I. **Program Details**
    a) Name (and Degree Type) of Academic Program: B.S. in Game Design and Development
    b) Academic Unit(s)/College(s): School of Information (iSchool), Social and Behavioral Sciences

II. **Primary Contact and Email:**

Catherine Brooks, Director

cfbrooks@arizona.edu

Laura Owen, academic advisor

lauraowen@arizona.edu

Danny Downes, academic advisor

downes@arizona.edu

III. **Planned start term for changes:** Fall 2023

IV. **Describe the proposed changes to the program as well as the rationale for making the specific changes and include any relevant supporting data.**

-Require a minor in advisement report

Functionally speaking, students already need a minor, as the 45 units major and reduced new general education units required will not reach 120 units, 42 Upper Division units. All other iSchool programs have a minor required in the advisement report. It will benefit students and be consistent.

-Adjust advisement report to divide up the major into sections

Dividing the large core requirement into sections in the advisement report with additional options will be easier for students and advisors to manage. Instead of a 'lump' of core classes, the core classes will be in progressive sections, and additional options are added to the core to reflect new courses that have been created. Students and advisors will be able to clearly see the major requirements and progression, rather than an undifferentiated cluster of classes. The proposed order in the advisement will also mimic the order students typically take the courses – for example, ISTA 251 is typically the first class students take in the major.

V. **Comparison Chart** –

UNDERGRADUATE MAJOR	Existing Major Requirements	Requirements For Modified Major
Name of major, emphasis (if applicable) and degree*	Game Design and Development, BS	Game Design and Development, BS
CIP Code –lookup here or contact the Office of Curricular Affairs for assistance, if needed	50.0411	50.0411

Total units required to complete the degree* (Note: this is for the entire degree, not just the major)	120 total	120 total
Upper division units required to complete the degree	42	42
Total CC transfer units that may apply to this degree*	64	64
Foundation courses		
Math	Moderate math strand, MATH 113 minimum	Moderate math strand, MATH 113
Second Language	Second semester proficiency	Second semester proficiency
General Education		
Introduction to General Education course (1 unit)	Introduction to General Education course (1 unit)	Introduction to General Education course (1 unit)
GE Exploring Perspectives: Choose one course from each domain. (12 units total)	Artist (1 course) Humanist (1 course) Natural Scientist (1 course) Social Scientist (1 course)	Artist (1 course) Humanist (1 course) Natural Scientist (1 course) Social Scientist (1 course)
GE Building Connections: Choose three courses (9 units) from two or more disciplines and/or perspectives.	GE Building Connections: Complete 3 courses, 9 units total.	GE Building Connections: Complete 3 courses, 9 units total.
GE Capstone course (1 unit)	GE Capstone course (1 unit)	GE Capstone course (1 unit)
Pre-major? (Yes/No)	No	No
List any special requirements to declare or gain admission to this major (completion of specific coursework, minimum GPA, interview, application, etc.)	No	No
Minimum # of units required in the major (units counting towards major units and major GPA)	45	45
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	18	18
Minimum # of residency units to be completed in the major	18	18
Required supporting coursework (courses that do not count towards major units and major GPA but are required for the major). Courses listed must include prefix, number, units, and title. Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses not owned by your department.	None	None
Major requirements. List all major requirements including core and electives. If applicable, list the	**CORE 1 (4 units)** ISTA 130: Computational Thinking and Doing	**Non-Technical Core (6 units)** ISTA 251: Introduction to Game Design ISTA 161: Ethics in a Digital World

emphasis requirements. Courses listed count towards major units and major GPA. Courses listed must include prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses being added and are not owned by your department. Recommend ordering requirements in the same order as your advisement report.

CSC 110 can be used for this requirement

CORE 2 (minimum 3 units)
ISTA 131: Dealing with Data (4)
    ISTA 130 or CSC 110 required
OR ESOC 301: Qualitative Internet Research (3)
    CSC 120 can be used for this requirement
OR ESOC 302: Quantitative Methods (3)

CORE 3 (minimum 3 units)
GAME 351: Introduction to Game Development in Unity (3) or ISTA 350: Programming for Information Applications. (4) CSC 210: Software development (4) (ghosted)

Remaining core courses (18 units)
ISTA 251: Introduction to Game Design (3)
ISTA 161: Ethics in a Digital World (3)
ISTA 116: Statistical Foundations for Info. Age (3)
    Requires MATH 107 or higher
ISTA 451: Game Development (3)
    Requires GAME 351 or CSC 210 or ISTA 350
ISTA 416: Human Computer Interaction (3)
ISTA 425: Algorithms for Games (3)
    Requires GAME 351 or CSC 210 or ISTA 350

Game electives (15 units)
ESOC 300: Digital Storytelling and Culture
ESOC 340: Information, Multimedia Design & the Moving Image
GAME 308: Diversity and Bias in Games
GAME 310: Gamification in Society
GAME 311: eSports Industries
GAME 312: Monetizing Independent Gaming
GAME/ISTA 452: Advanced Game Development

Programming Core (4 units)
ISTA 130: Computational Thinking and Doing
CSC 110 can be used for this requirement

Statistical Core (3 units)
ISTA 116: Statistical Foundations for the Information Age

Research Methods/Data Analysis (minimum 3 units)
ISTA 131: Dealing with Data (4)
    ISTA 130 or CSC 110 required
OR ESOC 301: Qualitative Internet Research (3)
    CSC 120 can be used for this requirement
OR ESOC 302: Quantitative Methods (3)

Introduction to Game Development (minimum 3 units)
GAME 351: Introduction to Game Development (3)
    Requires ISTA 130 or CSC 110
OR ISTA 350: Programming for Informatics Applications (4)
Remove CSC 210

Game Development (3 units)
ISTA 451: Game Development (3)

Technical core 1 (3 units)
ISTA 416: Human Computer Interaction (3)
OR ISTA 424: Virtual Reality (3)
    Requires GAME 351 or CSC 210 or ISTA 350

Technical core 2 (3 units)
ISTA 425: Algorithms for Games (3)
    Requires GAME 351 or CSC 210 or ISTA 350
OR GAME 452: Advanced Game Development (3)
    Requires ISTA 451

GAME MAJOR ELECTIVES (15 units)
ESOC 300: Digital Storytelling and Culture
ESOC 340: Information, Multimedia Design & the Moving Image
GAME 308: Diversity and Bias in Games

	Requires ISTA 451
	ISTA 301: Computing and the Arts
	ISTA 302: Technology of Sound
	ISTA 303: Introduction to Creative Coding
	  - Requires ISTA 130 or CSC 110 or ECE 175
	ISTA 421: Introduction to Machine Learning
	
	ISTA 424: Virtual Reality
	  - Requires ISTA 350 or CSC 210 or GAME 351
	
	ISTA 450: Artificial Intelligence
	Requires ISTA 350
	  ISTA 457: Neural Networks
	Requires ISTA 350
	
	LIS 484: Introduction to Copyright
	
	SENIOR CAPSTONE: Take One (3 units)
	ISTA 498: Senior Capstone
		GAME 310: Gamification in Society
		GAME 311: eSports Industries
		GAME 312: Monetizing Independent Gaming
		GAME 452: Advanced Game Development
		Requires ISTA 451
		ISTA 301: Computing and the Arts
		ISTA 302: Technology of Sound
		ISTA 303: Introduction to Creative Coding
		  - Requires ISTA 130 or CSC 110 or ECE 175
		==ISTA 416: Introduction to Human-Computer Interaction==
		ISTA 421: Introduction to Machine Learning
		
		ISTA 424: Virtual Reality
		  - Requires ISTA 350 or CSC 210 or GAME 351
		
		ISTA 450: Artificial Intelligence
		Requires ISTA 350
		ISTA 457: Neural Networks
		Requires ISTA 350
		
		LIS 484: Introduction to Copyright
		
		==**Add:**==
		==ISTA 425: Algorithms of Games==
		==ESOC 316: Digital Commerce==
		==ESOC 318: Disruptive Technologies==
		==GAME 303: Digital Games and Society==
		==GAME 305: Legal Aspects of Game industries==
		==GAME 307: Narrative Practices in Digital Games==
		==GAME 3TR==
		==GAME 1TR==
		
		SENIOR CAPSTONE: Take One (3 units)
		ISTA 498: Senior Capstone

Internship, practicum, applied course requirements. (Yes/No). If yes, provide description.	No	No
Senior thesis or senior project required (Yes/No). If yes, provide description.	ISTA 498: Senior Capstone – this is a class in which students complete a large independent project	ISTA 498: Senior Capstone – this is a class in which students complete a large independent project
Additional requirements (provide description)	No	No
Minor (optional or required)	Option	==**Required**==

VI. **Faculty impact** – will new faculty hires be required to deliver the new, proposed curriculum?
No

VII. **Budgetary impact** – indicate new resources needed and source of funding to implement proposed changes. If reallocating resources, indicate where resources will be taken from and the impact this will have on students/faculty/program/unit.
None

VIII. **Transfer Student Consideration** – Please explain how you have planned and evaluated the changes you requested in the context of:
- Mitigating the complexity of the transfer pathway/curriculum
- Supporting transfer student success
- Ensuring transferability of course work from Arizona community colleges

This will actually make it easier to transfer students – most transfer students will need additional units beyond the 45 major units to meet the 56 university units/42 upper division requirements, especially if they have major transfer credit. Requiring a minor is a more straightforward requirement for students to understand than 'additional electives'.

IX. **Required signatures**
Program Director/Main Proposer (print name and title):

Program Director/Main Proposer signature:
Date:

Department Head (print name and title):
 Catherine F. Brooks, PhD, Director & Professor
Department Head's signature:

Catherine F. Brooks
Date: 12/14/2022

Associate/Assistant Dean (print name):
Amy C. Kimme Hea, PhD, Associate Dean, Academic Affairs and Student Success
Associate/Assistant Dean's signature:

Date: 12/16/2022

Dean (print name):

Dean's signature:
Date:

UG: For use by Curricular Affairs (for majors):

Committee	Approval date
APC	
Undergraduate Council	
U-CAAC	