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SECTION ONE: Introduction

Welcome to the Creative Technologies program (CTCH) at the University of Regina. This handbook provides information about CTCH: its vision, 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) and Computer Science (CS) CTCH web pages and the University of Regina Undergraduate and Graduate Calendars.

The Creative Technologies program 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 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.

Program Administration

The Student Program Office is located in the Faculty of MAP (RC 267.2). General questions about the program and courses can be directed to:

Interdisciplinary Programs Coordinator (Faculty of Media, Art, and Performance)
Dr. Christine Ramsay
Christine.Ramsay@uregina.ca

Interdisciplinary Programs Administrative Assistant (Faculty of Media, Art, and Performance)
Rita Racette
Rita.Racette@uregina.ca

Faculty Liaison (Department of Computer Science, Faculty of Science)
Dr. Daryl Hepting
Hepting@cs.uregina.ca

For program advice or to set up an advising appointment:

MAP Students:
Contact the Academic Program Coordinator: Janelle Bennett (RC 267.2)
Janelle.Bennett@uregina.ca

CS Students:
Contact the Academic Program Coordinator: Connie Renwick (CW 307.14)
Connie.Renwick@uregina.ca

Important Links:

Faculty of Media, Art, and Performance
https://www.uregina.ca/mediaartperformance/areas-study/creative-tech/

Department of Computer Science

Undergraduate Calendar:
https://www.uregina.ca/student/registrar/publications/undergraduate-calendar/sections.html
Creative Technologies (CTCH) is an interdisciplinary program that is unique in the province of Saskatchewan. It encourages 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. Students may enter through the Faculty of Media, Art, and Performance and graduate with a BA (Fine Art) 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 another Faculty or area.

CTCH offers courses from fine arts, computer science, and engineering, with opportunities to draw on courses from media and communications studies, education, and beyond. Our roster of courses encourages collaboration, experimentation, and lateral thinking. The program cultivates imaginative and innovative outcomes inspired by our changing technological landscape.

The Creative Technologies program is ideal for students who have specific interests in art, technology, culture, and interdisciplinary study. Our students are serious about gaining skills as artists, scientists, developers, theorists, entrepreneurs, and, practice-based scholars, and they learn to think about technology and the arts in new ways. Our students thrive in the exploration of digital culture while working in interactive media and installation, physical computing and creative computation, augmented performance and critical research into art and technology.

Imagine how a music course like the Tablet Orchestra broadens traditional music training by including new media; how real-time interactivity through the incorporation of custom electronics enriches the process of making installation, and sound art; how 3D modeling, laser cutting and rapid prototyping nurtures new avenues in sculpture; how a course in expanded cinema enhances approaches to animation; and how the
development and programming of topic sensitive social media and mobile apps augment a course in performance theatre.

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

- Students may focus interdisciplinary approaches by designing their course of study to engage in a breadth of inquiry (selecting from courses across all our areas of study)
- Students may design their course of study to focus on a particular area of interest under the banner of Creative Technologies (clustering courses in visual practices, sound and audio, or interactive media software and media art development, for example).
- Students taking BFA, BA or BSc degrees in a disciplinary area, may use CTCH courses to supplement their course of study through additional training in art and technology, as it relates to their fields.
- Creative Technologies graduates have many options for continued study and employment. This unique specialization in art and technology 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; 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; and, as online and social media producers or consultants.

(Wearable project by Gary Wasyliw (MFA Student))
CTCH Teaching Faculty and Researchers

Dr. Christine Ramsay  
Professor, Film Department, and  
Coordinator of Interdisciplinary Studies  
ED 239.5, 306-585-4210  
christine.ramsay@uregina.ca

Dr. Rebecca Caines  
Associate Professor, Interdisciplinary Programs  
(Creative Technologies)  
RC 154, (306) 585-5520  
Rebecca.Caines@uregina.ca

Dr. Charity Marsh  
Canada Research Chair II in Interactive Media and  
Popular Music,  
Associate Professor, Interdisciplinary Programs  
(Creative Technologies)  
ED 239.12, (306) 337-2623  
Charity.Marsh@uregina.ca

Dr. Randal Rogers  
Associate Professor, Interdisciplinary Programs  
(Creative Technologies)  
RC 250, (306) 585-4746  
Randal.Rogers@uregina.ca

Dr. Megan L. Smith  
Assistant Professor, Interdisciplinary Programs  
(Creative Technologies)  
RC 157, (306) 585-5554  
Email: Megan.Smith@uregina.ca

DEPARTMENT OF THEATRE

William Hales  
Instructor and Department Chair, Theatre  
Department RC 180.1, (306) 585-5568  
William.Hales@uregina.ca

DEPARTMENT OF VISUAL ARTS

Dr. Risa Horowitz  
Associate Professor, Department of Visual Arts  
RC 047, (306) 585-5641  
Risa.Horowitz@uregina.ca

Sean Whalley  
Assistant Professor, Department of Visual Arts  
RC 158, (306) 585-5581  
Sean.Whalley@uregina.ca

DEPARTMENT OF FILM

Ian Campbell  
Lab Instructor, Film Department  
ED 239.3, (306) 585-5313  
ian.Campbell@uregina.ca

Dr. Sheila Petty  
Professor, Film Department  
ED 239.9, 306-585-4188  
Sheila.Petty@uregina.ca

Michael Rollo  
Instructor, Film Department  
ED 239.2, (306) 585-4569  
Mike.Rollo@uregina.ca

Dr. Christina Stojanova  
Associate Professor, Film Department  
ED 239.7, 306-585-5690  
christina.stojanova@uregina.ca

DEPARTMENT OF MUSIC

Dominic Gregorio  
Assistant Professor, Director of Choral Activities,  
Music Department  
RC 256.1, (306) 585-5538  
Dominic.Gregorio@uregina.ca

Dr. Helen Pridmore  
Associate Professor  
Music Department  
RC 256.9, 306-585-5540  
helen.pridmore@uregina.ca
DEPARTMENT OF COMPUTER SCIENCE

Dr. Malek Mouhoub
Professor and Department Head, Computer Science
College West 308.13, (306) 585-4700
cshead@uregina.ca

Dr. Daryl Hepting
Associate Professor, Computer Science
CW 308.22, (306) 585-5210
hepting@cs.uregina.ca

Dr. David Gerhard
Associate Professor, Computer Science
CW 308.8, (306) 585-5227
gerhard@cs.uregina.ca

Dr. Howard J. Hamilton
Professor, Computer Science
CW 308.21, (306) 585-4079
hamilton@cs.uregina.ca

Dr. Orland Hoeber
Associate Professor, Computer Science
CW 308.25, (306) 585-4598
Orland.hoeber@uregina.ca

Dr. Xue Dong Yang
Professor, Computer Science
CW 308.26, (306) 585-4692
Yang@cs.uregina.ca

FACULTY OF ENGINEERING AND APPLIED SCIENCE

Dr. Craig Gelowitz
Associate Professor, Chair Software Systems Engineering
ED 426, (306) 585-4733
Craig.Gelowitz@uregina.ca

Drawn with code by Cara Focht (BFA Student)
SECTION TWO: Getting In

Application Procedures:

All students applying to the Creative Technologies program must first apply to the University of Regina. Full details about admission requirements to enter through Faculty of MAP can be accessed from the Creative Technologies website: [https://www.uregina.ca/mediaartperformance/areas-study/creative-tech/](https://www.uregina.ca/mediaartperformance/areas-study/creative-tech/) (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/](http://www.cs.uregina.ca/FutureStudents/undergrad/)

Important Dates:

Fall/winter application deadlines for most programs at the University of Regina is August 1 for Canadian citizens and permanent residents, and March 1 for International Students. See [http://www.uregina.ca/futurestudents/deadlines/fall.html](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/](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. See [http://www.cs.uregina.ca/Technical/](http://www.cs.uregina.ca/Technical/)

Creative Technology Makers Space: This a flexible project space, equipped with various small hand tools, soldering equipment, projector, sound system, work bench, littleBits Pro library, 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. [https://www.facebook.com/groups/953916048001528](https://www.facebook.com/groups/953916048001528)

IMP Labs: Directed by Dr. Charity Marsh (Canada Research Chair: Interactive Media and Popular Music), the IMP Labs support research focusing on popular music in Canada, Indigenous hip hop cultures, interactive media and performance, gender and technology, mobile media and youth culture. The IMP Labs house an electronic beat-making and sound studio, an interactive DJ lab, an ethnomusicology and field recording lab, the mobile media and popular music lab, as well as the centre for Indigenous Hip Hop and Community Research. These labs are open to the university communities and the wider public and used for classes. See: [http://www.interactivemediaandperformance.com](http://www.interactivemediaandperformance.com)

Computer Science Undergraduate Media Lab (UDML) and Other Classrooms: The UDML (or “Fishbowl”) houses 16 iMacs equipped with audio, graphics, imaging, office, software development, web development, and hacker/maker tools, along with an Epson scanner and midi keyboard. Digital Print Studio is a flexible space equipped with magnetic display walls and professional grade equipment capable of printing large format digital images. It houses the Epson 3880 and Epson 9890 archival printers.

Rough Music and Audio Digital Interaction Lab (aRMADiLo): aRMADiLo is a specialized lab of the Faculty of Science that provides facilities to researchers and visiting artists focusing on usability and interaction with artistic pursuits. This research focuses on computational interaction with information-rich human data such as music, speech, vision and movement, combining signal processing, pattern classification, information retrieval and sensor-based physical computing techniques with multimedia, speech recognition, computer music and human-computer interaction.

The Faculty of MAP also hosts the MAP Equipment Room which houses a range of audio and visual recording and presentation devices, laptop computers, tablets, alongside its collection of AV teaching resources, and several other flexible classrooms which include access to PC labs, green screens, professional audio systems & equipment, and software for general and media software development and media production.
SECTION THREE: Options and Requirements

Bachelor of Arts (Fine Arts) Creative Technologies Concentration:
Chart your own course in this diverse interdisciplinary program. You will learn to be innovative and adept with new technology and at integrating new mediums. You will gain a new perspective on technology and the arts.

Flexibility is built into the program, 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.

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

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 Fine Arts Minor requirements.

http://www.uregina.ca/mediaartperformance/areas-study/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.

## Program Requirements:

### Bachelor of Arts (Fine Arts). Creative Technologies concentration

<table>
<thead>
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<th>Credit hours</th>
<th>Required</th>
<th>Completed</th>
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<td>0.0</td>
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### Media, Art, and Performance Critical Competencies – 33 credit hours

#### Communication in Writing

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#### Culture and Society

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<th>MAP 202</th>
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<td>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.</td>
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#### Natural or Social Sciences

<table>
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<tr>
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<th>Two courses in the following areas (excluding courses in research/statistics): ECON, GEOG, PSCI, PSYC, SOC, SOST, and STS other than statistics or methodology. Any Science courses, including MATH.</th>
<th></th>
</tr>
</thead>
</table>

#### Research Skills and Methodologies

| 3.0          | Any course in research methods, statistical analysis, logic, or computer science offered through the Faculties of Arts and Science, such as: PHIL 150, CS (any course), INDG 280, 282, SOST 201, 203, 306, 307, PSYC 204, 305, WGST 220. STAT (any course). ARTH 301, CTCH 203, 303, and THST 250 may be counted in this area if not already counted in another area of the |           |

#### Critical Competency Electives

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<th>9 credit hours from any of the above areas.</th>
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**Note:** Course substitutions in the above categories may be granted by the Dean or Designate.

### Concentration Requirements - 36 credit hours 65% is required in area of Concentration

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<tr>
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<tr>
<td>3.0</td>
<td>CTCH 111</td>
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<tr>
<td>3.0</td>
<td>ARTH 360</td>
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<td>3.0</td>
<td>CTCH 301</td>
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<td>3.0</td>
<td>CTCH 304 or CTCH 305</td>
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<td>3.0</td>
<td>FILM 280 AC or FILM 209</td>
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<tr>
<td>3.0</td>
<td>One additional CTCH at the 200 or 300 level</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>One additional CTCH at the 400 level</td>
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</tr>
<tr>
<td>3.0</td>
<td>CTCH 499, taken in the last two semesters of enrolment</td>
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<tr>
<td>3.0</td>
<td>Two courses from the following, “Creative Technologies Recommended Courses” list: ART 222, 223, ARTH 222, CTCH 200, 300 or 400 level, CS110, 205, 280, ENGG 100, 123, FILM 280 AA, FILM 280 AD, FILM 253, FILM 386 AD, FILM 286 AA, MUHI 304, MU 319, MUEN 123, THDS 240, THDS 346, THDS 347, THDS 220</td>
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### Media, Art, and Performance Requirements outside the Concentration - 12 credit hours

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Open Electives – 39 credit hours

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<tr>
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<td>CS 115</td>
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<td></td>
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<tr>
<td>3.0</td>
<td>CS 205</td>
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<tr>
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<tr>
<td>3.0</td>
<td>CS 210</td>
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<tr>
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<tr>
<td>3.0</td>
<td>CS 280</td>
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<td>Three of: CS 301, 310, 330, 335, 372</td>
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<td>CS 315</td>
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<td>CTCH 300- or 400-level from list in handbook **</td>
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99.0 Subtotal (65% Major GPA required)

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</table>
120.0 **Total (65% Program GPA required)**

* It is highly recommend that fourth year CS electives be related to creative technology, such as CS 405, CS 408, CS 409, CS 425, CS 427, CS 455
** CTCH electives will be selected from the list of available electives in the CTCH handbook
*** The CTCH Capstone project course will consist of a major project implemented by the student. Details reside in the CTCH handbook and are currently being finalized

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### BA MEDIA, ART, AND PERFORMANCE MINOR, CREATIVE TECHNOLOGIES

<table>
<thead>
<tr>
<th>Credit hours</th>
<th>Required</th>
<th>Completed</th>
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<tr>
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<td>CTCH 204 or CS 207</td>
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<tr>
<td>3.0</td>
<td>CTCH course at the 300-level</td>
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<td>CTCH at the 300 or 400-level</td>
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<td>A course from: ART 222, 223, 355, ARTH 222, CS 280, 305, 325, 327, 408, 409, CTCH 111, CTCH 200, 300 or 400-level, (including CTCH 304, 305, 402), ECMP 355, ENGG 100, 123, ENSE 479, MAP 300, 401, MUCO 217, 341 MUHI 304, THDS 347</td>
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<td><strong>Total</strong></td>
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<td>1 course from the following list: CTCH 111, CTCH 200, 300 or 400 level, ART 223, ART 355, ART 390 AI, ARTH 222, ARTH 380 AI, CS 280, CS 305, CS 325, CS 327, CS 330, CS 408, ECMP 355, ENGG 100, ENGG 123, FA 300 AN, FA 401, FILM 200, FILM 346, MUCO 317, MUCO 318, MUCO 326, MUCO 327, MUHI 304, THDS 347</td>
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<td><strong>18.0</strong></td>
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### 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.

<table>
<thead>
<tr>
<th>Credit hours</th>
<th>Computer Science minor required courses</th>
<th>Student’s record of courses completed</th>
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<td><strong>Subtotal</strong></td>
<td></td>
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*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:

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 from the student the host institution. Students must have completed 60 credit hours and have permission of 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.

What types of 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.

Graduate Program Requirements
Students may pursue advanced study in Creative Technologies through the Master of Fine Arts in Interdisciplinary Studies (MFA) or the Master of Arts in Interdisciplinary Studies (MA), or through a Special Case PhD. They may also pursue an MA or PhD in Computer Science. Please visit the Faculty of MAP Graduate Studies page for more information: http://www.uregina.ca/mediaartperformance/areas-study/grad-studies/index.html Or the Department of Computer Science Graduate Programs page at: http://www.cs.uregina.ca/GraduateProgram/
SECTION FOUR: Course Descriptions

Courses with the CTCH course code are available alongside a wide range of courses with codes from programs that engage with Creative Technologies interdisciplinary scholarship. Please review the online Course Catalog for up-to-date offerings and full details about pre-requisites, permissions, and course fees: https://banner.uregina.ca/prod/sct/bwckctlg.p_disp_dyn_ctlg

CTCH 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.*Note: May not receive credit for both CTCH 110 and FA 169AA*, *Note: Creative Technologies Program Option*

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 Note: Creative Technologies Program Option.*

CTCH 200 AE: The Electronic Voice: Beatbox, Looping, Vocal FX and Soundscapes
This course explores the endless possibilities of the human voice in combination with technology. We will cover 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.

CTCH 200AF, CTCH 200AH: Global Exploration in Creative Technologies
Students will critically and experientially engage with creative technologies in global locations.

CTCH 200AG: 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.

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***
*Note: Students may not receive credit for CTCH 201 and/or CTCH 200 AA and/or FA 269AB 001 and/or ENEL 496AD* *Note: Creative Technologies Program Option

CTCH 202: The Tablet Orchestra
This class explores the potential of the tablet as a musical instrument, and as a tool to enhance music teaching, learning, composing, and performing. All enrolled students will participate in a new performance ensemble "The University of Regina Tablet Orchestra". Music students, computer science students and those interested in experimental performance are encouraged to enroll. ***Prerequisite: Successful completion of 15 credit hours, or permission of the instructor***
*Note: Students may not receive credit for CTCH 200 AB and CTCH 202* *Note: Creative Technologies Program Option*

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* *Note: Creative Technologies Program Option*
CTCH 204: Introduction to New Media Graphic Design
This course investigates design strategies for creative technologies and new media. ***Prerequisite: Successful completion of 15 hours or permission of the instructor. *** NOTE: Students cannot receive credit for CTCH 200AD and CTCH 204. **NOTE: Creative Technologies Program Option.

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.* *Note: Creative Technologies program option.*

CTCH 211: Digital Studio Tools
This studio course explores the creative opportunities available to creatives working digitally in the areas of fine art, illustration & 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 & Adobe InDesign as well as learning how to incorporate scanned artwork or photography into works for both print and screen.

CTCH 212 Audio Tools
A basic 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. ***Prerequisite: 30 credit hours or permission of instructor.***

CTCH 301: PLAY: Interactions in New Media Practice
Play: interactions in new media Play is a hands-on studio course exploring participation and interaction in new media art practice. Students will build projects in the areas of interactive installation, data visualization and public intervention. ***Prerequisite: CS 207 or CTCH 202 or CTCH 204 or permission of instructor*** *Note: Creative Technologies Program Option*

CTCH 303: Technology and Culture
The aim of this course is to understand technology as a social practice. It will focus on issues concerning the intersections between technology and social life from a multidisciplinary perspective. Topics include: the nature of technology; history of technology; theories of technology; technological determinism and fetishism; technology and bodies; gender and media; digital and interactive media; technology and representation. ***Prerequisite: CTCH 203*** *Note: Creative Technologies Program Option*

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). *Note: Creative Technologies Program Option*

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. *Note: Creative Technologies Program Option*

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 310 AB: Wearables: Art and Body Tech
This course explores “wearables” in art and technology. Students will create wearable projects and learn about critical concepts and histories of global wearable art, including emerging wearable trends. ***Prerequisite: 30 credit hours or permission of instructor***

CTCH 310AC: 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. ***

CTCH 320AA: 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. ***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 320AC: Spy Media
As an examination of spies and spying in popular culture this course investigates: the spy genre in film and television; cultures of surveillance and resistance; contemporary media representations of espionage, security, transparency, secrets, conspiracy and paranoia.

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*** *Note: Creative Technologies Program Option*

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 499: Creative Technologies 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. ***

CTCH COURSES OFFERED THROUGH THE DEPARTMENT OF MUSIC

MUEN 123: New Music Ensemble
This is an open instrumentation ensemble that performs works by student composers from MUCO 217 – The Art of Music Composition; it will also study and perform works of the 20th and 21st centuries and practice free improvisation. Members of the New Music Ensemble will be expected to prepare materials to a level suitable for public performance. The ensemble has two sections: section 001 is for academic credit and section 002 is non-credit. The ensemble is open to all students without prerequisite; community members are also welcomed.

MU 319: Music Cultures of the World
An inclusive survey of classical, popular and folk music traditions from around the world. As well as expanding their listening skills, students study music in culture and music as culture and, in the process, develop fresh approaches to their own musical traditions. Music-reading ability not required. ***Prerequisite: completion of 15 credit hours***
**Note:** Students cannot receive credit for both MU 319 and MUHI 319*

**MU 319: Introduction to Computers in Music**
Taught in an electronic studio environment, this course introduces computer techniques used in music notation, editing, sound production and recording. *Note: Music reading ability recommended* *Note: Students cannot receive credit for both MU326 and MU 319* *Note: Creative Technologies Program Option*

**MU 326: Introduction to Computers in Music**
Taught in an electronic studio environment, this course introduces computer techniques used in music notation, editing, sound production and recording. *Note: Music reading ability recommended* *Note: Students cannot receive credit for both MU326 and MU 319* *Note: Creative Technologies Program Option*

**MU 327: Introduction to Electronic Music**
Introduction to techniques of composing with professional electronic equipment such as Pro Tools, Digital Performer and Max/MSP. This course is taught in an electronic studio environment. *Note: Music reading ability recommended* *Note: Students may not receive credit for both MU 327 and MU 319* *Note: Creative Technologies Program Option*

**MUHI 304: Music History of the Contemporary Period**
Schoenberg, Stravinsky, Stockhausen, Glass? These are among the contemporary composers who changed music forever. This course focuses on the most important and radical developments in music during the 20th and 21st centuries. Emphasis is placed on honing students? Critical thinking, writing, research and presentation skills. ***Prerequisite: MUHI 202 or permission of Department Head*** *Note: Students cannot receive credit for both MU 319 and MUHI 304* *Note: Creative Technologies Program Option*

**MU 359: Music History of the Contemporary Period**
Schoenberg, Stravinsky, Stockhausen, Glass? These are among the contemporary composers who changed music forever. This course focuses on the most important and radical developments in music during the 20th and 21st centuries. Emphasis is placed on honing students? Critical thinking, writing, research and presentation skills. ***Prerequisite: MUHI 202 or permission of Department Head*** *Note: Students cannot receive credit for both MU 319 and MUHI 304* *Note: Creative Technologies Program Option*

**MU 399: Creating Music with Technology**
Learn to write and perform music using commercial, open-source and DIY audio tools with the computer. This course is designed to be useful to students regardless of literacy in music reading and notation, and welcomes students of varied experience and background in music, creative sound and computers. *Note: Creative Technologies Program Option*

**CTCH COURSES OFFERED THROUGH THE DEPARTMENT OF THEATRE**

**THDS 240: Introduction to Technical Theatre**
A practical examination of the theatre technician’s role in rigging, lighting, sound and the movement of scenery. *Note: Student cannot receive credit for THEA 241 and THDS 240.*

**THDS 346: Lighting Design**
Examining the principles, theories, and equipment employed by a lighting designer. Areas of investigation include: colour, light sources, control systems, drafting of plans, and script analysis. *Note: Student cannot receive credit for THEA 346 and THDS 346.* ***Prerequisite: THDS 240***

**THDS 347: Digital Graphics for Theatre**
An applied study of computer graphics programs which are used in contemporary scenographic and technical theatre practice. ***Prerequisite: Permission of the Department Head*** *Note: Student cannot receive credit for THEA 347 and THDS 347* *Note: Creative Technologies Program Option*

**ART 222: Introduction to Photography**
Learn the techniques and theories of black and white photography, and how to use a 35mm camera, and to develop and print black and white photographs. Photographic history, critical and formal analysis, and presentation of work is also addressed. *Note: Creative Technologies Program Option*

**ART 223: Digital Photography**
Learn to use software and hardware in creating works of contemporary art and gain familiarity with critical and conceptual processes and historical precedents within social and political contexts. *Note: Creative Technologies Program Option*

**ART 355: Installation Art**
A variety of exciting and diverse approaches to contemporary Installation Art will be explored. Re-examine the artist’s relationship to the gallery, move beyond the confines of the classroom and interact directly with public/private spaces, build your own custom tailored environment or redefine space all together. ***Permission of Department Head***

**ART 390: Digital Photography in Contemporary Art**
Students work on contemporary art projects (independent and directed) with instructor supervision exploring the creative and technological possibilities of working in digital
photographic media. A range of contemporary art approaches to traditional photographic genres may be explored, including the pictorial, abstract, landscape, documentary, conceptual, figuration, and still life. *Pre-requisite: ART 223 or by permission of the Dept. Head***

ARTH 222: Critical Histories of Photography
The aim of this course is to understand the technical and creative aspects of photography organized in a semi-chronological manner in relation to the theoretical interpretations, beginning with ancient uses of the camera obscura, and leading up to digital media in contemporary times. *Note: Cultures of Display Option* *Note: Creative Technologies Program Option*

ARTH 360: Curating the New
This course offers students a practical course where theoretical concepts related to the display and curation of time-based art are put into practice in gallery, museum or site-specific contexts. ***Prerequisite: Completion of 45 credit hours or permission of the Department Head***

CTCH COURSES OFFERED THROUGH THE DEPARTMENT OF FILM

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*

FILM 253: Narratives for the Digital Age
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: Materials Fee: $100*

FILM 280AA: Introduction to Digital Filmmaking
Students will be given an introduction to film language, an overview of key concepts from film history and use digital cameras to create their own short projects. *Note: The course is intended for NON Film major. Film majors cannot receive credit for this course and any other Film course. *Note: Material Fee: $100*

FILM 280AC: Technical Fundamentals
The course provides technical fundamentals for developing solid technical understandings of cameras, lenses, lighting, audio and editing. *Note: The course is intended for NON Film majors. Students cannot receive credit for both Film 280AC and Film 209*

FILM 280AD: 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: Materials Fee: $100*

FILM 286AA: Anime: Popular Animation from Japan
An introductory survey of Japanese animation produced from the 1970s to the 2010s. We will critically investigate the western scholarship on the subject as well as examine the global fan communities connected with the culture of Anime.

FILM 346: Television Studies
This course introduces a variety of theoretical and methodological approaches to the study of television and audience reception. Students will learn and be asked to engage in critical analyses and (inter)textual readings of a variety of television genres including drama, news broadcasting, comedy, reality, sci-fi, daytime television. ***Prerequisite: Completion of 30 credit hours or permission of the Department Head*** *Note: Creative Technologies Program Option*

FILM 385AC: Black & White Photography
Students will be introduced to the fundamentals of black and white photography and darkroom practices. This course is designed for NON film majors. Students cannot receive credit for this course AND Film 205 *Note: Materials Fee: $100*

FILM 386AD: Aliens in Film
This course will examine the Alien, or Extra-Terrestrial, as the science-fiction film genre’s exploration of identity. As a collective expression of desire for, and fear of, the Other, the Alien allegorizes common attitudes towards cultural difference, that partly overlap with Orientalist discourse.
CTCH COURSES OFFERED THROUGH THE DEPARTMENT OF COMPUTER SCIENCE

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, 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
Description: 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

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

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, keyframe-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
Description: 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; dialogue 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

CTCH COURSES OFFERED THROUGH THE FACULTY OF ENGINEERING

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: Getting Around

Advising and Registration Procedures:

All students are encouraged to receive academic counseling prior to registering each semester. Academic advising begins around mid-March for the spring, summer, and fall semesters, and early November for the winter semester, and continues until registration has opened for all categories of students.

Students entering through MAP should contact the Academic Program Coordinator for Media, Art, and Performance, Janelle Bennett (Janelle.Bennett@uregina.ca ; (306) 585-5576).

Students entering through Computer Science should contact the Academic Program Coordinator for Computer Science, Connie Renwick (Connie.Renwick@uregina.ca ; 306 337 2541)

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.

Use of Facilities and Equipment:

Facilities are designated for Creative Technologies 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.
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.

Services for Students with Disabilities and the Centre for Student Accessibility:

The University of Regina wishes to effectively assist all students with disabilities, and all students in achieving academic success while enjoying a full and rewarding university experience. The University aims to provide services that will enable students with disabilities to approach their studies with minimum difficulty. This is best achieved if faculty members are informed in advance about requests for accommodations by students who will be taking their classes.

The Centre for Student Accessibility upholds the university’s commitment to a diverse and inclusive learning community by providing services and support to enable students with disabilities to approach their studies in an equal and effective manner. The Centre aims to encourage independence, self-advocacy and equality for all students, while maintaining personal, confidential service.

Assistance can be arranged in such things as advocacy, academic advising, lectures, reading assignments, examinations, technologies to assist students and parking. Students who use assistance should discuss their needs when registering for classes. Students should contact the Centre for Student Accessibility for information about appropriate accommodation(s) and to discuss the adaptive equipment that is available on campus. Services may vary according to student abilities, needs, supporting documentation and requests. Early registration is advised, particularly for students who need books taped or in Braille. Since not all areas of the campus are accessible, students should inquire at the time of registration.

- Centre for Student Accessibility: [http://www.uregina.ca/student/accessibility/](http://www.uregina.ca/student/accessibility/)

Harassment and Discrimination Prevention Office:

Contact the Office for information, to discuss concerns or questions about harassment or discrimination, or to report complaints, or seek conflict resolution.
Complaints may be dealt with by the Harassment, Discrimination Prevention & Conflict Resolution Coordinator or referred to another University of Regina Officer appointed to deal with harassment or discrimination concerns. Please begin by contacting the Office at (306) 585-5400. All consultations and enquiries will be dealt with in a confidential manner.

- Harassment, Discrimination Prevention & Conflict Resolution Services Office
  Room 251, Riddell Centre, (306) 585-5400

**Student Advocate:**

The Student Advocate is a Registered Professional Social Worker available to assist University of Regina students who are experiencing difficulties with all facets of their lives. Students who are undergoing financial, academic, or personal troubles are encouraged to seek the advocacy services at the Students’ Union. The Office of the Student Advocate (RC 221.8) acts as referral agent. It provides a comprehensive Resource Information Centre, accessible to all University of Regina students. For more information or a confidential meeting, students are invited to visit the Students’ Union, call (306) 586-8811, or visit the website:

http://ursu.ca/services/student_advocate/