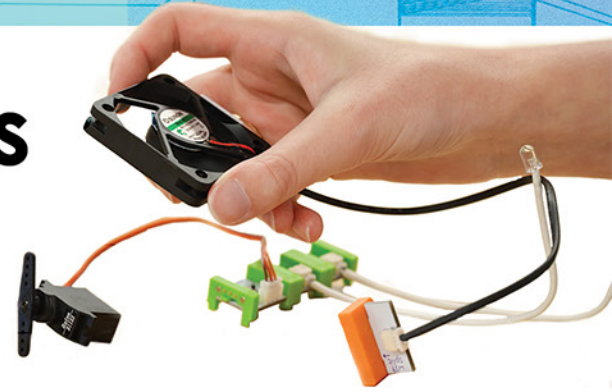


# creative technologies & design

student handbook // 2024-2025



# Territorial Acknowledgment

## Territorial Acknowledgement

The University of Regina and its federated colleges are on Treaty 4 and Treaty 6 territories — the homelands of the nêhiyawak, Anihšīnāpēk, Dakota, Lakota, Nakoda peoples, and Michif/Métis nation.

We recognize that, as an institution founded by settlers, we benefit from being on this land. We are grateful for the privilege to learn, teach, and work here. We demonstrate our commitment to reconciliation by incorporating Indigenous knowledge and world views in our research, teaching, and studies to ensure that there are increased economic, social, and creative opportunities for current and future generations. It is our responsibility to strengthen relationships with Indigenous communities and build a more inclusive future.

(Tapwewin kwayaskwastâsowin – nêhiyawak (Cree) language stating Truth and putting things right: Indigenous Engagement Strategic Plan, pg. 4)

<https://www.uregina.ca/indigenous-engagement/strategic-plan/index.html>

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# Welcome Message

## Message from Dr. Charity Marsh, Program Coordinator for Creative Technologies & Design

Welcome to our expanding area of Creative Technologies & Design!

In 2024 we are introducing a new Bachelor of Design, a BFA in Creative Technologies, and a Diploma in Creative Technologies. Our faculty and instructor complement is growing to further serve this expansion, along with our course offerings, facilities, and partnerships. It is an exciting time to be a student in our programs!

Creative Technologies and Design programs are for students who have an interest in learning about art, design, technology, and culture through an interdisciplinary lens. You can explore digital culture while working in 3D animation, interactive media and installations, visual communication and graphic design, physical computing, creative computation, virtual and augmented reality, sound art, digital storytelling, computer gaming, and sound technologies. We cover a lot, so you have the opportunity to discover what really interests you.

In our courses we encourage collaboration, experimentation, play, and thinking outside the box. We help students develop specialized skills across a range of technologies used in industry, while also offering opportunities to gain hands-on experience through creative assignments and collaboration. As you move through the program you will notice a focus on project-based exploration and professionalization. Our students develop skills as designers, artists, scientists, developers, theorists, entrepreneurs, and practice-based scholars, as they learn to think about creative technologies and design in new and critical ways.

As I noted above, we are at a particularly exciting moment for Creative Technologies & Design as we grow and evolve the programs.

*I invite you to explore the new possibilities here:*

**Creative Technologies & Design**

<https://www.uregina.ca/media-art-performance/creative-technologies-design/index.html>

**Diploma & Bachelor's Degree Programs: Creative Technologies**

<https://www.uregina.ca/academics/programs/map/creative-technologies.html>

**Bachelor's Degree Program: Design**

<https://www.uregina.ca/academics/programs/map/design.html>

*I want to invite you to join us on our social media as well:*

 [@CreativeTechnologiesUofR](#)

 [@ctchmakerspace](#)

 [@uofrimplabs](#)

My office is in RC 263, located near Dr. David Dick, the Dean of MAP's offices, the MAP Student Program Center, the MAP Admin-Hub, and the office of our Associate Dean Undergraduate, Dr. Susan Johnston. Please feel free to drop by or email me to set up an appointment anytime.

I wish you great success as you navigate your academic adventures!



All the best,  
Dr. Charity Marsh



# **SECTION ONE**

**Introduction to Creative Technologies & Design**

## Introduction to Creative Technologies & Design

Welcome to Creative Technologies & Design in the Faculty of Media, Art, and Performance at the University of Regina. This handbook provides information about Creative Technologies & Design including: its vision, programs, requirements, faculty, facilities, and the broad range of courses that can be taken as part of an individualized course of study. This handbook supplements the general policies and procedures outlined on the Faculty of Media, Art, and Performance (MAP) webpages and the University of Regina Undergraduate and Graduate Calendars.

Creative Technologies & Design recognizes visionary research at the intersection of the arts, sciences, technology, and culture through forming a collaborative network that fosters new and innovative interdisciplinary opportunities for students and researchers alike. Core courses are taught by faculty and instructors who work within and across disciplines, develop new models for teaching and learning, and bring together students with a wide range of interests to explore exciting forms of creative expression. We also have a range of creative industries professionals who teach courses and share their professional experience.



*Students can take CTCH 321: Introduction to Computer Games and VR Design*



## Program Administration for Creative Technologies & Design

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General questions about Creative Technologies & Design programs and course offerings can be directed to:

### **Program Coordinator for Creative Technologies and Design**

**Dr. Charity Marsh**

Professor, Creative Technologies and Design

[MAP.CTCH.Chair@uregina.ca](mailto:MAP.CTCH.Chair@uregina.ca)

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For program advice or to set up an advising appointment contact:

**MAP Student Program Center located in the Faculty of MAP, Riddell Center 267**

[MAP.StudentProgramCentre@uregina.ca](mailto:MAP.StudentProgramCentre@uregina.ca)

**MAP Administrative Hub located in the Faculty of MAP, Riddell Center**

[MAP.AdminHub@uregina.ca](mailto:MAP.AdminHub@uregina.ca)

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**Faculty Liaison (Department of Computer Science, Faculty of Science)**

**Dr. Daryl Hepting**

[Hepting@cs.uregina.ca](mailto:Hepting@cs.uregina.ca)

**Faculty Liaison (Faculty of Engineering)**

**Dr. Tim Maciag**

[Tim.Maciag@uregina.ca](mailto:Tim.Maciag@uregina.ca)

### **Important Links:**

Faculty of Media, Art, and Performance <https://www.uregina.ca/media-art-performance/creative-technologies-design/index.html>

Undergraduate Calendar: <https://www.uregina.ca/student/registrar/publications/undergraduate-calendar/sections.html>



## **Come Play With Us!** **Creative Technologies & Design**

Creative Technologies (CTCH) & Design (DES) consists of interdisciplinary programs that are unique in the province of Saskatchewan. In this area we encourage studies and research outside of and across traditional areas of study; bringing together artists, scientists, and cultural theorists to converge and explore innovative approaches to art making that re-imagine the impact and power of technology within the fine arts including visual and media arts, music, film, and theatre.

As a student in CTCH & Design you will develop specialized skills across a range of technologies used in industry and gain hands-on experience as you study. In Creative Technologies & Design you will explore digital culture while working in interactive media and installation, visual communication and graphic design, physical computing, creative computation, virtual and augmented reality, 3D animation, sound art, digital storytelling, interactive media, computer gaming, and sound technologies. Our small studio courses focus on project-based exploration and professionalization.

Students may enter through the Faculty of Media, Art, and Performance and graduate with a BA, BFA, or a Diploma in Creative Technologies, or enter through the Faculty of Science, Department of Computer Science and graduate with a BSc (Computer Science) in Creative Technologies. Minors in Creative Technologies are also possible as part of a major degree in MAP or a different Faculty at the University of Regina.

CTCH & DES offer courses from fine arts, computer science, and engineering, with opportunities to draw on courses from other Faculties. Our roster of courses encourages collaboration, experimentation, and lateral thinking. The program cultivates imaginative and innovative outcomes inspired by our changing technological landscapes.

## Who Should Study With Us?

Creative Technologies & Design is ideal for students who have an interest in art, design, technology, culture, and interdisciplinary study. Our students are serious about gaining skills as artists, designers, scientists, developers, theorists, entrepreneurs, and practice-based scholars, and they learn to think about technology and the arts in new ways. Creative Technologies & Design encourages collaboration, experimentation, play, and thinking outside the box.

Creative Technologies & Design encourages studies and research outside of and across traditional areas of study, bringing together artists, designers, scientists, and cultural theorists to converge and explore new approaches to art-making and creative problem-solving that re-imagine the impact and power of technology within the fine arts including visual and media arts, music, film, and theatre, and the creative industries.

### **Our courses also supplement traditional study in Fine Arts.**

#### **For example, imagine:**

- How an artist can make their art interactive and accessible to more audiences with Augmented Reality
- How real-time interactivity through the incorporation of custom electronics enriches the process of making art installation
- How the development and programming of topic-sensitive mobile apps augments a course in performance theatre
- How a course working with a tablet as an instrument broadens traditional music training by including new media
- How a course in expanded cinema enhances approaches to animation
- How 3D modeling, laser cutting and rapid prototyping facilitates new avenues in sculpture

For students of Creative Technologies & Design, the possibilities are as open and flexible as our ideas and engagements. Students are supported through an academic advising process that tailors their program of study to individual interests.



## Creative Technologies & Design Program Goals

- To teach creative, critical and technological excellence through an interdisciplinary approach working across creative technologies and design art making and study, cultural and media studies, computer science, and engineering.
- To support the growth of intellectual, creative and technological expertise in our students.
- To sustain flexible, rigorous programs that continually integrate new approaches and responds to leading scholarly, industry and creative challenges.
- To enable pedagogical paths for makers, creative industry professionals, those seeking to augment another program with electives, and scholars: including those who will continue with graduate work, and those who will move directly into professional fields.
- To continue to be a centre for excellence in interdisciplinary pedagogical innovation.

## Careers

Creative Technologies graduates have many options for continued study and employment. This unique specialization in art, design, and technology also gives students an edge in applying for graduate programs to pursue scholarly research at the master's and doctoral levels anywhere in the world. Graduates will be employable in the areas of interactive art design and display, mobile app design and development; animation; web content design and programming; Virtual Reality and Augmented Reality Design, and, interface and interaction design. Or, graduates may choose careers in the creative sector working in the visual and media arts, film, music, or theatre; as digital and interactive media content designers; as marketing and communications specialists, including online and social media producers or consultants.

# CTCH & DES Teaching Faculty and Researchers

## CREATIVE TECHNOLOGIES & DESIGN CORE FACULTY

### **Dr. Charity Marsh (she/her)**

Program Coordinator, Creative Technologies & Design

Professor, Creative Technologies & Design

RC 263

[Charity.Marsh@uregina.ca](mailto:Charity.Marsh@uregina.ca)

### **Lindsey french (they/she)**

Assistant Professor, Creative Technologies & Design

RC 154

[Lindsey.french@uregina.ca](mailto:Lindsey.french@uregina.ca)

### **Dr. Aislinn McDougall (she/her)**

Assistant Professor, Creative Technologies & Design

RC 248

[Aislinn.McDougall@uregina.ca](mailto:Aislinn.McDougall@uregina.ca)

## CREATIVE TECHNOLOGIES AFFILIATED FACULTY

### **Dr. Timothy Maciag**

Assistant Professor, Software Systems Engineering

[Timothy.Maciag@uregina.ca](mailto:Timothy.Maciag@uregina.ca)

### **Dr. Daryl Hepting**

Professor, Computer Science

CW 308.22, (306) 585-5210

[hepting@cs.uregina.ca](mailto:hepting@cs.uregina.ca)

### **Ian Campbell**

Lab Instructor, Film Department (and Creative Technologies & Design)

ED 239.3

[Ian.Campbell@uregina.ca](mailto:Ian.Campbell@uregina.ca)

# CTCH & DES Teaching Faculty and Researchers

## CREATIVE TECHNOLOGIES & DESIGN SESSIONAL INSTRUCTORS

A number of our CTCH classes are also taught by our wonderful team of industry professionals, and some of the recommended electives for Creative Technologies & Design students are taught in the as well as the Departments of Film, Music, Theatre, and Visual Arts.

**Ben Halsall, MA, PGCHE, BA**

CTCH 113, CTCH 311

**WL Altman, MFA**

CTCH 112

**Anthony Deiter, MFA**

CTCH 216, CTCH 314

**Evie Johnny Ruddy, PhD Candidate, Cultural Mediations, Carleton University**

CTCH 313, CTCH 303

**Alain Maubert, PhD Candidate, Computer Science, UofR**

CTCH 312

**Elizabeth Curry, MA**

CTCH 203, CTCH 205, CTCH 321

**Annalisa Raho**

CTCH 215

**Jaecy Bells, MA Graduate Student, UofR**

CTCH 110

**Brandon Watson, MFA Graduate Student, UofR**

CTCH 110

**Amin Malakoothikak, MFA Graduate Student, UofR**

CTCH 213



# **SECTION TWO**

**Getting In**

## Application Procedures:

All students applying to the Creative Technologies & Design program must first apply to the University of Regina. Full details about admission requirements to enter through the Faculty of MAP can be accessed from the Creative Technologies and Design website:

<https://www.uregina.ca/mediartperformance/creative-technologies.html>

(click the 'Apply for Admission' button in the Quick Links).

Full details about admission requirements to enter through Computer Science can be accessed from the Computer Science **"Future Undergraduate Students"** page: <http://www.cs.uregina.ca/FutureStudents/undergrad/>

## Important Dates:

Fall/winter application deadlines for most programs at the University of Regina are August 1 for Canadian citizens and permanent residents, and March 1 for International Students.

See <http://www.uregina.ca/futurestudents/deadlines/fall.html> for more details, along with the Important Dates web pages: <https://www.uregina.ca/student/registrar/publications/>

## Facilities:

The Faculty of Media, Art, and Performance and Department of Computer Science have excellent facilities for the study of Creative Technologies and Design.

See <http://www.cs.uregina.ca/Technical/>

**Creative Technology Maker Space (RC 040):** This a flexible project space, equipped with various small hand tools, soldering equipment, a projector, a sound system, a work bench, littleBits Pro library, a laser cutter, a plotter cutter, and iMacs with the latest Adobe Creative Suite on all the computers. The space is perfect for rapid prototyping, working with wearable technologies and learning and playing with DIY electronics. Located in RC 040 the Maker Space supports ongoing CTCH & DES classes, and also offers community hours to facilitate public engagement.





*The IMP Labs and the interactive DJ studio*

**IMP Labs (RC 033):** The IMP Labs are a hub for engaging in the creating practices of interactive media and audio technologies and cultures. The lab houses a multimedia, interactive DJ studio and performance/workshop space, and a beat-making lab. Community engagement is a major drive behind the space, with the goal of making the technologies, equipment and expertise accessible not only to researchers and University students, but also to the public at large. Located in RC 033 the IMP Labs support ongoing CTCH & DES classes, and also offers community hours to facilitate public engagement.

**MAP Sound Studio (ED 242):** This is a research space for multichannel sound, audio art and sound technologies. This space also works well for VR and AR Design. ED 242 is one of the primary CTCH & DES classrooms.

**Computer Science Undergraduate Media Lab (UDML CL 135):** The UDML (or "Fishbowl") houses 18 iMacs equipped with audio, graphics, imaging, office, software development, web development, and hacker/maker tools, along with an Epson scanner and midi keyboard. Located in CL 135.

**Faculty of MAP/Department of Visual Arts Digital Print Studio:** This is a flexible space equipped with magnetic display walls and professional grade equipment capable of printing large format digital images. Your instructor will arrange access to this space if it is being used for a class or event. Printing access is organized through your instructor.



# **SECTION THREE**

## **Options and Requirements**

# Program Options

## **Bachelor of Arts and the Bachelor of Fine Arts in Creative Technologies:**

Creative Technologies is for students who have an interest in art, technology, culture, and interdisciplinary study. Explore digital culture while working in interactive media and installation, physical computing, creative computation, virtual and augmented reality, 3D animation, sound art, digital storytelling, interactive media, computer gaming, popular music technologies, and critical research into art and technology. The U of R's innovative programs in Creative Technologies are unique in Saskatchewan.

Our students can develop skills as artists, scientists, developers, designers, theorists, entrepreneurs, and practice-based scholars, as they learn to think about technology and the arts in new and critical ways.

Creative Technologies encourages collaboration, experimentation, play, and thinking outside the box. Our programs cultivate imaginative and innovative outcomes inspired by our changing technological landscape.

Flexibility is built into these programs, so you can choose courses that match your own interests. First, take required courses that provide a broad base of technological skills and theoretical knowledge. Then, engage in the advising process to choose your individualized course of study in relation to the many studio-based upper level courses offered.

As you will see, the difference between the BA and BFA programs is in the number of electives and the number of studio-based courses required. The BFA requires more making courses.

<http://www.uregina.ca/mediaartperformance/areas-study/creative-tech/ct-programs.html>

# Program Options

## **Bachelor of Science (Computer Science), Creative Technologies Concentration:**

This computer science degree allows you to take core creative technologies classes alongside core computer science classes to build an interdisciplinary degree focused on computer science skills such as coding and programming.

<http://www.cs.uregina.ca/UndergradProgram/programs/>

## **MAP Minor in Creative Technologies:**

A minor in Creative Technologies will add breadth to your fine arts degree. Find out how far your creativity can take you by adding these courses to your program of study. See the following pages for a detailed outline of the Minor requirements.

<https://www.uregina.ca/mediaartperformance/programs/creative-tech/ct-programs.html>

## **Computer Science Minor in Creative Technologies:**

A minor in Creative Technologies will add breadth to your computer science degree. Find out how far your creativity can take you by adding these courses to your program of study. See the following pages for a detailed outline of the Computer Science Minor requirements.

<http://www.cs.uregina.ca/UndergradProgram/programs/minor>

# Program Options

## Bachelor of Design:

Design is for students who have an interest in design, technology, art, culture, and interdisciplinary study. Explore digital culture while working in visual communication and graphic design, physical computing, creative computation, VR design, AR design, interactive media and installation, and sound design. The U of R's innovative programs in Creative Technologies & Design are unique in Saskatchewan and across the prairie provinces.

Our students develop skills as designers, artists, scientists, developers, theorists, entrepreneurs, and practice-based scholars, as they learn to think about creative technologies and design in new and critical ways.

Design encourages collaboration, experimentation, play, and thinking outside the box. Our programs cultivate imaginative and innovative outcomes inspired by our changing technological landscape.

This two-year post-diploma degree program is what is known as a 2+2 program. Students must first complete a diploma in design at an approved Canadian institution, or a Diploma in Creative Technologies or a Diploma in Computer Science at the University of Regina. Then, they can apply for direct entry to the Bachelor of Design program.

<https://www.uregina.ca/academics/programs/map/design.html>



*The Maker Space is open to support the works of CTCH & DES students .*

# Program Options

## How to Choose My Classes

### FIRST YEAR COURSES

There are some set first year courses in CTCH & DES that will introduce you to the wider field and provide you with some basic training in the areas of audio, visual, interactive, and digital media. You can also choose other critical competencies, electives, or required CS or MATH courses to complete during this year.

**MAP Critical Competencies or Required CS and MATH Courses:** These are courses to ground your Bachelor of Arts or Bachelor of Computer Science in the necessary broad approach to your field, and ensure you have the required literacies and critical knowledges. These courses can be taken at any time during your degree. Some have pre-requisites that must be taken first, check each option carefully.

**Approved Courses:** These courses are offered across the Faculty of MAP and our partners. They are designated electives in Visual Art, Theatre, Music, Film, Computer Science and Engineering that can be used to supplement the core CTCH & DES classes by offering exciting disciplinary training that connects to our programs. We have a list of courses to choose which is updated regularly. You will have to check with each area to see which courses are being run that semester, as courses are not offered every semester.

# Program Options

## SECOND YEAR COURSES

This is where you have the opportunity to choose from a diverse range of CTCH & DES classes and take further recommended electives. Some courses are core to all students, but you have lots of other choices available. You may wish to cluster a number of courses in a particular area, or alternatively, you can take a diversity of approaches as you explore art, design, and technology. Courses may be lecture based, or studio/lab based, or a hybrid-based model, often including a mix of both approaches.

**We have arranged them into the following three streams to help you find a pathway that makes sense for your areas of interest and to give you a strong background in the discipline of Creative Technologies & Design:**

**Audio:** *These courses are focused in interactive audio, popular music, sound art and other creative, critical, and technical approaches to working with sound.*

**Visual:** *These courses are focused in design, creative coding for visuals, video hacking, modelling, expanded screens, and other creative, critical and technical approaches to working with 2D and 3D visuals.*

**Interactive:** *These courses are focused on interactive gadgets, wearables, game and VR design, AR design, and other approaches to creating interactive media, art, performance and/or interactive Computer Science or Engineering work.*

**All three streams of Creative Technologies & Design focus on the critical questions in the fields, and provide training in understanding media and culture. There are also two designated core theory courses (CTCH 203 AND CTCH 303) that all students must take in order to ground their studies in critical and historical knowledge in the fields. Some students may be also interested in research careers and can take additional courses in this area.**

# Program Options

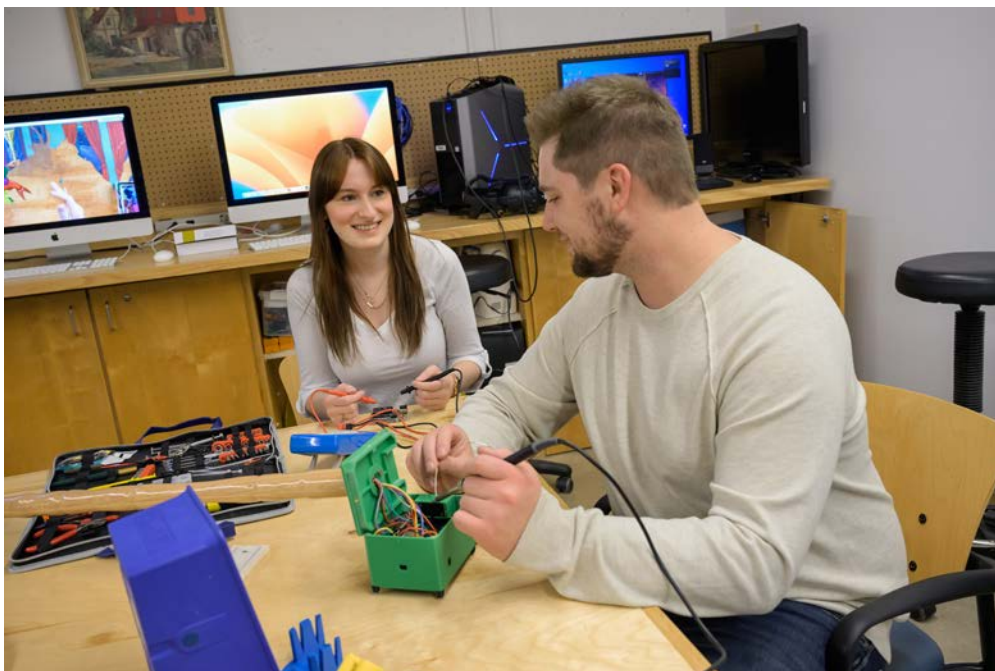
## THIRD YEAR COURSES

This is where you apply your learning from your first and second years to more advanced classes based on collaborative and large projects, deeper critical analysis, and advanced learning. There are some core classes all students take, plus a number of additional courses to choose between. Courses at this level allow you to propose and develop your own independent projects and approaches, and work in interdisciplinary teams, and some have public or online showcases. Choose the ones you think relate to your interests.

## FOURTH YEAR

In your fourth year, you will take our capstone project classes which prepare you for graduation. In these classes you will learn professionalization (CTCH 498) and create a major project or major written project (CTCH 499). You may also choose one of the fourth-year electives if you wish, although these are offered less often, depending on Faculty availability.

See examples of capstone projects here: <http://www.creative-technologies.ca/>



*Graduate and Undergraduate Students collaborate in the Maker Space.*



# Career Opportunities

## What Kinds of Jobs Might I Get with my Creative Technologies Degree?

Our programs offer multiple kinds of degrees and diplomas in creative technologies and design that can be applied to many careers. Our graduates have also gone on to combine careers in art, industry, and commercial spheres.

Specific career options for creative technologies graduates include:

- **Contemporary Artist** (*Digital/new media artist, popular musician, sound artist, media artist, digital performer etc.*)
- **Computer programmer/analyst, or Engineer** (*Computer scientists or engineer employed in the Creative Industries*)
- **Animator** (*Concept artist, art director, character designer, animation technical director, lighting artist, rigger for TV, film, and game development*)
- **Entrepreneur** (*Inventor, creative businessperson*)
- **Researcher** (*Professor in art /technology/media/computer science/ engineering; product tester or reviewer; research and development work*)  
*Note: Many research options will require continuing on to a graduate degree.*
- **Designer** (*graphic designer, interactive content designer, sound designer, computer game designer, VR designer, AR designer*)
- **Interactive Media Producer** (*Production of commercial online content including visual, video, audio, and interactive content, web design, game design, etc. Developer of interactive gadgets and systems, mobile app designer*)
- **Careers in Social Media and Online Marketing** (*social media marketing; social media consultant; YouTube producer/performer*)

# Program Requirements

## Program Requirements:

### BFA in Creative Technologies

Credit Hours	BFA in Creative Technologies: Required Courses
0.0	MAP 001
<b>Critical Competencies – 21 credit hours</b>	
<b>Communication in Writing</b>	
6.0	Two of ACAD 100, ENGL 100 or 110
<b>Culture and Society</b>	
3.0	MAP 202 or MAP 209*
3.0	Any one in the following areas (excluding courses in statistics, methods, or PHIL 150): ANTH, CLAS, ENGL above 100- level, HIST, HUM, INDG, IDS, JS, IS, Language other than English, Literature in translation, LING, RLST, PHIL, WGST.
<b>Natural or Social Sciences</b>	
6.0	Two courses in the following areas (excluding courses in research/statistics): ECON, GES, PSCI, PSYC, SOC, SOST, and STS other than statistics or methodology; any Science courses, including MATH.
<b>Research Skills and Methodologies</b>	
3.0	Any course in research methods, statistical analysis, logic, or computer science offered through La Cité, the Faculties of Arts and Science, such as PHIL 150, CS (any course), INDG 280, 282, SOST 201, 203, 306, 307, PSYC 204, 305, STATS* (any course), WGST 220.  ARTH 301, and THST 250 may be counted in this area if not already counted in another area of the program – see Additional Regulations.  *Statistics courses offered through faculties other than Arts and Science may be used with approval by the Dean or designate.
<b>Media, Art, and Performance Requirements outside the major</b>	
9.0	Three Media, Art, and Performance courses outside the major

# Program Options

<b>Major Requirements – 72 credit hours in the discipline</b>	
3.0	CTCH 110
3.0	CTCH 111
3.0	CTCH 112
3.0	CTCH 113
3.0	FILM 200
3.0	CTCH 203
3.0	CTCH 204
3.0	CS 110
3.0	ENSE 271
3.0	CTCH 209/DES 209
15.0	5 of the following: CTCH 201, 205, 213, 214, 215, 251, CS 207 or any other CTCH 2XX
3.0	CTCH 301
3.0	CTCH 302 or CTCH 307
3.0	CTCH 303
3.0	CTCH 306
15.0	5 of the following: CTCH 311, 312, 313, 314, 321, 305, ENSE 405 or any other CTCH 3XX or CTCH 4XX
3.0	CTCH 498
3.0	CTCH 499
<b>Open Electives –12 credit hours</b>	
<b>12.0</b>	<b>Four</b> Open Electives
120.0	<b>Total - PGPA 65.00% and 60.00% UGPA required</b>

# Program Options

## BA in Creative Technologies

Credit Hours	BA in Creative Technologies Required Courses
0.0	MAP 001
<b>Critical Competencies – 33 credit hours</b>	
<b>Communication in Writing</b>	
6.0	Two of ACAD 100, ENGL 100 or 110
<b>Culture and Society</b>	
3.0	MAP 202 or MAP 209*
6.0	Any two in the following areas (excluding courses in statistics, methods, or PHIL 150): ANTH, CLAS, ENGL above 100- level, HIST, HUM, INDG, IDS, JS, IS, Language other than English, Literature in translation, LING, RLST, PHIL, WGST.
<b>Natural or Social Sciences</b>	
6.0	Two courses in the following areas (excluding courses in research/statistics): ECON, GES, PSCI, PSYC, SOC, SOST, and STS other than statistics or methodology; any Science courses, including MATH.
<b>Research Skills and Methodologies</b>	
3.0	<p>Any course in research methods, statistical analysis, logic, or computer science offered through La Cité, the Faculties of Arts and Science, such as PHIL 150, CS (any course), INDG 280, 282, SOST 201, 203, 306, 307, PSYC 204, 305, STATS* (any course), WGST 220.</p> <p>ARTH 301, and THST 250 may be counted in this area if not already counted in another area of the program – see Additional Regulations.</p> <p>*Statistics courses offered through faculties other than Arts and Science may be used with approval by the Dean or designate.</p>
<b>Critical Competency Electives – 9 credit hours</b>	
9.0	9 credit hours from any of the critical competency categories.
<b>Note:</b> Course substitutions in the above categories may be granted by the Dean or designate.	

# Program Options

<b>Major Requirements – 60 credit hours in the discipline</b>	
3.0	CTCH 209/DES 209
3.0	CTCH 110
3.0	CTCH 111
3.0	CTCH 112
3.0	CTCH 113
3.0	CTCH 203
3.0	CTCH 204
3.0	CTCH 301
3.0	CTCH 303
3.0	CTCH 306
9.0	Three CTCH courses at the 200-, 300-, or 400-level
3.0	One of CTCH 302 or 307
3.0	CTCH 498
3.0	CTCH 499
3.0	ENSE 271
3.0	FILM 200
6.0	Two courses from the Creative Technologies approved courses**
<b>Media, Art, and Performance Requirements outside the major</b>	
9.0	Three Media, Art, and Performance courses outside the major
3.0	One MAP course or other interdisciplinary Media, Art, and Performance course (approved by Dean or designate).
<b>Open Electives – 15 credit hours</b>	
15.0	Five Open Electives
120.0	<b>Total - PGPA 65.00% and 60.00% UGPA required</b>

# Program Options

## Minor in Creative Technologies

Credit Hours	Minor in Creative Technologies: Required Courses
3.0	CTCH 110
3.0	<b>CTCH 113</b>
3.0	<b>CTCH 203</b>
3.0	<b>CTCH 204</b>
<b>Two of CTCH 301, 302, 306, 307, 311, 312, 313</b>	
<b>3.0</b>	
<b>3.0</b>	
18.0	<b>Total – GPA 65.00% required</b>

## Diploma in Creative Technologies

Credit Hours	Diploma in Creative Technologies: Required Courses
0	MAP 001
3.0	ENGL 100
3.0	CTCH 110
3.0	CTCH 111
3.0	CTCH 112
3.0	CTCH 113
3.0	CTCH 203
3.0	CTCH 204
3.0	CTCH 301
3.0	CTCH 306
18.0	6 CTCH 200 and/or 300 level
3.0	FILM 200
12.0	4 Electives*
<b>60.0</b>	<b>Total 65.00% PGPA and 60.00% UGPA required</b>

# Program Options

## Bachelor of Design

Credit Hours	Bachelor of Design Required Courses
0.0	MAP 001
<b>Critical Competencies – 24 credit hours</b>	
<b>Communication in Writing</b>	
3.0	ACAD 100 or ENGL 110
<b>Culture and Society</b>	
3.0	MAP 202 or MAP 209*
3.0	Any course in the following areas (excluding courses in statistics, methods, or PHIL 150): ANTH, CLAS, ENGL above 100-level, HIST, HUM, INDG, IDS, JS, IS, Language other than English, Literature in translation, LING, RLST, PHIL, WGST.
<b>Natural or Social Sciences</b>	
3.0	Any course in the following areas (excluding courses in research/statistics): ECON, GES, PSCI, PSYC, SOC, SOST, and STS other than statistics or methodology; any Science courses, including MATH.
<b>Research Skills and Methodologies</b>	
6.0	Any two courses in research methods, statistical analysis, logic, or computer science offered through La Cité, the Faculties of Arts and Science, such as PHIL 150, CS (any course), INDG 280, 282, SOST 201, 203, 306, 307, PSYC 204, 305, STATS* (any course), WGST 220.  ARTH 301, CTCH 203 and 303 may be counted in this area if not already counted in another area of the program - see Additional Regulations. *Statistics courses offered through faculties other than Arts and Science may be used with approval by the Dean or designate.
<b>Critical Competency Electives</b>	
3.0	1 course from any of the above areas.
3.0	ART 100

# Program Options

<b>Major Requirements – 36 credit hours</b>	
18.0	Six approved elective courses (courses not already counted in another area of the program) from the following:  Any CTCH course at the 200, 300, 400 level (excluding CTCH 498 and 499);  FILM 200; 205;  ART 220, 221, 223;  INAH 100
12.0	Four of any DES courses *consider course level requirements  DES 2XX, DES 3XX; DES 4XX
3.0	DES 498 From Prototype to Portfolio
3.0	DES 499 Capstone
<b>60.0</b>	<b>Total: 65.00% GPA required</b>

## **FACULTY OF SCIENCE, COMPUTER SCIENCE, MINOR IN CREATIVE TECHNOLOGIES**

**The minor in Creative Technologies is offered jointly with the Faculty of Media, Art, and Performance. For purposes of elective requirements, CTCH courses are considered to be categorized as Media, Art, and Performance courses.**

<b>Credit Hours</b>	<b>Computer Science minor required courses</b>
3.0	CTCH 110
3.0	CS 207
3.0	CTCH 203
3.0	CTCH 2xx or 3xx
3.0	CTCH 2xx or 3xx
3.0	Approved Elective*
<b>18.0</b>	<b>Total – GPA 65.00% required</b>

\*Approved Electives: ART 223, CS 205, 207, 215, 408, 409, 427, 428, ENGG 100, ENGG 123, MUCO 326, MUCO 327, or THDS 347.



# Professional Placement and Co-op Options

## Professional Placement and Co-op Options

### The Faculty of Media, Art, and Performance Professional Placement

This is an experiential learning course, similar to an internship. It gives students the opportunity to further their knowledge and skill set within an institution related to their major, and at the same time, earn credit towards their degree. Typically, the placement is off campus. The project or terms of the placement will be developed through consultation between the home department, the student and the institution. Supervision is jointly undertaken by the host institution and a faculty member. Students must have completed 60 credit hours and have permission from their Department Head to [take part in the program](#).

### Co-op Option for CS Students

The department of Computer Science offers paid co-op positions to qualified candidates in the second, third, and fourth year of a computer science degree program.

Full details can be found on the Co-operative Education Program webpages of the Department of Computer Science:

<http://www.cs.uregina.ca/UndergradProgram/workstudy/>

and on the Career Centre pages:

<http://www.uregina.ca/careercentre/coop/future-students/co-op/science/computer-science.html>.

CS students must maintain an average of at least 65% and must be enrolled in (or have completed) at least 30 and no more than 75 credit hours (including current semester of study) towards their Science degree including CS 115 or CS 110 along with MATH 110. It is also recommended that the student have more than 1 CS class completed. Students must be registered as a full-time student in the semester prior to starting a work term.

# Professional Placement and Co-op Options

## What types of co-op jobs are available to CS Co-op students?

CS Co-op students are prepared to work in software design, help desk support, network administration, web page design and maintenance, hardware and software application support, data processing, instruction and scientific computing. You might work as an Applications Delivery Analyst for Shell Canada, a Technical Assistant for SaskTel, or SGI Desktop Services, Network Services and Application Development.

## How many work terms will I do?

Three, with an optional fourth.

## How much can I earn during a work term?

Salaries for CS Co-op students typically range from \$2200 per month to \$3200 per month. That works out to approximately \$14 to \$20 per hour. Some employers may also offer a moving allowance.



*Recording a podcast in the IMP Labs.*



# **SECTION FOUR**

## **Course Descriptions and Offerings**

## Course Descriptions and Offerings

Creative Technologies & Design courses (with the CTCH and DES course code) are available, alongside a wide range of courses from our partner Departments that also engage with Creative Technologies & Design. Not all courses run every semester.

For current offerings, search by the term and look under “Creative Technologies” and “Design” on the University of Regina website, see:

### “Search Classes and Build a Schedule”

[https://banner.uregina.ca:17023/ssbprod/bwckschd.p\\_disp\\_dyn\\_sched](https://banner.uregina.ca:17023/ssbprod/bwckschd.p_disp_dyn_sched)

### Schedule of CTCH & DES courses offered for 2024-2025

*Course Area subject to change*

#### Spring 2024

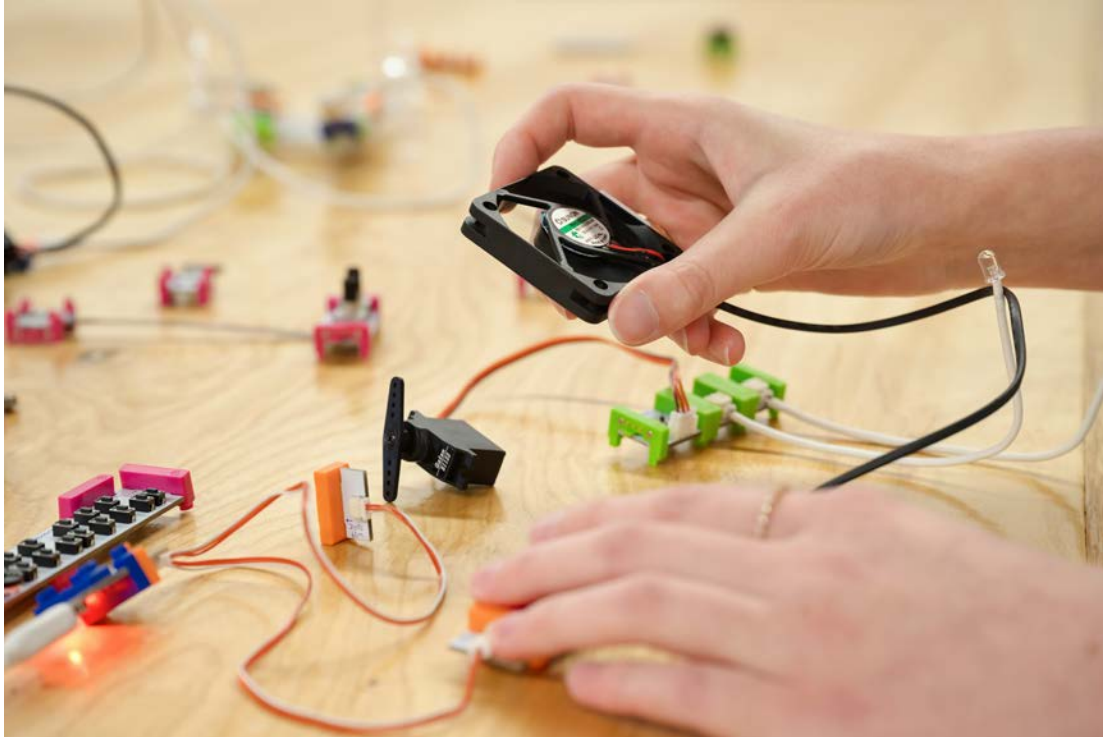
- CTCH 110 Introduction to Creative Technologies (online)
- CTCH 112 Introduction to Audio Tools (remote)
- CTCH 113 Introduction to Digital Studio Tools (online)
- CTCH 213 Branding, Advertising, and Design (remote)
- CTCH 216 3D Animation: Art and Social Media (online)
- CTCH 311 Video Hack (remote)
- CTCH 312 Introduction to Computer Game and VR Design (in person)

#### Fall 2024

- CTCH 110 Introduction to Creative Technologies
- CTCH 112 Introduction to Audio Tools (remote)
- CTCH 113 Introduction to Digital Studio Tools
- CTCH 203 Introduction to Media and Communication
- CTCH 204 Introduction to Creative Coding
- CTCH/DES 209 Fundamentals of Creative Practice
- CTCH 210 AC Popular Music Performance and Politic
- CTCH 213 Branding, Advertising, and Design
- CTCH 216 3D Animation: Art and Social Media
- CTCH 301 Play: Interactions in New Media
- CTCH 306 Digital Storytelling and Interactive Media
- CTCH 313 Augmented Reality: Critical Theory, Art, Activism
- CTCH/DES 498 From Prototype to Portfolio

## Winter 2024

CTCH 111	Creative Technologies Processes
CTCH 113	Introduction to Digital Studio Tools
CTCH 201	Introduction to Sound Art
CTCH 204	Introduction to Creative Coding
CTCH 205	Hip Hop Cultures
CTCH 214	Visual Communication for the Web
CTCH 303	Technology and Culture
CTCH 307	Improvisation
CTCH 312	Introduction to Computer Gaming and VR
CTCH 314	3D Animation - Advanced
CTCH/DES 499	CTCH & DES Capstone Project



*Students building entry-level robotics with LittleBits in the Maker Space*

## Catalogue of CTCH & DES Courses

**CTCH 110 - Introduction to Creative Technologies** This course investigates the creative use of technology. It explores how computer hardware and software, machinery and gadgets and devices, and networks (including social networks) are used in the production of works of visual art, music, theatre, film and new media; and how creativity shapes new technologies. No prerequisite.\*

### **CTCH 111: Creative Technologies Processes**

This course investigates the creative uses of technologies and how various technologies are used in the production of visual arts, film, music, theatre and new media and how creativity shapes new technologies. Will include hands on activities.

### **CTCH 112: Introduction to Audio Tools**

An entry level course including practical guidance in the setup and use of audio and electronic equipment, and in learning to write and perform music using commercial, open-source and DIY audio tools with the computer. Designed to be useful to students regardless of literacy in music reading and notation, this course welcomes students of varied experience and background in music, creative sound and computers. \*Note: Students may not receive credit for CTCH 112 and CTCH 212\*

### **CTCH 113: Introduction to Digital Studio Tools**

This entry level studio course explores the creative opportunities available when working digitally in the areas of fine art, illustration and graphic design. Throughout this course students will work towards the production of a portfolio of digital works that will include digital painting, digital collage, vector illustrations, typography, layout design and photographic manipulations. Modules will include introductory and intermediate skills in Adobe Photoshop, Adobe Illustrator, and Adobe InDesign as well as learning how to incorporate scanned artwork or photography into works for both print and screen. \*Note: Students may not receive credit for CTCH113 and CTCH 211\*

### **CTCH 200AI: Rhythm, Riff, Remix: Electronic Dance Music Production**

This course introduces students to the basic elements, techniques and processes of electronic music, technologies and design, focusing on three key areas: beats and rhythm design, riff composition and combination, and remix strategies and production processes.

### **CTCH 200AJ: Music and the Computer: Listening for the Future**

Imagine a future where a button press unleashes a symphony, or everyone contributes to a global soundtrack. Music is evolving, and in this course students will explore the relationships between music, science, and technology, engaging with ideas of contemporary scholars and sonic artists, conducting creative projects, and questioning music's future.

### **CTCH 201: Introduction to Sound Art**

This course introduces the artistic practice of sound art. It covers a range of sound art practices including avant-garde sound, Musique Concrete, sound and 1960s art movements, electroacoustic music, sound sculpture, radio art, Acoustic Ecology, community-engaged sound art, sound art in performance, and new media. Includes practical exercises. \*\*\*Prerequisite: Successful completion of 15 credit hours, or permission of the instructor\*\*\*

### **CTCH 203: Introduction to Media and Communication**

Key topics in media and communication such as: theories of media and communication; technology as social practice; digital and interactive media; television and advertising; global media; online media; surveillance; alternative and tactical media; perceptual media. \*Note: Students may not receive credit for FA 269AC and CTCH 203\*

### **CTCH 204: Introduction to Creative Coding**

This course introduces core creative coding methods and strategies for computational art. \*\*\*Prerequisite: Successful completion of 15 credit hours or permission of the Instructor. \*\*\*

### **CTCH 205: Hip Hop Culture, Politics, Identities**

This course is an exploration of local and global hip hop cultures, politics and identities. Students will be expected to engage in both critical analysis and hip hop cultural production. \*Note: Students cannot receive credit for CTCH 200AC and CTCH 205.\*

### **CTCH 206: The Electronic Voice: Beatbox, Looping, Vocal FX and Soundscapes**

This course explores the endless possibilities of the human voice in combination with technology and covers modules in song construction, beatboxing, looping, improvisation, vocal FX and live performance using various electronic equipment. This course is ideal for students with vocal interest, comfortable with solo singing. \*Note: Students may only receive credit for one of CTCH 206 and CTCH 200AE.\*

### **CTCH 209/DES 209: Fundamentals of Creative Practice**

In this course, students will be introduced to foundational concepts and skillsets for developing their creative practice. This practice-based, hands-on studio course will guide students in establishing strategies and techniques for artistic research, concept development, and presentation and documentation of creative work, with a focus on new media, creative technologies, and design practices. Discussion, peer review, and self-reflection activities will support students in investigating their interests as creative practitioners.

### **CTCH 210AC: Popular Music Performance and Politics in North America Post-World War II**

In this course we will explore the diverse popular musics that have dominated popular culture since the mid-1950s, including Country, Blues, Rock 'n' Roll, Soul, Motown, Heavy Metal, Disco, Hip-Hop, Rap, and Pop, among others. No previous background in music performance or musicology is required.

### **CTCH 213: Branding, Advertising and Design**

This course explores design practices for branding and advertising as they are developed in a professional environment. Through experiential learning process, lectures, case studies, and studio projects, students will gain practical and theoretical knowledge to create and understand the visual language underpinning brand identities and advertising campaigns. \*Note: Students may only receive credit for one of CTCH 213 and CTCH 200AG.\*

### **CTCH 214: Visual Communication for the WEB**

This course focuses on skills, experience, and critical thinking related to the production of online-related experiences. While investigating case studies and visual communication principles, students will engage with projects including display/mobile advertising, as well as the design of a website. \*Note: Students may only receive credit for one of CTCH 214 and CTCH 200AK.\*

### **CTCH 215: Visual Identity Design**

Visual Identity is key to making a difference. In this course you will design visual communication for business and non-profit organizations. Through a combination of projects, you will design and publish documents for internal and external publics, connecting with your audience through print and web media products. \*Note: Students may only receive credit for one of CTCH 215 and CTCH 200AL.\*



### **CTCH 216: 3D Animation: Art, Social Media**

An online real-time interactive software intensive course that addresses digital art, design, DE animation and modeling.

### **CTCH 221: The Art of Podcasting**

An introduction to the creative and technical aspects of creating a podcast. Students will develop, record and edit podcast episodes in a variety of genres. They will share their work via web pages and an RSS feed that can be accessed through various podcast clients. \*Note: Students may only receive credit for one of FILM 221 or FILM 280AD\*

### **CTCH 250: Creative Technologies Beyond the Classroom**

Students will critically and experientially engage with creative technologies in global locations. \*Note: Students may only receive credit for one of CTCH 250 and CTCH 200AF.\* \*Note: Creative Technologies Program Option.\*

### **CTCH 251: Creative Technologies Beyond the Classroom - 2**

Students will critically and experientially engage with creative technologies in global locations. \*Note: Students may only receive credit for one of CTCH 251 and CTCH 200AH.\* \*Note: Creative Technologies Program Option.\*

### **FILM 200: Introduction to Film Production**

Exploring the differences between photographic, film, video and audio processes, students will study the characteristics of these media through hands on assignments. \*Note: Restricted to Film majors. Materials Fee: \$100\* \*Note: Creative Technologies Program Option\*

### **ENSE 271: People-Centred Design**

Psychological principles of human-computer interaction. Evaluation of user interfaces. Usability engineering. Task analysis, user-centered design, and prototyping. Conceptual models and metaphors. Software design rationale. Design of windows, menus, and commands. Voice and natural language I/O. Response time and feedback. Color, icons, and sound. Internationalization and localization. User interface architectures and APIs. Case studies and project. \*\*\*Prerequisites: Completion of 30 credit hours.\*\*\*

### **CTCH 301: Play**

Play is a core, hands-on studio course which critically investigates participation, interaction, and play within new media art practice. Students will build projects in the areas of interactive installation or performance, data translation and interactive games.

\*\*\*Prerequisite: CS 207, CTCH 202, CTCH 204 or permission of instructor\*\*\*\*

### **CTCH 302: Augmentation**

Augmentation explores “wearables” technologies and techniques in art practice. Students will create wearable projects and learn about critical concepts, global histories, and emerging practices which address technological augmentation of the body in art and design. Prerequisite: CS 207 or CTCH 204 or permission of instructor. \*Note: Students may only receive credit for one of CTCH 302 and CTCH 310AB.\*

### **CTCH 303: Technology, Culture, and Art**

Turning to cultural and artistic practices as tools for analyzing current technological developments and their influence on art, politics, and culture, students will analyze theoretical works focusing on understanding technology as culture, the intersections between technology and social life, and the contributions digital technologies make to creative industries.

\*\*\*Prerequisite: CTCH 203\*\*\*

### **CTCH 304: Media Empires**

This course offers an interdisciplinary approach to historical patterns of technological development, and the institutional, ideological, aesthetic and ethical changes they have prompted over the last hundred years in the most popular media of the day (film, TV, internet).

### **CTCH 305: Expanded Screens**

This course looks at contemporary cinemas and the expanding and contracting screen in recent decades. Topic may include films as political vehicles, technological spectacles, accessories, and installation art.

### **CTCH 306: Digital Storytelling & Interactive Media**

This studies/studio hybrid course explores the social, political, cultural, economic, and intersectionality of interactive media and digital storytelling. We will engage with audio (audio walking tours, music recording, podcasting, radio programming) and on-line interactive and immersive storytelling (web-projects, gaming, apps). \*\*\*Prerequisite: Successful completion of 30 credit hours, or permission of the instructor\*\*\*

\*Note: Students may not receive credit for CTCH306 and CTCH 310 AE storytelling (web-projects, gaming, apps).\*

### **CTCH 307: Improvisation**

Students analyze the roles of improvisation in the creation and production of artworks (i.e interactive media, sound art, music, performance, socially engaged art, digital storytelling, community radio). Drawing on key principles such as active listening, risk taking, building trust, and collaboration, students will create art projects using critical improvisation.

\*\*\*Prerequisite: CTCH 201 or CTCH 202 or CTCH 205, or permission of instructor.\*\*\*

### **CTCH 310AA: Sound Art 2: Interactive Audio**

This class focuses on creative explorations of interactive audio art. Students will work on a major practical project(s) or research projects depending on their interests.

### **CTCH 313: Augmented Reality: Critical Theory, Art, and Activism**

Students will engage with AR artworks and examine how artists and activists are using AR art to further social change. Reading scholarly works on AR art as strategies for social justice, students will explore issues related to participatory place-based art/media and learn AR technologies during labs/workshops. \*\*\*Prerequisite: 30 credit hours or permission of instructor.\*\*\*

\*Note: Students may only receive credit for one of CTCH 313 or CTCH 310AF.\*

### **CTCH 314 - 3D Animation Design: Story, Character, & Motion**

Advanced studies in 3D modelling/animation for Industry and Entertainment. Studies will include opportunities to learn character modelling, rigging and animation. Applications for motion graphics and visual effects (VFX). Professional 3D portfolio for media and industry will be covered. Students should have completed CTCH 210 AB or be able to demonstrate to the instructor an achieved level of competency in creating animation similar to that achieved in CTCH 210AB. \*\*\*Prerequisite: CTCH 210AB or CTCH 216 or permission of instructor or Program Coordinator.

\*Note: Students may only receive credit for one of CTCH 314 or CTCH 310AG.\*

### **CTCH 311 - Video Hack: Web Video Tools**

This course mashes together traditional video creation skills with an emphasis on using contemporary tools to produce high quality digital outputs for the internet and emerging online platforms. Using widely available tools such as smartphones, tablets, action cameras, open source code & laptops this class will explore creative opportunities afforded by these new tools. Topics will include super short form videos for social media, video mashups from

found video, code & video, time-lapse video & the evolution of camera placement. Editing projects for these new platforms will incorporate professional video editing applications, online tools and image editing applications.

\*\*\*Prerequisite: 30 credit hours or permission of instructor.\*\*\* \*Note: Students may only receive credit for one of CTCH 311 and CTCH 310AC.\*

### **CTCH 312 - Introduction to Computer Game and VR Design**

This course introduces computer game design using Unity and other industry standard software, through concept, pre-production, production and post-production; includes storyboarding and distribution. For game design, and virtual reality composition towards experimental art applications.

\*\*\*Prerequisite: 30 credit hours\*\*\* \*Note: Students may only receive credit for one of CTCH 312 and CTCH 310AD.\* \*Note: Special permission of the instructor available for strong candidates with less credit hours completed.\*

### **CTCH 320AB - Contemporary Performance/Technology**

This course investigates the use of new technology in live performance contexts. It covers technology in performance art, new theatre forms, and live sound and body work. Students will study contemporary artists and analyse their ideas and techniques working on either a major essay or a solo performance work.

\*\*\*Prerequisite: 30 credit hours or permission of instructor\*\*\*

### **CTCH 320AD - Audio Art and Maker Culture**

This course explores the connections between maker culture and sound art in both maker culture and artistic contexts. Students will examine existing artists and practitioners, create demos, and participate in and examine local maker culture and audio art events. \*\*\*Prerequisite: 30 credit hours or permission of instructor\*\*\*

### **CTCH 320AB: Contemporary Performance / Technology**

This course investigates the use of new technology in live performance contexts. It covers technology in performance art, new theatre forms, and live sound and body work. Students will study contemporary artists and analyze their ideas and techniques working on either a major essay or a solo performance work. \*\*\*Prerequisite: 30 credit hours or permission of instructor\*\*\*

### **CTCH 321: Popular Music Cultures and Technologies**

The aim of this course is to study and understand the social, political, and cultural significance of popular music in the 20th and 21st Centuries. Topics include genres, individual artists and groups, stylistic trends, record labels and recording technologies, media representation and celebrity construction, as well as the role of race, class, gender, sexuality, and regional differences in the reception of popular music.

### **CTCH 402: Media, Censorship, Propaganda**

This advanced seminar course will introduce students to interdisciplinary critical approaches to the study of (self) censorship, propaganda and persuasion in contemporary media on the basis of films, television shows and other artefacts. \*Note: Students cannot receive credit for Film 480AV and CTCH 402\*

### **CTCH 403: Advanced Communication**

A seminar in advanced communication. Individual seminar themes include but are not limited to: digital and interactive media; global media; television studies; media convergence and surveillance; alternative and tactical media; perceptual media, etc. \*\*\*Prerequisite: CTCH 303 or permission of the instructor\*\*\*

### **CTCH 410AA: Interdisciplinary Improvisation**

Investigates history and practice of improvisation in theatre, music, computer science, arts, and social practice; and its wider impact on interdisciplinary collaboration practices. Students choose either essays or applied/creative assignments.

\*\*\*Prerequisite: Completion of 30 credit hours or permission of the instructor. \*\*\*

### **CTCH 410AB: Black-Box Studio on Experimental Techniques in Motion Capture and Animation Simulation**

This course is a hands on studio working with motion capture technologies, animation and creation of scenario simulations. The course will build mixed-reality content for virtual reality experiences. A combination of studio and theory will be studied in class. \*\*\*Prerequisite: 30 credit hours or permission of instructor\*\*\*

### **CTCH 411 - Collaboration and Project Design**

This course critically investigates collaborative project design models from the arts and computer sciences and their application to creative technologies work, exploring historical and contemporary examples including improvisation, Avant-Garde experimentation techniques, jams, hackathons, and agile methodologies. \*\*\*Prerequisite: Completion of 30 credit hours or permission of the instructor.\*\*\* \*Note: Students may only receive credit for one of CTCH 410AA and CTCH 411.\*

### **CTCH 420AA - Popular Music: Theoretical and Methods**

In this course students are introduced to contemporary theoretical debates and methodological approaches in Popular Music Studies.

### **CTCH 498/DES 498: From Prototype to Portfolio**

Students will design and draft a major project or research paper in creative technologies. They will also learn professional skills in the Creative Industries including project pitching, grant writing, entrepreneurship, and interviewing. Students in the Creative Technologies concentration will design the first stage of their Capstone work. \*\*\*Prerequisite: 81 credit hours\*\*\*

### **CTCH 499/DES 499: Creative Tech Capstone Project**

This course focuses on the development of a major independent project or research paper in the area of Creative Technologies, for all students in the Creative Technologies Concentration. \*\*\*Prerequisite: 84 credit hours and CTCH 498.\*\*\*



*CTCH 313: Augmented Reality: Critical Theory, Art, and Activism*

## Course Descriptions: Computer Science Courses

These courses are approved to be part of CTCH & DES and are offered through the Department of Computer Science.

(Check with the Department to see which ones are currently available.)

### **CS110: Programming and Problem Solving**

An introduction to problem-solving techniques, the fundamental concepts of programming, and the software design process. Topics will include: data types, control structures, scope rules, functions, files, and the mechanics of running, testing and debugging. Problems will be drawn from various science disciplines. \*\*\*Prerequisite: Pre-calculus 30, Calculus 30, or Math 102\*\*\* \*Note: CS majors who have mastered the course material in CS 110 through other means are eligible to write the CS 110 bypass exam.\*

### **CS115: Object Oriented Design**

This course focuses on the concepts of object-oriented programming. Topics include data abstraction, classes, composition and inheritance, subtyping, dynamic binding, polymorphism and dynamic memory management. Other topics include type systems, two-dimensional arrays, records, and references, searching and sorting algorithms, language translation. Software engineering: comprehensibility, correctness, efficiency, refactoring. Prerequisites: CS 110 and MATH 110 (may be taken concurrently) with a minimum grade of 65%.

### **CS201: Introduction to Digital Systems**

Hardware paradigms, logic minimization, sequential and combinational circuits, register transfer notation. Numerical data representation, number bases, floating-point and two's-complement representation, representation of non-numeric data, records and arrays. Von Neumann architecture, control units, instruction sets, assembly language programming, addressing modes, subroutines, basic building blocks, computer components.

Prerequisites: CS 110

### **CS 205: Introduction to Multimedia Systems**

Multimedia is the use of computers to integrate texts, graphics, video, animation, and sound in an interactive experience. The course introduces these elements of multimedia and their associated technologies. Students will gain an appreciation of each element and be able to combine them into a finished work. \*Prerequisites: CS 110\* Note: Students may not receive credit for more than one of CS 205, CS 325, CS 390AI, CS 490BM, and FILM 385AB.

### **CS 207: Building Interactive Gadgets**

An introduction to building and controlling interactive devices for multimedia art and DIY projects. Build robots, new musical instruments, wearable computers and more. Learn about sensors and actuators: WiFi, Bluetooth, GPS; hardware platforms such as the Arduino; and software platforms such as Processing and MaxMSP.

\*\*\*Prerequisite: CS 100 or CS 110 or completion of 30 credit hours. \*\*\*

### **CS 215: Web Oriented Programming**

This course shows how interactive database-driven web applications are designed and implemented. Appropriate protocols and languages for web and database programming will be discussed, with a focus on client-server architectures, interface design, graphics and visualization, event-driven programming, information management, data modeling, and database systems. \*\*\*Prerequisite: CS 210\*\*\*

### **CS 280: Risk and Reward in the Information Society**

Social context of computing. Case study: human- computer interfaces and their evaluation. Methods and tools of analysis. Professional and ethical responsibilities. Risks and liabilities of computer- based systems. Intellectual property, privacy and civil liberties. Professional communication. Sustainability. Cybercrime.

### **CS 305: Human Computer Communications**

This course stresses the importance of good interfaces and the relationship of user interface design to human-computer interaction. Other topics include: interface quality and methods of evaluation, interface design examples, dimensions of interface variability, dialogue genre, dialogue tools and techniques, user-centered design and task analysis, prototyping and the iterative design cycle, user interface implementation, prototyping tools and environments, I/O devices, basic computer graphics, and color and sound. \*\*\*Prerequisite: CS 215. \*\*\*

### **CS 315: Introduction to Computer Graphics**

Introduction to graphics hardware and software. Two-dimensional graphics rendering algorithms. Basic three-dimensional modeling, transformations, viewing geometry, lighting and shading, hidden surface removal, and texture mapping. \*\*\*Prerequisite: CS210 and MATH 122 \*\*\*



### **CS320: Introduction to Artificial Intelligence**

Foundations and main methods of Artificial Intelligence. Problem characteristics and spaces. Search and optimization techniques with a focus on uninformed and heuristic algorithms. Two player games and constraint satisfaction. Modelling and simulation. Comparison of logic-based, fuzzy, and probabilistic reasoning and knowledge representation methodologies. Machine learning: learning tasks, inductive learning, statistical-based learning, over-fitting, accuracy. \*\*\*Prerequisites: CS 210, STAT 160 or 200, and MATH 221\*\*\*

### **CS 325: Introduction to Multimedia Systems**

Multimedia is the use of computers to integrate texts, graphics, video, animation, and sound in an interactive experience. The course introduces these elements of multimedia and their associated technologies. Students will gain an appreciation of each element and be able to combine them into a finished work. \*\*\* Prerequisite: CS 215 \*\*\* \* Note: Students may not receive credit for more than one of CS 390AI, CS 490BM, and FILM 385AB. \*

### **CS 327: Introduction to Computer Audio**

The purpose of this course is to provide a broad overview of many areas of computer audio, including: Digital representation and compression; MP3s and music downloading; Psychoacoustics; Surround Sound; Speech recognition and Music Information Retrieval; MIDI and New interfaces for music; and video game sound. We will also explore modular interactive software environments such as Max/MSP and PD. Prerequisites: Completion of 60 credit hours.

### **CS340: Advanced Data Structures and Algorithm Design**

Fundamental algorithms: depth- and breadth-first traversals, pattern matching, and graph algorithms. Algorithmic strategies: brute-force, greedy, divide- and-conquer, backtracking, branch-and-bound, dynamic programming, and randomized. Algorithm analysis, complexity theory, performance evaluation. Parallelism: fundamentals, algorithms, communication.

### **CS 408: Animation Software Design**

This course teaches the design and implementation of software for creating animations. Topics include history of animation, technical background, motion control, key frame-based animation, kinematics, physically- based animation, fluid animation, modelling and animating human figures, facial animation, modelling behavior, and special models for animation. \*\*\*Prerequisite: One of CS 315, CS 320, CS 330, or CS 340\*\*\*

### **CS 409: Interactive Entertainment Software**

This course teaches the design and implementation of interactive entertainment software, including computer games. Topics include history of interactive software, social factors, and principles of interactive entertainment, hardware platforms, current software development tools, game design, game architecture, game physics, collision detection, game graphics, artificial intelligence for games, audio, game production and business aspects. \*\*\*Prerequisite: One of CS 315, CS 320, CS 330, or CS 340.\*\*\*

### **CS 428: Human Computer Communications**

This course stresses the importance of good interfaces and the relationship of user interface design to human-computer interaction. Other topics include: interface quality and methods of evaluation; interface design examples; dimensions of interface variability; dialogue genre; dialogue tools and techniques; user-centered design and task analysis; prototyping and the iterative design cycle; user interface implementation; prototyping tools and environments; I/O devices; basic computer graphics; color and sound. Prerequisites: CS 215 and 280

## **Course Descriptions: Engineering Courses**

These courses are approved to be part of CTCH & DES and are offered through the Department of Computer Science.

(Check with the Department to see which ones are currently available.)

### **ENGG 100: Engineering Graphics**

Fundamentals of graphical communication and analysis. Manual and computer-aided sketching and drawing techniques; orthographic and pictorial projections; multi-view, isometric and oblique drawings; basic descriptive geometry; introduction to working drawings.

### **ENGG 123: Engineering Design and Communications**

Students will be introduced to the concepts of engineering design and communications. In addition, the consequences of engineering projects on society will be explored.



# **SECTION FIVE**

## **Student Supports**

# Student Supports

## Building Security and Access:

University of Regina buildings are open from 7:00 a.m. - 11:00 p.m. Some rooms are accessible only by card key, which will be issued as appropriate to each student by the Office of the Dean of Media, Art, and Performance. It is prohibited to prop the doors to key-accessible spaces as this jeopardizes the security of people and equipment.

**House Phones:** House phone are located throughout campus. Please take note of their location for reference. Campus Security is on call 24/7, and can be reached at (306) 585-4999, or by pressing the Campus Security button on any campus SaskTel payphone (no coins required).

**Walk Along:** Walk Along is a free service that offers staff and students a safe walk to their car or anywhere on campus. Call (306) 585-5600 or press the “Walk Along” button on campus pay phones (no coins required).

**Lone Worker:** The Lone Worker Service is provided by Campus Security to enhance your personal safety while working or studying alone. The Service is available to everyone in the University of Regina community during the quiet hours of the evening, weekends and statutory holidays.



*Collaboration is a key element of Creative Technologies & Design courses.*

# Student Supports

## Use of Facilities and Equipment:

Facilities are designated for Creative Technologies & Design in order that all users can enjoy a pleasant and productive working environment. It is essential that there be mutual respect and co-operation.

Please consider the impact of your actions on others in our common shared spaces, and observe the following guidelines:

1. Spaces must be left in their original, tidy condition for the next users.
2. Eating and drinking at computer workstations is prohibited. Smoking and/or consuming drugs or alcohol are prohibited outside of designated areas on campus.
3. Users of designated, specialized spaces must have permission to use those spaces: faculty members will facilitate appropriate key requests.
4. Keys for specialized spaces are non-transferable and must be returned to the Office of the Dean.
5. There must be no tampering with equipment. Any problems with equipment should be reported immediately to the appropriate faculty or staff member or technician.
6. No equipment is to be moved without permission of faculty.
7. No permanently placed equipment is to be removed from the University premises without written permission.

# Student Supports

## Booking Rooms:

Your class may include access to one of our specialized labs or studios. Your instructor will inform you of the access policy, but in general undergraduate students access the spaces in one of three ways:

1. Your class may be scheduled in one of our specialized spaces such as the Makerspace or the Sound Studio. Your instructor will provide orientation. If you are allowed to access the lab outside class for your assignments, you will be informed by your instructor how to arrange access.
2. You can also visit labs/spaces during a set drop-in “open hour” or open lab times. These are drop-in times set by the program for Fall and Winter, and change from semester to semester. Usually, the open hours are supervised by undergraduate technical assistants, graduate students, or sometimes by your instructor. Open lab hours often set up for the Makerspace, and the IMP Labs, and occasionally are organized for other MAP or CS spaces. These open hours will be advertised by posters, and social media, or you can contact Rita Racette in the Creative Technologies office. She can provide you with either a list of the current semester’s open hours, or information on who to contact for current information and opening hours.
3. Some MAP rooms, such as the ED113 classroom, can be booked by students for use outside class times for coursework. These bookings usually require a booking form submitted in advance, that will need to be signed by your instructor. If you think you need a room, contact your instructor for help finding the right one. The room booking form for ED113 can be collected from the MAP/Film Equipment Room (see below). Note: Some MAP rooms are only open to majors from a specific Department.

# Student Supports

## Equipment and Fees:

Creative Technologies & Design students can access some equipment for free, take home loan, through the MAP/Film Equipment room. The room is located in the Education Building, First Floor, inside the Film Department. Students must book equipment in advance. Strict booking policies are used to ensure equipment is looked after and returned on time. You will receive information on what you need, and how to reserve, pick up, and return your equipment from your instructor.

Other equipment will be used in the labs/classrooms and can only be accessed there.

You may also be asked to provide your own equipment for a specific class, or to purchase kits or other resources. This will all be outlined in your syllabus/course outline when you start the course.

A materials fee will be applied to all students registered in the CTCH & DESIGN making courses where additional equipment will be purchased by CTCH & Design. Exact amounts for the materials fee will be determined based on the specific needs for each course. This is to support the upkeep and replacement of expensive, specialized equipment and to provide extra supplies for you for unique classes, you will be informed at the start of the class when this applies.

## Email Notices to Students:

All units at the University of Regina maintain an official list of student's University of Regina e-mail addresses and we will regularly send e-mail notices to your University of Regina account. Please check your UR e-mail account and URCourses individual course email folders regularly.

## Student Employment Opportunities:

Various student employment opportunities are available to Creative Technologies students including student teaching technical assistant positions, and research assistantships with Professors. All positions are posted on the Media, Art, and Performance bulletin boards and on the University of Regina website.

# Student Supports

## Centre for Student Accessibility

The University of Regina wishes to support all students in achieving academic success while enjoying a full and rewarding university experience. The Centre for Student Accessibility is guided by Saskatchewan's Human Rights legislation and the duty to accommodate individuals on the basis of disability, family status, religion, and gender identity.

Students who may require academic accommodations and/or support services are encouraged to contact the Centre for Student Accessibility as early as possible. The deadline to register and/or request Accommodation Letters for instructors coincides with the Grade of W drop deadline(s) for courses each term.

**For further information on the registration process, please explore the “UR Accommodated” website:** <https://www.uregina.ca/student/accessibility/>.

### Centre for Student Accessibility Contact

Paskwaw Tower, Room 119  
(306) 337-2200  
[accessibility@uregina.ca](mailto:accessibility@uregina.ca)



# Student Supports

## Respectful University Policy & Sexual Violence Misconduct

Harassment and Discrimination will not be tolerated. The University of Regina promotes a learning environment that is free from all forms of harassment and discrimination. The University will neither tolerate nor condone any inappropriate or irresponsible conduct, including any form of behaviour which creates an intimidating, hostile or offensive environment for work or study through the harassment of an individual or group on the basis of a) race and all race-related grounds such as ancestry, place of origin, colour, ethnic origin, citizenship and creed or b) sex, gender or sexual orientation.

All members of the University community also have the right to work, teach, research, study and otherwise participate in activities connected to the University in an environment that is free from any form of sexual violence, including sexual harassment, stalking, sexual assault, cyber sexual violence and harassment, and distribution of intimate images without consent.

**University policies may be viewed here:**

<https://www.uregina.ca/policy/browse-policy/policy-GOV-100-015.html>

<https://www.uregina.ca/policy/browse-policy/policy-GOV-100-018.html>

# Student Supports

## Academic Regulations

Students are responsible for understanding and following the University's Academic Regulations, beginning on page 56, in the [Undergraduate Calendar](#).

## Academic Misconduct

Academic Misconduct, as [defined in the Undergraduate Calendar](#) (pp. 48-50), includes cheating, plagiarism, and any other acts by which students attempt to attain grades or academic standing that they don't deserve. The University's policy is that it is your responsibility to know what plagiarism is and to avoid it in your course work. You will not be able to excuse academic misconduct by arguing that you didn't know your behaviour constituted plagiarism or misconduct. Please read the section titled, "Plagiarism" on p. 49 of the Undergraduate Calendar. If you are ever uncertain about whether or not your work constitutes plagiarism, please ask your instructor before you submit it. When you hand in assignments, it will be assumed that you submitted the version you intended to submit. Therefore, any attempt to avoid penalty by saying you accidentally handed in the wrong paper or file, will not be accepted. Please review the Student Code of Conduct and Right to Appeal on pages 48-55 in the Undergraduate Calendar.

Every CTCH & DES course syllabus will have a statement about Academic Misconduct and the use of AI. It is a student's responsibility to read through the syllabus and understand the specific regulations for every course.