Digital Design and Game Development

ACADEMIC SKILLS

AA SPEAKING AND LISTENING

AA1 Utilize effective verbal and non-verbal communication skills

AA2 Participate in conversation, discussion, and group presentations

AA3 Communicate and follow directions/procedures

AA4 Communicate effectively with customers and co-workers

AB READING AND WRITING

AB1 Locate and interpret written information

AB2 Read and interpret workplace documents

AB3 Identify relevant details, facts, and specifications

AB4 Record information accurately and completely

AB5 Demonstrate competence in organizing, writing, and editing using correct vocabulary, spelling, grammar, and punctuation

AB6 Demonstrate the ability to write clearly and concisely using industry specific terminology

AC CRITICAL THINKING AND PROBLEM SOLVING

AC1 Utilize critical-thinking skills to determine best options/outcomes (e.g., analyze reliable/unreliable sources of information, use previous experiences, implement crisis management, develop contingency planning)

AC2 Utilize innovation and problem-solving skills to arrive at the best solution for current situation

AC3 Implement effective decision-making skills

AD MATHEMATICS

AD1 Perform basic and higher level math operations (e.g., addition, subtraction, multiplication, division, decimals, fractions, units of conversion, averaging, percentage, proportion, ratios)

AD2 Solve problems using measurement skills (e.g., distance, weight, area, volume)

AD3 Make reasonable estimates
AD4 Use tables, graphs, diagrams, and charts to obtain or convey information

AD5 Use deductive reasoning and problem-solving in mathematics

**AE FINANCIAL LITERACY**

AE1 Locate, evaluate, and apply personal financial information

AE2 Identify the components of a budget and how one is created

AE3 Set personal financial goals and develop a plan for achieving them

AE4 Use financial services effectively

AE5 Demonstrate ability to meet financial obligations

**AF INTERNET USE AND SECURITY**

AF1 Recognize the potential risks associated with Internet use

AF2 Identify and apply Internet security practices (e.g., password security, login, logout, log off, lock computer)

AF3 Practice safe, legal, and responsible use of technology in the workplace

**AG INFORMATION TECHNOLOGY**

AG1 Use technology appropriately to enhance professional presentations

AG2 Demonstrate effective and appropriate use of social media

AG3 Identify ways social media can be used as marketing, advertising, and data gathering tools

**AH TELECOMMUNICATIONS**

AH1 Select and use appropriate devices, services, and applications to complete workplace tasks

AH2 Demonstrate appropriate etiquette when using e-communications (e.g., cell phone, e-mail, personal digital assistants, online meetings, conference calls)
EMPLOYABILITY SKILLS

EA POSITIVE WORK ETHIC

EA1 Demonstrate enthusiasm and confidence about work and learning new tasks
EA2 Demonstrate consistent and punctual attendance
EA3 Demonstrate initiative in assuming tasks
EA4 Exhibit dependability in the workplace
EA5 Take and provide direction in the workplace
EA6 Accept responsibility for personal decisions and actions

EB INTEGRITY

EB1 Abide by workplace policies and procedures
EB2 Demonstrate honesty and reliability
EB3 Demonstrate ethical characteristics and behaviors
EB4 Maintain confidentiality and integrity of sensitive company information
EB5 Demonstrate loyalty to the company

EC SELF-REPRESENTATION

EC1 Demonstrate appropriate dress and hygiene in the workplace
EC2 Use language and manners suitable for the workplace
EC3 Demonstrate polite and respectful behavior toward others
EC4 Demonstrate personal accountability in the workplace
EC5 Demonstrate pride in work

ED TIME, TASK, AND RESOURCE MANAGEMENT

ED1 Plan and follow a work schedule
ED2 Work with minimal supervision
ED3 Work within budgetary constraints
ED4 Demonstrate ability to stay on task to produce high quality deliverables on time
EE DIVERSITY AWARENESS
EE1 Recognize diversity, discrimination, harassment, and equity
EE2 Work well with all customers and co-worker
EE3 Explain the benefits of diversity within the workplace
EE4 Explain the importance of respect for feelings, values, and beliefs of others
EE5 Identify strategies to bridge cultural/generational differences and use differing perspectives to increase overall quality of work
EE6 Illustrate techniques for eliminating gender bias and stereotyping in the workplace
EE7 Identify ways tasks can be structured to accommodate the diverse needs of workers
EE8 Recognize the challenges and advantages of a global workforce

EF TEAMWORK
EF1 Recognize the characteristics of a team environment and conventional workplace
EF2 Contribute to the success of the team
EF3 Demonstrate effective team skills and evaluate their importance in the workplace (e.g., setting goals, listening, following directions, questioning, dividing work)

EG CREATIVITY AND RESOURCEFULNESS
EG1 Contribute new ideas
EG2 Stimulate ideas by posing questions
EG3 Value varying ideas and opinions
EG4 Locate and verify information

EH CONFLICT RESOLUTION
EH1 Identify conflict resolution skills to enhance productivity and improve workplace relationships
EH2 Implement conflict resolution strategies and problem-solving skills
EH3 Explain the use of documentation and its role as a component of conflict resolution

EI CUSTOMER/CLIENT SERVICE
EI1 Recognize the importance of and demonstrate how to properly acknowledge customers/clients
EI2 Identify and address needs of customers/clients
EI3 Provide helpful, courteous, and knowledgeable service

EI4 Identify appropriate channels of communication with customers/clients (e.g., phone call, face-to-face, e-mail, website)

EI5 Identify techniques to seek and use customer/client feedback to improve company services

EI6 Recognize the relationship between customer/client satisfaction and company success

**EJ ORGANIZATIONS, SYSTEMS, AND CLIMATES**

EJ1 Define profit and evaluate the cost of conducting business

EJ2 Identify "big picture" issues in conducting business

EJ3 Identify role in fulfilling the mission of the workplace

EJ4 Identify the rights of workers (e.g., adult and child labor laws and other equal employment opportunity laws)

EJ5 Recognize the chain of command, organizational flow chart system, and hierarchy of management within an organization

**EK JOB ACQUISITION AND ADVANCEMENT**

EK1 Recognize the importance of maintaining a job and pursuing a career

EK2 Define jobs associated with a specific career path or profession

EK3 Identify and seek various job opportunities (e.g., volunteerism, internships, co-op, part-time/full-time employment)

EK4 Prepare a resume, letter of application, and job application

EK5 Prepare for a job interview (e.g., research company, highlight personal strengths, prepare questions, set-up a mock interview, dress appropriately)

EK6 Participate in a job interview

EK7 Explain the proper procedure for leaving a job

**EL LIFELONG LEARNING**

EL1 Acquire current and emerging industry-related information

EL2 Demonstrate commitment to learning as a life-long process and recognize learning opportunities

EL3 Seek and capitalize on self-improvement opportunities

EL4 Discuss the importance of flexible career planning and career self-management
EL5 Employ leadership skills to achieve workplace objectives (e.g., personal vision, adaptability, change, shared vision)

EL6 Recognize the importance of job performance evaluation and coaching as it relates to career advancement

EL7 Accept and provide constructive criticism

EL8 Describe the impact of the global economy on jobs and careers

EM JOB SPECIFIC TECHNOLOGIES

EM1 Identify the value of new technologies and their impact on driving continuous change and the need for life-long learning

EM2 Research and identify emerging technologies for specific careers

EM3 Select appropriate technological resources to accomplish work

EN HEALTH AND SAFETY

EN1 Assume responsibility for safety of self and others

EN2 Follow safety guidelines in the workplace

EN3 Manage personal health and wellness
OCCUPATIONAL SKILLS

OA COMPUTER LITERACY

OA1 Demonstrate proficiency in a word processing package
OA2 Demonstrate proficiency in a spreadsheet package
OA3 Describe common applications of a database
OA4 Demonstrate proficiency in a presentation package
OA5 Send and receive electronic mail
OA6 Print in landscape and portrait orientations
OA7 Apply Internet etiquette and safety
OA8 Explain the differences between a Web browser and a search engine
OA9 Navigate a World Wide Web browser
OA10 Identify Internet search engines and their advantages and disadvantages
OA11 Demonstrate proficiency in the use of the Internet
OA12 Identify what an operating system is, how it works, and be able to solve common problems
OA13 Manipulate (e.g., create, copy, cut, paste, move, rename, delete) files and folders to manage and maintain data
OA14 Discriminate between ethical and unethical uses of computers and information
OA15 Demonstrate an understanding of copyrights and licensing
OA16 Demonstrate an awareness of computer security and a basic understanding of ways to protect a computer (e.g., viruses, Trojans, Malware)
OA17 Explain the impact of computers on society
OA18 Identify types of computers, platforms, and devices explaining how they process information and how individual computers interact with other computing systems and devices
OA19 Identify the function of computer hardware components
OA20 Identify how to maintain computer equipment and solve common problems relating to computer hardware
OA21 Identify how software and hardware work together to perform computing tasks and how software is developed and upgraded
OA22 Identify different types of software, general concepts relating to software categories, and the tasks to which each type of software is most suited or not suited

OA23 Demonstrate the safe and responsible use of resources, office equipment, and machines

**OB INFORMATION TECHNOLOGY PROJECT MANAGEMENT**

OB1 Determine client needs

OB2 Determine the purpose and goals of the project

OB3 Identify target audience

OB4 Identify stakeholders and decision makers

OB5 Define scope of work to meet client requirements

OB6 Evaluate project requirements

OB7 Estimate time requirements

OB8 Create a project plan

OB9 Estimate project pricing

OB10 Demonstrate knowledge of project budgeting, scheduling, and control issues related to development and support

OB11 Identify tools and resources for the job

OB12 Identify critical milestones

OB13 Report project status

OB14 Identify software packages (e.g., MS Project, Freeware, Shareware)

**OC EXPLORE THE DIGITAL GAME INDUSTRY**

OC1 Explain the history of game development

OC2 Understand careers in game design and development

OC3 Demonstrate knowledge of industry terminology

OC4 Demonstrate knowledge of design theories

**OD UNDERSTAND FOUNDATIONS OF GAME DESIGN AND DEVELOPMENT**

OD1 Explain fundamentals of production

OD2 Understand game structure
OD3 Produce game documentation
OD4 Incorporate industry standard game mechanics

**OE CREATE ASSETS FOR GAME DEVELOPMENT**

OE1 Create 2D game art and apply animation
OE2 Understand fundamentals of art
OE3 Understand environments in game design
OE4 Develop a character
OE5 Create 3D game art
OE6 Apply animation to 3D game assets

**OF UNDERSTAND PROGRAMMING FOR DIGITAL GAME DEVELOPMENT**

OF1 Apply logic to game development
OF2 Understand programming language concepts
OF3 Understand algorithms

**OG BUILD A GAME**

OG1 Explore 2D and 3D game engines
OG2 Diagram game levels
OG3 Utilize Graphical User Interface (GUI)
OG4 Design custom mechanics
OG5 Integrate media types

**OH UNDERSTAND LEGAL AND ETHICAL ISSUES IN GAME DESIGN AND DEVELOPMENT**

OH1 Understand copyright laws in relationship to game development
OH2 Understand security issues in relation to game development and design
OH3 Apply personal and professional ethics

**OI PUBLISHING THE GAME**

OI1 Target platforms
OJ2 Market a game

**OJ EXPLOROE EMERGING TECHNOLOGIES**

OJ1 Understand social aspects of gaming

OJ2 Understand the role of networking

OJ3 Explore advances in devices