game engine World	9	
	2.2	World Building and Environment Design: Understanding the role of world building in game design - Principles of environmental storytelling and immersion - Assignment: Designing a 3D game environment concept	5	
	2.3	Asset Creation and Integration: Introduction to 3D modelling, texturing, and asset creation - Techniques for creating and optimizing assets for game engines - Assignment: Creating and importing 3D assets into a game engine	4	
3	**Level Design Fundamentals/Scripting and Interactivity**		**20**	3
	3.1	Principles of level design and spatial composition - Introduction to level editors and design tools - Assignment: Designing a basic game level with provided assets	10	
	3.2	Introduction to scripting languages for game development (e.g., Unity's C#, Unreal Engine's Blueprints, etc.) - Basics of adding interactivity and gameplay mechanics to a level - Assignment: Implementing basic gameplay mechanics through scripting	5	
	3.3	Understanding player psychology and behaviour - Principles of UX design in game interfaces and interactions - Assignment: Evaluating and refining the user experience of a game level	5	
	Final Project		**17**	4

4	4.1	Specialized techniques and tools for advanced game design - Guest lecture or demonstration on a specific topic (e.g., procedural generation, multiplayer design, etc.) - Assignment: Exploring advanced features or techniques in a game engine	7
	4.2	Development and presentation of a fully functional 3D game environment - Incorporating all aspects of 3D game design covered in the course - Peer review and critique of final projects	10
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Advanced Maya Texturing and Lighting with CDROM: Lee Lanier, Wiley Publishing 2008
2. Texturing and Modelling: A Procedural Approach: David S. Ebert 2003
3. Maya for Games: Modelling and Texturing Techniques with Maya and Mudbox by Michael Ingrassia 2018
4. Creating Games with Unity, Substance Painter, & Maya; by Jingtian Li, Adam Watkins 2021

Course 19

Course Code	**24UAVEDSE406**
Discipline	**Capstone**
Course Title	**3D PRINTING TECHNIQUES FOR MOVIES**
Type of Course	**Discipline Specific Elective Course**

Course Level	**400-499**
Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course is a combination of theory, practical demonstrations, and hands-on projects, students will learn how to leverage 3D printing techniques to bring creative visions to life on the big screen.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the principles of 3D printing technology.	Analyse	1,3,5
2	Plan techniques for preparing 3D models for printing.	Create	1,3,5
3	Improve the use of 3D printing in prop and costume design for movies.	Create	1,3,5
4	Develop skills in integrating 3D-printed elements into film production.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to 3D Printing in Film/3D Modelling for Printing**		**20**	1
	1.1	Overview of 3D printing technology and its applications - Historical context and examples of 3D printing in movies - Introduction to different types of 3D printers and materials	12	
	1.2	Basics of 3D modelling for 3D printing - Design considerations for successful 3D prints	4	
	1.3	Techniques for optimizing models for printing - Hands-on exercises in creating printable 3D models	4	
2	**Prop Design and Fabrication/Costume Design and Fabrication**		**18**	2
	2.1	Overview of prop design for movies - Using 3D printing to create props and set pieces - Post-processing techniques for finishing 3D-printed props - Case studies of 3D-printed props in film production	9	
	2.2	Principles of costume design for movies - Techniques for 3D printing costume elements	5	
	2.3	Integrating 3D-printed components with traditional costume fabrication methods - Hands-on exercises in creating wearable 3D-printed costumes	4	
3	**Character Design and Production**		**20**	3
	3.1	Overview of set design for movies	10	
	3.2	Using 3D printing to create miniature sets and set pieces - Techniques for integrating 3D-printed elements into larger sets	5	
	3.3	Hands-on exercises in creating 3D-printed set pieces	5	
4	**Final Project**		**17**	4
	4.1	Review and feedback on student work - Guidance on assembling a professional portfolio - Presentation of final projects showcasing 3D printing techniques for movies	4	
	4.2	Assessment: Weekly assignments and exercises - Mid-term project: Creation of a 3D-printed prop or costume element	2	
	4.3	Final project: Development of a complete scene or character showcasing learned techniques - Portfolio assessment	2	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The 3D Printing Handbook: Technologies, Design and Applications" by Ben Redwood, Filemon Schoffer, and Brian Garret 2017
2. 3D Printing and Additive Manufacturing: Principles and Applications" by Chee Kai Chua and Kah Fai Leong 2017
3. The Prop Effects Guidebook: Lights, Motion, Sound, and Magic" by Eric Hart 2018
4. The Filmmaker's Guide to Visual Effects: The Art and Techniques of VFX for Directors, Producers, Editors, and Cinematographers" by Eran Dinur 2017

3. Discipline Specific Course (Minors)

Discipline: Animation

SEM	Sl No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P

I	**1**	24UAVEDSC101	Basics of Animation Drawing	Animation	100-199	4	0	3	2
III	**4**	24UAVEDSC201	3D Art Foundation	Animation	200-299	4	0	3	2
V	**6**	24UAVEDSC301	Art of Stop motion	Animation	300-399	4	0	3	2

Discipline: Visual Effects

SEM	Sl No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
I	**2**	24UAVEDSC102	Raster Graphics	Visual Effects	100-199	4	0	3	2
II	**3**	24UAVEDSC106	Motion Graphics Essentials	Visual Effects	100-199	4	0	3	2
III	**5**	24UAVEDSC203	Basics of Compositing	Visual Effects	200-299	4	0	3	2

4. Multidisciplinary Courses

SEM	Sl No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
I	**1**	24UAVEMDC101	Basics of 2D Digital Animation	Animation	100-199	3	0	2	2

II	**2**	24UAVEMDC102	Art of Editing	Animation	100-199	3	0	2	2
III	**3**	24UAVEMDC201	Introduction of Visual Effects	Animation & Visual Effects	200-299	3	0	2	2

Course 1

Course Code	**24UAVEMDC101**
Discipline	**Animation**
Course Title	**BASICS OF 2D DIGITAL ANIMATION**
Type of Course	**Multidisciplinary Course**

Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/30/30**
Credits	**3**
Course Description: This course is designed to equip students with the foundational skills and knowledge necessary to bring characters, stories, and ideas to life through the dynamic medium of digital animation.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the skill of using 2D Digital Interface of Animation	Understand	1,3,5
2	Develop Basics of Animation Principles	Apply	1,3,5
3	Build Skill of creating Character Animation	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of 2d Digital animation**		**9**	1
	1.1	Introduction to 2D Digital Animation: Overview of 2D animation principles - Introduction to animation software - Understanding the digital animation workspace.	3	
	1.2	Introduction of interface of the Software: Basic Tools - Timeline - Panels - Other features	6	
2	**Basics Techniques of Animation**		**25**	2
	2.1	Principles of Animation: Understanding the animation principles.	5	
	2.2	Animation Techniques: Key-frame animation techniques - Timing and spacing principles - Creating simple animations with shapes Hands-on exercises: Basic animation principles	10	
	2.3	Transition in Animation: Transition between key poses - Adding in-between frames for Animation/ onion skin function - Tips for creating smooth and believable movement	10	
3	**Character Design and Dialogue Animation**		**26**	3
	3.1	Character : Simple Character face design - Designing characters expressions and mouths – Library creation	6	
	3.2	Lip Sync and Dialogue Animation: Techniques for lip sync in 2D animation - Animating characters dialogue syncing with sound.	6	
	3.3	Special Effects: Rain, Snow fall, Smoke	4	
	3.4	Practical exercises: Creating an animated dialogue with effects	10	
4	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types

Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Lasseter, John, and Steve Daly. *The Art of 2D Animation.* Chronicle Books, 2009.
2. Williams, Joseph Labrecque, and Rob Schwartz. *Adobe Animate Classroom in a Book (2021 release)*. Peachpit Press, 2021.
3. Hoisington, Corinne. *Adobe Animate CC: The Basics*. Cengage Learning, 2016.

Course 02

Course Code	**24UAVEMDC102**
Discipline	**Animation**
Course Title	**ART OF EDITING**

Type of Course	**Multidisciplinary Course**
Course Level	**100-199**
Lecture/Tutorial/Practical Hours	**0/30/30**
Credits	**3**
Course Description: This course designed for aspiring editors, filmmakers, and multimedia creators, this course covers both the technical skills and artistic considerations necessary to produce high-quality video content for various platforms.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse modern developments DV, HD Tapeless media, HD & LR	Analyse	1,3,5
2	Create Shooting script and editing script, time and space concepts	Create	1,3,5
3	Create colour grading by analysing colour timing	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Video Formats**		**14**	1
	1.1	History of Media: Colour TV and video recording, Origin of television systems NTSC, PAL, SECAM.	4	
	1.2	History of formats of video: B&C, VHS, SVHS, U-Matic, Beta etc. - Modern developments - DV.HD Tapeless media HD & LR	10	
2	**Principles of Video Editing and Techniques**		**28**	2
	2.1	Video editing: Continuous shots, Concept of time and space, Introduction to video editing, Jump cut.	8	
	2.2	Editing principles: Time and space concepts, Golden ratio, Rule of Third.	6	
	2.3	Script: Shooting script and editing script, Cut and shot transition, Match cut, Jump cut, Scene transitions, Editing rushes, Online, Linear AB roll, Logging, Advantages and disadvantages of linear and non-linear editing.	7	
	2.4	Non-linear software: Editing Software, Audible sound, Clapboard synchronization.	7	
3	**Colour Grading**		**18**	3
	3.1	Colour Techniques: “Colour Timing”, colour manipulation from early hand colour techniques, three strips, Hazeltine, early telecine colour timing.	5	
	3.2	Modern colour Techniques: Digital intermediate (DI), Colour, Da Vinci etc. - 4:4:4/4:2:2 etc. 10bit vs. 8bit, resolution etc. DI, Film vs. Video latitude, First hands-on session with colour. Controlling specified areas of the image through use of secondary’s, Shapes vs. keys, Tonal ranges, Tracking.	13	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types

Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Video Production Handbook: Focal Press 2008
2. HD Cinematography: Focal Press 2007
3. Nonlinear Editing: Bryce Button (Focal Press) 2002
4. Grammar of edit (Second edition): Roy Thompson (Focal Press) 2017
5. Make the Cut: Lori Jane Coleman A.C.E & Diana Friedberg. 2010
6. Grammar of Shot: Roy Thompson (Focal Press) 2013

Course 03

Course Code	**24UAVEMDC201**
Discipline	**Visual Effects**
Course Title	**INTRODUCTION TO VISUAL EFFECTS**
Type of Course	**Multidisciplinary Course**

Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/30/30**
Credits	**3**
Course Description: This course offers students an immersive introduction to the exciting world of visual effects in film, television, and other media.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify the role and importance of visual effects in today's world.	Apply	1,3,5
2	Identify the principles behind common visual effects techniques.	Apply	1,3,5
3	Evaluate the basic techniques of different vfx software.	Evaluate	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Visual Effects**		**10**	1
	1.1	Introduction to Visual Effects: Overview, special effects and visual effects, visual effects in movies, television and other media	5	
	1.2	Categories and Applications: CGI, Compositing, motion graphics and others	5	
2	**Basics of Vfx Software**		**20**	2
	2.1	Introduction to Vfx Software: Basic Navigation tools, workspace setup, Layers, Shapes, Texts and blending modes	5	
	2.2	Fundamentals of Compositing: Track mattes luma, Alpha matte, Animated mattes, Masks, Animated Masks, Basic Light & Camera	15	
3	**Visual Effects Techniques**		**30**	3
	3.1	Techniques: Chroma Keying, Colour correction, Basic roto & compositing with roto, Introduction to motion tracking & Camera Tracking, Motion stabilization.	15	
	3.2	Effects: Particle systems, explosions, and fire effects, Snow, rain, waves. Etc.	15	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

Practical: Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE)

Theory: Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.**

Practical: Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. "The Art and Science of Digital Compositing" by Ron Brinkmann. 2008
2. "Digital Visual Effects in Cinema: The Seduction of Reality" by Stephen Prince. 2012

5. Value Added Courses

SEM	SI No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
III	1	24UAVEVAC201	Art of Self Defence & Fitness	Self Defence	200-299	3	0	3	0
IV	2	24UAVEVAC202	Sustainable Development and Ecology	Environmental Science	200-299	3	3	0	0

VI	**3**	24UAVEVAC301	Cyber Security Vigilance	Cyber Security	300-399	3	3	0	0

Course 01

Course Code	**24UAVEVAC201**
Discipline	**Self Defence**
Course Title	**ART OF SELF DEFENCE AND FITNESS**
Type of Course	**Value Added Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/0**

Credits	**3**
Course Description: The Art of Self-Defence and Fitness course offers a comprehensive exploration of self-defence techniques, physical fitness, and personal safety strategies.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop the breathing power.	Create	1,3,5
2	Develop the physical fitness.	Create	1,3,5
3	Develop the mental health and self-defence skills	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Kung Fu Practice**		**15**	1
	1.1	Introduction to Kung Fu, Importance of Fitness in daily life	7	
	1.2	Bowing & Meditation, basic warm up exercises	8	
2	**Exercises**		**15**	2
	2.1	Stretching exercises	10	
	2.2	Body strengthening exercises	5	
3	**Self Defence Practice**		**15**	3
	3.1	Basic Hand strikes /hand conditioning, Basic leg strikes	8	
	3.2	Animal movements/self-defence, Basic form	7	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

Practical: Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE)

Theory: Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.**

Practical: Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.

The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. HOW TO LEARN KUNG FU AT HOME
2. TAIZU SHAOLIN KUNG FU SCHOOL CHINA
   HTTPS://WWW.YOUTUBE.COM/WATCH?V=K04JOAGGPRW&LIST=PLE0LUGQN9ZDBJOFONIWXQVSBIPPHSIGP3
3. T. SCHOOL CHINA

Course 02

Course Code	**24UAVEVAC202**
Discipline	**Environmental Science**
Course Title	**SUSTAINABLE DEVELOPMENT AND ECOLOGY**
Type of Course	**Value Added Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**45/0/0**

Credits	**3**
Course Description: This course will gain a deep understanding of the complex interactions between human society and the natural environment and explore strategies for promoting environmental sustainability and social equity.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Explain the various concepts under ecological issues and sustainable development	Understand	1,3,5
2	Analyse the importance of economic sustainability.	Analyse	1,3,5
3	Evaluate various measures for sustainable development.	Evaluate	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Concept of Sustainable Development**		**15**	1
	1.1	Social Ecology and Bio-regionalism, Role of Corporate Social Responsibility (CSR) in sustaining ecology and development, Role of Ecofeminism in sustaining ecology.	10	
	1.2	Dimensions of the 'Common Concerns' on Environment and Human wellbeing. Geo-Politics, Economic Sustainability: Modifying Natural Resource Use.	5	
2	**Ecological Measures for Sustainable development**		**15**	2
	2.1	Controlled use of natural resources, Re-cycling of E-waste, Eco-farming, Save Soil Movement.	10	
	2.2	Scientific Challenges of the 21st Century, Developing a Global Vision	5	
3	**Social Awareness**		**15**	3
	3.1	Public awareness works on sustainable development.	10	
	3.2	Public awareness works on Ecology.	5	
4	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. Jardins, Joseph R. Des: Environmental Ethics: An Introduction to Environmental Philosophy, 3rd Ed. Belmont CA: Wadsworth, 2001.
2. Sanwal, Mukul: The World's Search for Sustainable Development – A Perspective from the Global South", Delhi: Cambridge University Press, 2015.
3. Frey, R. G. and Heath Wellman Christopher (eds.): A Companion to Applied Ethics, Malden: Blackwell Publishing, 2005.
4. Pojman, Louis P.: Environmental Ethics: Readings in Theory and Application 3rd Ed, Belmont: Thomson Wadsworth, 2001.

Course 03

Course Code	**24UAVEVAC301**
Discipline	**Cyber Security**
Course Title	**CYBERSECURITY VIGILANCE**
Type of Course	**Value Added Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**45/0/0**
Credits	**3**
Course Description: This course covers different skills and techniques that help to develop investigation skill in candidates. Students will acquire in-depth skills and knowledge in Cyber forensic and Data Management.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Identify Cyber security cyberattack attempt against individuals.	Apply	1,3,5
2	Identify Cyber forensic against organization.	Apply	1,3,5
3	Analyse the global perspective on cybercrimes and cyber laws.	Analyse	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Cyber security**		**15**	1
	1.1	Introduction to Cyber Security: Basics of safeguarding digital systems and data from malicious attacks through preventive measures and risk management.	3	
	1.2	Cyber-attacks and Preventive measures : Common mistakes in cyberspace can compromise privacy, leading to violations; adherence to best practices in security measures serves as a preventive measure against such breaches.	6	
	1.3	Efficient system maintenance : it covers Efficient system maintenance and how it ensures smooth operation and security through regular updates and optimization.	3	
	1.4	Terminologies and keywords in cyber security : encompass terms related to threats, vulnerabilities, encryption, authentication, and intrusion detection.	3	
2	**Cyber forensic investigation**		**15**	2
	2.1	Introduction to cyber forensic investigation : involves learning the fundamental principles and techniques used to collect, analyse, and present digital evidence in legal proceedings related to cybercrimes.	5	
	2.2	Investigation tools and evidence collection : entail utilizing specialized software and methodologies to gather and preserve digital evidence for forensic analysis in legal investigations.	5	
	2.3	Digital evidence collection: involves gathering electronic data for forensic analysis, often following procedures outlined in the Code of Criminal Procedure also includes filing a First Information Report (FIR), conducting investigations, seizing relevant materials, and adhering to legal protocols. The process concludes with the completion and closure of the investigation.	5	
3	**Cyber-crimes and cyber laws**		**15**	3
	3.1	Encryption & Decryption : entitle the world of latest data protection methods for safe interaction in cyber space	5	
	3.2	Offences, IT act and its amendments : The Offences and IT Act encompasses laws and regulations governing cybercrimes and digital offenses, aimed at regulating and penalizing illegal activities in the digital realm.	5	
	3.3	Prevention to Data compromise & Recovering methods : involves implementing robust security measures, while recovery methods entail restoring compromised data through backups and forensic analysis.	5	

4	**Teacher Specific Content**

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. John R. Vacca, "Computer Forensics: Computer Crime Scene Investigation", Cengage Learning, 2nd Edition, 2005. (CHAPTERS 1 – 18). (UNIT I – IV)
2. Marjie T Britz, "Computer Forensics and Cyber Crime: An Introduction", Pearson Education, 2nd Edition, 2008. (CHAPTERS 3 – 13). (UNIT IV – V
3. "Guide to Computer Forensics and Investigations" by Bill Nelson, Amelia Phillips, and Christopher Steuart

Suggested Readings:

Online resources and tutorials

- National Institute of Standards and Technology (NIST)

6. Skill Enhancement Courses

SEM	SI No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
							L	T	P
IV	**1**	24UAVESEC201	Artistic Production for Industry	Animation	200-299	3	0	3	0
V	**2**	24UAVESEC301	Demo Reel	Portfolio	300-399	3	0	3	0
VI	**3**	24UAVESEC302	Crafting Sound for Animation	Animation	300-399	3	0	3	0

Course 01

Course Code	**24UAVESEC201**
Discipline	**Animation**
Course Title	**ARTISTIC PRODUCTION FOR INDUSTRY**
Type of Course	**Skill Enhancement Course**
Course Level	**200-299**
Lecture/Tutorial/Practical Hours	**0/45/0**
Credits	**3**
Course Description: The Art and Crafts course is an exploration of various artistic mediums and techniques, aimed at fostering creativity, self-expression, and craftsmanship.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Create artworks using 3D pen.	Create	1,3,5
2	Create art properties for movies.	Create	1,3,5
3	Create craft works and miniatures using PVC.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**3D Pen Art**		**10**	1
	1.1	Introduction to 3D Pen and its technical usage. Creating basic Geometry/shapes/designs	5	
	1.2	Creating architectural structures and Props. Creatures and Insects modelling.	5	
2	**Art Props for Movies**		**15**	2
	2.1	Modelling dummy weapons for Film shooting.	5	
	2.2	Realistic Props modelling for Movies	10	
3	**PVC Craft works and Miniatures**		**20**	3
	3.1	Making Vehicle models, Aircrafts, Ships, realistic weapon models.	10	
	3.2	Making realistic exterior models.	10	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

Practical: Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE)

Theory: Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.**

Practical: Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.

The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

Course 02

Course Code	**24UAVESEC301**
Discipline	**Portfolio**
Course Title	**DEMOREEL**
Type of Course	**Skill Enhancement Course**
Course Level	**300-399**
Lecture/Tutorial/Practical Hours	**0/45/0**
Credits	**3**

Course Description: The Demoreel Development course is designed to guide students in the creation of a professional-quality demoreel showcasing their skills and achievements in their chosen field of study or profession.

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Create an introductory clip showcasing their best work	Create	1,3,5
2	Compile variety of works demonstrating their range of skills.	Create	1,3,5
3	Create a successful demo reel	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Demo reel**		**10**	1
	1.1	Brief title card with your name and profession.	5	
	1.2	A short introductory clip showcasing your best work or a montage of your skills.	5	
2	**Work Highlights**		**15**	2
	2.1	Select 4-6 of your best projects or pieces of work, include a variety to demonstrate your range of skills (e.g.: Animation, Modelling, Compositing, Rotoscoping)	10	
	2.2	Show excerpts or key scenes, keeping each segment concise (10-30 second each).	5	
3	**Breakdowns and Reel conclusion**		**20**	3
	3.1	Break down 1-2 of the showcased projects, explain your role, challenges faced and any unique techniques used, Include side by side: comparisons, wireframes, or before and after shots to illustrate your contributions.	10	
	3.2	Recap your strength and specialities, provide your contact information (email, website, phone number, LinkedIn, etc.), End with a memorable outro, such as a logo animation or a thank you message.	10	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

Practical: Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE)

Theory: Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.**

Practical: Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. INTERVIEW: HOW TO MASTER INTERVIEWS AND STAND OUT AMONG YOUR PEERS: STEFAN ANDERSON
2. SUCCESS IN INTERVIEW: ANAND GANGULY

WEBSITE REFERENCES

https://www.premiumbeat.com/blog/top-20-tips-for-creating-a-successful-demo-reel/
https://careerservices.princeton.edu/undergraduate-students/interviews-offers/preparinginterviews
https://www.kent.ac.uk/careers/cv/mediacv.htm
https://www.bbc.co.uk/academy/production/article/art20130702112136472

Course 03

Course Code	**24UAVESEC302**
Discipline	**Animation**
Course Title	**CRAFTING SOUND FOR ANIMATION**
Type of Course	**Skill Enhancement Course**
Course Level	**300-399**

Lecture/Tutorial/Practical Hours	**0/45/0**
Credits	**3**
Course Description: This course offers an in-depth exploration of the principles, techniques, and creative processes involved in designing and integrating sound for animation projects.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the role of sound in storytelling.	Analyse	1,3,5
2	Analyse basic sound editing, recording techniques.	Analyse	1,3,5
3	Design unique sounds for characters.	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Sound in animation**		**10**	1
	1.1	Basics of sound: Introduction, different types of sound	5	
	1.2	Sound in Animation: Importance of sound in animation movies, case studies of movies.	5	
2	**Recording and Editing of sound**		**15**	2
	2.1	Recording and Editing: Different microphones for different purposes, recording environments, acoustics, basic microphone techniques. Basic Editing techniques.	10	
	2.2	Sound for Animation: Creating realistic environments, background sounds to enhance storytelling, Integrating ambient sounds with animation	5	
3	**Character Sound Design**		**20**	3
	3.1	Character Sound Design: Unique sounds for characters, character voice overs and dialogues, Syncing character sounds with animation character sound	10	
	3.2	Mixing: Mixing sounds (Dialogue, sound effects and music).	10	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

Practical: Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.

B. End Semester Examination (ESE)

Theory: Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. "The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects" by Ric Viers 2008
2. "The Foley Grail: The Art of Performing Sound for Film, Games, and Animation" by Vanessa Theme Ament 2014
3. "The Complete Guide to Game Audio: For Composers, Musicians, Sound Designers, and Game Developers" by Aaron Marks 2008

7. Signature Courses

SI No	COURSE CODE	COURSE NAME	COURSE STREAM	LEVEL	CREDIT	HOURS PER WEEK		
						L	T	P
1	24UAVESIG201	Visual Editing and Sound Design	Animation	200-299	4	0	3	2
2	24UAVESIG301	Explore in Experimental Animation	Animation	300-399	4	0	3	2

3	24UAVESIG302	Mastering the Craft of Ideation & Orchestrating Visual Narratives	Animation	300-399	4	0	3	2

Course 01

Course Code	**24UAVESIG201**
Discipline	**Animation**
Course Title	**VISUAL EDITING AND SOUND DESIGN**
Type of Course	**Signature Course**
Course Level	**200-299**

Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course introduces students to the principles and techniques of visual editing and sound design for various media formats, including film, video, animation, and interactive media. Through theoretical discussions, practical exercises, and hands-on projects, students will learn how to manipulate visual elements and sound to enhance storytelling and create impactful media experiences.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Overview Basics of Visual Editing	Analyse	1,3,5
1	Analyse the Basics of Visual Editing	Analyse	1,3,5
2	Develop Sound Design Techniques	Create	1,3,5
3	Create Integrated Visuals with sound	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Visual Editing, Advanced Editing Techniques**		**18**	1
	1.1	Overview of visual storytelling - History and evolution of editing techniques - Basic principles of visual editing (continuity editing, montage, rhythm) - Introduction to editing software (e.g., Adobe Premiere Pro, Final Cut Pro).	6	
	1.2	Transitions and effects - Time manipulation (slow motion, time-lapse)	6	
	1.3	Colour grading and correction - Multi-camera editing	6	
2	**Sound Design**		**12**	2
	2.1	Importance of sound in visual media - Basic principles of sound design (foley, ambient sound, dialogue) - Introduction to sound editing software (e.g., Audacity, Adobe Audition)	6	
	2.2	Microphone types and techniques - Field recording vs. studio recording - Dialogue recording and editing - Music selection and synchronization	6	
3	**Advanced Techniques**		**25**	3
	3.1	Sound effects creation and manipulation - Spatial audio and surround sound - Mixing and mastering techniques - Audio restoration and cleanup	15	
	3.2	Syncing sound to picture - Creating mood and atmosphere through sound	10	
4	**Integrating Visual Editing and Sound Design**		**20**	4
	4.1	**Final project**: Creating a short film or video with emphasis on visual editing and sound design	20	
5	**Teacher Specific Content**			

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types

Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. BASIC OF AUDIO -VISUAL EDITING by RA MITCH S. 2013

Course 02

Course Code	**24UAVESIG301**
Discipline	**Animation**
Course Title	**Explore in Experimental Animation**
Type of Course	**Signature Course**
Course Level	**300-399**

Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: This course is a dynamic exploration of the creative possibilities within animation, focusing on pushing the boundaries of traditional animation techniques and storytelling conventions of artistic exploration and innovation.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Analyse the Basics of Experimental Animation	Analyse	1,3,5
2	Develop Basic Animation Techniques	Create	1,3,5
3	Design Techniques of Experimental Animation	Create	1,3,5
4	Create Experimental Animation with Sound	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction to Experimental Animation (6 hours)**		**14**	1
	1.1	Overview of experimental animation: definition, history, and key figures - Discussion of contemporary trends and examples of experimental animation	3	
	1.2	Introduction to unconventional animation techniques: collage, pixilation, rotoscoping.	3	
	1.3	Experimentation with traditional animation principles in unconventional ways - Hands-on exercises to explore foundational techniques	8	
2	**Abstract Animation - Experimental Narrative - Hybrid Animation**		**36**	2
	2.1	Exploration of abstract animation: color, shape, form, and texture - Techniques for creating non-representational animated works - Analysis and discussion of abstract animation in the context of visual music.	12	
	2.2	Experimentation with narrative structures: nonlinear storytelling, associative imagery - Incorporation of found footage, mixed media, and improvisation in narrative animation - Critique and discussion of experimental narrative works.	12	
	2.3	Exploration of hybrid animation techniques: combining traditional and digital media - Integration of live-action footage, puppetry, and experimental compositing - Hands-on projects combining multiple animation mediums	12	
3	**Sound Design for Experimental Animation**		**15**	3
	3.1	Sound Design for Animation - Understanding the role of sound in animation - Creating and integrating soundscapes	3	
	3.2	Syncopation of Sound and Image - Exploring the relationship between visual and auditory elements - Creating rhythmic and synchronized animations	3	
	3.3	Voice and Dialogue in Animation - Incorporating voiceovers and dialogue in experimental animation - Techniques for conveying emotions through sound	9	
4	**Project Development and Presentation**		**10**	4

	4.1	Final project development and Presentation	10
5	**Teacher Specific Content**		

Teaching and Learning Approach
Classroom Procedure (Mode of transaction) Interactive lectures, Flipped Classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.
Assessment Types
Mode of Assessment **A. Continuous Comprehensive Assessment (CCA)** **Theory:** Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*. **Practical:** Observation of practical skills, , Laboratory record, *Any other method as may be required for specific course by the course faculty*.
B. End Semester Examination (ESE) **Theory:** Written test/Standardized Test (MCQ)/Open book/ Problem based assignments/Individual project report/Team project report**.** **Practical:** Practical based assessment, Record, *Any other method as may be required for specific course by the course faculty*.
The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. O'Hailey, Tina. Hybrid Animation: Integrating 2D And 3D Assets. Focal Press, 2015.
2. Foster, Thomas, and Martha Blassnigg. Experimental Animation: From Analogue to Digital. Bloomsbury Academic, 2019.
3. Wells, Paul. Animation: Genre and Authorship. Wallflower Press, 2002.
4. O'Pray, Michael. Avant-Garde Film: Forms, Themes, and Passions. Wallflower Press, 2003.
5. Beckerman, Howard. Animation: The Whole Story. Thames & Hudson, 2003.
6. Cholodenko, Alan, editor. The Illusion of Life 2: More Essays on Animation. Power Publications, 2007.
7. Yvonne Andersen. Reel Time: The Social Experience of Film. Amsterdam University Press, 2012.
8. Laybourne, Kit. The Animation Book: A Complete Guide to Animated Filmmaking - From Flip-Books to Sound Cartoons to 3D Animation. Three Rivers Press, 1998.

Course 3

Course Code	**24UAVESIG302**
Discipline	**Animation**
Course Title	**Mastering the Craft of Ideation & Orchestrating Visual Narratives**
Type of Course	**Signatory Course**
Course Level	**300-399**

Lecture/Tutorial/Practical Hours	**0/45/30**
Credits	**4**
Course Description: Mastering the Craft of Ideation and Orchestrating Visual Narratives is a comprehensive course designed to equip students with advanced skills in conceptualizing and visualizing animation projects. This course emphasizes the development of original concepts and intricate stories and then transforms them into compelling visual narratives through lectures by industry experts and practical sessions.	

COURSE OUTCOMES (CO)

CO No.	Expected Course Outcome	Learning Domains *	PO No.
1	Develop and Refine animation concepts and ideas	Create	1,3,5
2	Develop and Explore advanced animation concepts and ideas	Create	1,3,5
2	Create detailed and dynamic visual narratives through storyboarding	Create	1,3,5
3	Execute comprehensive visual narratives that effectively communicate stories	Create	1,3,5

COURSE CONTENT

Module	Units	Description	Hours	CO No.
1	**Introduction of Animation Concepts and ideation**		**10**	1
	1.1	Introduction of the Animation ideas	3	
	1.2	Exploring and refining sophisticated animation ideas	7	
2	**Advanced Ideation Techniques**		**15**	2
	2.1	Advanced brainstorming and ideation methods	7	
	2.2	Developing complex themes and character arcs	8	
3	**Visual Storytelling**		**30**	3
	3.1	Techniques for creating and visualizing compelling stories	5	
	3.2	Advanced storyboarding techniques	10	
	3.3	Visual composition and scene design	5	
	3.4	Creating Animatics for detailed visual planning	10	
4	**Executing Visual Narratives**		**20**	4
	4.1	Bringing concepts to life through comprehensive visual storytelling	5	
	4.2	Integrating visual elements into cohesive narrative	5	
	4.3	Refining and presenting final visual narratives	10	
4	**Teacher Specific Content**			

Teaching and Learning Approach

Classroom Procedure (Mode of transaction)

Interactive lectures, flipped classroom, Lecture-based Learning, Project-Based Learning, Experiential Learning, Peer Teaching, invited lecture, group discussions, Discussion-based Learning, Inquiry-Based Learning, Field based collection and interactions, Online Learning, Blended Learning, and other innovative learning approaches.

Assessment Types

Mode of Assessment

A. Continuous Comprehensive Assessment (CCA)

Theory: Quiz, Oral Presentation, Self and Peer assessments, Written test, Open book test, Problem based assignment, Field study report/Group discussion. *Any other method as may be required for specific course by the course faculty*.

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The percentage weightage for CCA and ESE will be as per the undergraduate regulations of the college.

References:

1. The Art Of Visual Storytelling: Captivating Audiences With Your Imagination; Wilhelm Maensson
2. Orchestrating Experiences: Collaborative Design for Complexity Paperback – 12 May 2020 by Chris Risdon