SUBJECT: Computing Everywhere: Seeking paid graduate student instructors

The Communication Studies department is soliciting proposals from graduate students in TSB, MTS and related fields to teach a workshop as part of our second computational literacy series to be offered for Northwestern undergraduates during the Winter and Spring Quarters in 2017. We are seeking to expand the program significantly, so are pleased to offer more opportunities this year.

What is this series? A zero-credit* computational literacy course for undergraduates that will consist of five 2-hour workshops on computational literacy. We will have two identical course sections each quarter, and enrollment in each section will be capped at 20 students. Each workshop will be taught by **1-2 graduate students**, and graduate students will be expected to teach their workshop in both sections for that quarter (i.e., twice in one week). We aim to have distinct sets of workshops in the two quarters.

Why should I do it? If your proposal is selected, you will be paid $700 (per instructor, for up to 2 instructors) to develop and teach your 2-hour workshop twice in one week, during one quarter. You will receive valuable teaching experience along with basic teaching mentorship and evaluation.

Am I eligible? All enrolled graduate students at Northwestern are eligible to submit proposals, though proposals from students in MTS, TSB and closely related fields will receive priority. Past instructors are strongly encouraged to apply and integrate feedback received on prior workshops, as are past applicants whose proposals were not accepted. *No individual applicant may be involved in more than two proposals for the October deadline.*

What's computational literacy? Exact topics will vary, but the overall goal is for students to be more conversant in computation. Topics could include the role of algorithms in everyday life, elementary programming and computational thinking, how to have conversations with programmers/software engineers, big data, etc. The overall goal is that workshops familiarize students with important computational concepts or ways of approaching problems as a programmer or in working with programmers.

When will this happen? The course will be offered during **the first five weeks** of Winter and Spring Quarters in 2017, with exact section times TBA (but with the expectation of evening time slots). Instructors will teach their workshop twice during **one** week only and need not be present at the other workshops. Some light administrative work (e.g., syllabus preparation, soliciting student feedback, answering student emails, etc.) will also be expected of instructors throughout the quarter. Workshops for Winter and Spring will be distinct, so instructors need only be available for and apply for one quarter or the other (though you may apply for both).

When are proposals due? Workshop proposals for both quarters are due via email by **5pm CT on October 14, 2016** to Jeremy Birnholtz (jeremyb@northwestern.edu). If the number or quality of proposals is insufficient, there may be a second deadline for Spring workshops, but all interested applicants are strongly encouraged to apply in October.

Who will the students be? The intended audience for these workshops are School of Communication students with interests in digital media, user experience and HCI but with very little or no programming/technical experience.

What should be in a proposal? Proposals should be 2-4 pages (no formatting requirements). Successful proposals will articulate a compelling topic area, specify 3-4 specific learning objectives for the workshop and provide a general lesson plan (e.g., how would the workshop be structured, how would time be spent, how would learning objectives be achieved, etc.) for the 2-hour session. For example, detailed plans for a 15-minute exercise are not necessary, but the proposal could indicate a plan to develop or use an existing exercise on a

topic. One helpful strategy for this is to break the 2-hour workshop into 15-30 minute chunks and provide a brief overview of each chunk. Note that workshops may take any form, but hands-on exercises and other forms of direct engagement with content are strongly encouraged.

Your application should indicate any relevant teaching experience or other qualifications that may distinguish you from other applicants. Please also indicate availability for winter, spring, both and any preferences.

Finally, please have your advisor/chair send a brief note of support (separately via email) for your involvement in this. (It can be as simple as "I'm aware that NAME has submitted this proposal and support their involvement.")

Then what? Proposals will be reviewed between October 15-22. In some cases, instructors may be asked to revise or combine proposals. Selected instructors should be prepared to submit a detailed lesson plan in early November (for winter workshops) and meet with Jeremy Birnholtz to review and discuss this plan.

What if I have other questions? Talk to past instructors, your peers and/or contact Jeremy.

I'm having trouble getting started. Can you point me to some helpful resources? Yes, of course. Here is the syllabus for the 2016 course, including a list of topics:

https://docs.google.com/document/d/1oZXRzYebO0DuRS-qNRIGuJaQfj_N2IrxbLsQ66fXi6E/pub

Here is a list of loosely similar initiatives that may help you get started in thinking about this (thanks to Sneha Narayan for compiling this!):

http://www.cs.cmu.edu/~CompThink/resources/education.html

http://cs.brown.edu/courses/csci0931/2015-fall/assignments.shtml

http://csprinciples.org/

Software Carpentry: http://software-carpentry.org/lessons/

http://www.cs.princeton.edu/courses/archive/spring08/cos116/syllabus.php

http://wiki.communitydata.cc/Community_Data_Science_Workshops

* Zero-credit courses appear on student transcripts as satisfactory/unsatisfactory, but do not carry academic credit. Attendance and active participation are required for satisfactory credit.