

New Program Code Replace Program Code Date: _____

REQUESTOR CONTACT INFORMATION

Name _____ Campus _____
 Title _____ Email _____
 Office/Dept _____ Phone _____

NEW PROGRAM CODE TO CREATE

Institution _____ Campus _____
 Level _____ Effective Term _____

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) _____	_____	<input type="checkbox"/> See Banner form STV_COLL
Department	(4) _____	_____	<input type="checkbox"/> See Banner form STV_DEPT
Degree/Certificate	(6) _____	_____	<input type="checkbox"/> See Banner form STV_DEGC
Major	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR
Concentration	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR
Minor	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR

If a similar major/concentration code exists in Banner, please list the code: _____

Justification to warrant a new major/concentration code similar to an existing major/concentration code:

Is this major/concentration code being used the same way at the other UH campuses? Yes No
 Should this program be available for applicants to select as their planned course of study on the online application? *If yes, student may select the code as their only program of study.* Yes No

RULES PERTAINING TO FINANCIAL AID AND 150% DIRECT SUBSIDIZED LOAN LIMIT LEGISLATION

Is 50% or greater of the classes in this program offered at a location other than the Home Campus? Yes No
 Is this program/major/certificate financial aid eligible? Yes No
 Does this certificate qualify as a Gainful Employment Program (Title IV-eligible certificate program)? Yes No

See <http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html>

Program Length

In academic years; decimals are acceptable. The length of the program should match what is published by the campus in any online and/or written publication.

Special Program Designations A B N P T U

See *Special Program Designations Code Definitions on IRAO Program Code Request webpage*

Required Terms of Enrollment: Fall Spring Summer Extended

EXISTING PROGRAM CODE TO REPLACE, IF APPLICABLE

Program Code _____	Program Description _____
Institution _____	Campus _____
College _____	Department _____
Level _____	
Are current students "grandfathered" under the program code? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Should the old program code be available for use in Banner? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Effective , old program code will no longer be available to admit or recruit students.	
<small>Term (ie. Fall 2020)</small>	
<i>This will turn off the online application, recruitment (effects Banner forms SRASUMI and SRAQUIK) and admissions (effects Banner forms SAADCRV, SAAADMS, SAASUMI, SAAQUIK, and SAAQUAN) Banner modules.</i>	
Effective , old program code will no longer be available to award degree to students.	
<small>Term (ie. Fall 2020)</small>	
<i>This will turn off the general student (effects Banner form SGASTDN) and academic history (effects Banner form SHADEGR) Banner modules.</i>	

ATTACHMENTS

BOR Approved: Sole-credential Certificate, Associate, Bachelor and Graduate Degrees, and sole credential certificates

- BOR Meeting Minutes & Supporting Documents Curriculum

Chancellor Approved: Concentrations, Certificates and Associate in Technical Studies (ATS) Degree

- Memo from Chancellor to notify Vice President for Academic Planning and Policy regarding program action.
 Curriculum

<p>CERTIFICATES ONLY: Please check one (1) statement. This certificate is a...</p> <p><input type="checkbox"/> BOR approved certificate. BOR Meeting/Approval Date: _____</p> <p><input type="checkbox"/> Chancellor approved within an authorized BOR program. BOR Program: _____</p> <p><input type="checkbox"/> Chancellor approved CO in accordance with UHCCP 5.203, Section IV.B.10.</p>

VERIFICATIONS

By signing below, I verify that I have reviewed and confirm the above information that is pertinent to my position.

<p>Registrar (Print Name)</p> <p>_____</p>	<p>Financial Aid Officer (Print Name)</p> <p>_____</p>	<p>For Community Colleges, verification of consultation with OVPCC Academic Affairs: Tammi Oyadomari-Chun</p> <p>_____</p>
Signature	Date	Signature
Signature	Date	Signature
Signature	Date	Signature

ADDITIONAL COMMENTS



UNIVERSITY
of HAWAII
MĀNOA

College of Natural Sciences
Information & Computer Sciences

October 19, 2023 (rev)

MEMORANDUM

TO: Laura E. Lyons
Interim Vice Provost for Academic Excellence

VIA: Acting Dean Alison Sherwood
College of Natural Sciences

Handwritten signature of Alison Sherwood.

FROM: Chair Scott Robertson
Department of Information & Computer Sciences

Handwritten signature of Scott Robertson.

SUBJECT: **UNDERGRADUATE PROGRAM CHANGE: CREATION OF A CREATIVE COMPUTATIONAL MEDIA TRACK FOR BA IN INFORMATION AND COMPUTER SCIENCES DEGREE.**

SPECIFIC ACTION REQUESTED:

The faculty of the Department of Information and Computer Sciences (ICS) requests the establishment of an official Track in Creative Computational Media (CCM) for the BA in Information and Computer Sciences.

RECOMMENDED EFFECTIVE DATE:

Fall 2024

ADDITIONAL COST:

In the first year, the ICS faculty and Instructor will cover the newly proposed classes in the track. We have funding from CNS and Chris Lee (Founder and Director ACM System at UH) for an I2 temporary position for Spring 24 and for 2024–2025. Eventually, we will request a permanent instructor position for someone with experience in entertainment, gaming, special effects, or related industries. We aim to request this position as soon as possible.

PURPOSE:

The purpose of this request is to establish a track specializing in CCM for the BA in Information and Computer Sciences **effective in the Fall 2024 semester**

BACKGROUND:

The program changes to achieve this **effective starting in the Fall 2024 semester** are:

- required courses are **110D, 111, 211, 212, 235, 311, 314, 321, 355, 369, 481, 487, MATH 301, (MATH 307 or MATH311), MATH 372.**

The Creative Computational Media track adds the following required courses:

- ICS 110D “Introduction to Computer Programming: Through animations”
- ICS 235 “Machine Learning Methods”
- ICS 355 “Security and Trust I: Resource Protections”
- ICS 369 “Computational Media Systems”
- ICS 481 “Introduction to Computer Graphics”
- ICS 487 “Digital Content Creation I”
- MATH 301 “Introduction to Discrete Mathematics”,
- MATH 307 “Linear Algebra and Differential Equations” or “MATH 311 “Introduction to Linear Algebra”
- MATH 372 “Elementary Probability and Statistics”
- Four AOC from already approved choices

The CCM track removes the following required courses:

- ICS 141 “Discrete Mathematics for Computer Science I”
- ICS 241 “Discrete Mathematics for Computer Science II”
- ICS 332 “Operating Systems”
- Choice of 300 ICS courses. Requirement to take 355.
- Two 300-level courses
- One 400+ electives

In 2022, Hawaii’s film industry generated a record \$480M in revenues. But much of the post-production work for the filming in Hawaii was shipped off island due to lack of studio space. UH is currently soliciting proposals for the development of a film studio in West O’ahu, with the developer scheduled to be announced in December 2023. Nationally the domestic box office generated nearly \$6B in revenue in 2022 and is expected to grow to 8.3% by 2027. The revenue of the global film industry was \$77B in 2022. Eclipsing the film market, the video game market reached \$183B in 2022 with mobile games contributing \$92B in revenue.

What unifies these diverse yet interconnected industries is a shared dependence on a media workforce proficient in computational skills. In an era marked by technological ubiquity, computing has transcended its functional role, becoming deeply embedded in virtually every aspect of media production and distribution workflow.

Our Creative Computational Media (CCM) track in the BS and BA degrees represent a groundbreaking educational pathway that not only positions students for gainful employment but also for leadership and innovation within the industry. With a unique blend of technical prowess,

creative thinking, and industry insight, graduates will be primed to contribute to the anticipated film studio at West O'ahu, as well as make a substantial impact on the global stage. This program is a launchpad for the next generation of media professionals, offering unparalleled opportunities for growth, exploration, and success in a rapidly evolving landscape.

The modified UHM catalog entry (with additions in red ink and deletions in red strike-through) is shown below. The program sheets and sample 4-year plans are also attached. Text in blue is related to another memo.

Marked-up Catalog Entry

Bachelor of Arts in Information and Computer Sciences, Creative Computational Media (M) Track

Students must complete the following courses (61-62 credits):

(MI) Core ICS 110D, 111, 211, 212, 235, 311, 314, 321, 355, 369, 481, 487

(MII) MATH 301, (307 or 311), 372

(MIII) AOC: Four electives from: ICS 464, 482, 484, 485, 486, 488, 489, 496 in

CCM

Substitution allowed: (ICS 141 and 241) can be a substitution for (MATH 301 and 372).

Substitution allowed: EE 367 for ICS 311.

ACTION RECOMMENDED:

We would like to recommend the establishment of an official Track in Creative Computational Media (CCM) for the BA in Information and Computer Sciences.

APPROVED DISAPPROVED:



Laura E. Lyons
Interim Vice Provost for Academic Excellence

10/30/23

Date

cc: Lynne Higa, College of Natural Sciences

University of Hawai‘i at Mānoa
College of Natural Sciences Program Sheet 2023-2024
Bachelor of Arts (BA) in Information and Computer Sciences
Creative Computational Media Track
Admissions: Open Process: Declaration
Min. Total Credits: 120 (109 in core & major + 11 in electives)

UHM General Education Core Requirements	
Foundations	
<input type="checkbox"/>	FW ENG 100, 100A, 190, ESL 100, or AMST 111
<input type="checkbox"/>	FQ* ICS 141
<input type="checkbox"/>	FG (A / B / C)
<input type="checkbox"/>	FG (A / B / C)
<i>*Note: This requirement changed in Fall 2018. If you entered the UH System prior to that, please see your college/school advisor.</i>	
Diversification	
<input type="checkbox"/>	DA / DH / DL
<input type="checkbox"/>	DA / DH / DL
<input type="checkbox"/>	DB
<input type="checkbox"/>	DP
<input type="checkbox"/>	DY
<input type="checkbox"/>	DS
<input type="checkbox"/>	DS
<i>* See degree, college and major requirements for courses that can also fulfill these.</i>	
UHM Graduation Requirements	
Focus	
<input type="checkbox"/>	H
<input type="checkbox"/>	E (300+)
<input type="checkbox"/>	O (300+)
<input type="checkbox"/>	W
<input type="checkbox"/>	W
<input type="checkbox"/>	W
<input type="checkbox"/>	W (300+)
<input type="checkbox"/>	W (300+)
Hawaiian / Second Language	
<input type="checkbox"/>	101
<input type="checkbox"/>	102
<input type="checkbox"/>	201
<input type="checkbox"/>	202
Credit Minimums	
●	120 total applicable
●	30 in residence at UHM
●	45 upper division (300+ level) credits
Grade Point Average	
●	2.0 cumulative or higher (<i>Note: Other GPAs may be required.</i>)
●	Good academic standing

Degree Requirements	
College Requirements	
Credit Maximums	
●	8 KRS activity
●	9 Directed Reading / Research
●	12 Practicum / Internship

*This program sheet was prepared to provide information and does not constitute a contract. See back for major requirements.
 Meet regularly with your major advisor.*

Major Requirements for BA in Information and Computer Sciences – Creative Computational Media

Admission: Open

Application: NA

Min. major credits: BA = 61-62 (69 to 70 with related requirements)

Min. C grade (not C-) in all courses, unless otherwise specified

Requirements

ICS Related Requirements (8 credits)

- To enroll in all courses requiring Calculus II as their prerequisite (ICS 311, MATH 307, and MATH 372), students must take MATH 242 or 252A for their Calculus II requirement.
- MATH 215 or 241 or 251A (Calculus I) is a prerequisite for MATH 242. However, students must meet the grade requirement B (not B-) in MATH 215 to enroll in MATH 242.
- MATH 241 or 251A (Calculus I) is a prerequisite for MATH 252A. However, students must meet the grade requirement B (not B-) in MATH 241 and receive consent to enroll in MATH 252A.

ICS Core Courses (49 credits)

ICS 110D

ICS 111

ICS 211

ICS 212

ICS 235 (Fall only)

ICS 311 (Substitution allowed: EE 367 can be a substitution for ICS 311)

ICS 314

ICS 321

ICS 355

ICS 369

ICS 481

ICS 487

MATH 301

MATH 307 or MATH 311

MATH 372

Substitution allowed: (ICS 141 and ICS 241) can be a substitution for MATH 301 in the CCM Track. In that case, students must take a 300+ level course for one of the diversification courses (DA/DH/DL or DS).

AOC: CCM Area of concentration electives (12-13 credits):

ICS 464, 482, 484, 485, 486, 488, 489, 496 in CCM

ICS 464, 482, 484, 485, 486, 488, 489, 496 in CCM

ICS 464, 482, 484, 485, 486, 488, 489, 496 in CCM

ICS 464, 482, 484, 485, 486, 488, 489, 496 in CCM

- ~~A proposal identifying upper-division elective courses and how they form a coherent plan of study must be approved by an ICS advisor.~~

University of Hawai‘i at Mānoa
College of Natural Sciences Program Sheet 2023-2024
Bachelor of Arts (BA) in Information and Computer Sciences
Creative Computational Media Track
Admissions: Open Process: Declaration
Min. Total Credits: 120 (111 in core & major + 9 in electives)

College Advising: Student Academic Success Center; Hamilton Library 002K; (808) 956-5911; cnsadvis@hawaii.edu;
natsci.manoa.hawaii.edu/sasc

Information and Computer Sciences Department: POST 317; (808) 956-7420; icsinfo@hawaii.edu; <https://www.ics.hawaii.edu/>

ICS Undergraduate Advisor: Kenny Ka‘aiakamanu-Quibilan; POST 303A; (808) 956-5428; kennydq@hawaii.edu

Guylaine Poisson; POST 303C; (808) 956-3496; guylaine@hawaii.edu

Rev .RK 2/2023

University of Hawai'i at Mānoa – Four-Year Academic Plan **2024-2025**

College of Natural Sciences

Bachelor of Arts in Information & Computer Sciences

Creative Computational Media Track

This is a sample academic plan. Students should meet with an academic advisor prior to registration to formulate their own plan.

Year 1	Year 2	Year 3	Year 4
Fall	Fall	Fall	Fall
ICS 110D 3 ICS 111 4 MATH 215 or 241 or 251A (FQ 4 FW 3	ICS 212 3 ICS 235 3 MATH 372 3 DS 3 HSL 101 3	ICS 321 3 FG (A/B/C) 3 MATH 307 3 HSL 201 3 ICS 381 481 A.S. 11/8/2023 3	DA/DH/DL 3 CCM AOC: ICS 462, 464, 482, 484, 485, 486, 488, 496 3 CCM AOC: ICS 464, 482, 484, 485, 486, 488, 489, 496 3 Elective 3 DB 3
Credits 14	Credits 15	Credits 15	Credits 15
Spring	Spring	Spring	Spring
ICS 211 4 MATH 242 or 252A 4 MATH 301 3 FG (A/B/C) 3 Elective 3	ICS 311 4 ICS 314 3 DP 3 DY 1 HSL 102 3	ICS 369 3 ICS 487 4 DA/DH/DL 3 ICS 355 3 HSL 202 3	Elective 300+ 3 DS 3 CCM AOC: ICS 464, 482, 484, 485, 486, 488, 489, 496 3 CCM AOC: ICS 464, 482, 484, 485, 486, 488, 489, 496 3 Elective 2
Credits 17	Credits 14	Credits 16	Credits 14
Summer	Summer	Summer	Summer
Credits 0	Credits 0	Credits 0	Credits 0
Total Credits 31	Total Credits 60	Total Credits 91	Total Credits 120

Notes:

Students must take placement exams to be able to register for CHEM 161 and MATH 215 or 241 or 251A.

Substitution allowed: (ICS 141 and ICS 241) can be a substitution for MATH 301 in the Creative Computational Media Track. In that case, students must take a 300+ level course for one of the diversification courses (DA/DH/DL or DS). EE 367 can be a substitution for ICS 311. Students must incorporate all focus requirements into this plan. Focus designations (i.e., W, E, O, H) are CRN specific and semester specific. 45 upper division (300+ level) credits are required.