RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

IDMX208 – INTERFACE DESIGN & HUMAN COMPUTER INTERACTION

I. Basic Course Information

A. Course Number and Title:	IDMX208 Interface Design & Human Computer Interaction
B. New or Modified Course:	Modified
C. Date of Proposal:	Semester: Spring Year: 2018
D. Effective Term: Fall 2019	
E. Sponsoring Department:	Visual and Performing Arts (VAPA)
F. Semester Credit Hours:	3
G. Weekly Contact Hours:	4 Lecture: 2 Laboratory: 2 Out of class student work per week: 5
H. Prerequisites/Corequisites:	**Prerequisite:** A grade of C or higher in IDMX114 Interactive Multimedia ~~**Corequisite:** Interactive Digital Media Programming Requirement.[1]~~
I. Laboratory Fees:	Yes, at current rate.

J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval: John Sichel – john.sichel @raritanval.edu & Vandana Nadkarni – vandana.nadkarni@raritanval.edu, Patrice Marks- Patrice.marks@raritanval.edu Divisional Dean.

II. Catalog Description

[1] ~~One of: CISY233 Introduction to PHP, CISY242 Object Oriented Programming, CISY244 JavaScript, CISY249 Java, CISY265 Introduction to C#.NET, CISY267 Programming for Game Developers, or other suitable programming course determined by the professor.~~

Prerequisites: A grade of C or higher in IDMX114 – Interactive Multimedia; ~~Corequisite: Interactive Digital Media Programming Requirement.~~[2] – This course equips students to understand the theory behind and develop practical experience in implementing user interfaces for electronic, multimedia-driven devices.

III. Statement of Course Need

A. Computer systems are now a ubiquitous part of everyday life, and how we interact with and through them shapes how we perceive, communicate, and interact with our colleagues, family, and friends, as well as how efficiently we carry out all of our digital tasks. As a result, a deep understanding of the psychology of and best practices behind designing these interfaces (a field commonly referred to as "User Experience" or "UX") has become increasingly important at virtually every point of human-computer contact.

B. This course requires the use of a Computer Lab to both learn the software necessary to create user interface assets, as well as to assemble practical user interface projects.

C. Transferability of Course: This course could transfer as a free elective or as a Computer Science elective.

IV. Place of Course in College Curriculum

A. This course meets a program requirement for the Interface Design & Web Development A.A.S., A.S., and Certificate.
B. Computer Elective on the Computer and Programming Electives List
C. Free Elective
D. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

A. Introduction to the concepts of User Interfaces (UI), and User Experience (UX).
    i. Field background.
    ii. Understanding UI and UX terminology.
    iii. Visual design principles.
        1. Contrast
        2. Repetition
        3. Alignment
        4. Proximity & Grouping
B. Focused user psychology.

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i. Psychological “reflexes.”
ii. Catching, holding, and manipulating attention.
iii. Mental vs conceptual models.
iv. Actionable cues and affordances.
v. Preventing & diffusing frustration.
vi. Planning, and anticipation.

C. Navigation & input paradigms.
    i. Linear, hierarchical, combination, etc.
    ii. Navigation elements (buttons, text areas, etc.)
    iii. Differences between desktop, mobile, and unconventional platforms.
    iv. Point-and-click vs. tap-and-gesture
    v. Using camera, accelerometer, and gyroscope inputs.
    vi. Other new inputs as discovered.
D. Coherent narrative and structured expression of ideas.
    i. Grouping ideas into categories.
    ii. Organizing and associating categories meaningfully.
    iii. Providing narrative to link ideas together and provide logical flow.
E. Design documentation conventions.
    i. Style guides
    ii. Font sheets
    iii. Color swatches
    iv. Wireframes & block diagrams
F. User personas.
    i. User-focused research
    ii. Applied role-playing
    iii. Determining audience-based design considerations
G. Iterative Design process.
    i. Planning and costing
        1. Brainstorming
        2. Scheduling and time estimates
    ii. Designing & Producing
        1. Sketching
        2. Proof-of-concept
        3. Prototyping
        4. Increasing fidelity over iterations
    iii. Testing
        1. Developer testing
        2. User testing
        3. Focused improvements
    iv. Delivering
        1. Publication materials (branding, “box art” etc.)
        2. Delivery systems (App store, Steam, etc.)
        3. Maintenance
        4. Iterative updates

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:

1. Apply creativity to problem solving; decision making; and quantitative reasoning (GE-NJ2)
2. Build communication skills (effective writing and speaking) through collaborative learning, utilizing team projects and multi-tasking. (GE-NJ1)

B. Course Learning Outcomes:

At the completion of the course, students will be able to:

1. Understand UI, and UX theories;
2. Identify the strengths and weaknesses of interfaces and have a basis for improving upon them;
3. Design interfaces to accommodate a wide range of users and skill levels;
4. Understand the Iterative Design process;
5. Create appropriately descriptive design documentation;
6. Prepare and carry out usability testing;
7. Apply practical design methodology to develop an interface prototype;
8. Tell a coherent, interactive story and/or expression of ideas with digital tools.

C. Assessment Instruments

1. Computer lab assignments
2. Quizzes
3. Midterm examinations
4. Final examination

VII. Grade Determinants

A. Attendance & participation
B. Lab projects
C. Homework assignments
D. Quizzes
E. Midterm exam
F. Final exam
G. Final project

The modes, and methods for teaching and learning that may be used in the course:

A. lecture/discussion
B. small-group work
C. computer-assisted instruction

D. guest speakers
E. laboratory
F. student oral presentations
G. simulation/role playing
H. student collaboration
I. independent study

VIII. Texts and Materials

A. Suggested textbooks:
   - "The Design of Everyday Things" by Donald A. Norman (latest edition)
   - "Don't Make Me Think: Revisited" by Steve Krug (latest edition)
   - "100 Things Every Designer Needs to Know About People" by Susan Weinschenk (latest edition)
   - "About Face: The Essentials of Interaction Design" by Alan Cooper et al. (latest edition)
B. Open Educational Resources (OER)

The following statement should be included in the outline:
(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

A. Computer lab with overhead projection
B. Modern web browser software (Chrome)
C. Microsoft Office Suite
D. Adobe Suite
E. Unity or other engine determined by the professor

X. Honors Options

N/A