ICT, Computing & iMedia

INTENT

Our curriculum is designed to foster critical thinking, computational thinking, and creativity, while also promoting effective communication and collaboration skills. We believe that our students should be prepared to contribute to the digital world responsibly, ethically, and effectively.

We focus on developing and refining fundamental skills such as computational thinking, programming, online safety, and digital media creation. Through a range of engaging and challenging activities, we aim to foster a love of Computing and encourage students to become confident and creative problem-solvers in a rapidly evolving digital world.

IMPACT

Studying computing develops problem-solving, critical thinking and collaboration skills, essential for future careers. These skills enable effective communication, analysis, and informed decision-making, providing a competitive edge. Additionally, digital literacy empowers students to navigate and succeed in the digital world, offering lifelong benefits.

LIFELONG OPPORTUNITIES

Studying computing opens up a wealth of career opportunities in fields such as software development, data analysis, cybersecurity, and artificial intelligence. The skills developed through computing are transferable to a range of industries and offer the potential for lifelong career growth and innovationh

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YEAR 11

SEMESTER 1

Topic 2: Create characters and comics

How does using specific software support creating and designing comic characters?

Techniques to obtain and create components for use within comics. Technical skills to create comics. techniques to save and publish characters and comics

SEMESTER 2

Topic Area 3: Review characters and comics

Why is it important to compare created characters and comics against client briefs; client requirement lists or success criterias?

Techniques to check and review characters and comics. Improvements and further developments. Techniques to check and review characters and comics.

UNIT R095

SEMESTER 3

Topic Area 1: The media industry

Why do the size and scale of projects/productions mean that individuals may perform more than one role?

Media industry sectors and products. Job roles in the media industry. Audience demographics and segmentation. Research methods, sources and types of data. Media codes used to convey meaning; create impact and/or engage audiences.

Topic Area 2: Factors influencing product design

How style; content and layout are linked to the purpose. Client requirements and how they are defined.

SEMESTER 4

Topic Area 3: Pre-production planning

What makes each pre-production document effective?

Work planning. Documents used to support ideas generation. Documents used to design and plan media products.

Topic Area 4: Distribution considerations

What makes each pre-production document effective?

The legal issues that affect media. Distribution platforms and media to reach audiences. Properties and formats of media files.

UNIT R093

YEAR 10

SEMESTER 1

Topic 1: Plan characters and comics

How do different design style options determine sector; purpose and audience

Character features and conventions. Conventions of comics. Resources required to create characters and comics. Pre-production and planning documentationand techniques for characters and comics

UNIT R095

SEMESTER 1

Topic 3: Create visual identity and digital graphics

Why is it important to resample images and assets for use in a print product?

Tools and techniques of imaging editing software used to create digital graphics

UNIT R094

SEMESTER 1

Topic 2 - Plan digital graphics for products

Why is the importance of graphic designs that incorporate visual identity and house style vital to a company's success?

Graphic design and conventions

SEMESTER 1

Topic 1 - Develop visual identity

What is meant by visual identity?

Purpose - elements and design of visual identity

YEAR 9

SEMESTER 1

Game Programming

What programming concepts and techniques are required to create games using Pygame or Javascript, including event handling, collision detection, and game states?

Understanding of programming concepts and techniques, including event handling, collision detection, and game states.

Knowledge of programming languages, such as Python or Javascript

SEMESTER 2

Algorithms

What are algorithms, how can they be represented using flowchart symbols, and how can they be used to solve problems, including searching and sorting algorithms?

Understanding of algorithm design principles, including flowchart symbols and pseudocode.

Knowledge of searching and sorting algorithms and their applications.

Ability to analyse and optimize algorithm efficiency. Logical thinking and problem-solving skills for designing and implementing algorithms.

SEMESTER 3

Visual Identity

What are the key elements of a visual identity, including colour, typography, and layout, and how can they be used to create a cohesive brand image?

Understanding of graphic design principles, including layout, colour, and typography.

Knowledge of branding and visual identity principles and their applications in marketing.

Ability to design and create a cohesive brand image using design software.

Critical thinking and evaluation skills for analyzing and interpreting visual content

SEMESTER 4

Python Programming Project

How can we use Python programming concepts and techniques to design and implement a project, including defining requirements, planning, coding, testing, and debugging?

Understanding of software development life cycle, including requirements gathering, design, coding, testing, and deployment.

Knowledge of programming concepts and techniques, including data structures, algorithms, and object-oriented programming. Ability to design and implement a software project using

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SEMESTER 4

Databases and Boolean

How can we use Boolean logic to manipulate data in databases, including searching, filtering, and sorting?

Problem-solving skills for querying and filtering data using Boolean operators.

Ability to use database software, such as MySQL or Access. Problem-solving skills for querying and filtering data using Boolean operators

Knowledge of database design principles and data manipulation techniques.

Understanding of Boolean logic and its applications in programming.

SEMESTER 3

Comic Book Creation

What are the main principles and conventions of comic book design, including character design, speech bubbles, and panel layout?

Critical thinking and evaluation skills for analysing and interpreting comic book content.

Creativity and imagination for designing engaging and visually appealing comic book content. Critical thinking and evaluation skills for analysing and interpreting comic book content.

Knowledge of graphic design principles, including layout, colour, and typography.

Understanding of comic book design principles, including character design, speech bubbles, and panel layout.

SEMESTER 3

Python Turtle

How can we use the Python turtle library to create patterns and shapes using sequence, iteration, and procedures?

Logical thinking and problem-solving skills for creating complex designs

Ability to use the turtle graphics library to create patterns and shapes. Logical thinking and problem-solving skills for creating complex designs.

Knowledge of the Python programming language and its syntax.

Understanding of basic programming concepts, including sequence, iteration, and procedures.

SEMESTER 2

Advent Window

How can we use graphic design principles, including layers and rollover images, to create an interactive advent calendar in Fireworks?

Creativity and innovation for designing visually appealing and engaging content

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YEAR 7

SEMESTER 1

Online Safety

What strategies can we use to stay safe and protect our personal information online?

Knowledge of common online threats and how to protect against them. Understanding of personal information and privacy protection. Critical thinking and evaluation of online content. Communication skills for reporting and seeking help

SEMESTER 2

Digital Detective

How can we use binary, ASCII codes, and image formats to represent and process different types of data, such as text, graphics, and multimedia?

Understanding of binary and ASCII codes and how they represent different types of data. Knowledge of image formats and compression techniques. Ability to convert between different data representations. Problem-solving skills for processing and manipulating data.

SEMESTER 3

Bafta Games Design

What principles and techniques can we use to design and create engaging and challenging games for a PEGI 12 audience?

Understanding of game design principles, including storyboarding, user interface, and game mechanics. Knowledge of character and level design principles, including game balance and difficulty. Creativity and imagination for designing engaging and immersive game content.

SEMESTER 4

Computer Hardware

What are the main components of a computer system and how do they work together to execute instructions and perform tasks?

Understanding of computer hardware components and their functions. Knowledge of computer architecture and system design. Ability to troubleshoot and diagnose hardware issues. Critical thinking and problem-solving skills for optimizing computer performance.

YEAR 8

SEMESTER 1

Advent Window

How can we use graphic design principles, including layers and rollover images, to create an interactive advent calendar in Fireworks?

Knowledge of graphic design principles, including layout, colour, and typography.

Proficiency in using design software, such as Fireworks or Photoshop.