CSC 379 601 Technology Partnerships in Urban Schools Syllabus, Spring 2018-2019

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Andrew Rasmussen

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General Course Information

Time TuTh 3:10 PM to 4:40 PM

Classroom CDM 224

Office Hours Tuesdays 4:40 to 6:10, CDM 705 (office phone is 312 362 8239, but I'll only be there during office hours). See office hour policy.

Final Exam Period June 11, 14:30 to 16:45, CDM 224

Class format Mix of lecture and field work. Class does not meet in person every week (see the course outline)

Instructor Information

Andrew Rasmussen (andyras@gmail.com, andy.rasmussen@depaul.edu) is the instructor for this course, and CS Project Developer at Chicago Public Schools. Over the course of his PhD program in theoretical chemistry, he learned a lot of computer science, and beyond that, about the power CS holds for students in all disciplines. He started as a TA for CS4All (now the Office of Computer Science) in spring 2015, and has since been working at all levels to make CS education work in Chicago.

Faythe Brannon is the High School Curriculum and Instruction Specialist for the Office of Computer Science, and manages the larger CS4All TA program that partners university students with computer science classrooms in Chicago. Faythe previously taught at Harlan High School. Don Yanek is a Special Agent for CS4All, currently acting as an instructional coach for ECS teachers at CPS. Don previously taught at Northside College Prep High School.

Textbooks and reading

This course has required reading: *Stuck in the Shallow End: Education, Race, and Computing* by Jane Margolis *et al.* (updated edition, ISBN 9780262533461). Any other reading materials will be posted on D2L.

Office Hour Policy

Please contact me ahead of time if you would like to come to office hours, and let me know what you would like to discuss so I can prepare. There are some weeks I will be out of town or unavailable during the usual office hour time, so please double-check the course announcements. I will make myself available another way if I am not physically present during regular office hours.

Prerequisites

Students in this course must have taken at least one introductory-level computer science before, or have equivalent experience. Other attributes that will help students succeed in this course include a good imagination, an ability to work and plan well with others, and a passion for helping youth learn computer science.

Grading

The grade for this course will be based on three areas:

30% class participation

20% field participation

30% weekly reflection assignments

20% final reflection

Late policy

Homework will be accepted up to four days late, with a penalty of 8% per day late (rounded up to the nearest integer number of days). Late work will not be accepted for the final.

Course context

Community-based service learning courses are designed for students to experience serving the marginalized, disenfranchised and under-served populations of our community. With the gap increasing between the wealthy and those living in poverty, the need to address current issues becomes increasingly relevant. Nowhere is this more evident than in the technology arena. Students will have the opportunity to assess urban community needs in the technology arena, and develop skills in assisting and developing methods for bridging the digital divide. In order to do so, these students will partner with Computer Science for All (CS4All) at Chicago Public Schools (CPS) and serve as a teaching assistant (TA) in a local high school Computer Science (CS) classroom. As a result, the student will be able to make a substantial difference in an underprivileged academic community group.

CS4All (or Computer Science for All, or CSforAll...) has become a popular catchphrase to encompass the nationwide set of initiatives to promote CS education in elementary and high school. Chicago Public Schools was the first major school district in the United States to launch such an initiative, and CS is now becoming established as a core subject at CPS. *CS4All* is another name for the Office of Computer Science at CPS.

A major barrier to the implementation of CS education nationwide is the dearth of K-12 instructors who are prepared to teach CS. Few teachers took a CS course themselves in high school or college (let alone elementary school), so becoming a CS teacher requires a lot of learning and a lot of work. This presents an opportunity for teachers to have the experience of learning the same CS material that their students are learning, often alongside those students.

The flagship high school course that CPS has adopted at their high schools, Exploring Computer Science or ECS, was developed to enable any high school student to learn the subject in a relevant, inquiry-driven way. ECS is also designed to be taught by any teacher willing to learn. As such, it fits in perfectly with the mission of CS4All to bring CS education to every student.

One important piece of practical support for teachers learning new material is to have a classroom aide who may know a little bit more than they do about the subject. This is where TAs come in.

Experiential learning at DePaul

The Experiential Learning requirement engages students in the first-hand discovery of knowledge through observation and participation in activities, most often in field-based settings outside the classroom. This inductive process of learning by doing and reflecting is supported by theory-based information. In these courses, students compare and analyze issues, problems, and ideas through the lenses of their own personal experiences and evolving intellectual worldview.

Experiential Learning may take place in a regularly scheduled course, an approved internship, a Study Abroad course*, or in an independent study approved on a case-by-case basis (utilizing the proper Independent Study Approval Form). All such courses may be offered in the students major and may count for both major field and Liberal Studies requirements. When more than four credit hours are earned from such an experience for example, an eight-hour internship four hours may be counted toward Liberal Studies requirements and four hours toward major program requirements. Experiential Learning is typically taken in the junior year as major field or other foundational knowledge is essential to ensure a successful outcome.

Experiential learning outcomes

Students will be able to:

- Apply particular concepts from readings, lectures, etc. to an analysis of lived experiences in the settings provided by the course.

- Use the experiences provided by the course to construct and articulate the impact of their experience on their understanding of course content.

- Demonstrate an understanding of the ethics appropriate to his or her experiential placement.

- Synthesize and articulate how the ideas and experiences provided by the course might inform their personal, academic, and/or professional pursuits.

Course structure

This community-based service learning course will pair students with Chicago computer science classrooms, primarily in public high schools, where they will act as CS TAs. The 2017-2018 iteration of CSC 379 will be closely aligned with the CS4All TA program, and so some of the activities will overlap significantly.

As a TA the student is expected to assist classroom teachers in better understanding CS concepts and skills, provide content knowledge, support effective computational thinking skills implementation, assist with planning curriculum instruction, and engaging students in relevant computer science education activities. TAs are *not* expected to assume a significant portion of the teaching load (e.g. more than occasional lecturing or leading of activities).

TA responsibilities will differ depending on classroom needs, but may include:

- Acting as teacher support,

- Research and development of new classroom material,

- Weekly check-ins with your assigned teacher(s),

- Weekly check-ins with CS4All staff,

- Observing and noting teachers and schools needs as they aid in rolling out a CS a curriculum, and

- Debriefing classroom and student progress with teacher(s) and CS4All staff weekly.

CS4All will engage all students enrolled in CSC 379 in introductory training before they enter their classroom. Students will partake in a brief welcome meeting between the assigned teacher, principal, and a CS4All staff member prior to their first day as a TA to lay the groundwork for a successful partnership and TA relationship. CS4All will provide all students with access to a digital notebook/journaling tool where they will be responsible with recording all of their TA sessions. This digital journal also contains additional tools and resources to guide each student throughout their TA experience.

Throughout this course, students will be able to make a substantial difference in an underprivileged academic community group. Goals and objectives include:

1. To increase students' knowledge of urban community technology status and needs;

2. To apply class-gained concepts from readings and lectures to an analysis of on site experiences;

3. To construct and articulate the impact of student experiences to course content;

4. To increase students' understanding of not-for-profit community organizations and agencies;

5. To affect decision making and problem solving techniques relating to teaching assistance.

With these goals in mind, the course provides the student with Junior-year Experiential Learning as outlined in the Liberal Studies Program.

Course communication

Especially due to the logistical component to this course (students will be visiting Chicago schools on a weekly basis), communication will be critical.

Software and media of communication

D2L will be the main nexus of course information; students are responsible for monitoring the site for updates.

Email will be the primary mode of communication with Chicago teachers. Please CC the course instructor when coordinating visits and following up with teachers. Students are responsible for checking their email regularly.

Google Docs/Apps some assignments and field journaling will involve collaboration via Google Docs and the Google Apps suite. Please let me know if you have any issue accessing these resources.

Instructor expectations

The instructor will respond to student email/D2L correspondence in a timely manner (within 2 business days, excluding weekends and holidays). Most responses will be after business hours.

Student expectations

Students will communicate in a timely manner (response within 2 business days) with the instructor and especially with teachers with whom they are paired. It is the students' responsibility to follow up with teachers to ensure that initial meetings and subsequent visits happen regularly.

Preferred names and pronouns

I make an effort to learn everyone's preferred name and pronouns in the first few class periods of the quarter. I invite you to share these with me at the start of the term, especially if they are not reflected in Campus Connect.

Note that preferred first names will appear in University-related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to update your preferred name and gender identity in Campus Connect, please see the Student Preferred Name and Gender Policy at http://policies.depaul.edu/policy/policy.aspx?pid=332.

Course Outline

The course will be a blend of in-class instruction and field work at schools. Field work does not have to happen during class time, and will depend on your schedule and teachers' schedules.

Course schedule

This schedule is tentative and subject to change. See D2L for the latest schedule. Expect the first couple of weeks to be class time, and the majority of the remainder of the course to consist of field work. There will likely be 10 class sessions total, and 6-7 weeks of field work. Students are required to do a minimum of 15 hours of field work (acting as a TA) over the course of the quarter, transit time not included. Days marked as 'TBD' in the table below may not have a class meeting.

Week	Day(s)	Activities / class or no class
1		**Class intro and school matching**
	Tu 4/2	class meets
	Th 4/4	class meets (**fingerprint day**)
2		**School matching, model lessons, TA practice**
	Tu 4/9	class meets
	Th 4/11	class meets
3		**Model lessons and TA prep (CPS Spring Break)**
	Tu 4/16	class meets
	Th 4/18	TBD
4		**Regular TA week**
	Tu 4/23	TBD
	Th 4/25	class does not meet
5		**Regular TA week**
	Tu 4/30	class does not meet
	Th 5/2	class meets
6		**Regular TA week**
	Tu 5/7	class does not meet
	Th 5/9	class does not meet
7		**Regular TA week**
	Tu 5/14	class does not meet
	Th 5/16	class does not meet
8		**Regular TA week, prep for final**
	Tu 5/21	class does not meet
	Th 5/23	TBD
9		**Regular TA week, prep for final**
	Tu 5/28	TBD
	Th 5/30	class does not meet
10		**Course wrap-up, prep for final**
	Tu 6/4	class meets
	Th 6/6	class does not meet
11	Tu 6/11	**Final exam period**

The schedule will be updated regularly and will be available on D2L.

Homework

There will be weekly reflection homework assignments and/or quizzes posted on D2L.

DePaul Policies

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the students identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at http://academicintegrity.depaul.edu/ If you have any questions be sure to consult with your professor.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Lewis Center 1420, 25 East Jackson Blvd.
Phone number: (312)362-8002
Fax: (312)362-6544
TTY: (773)325.7296