I. Course Description
The use of technology for public health recruitment, assessment, and intervention has grown substantially since the introduction of the Internet and adoption of smartphones. Technology provides opportunities for public health research and practice, as well as challenges in adoption, adaptation, and implementation. This purpose of this course is to provide an overview of how technology may be used as a recruitment, assessment, and intervention tool in public health research and practice. Students will discuss the opportunities and challenges associated with different technologies, as well as discuss practical strategies for managing public health projects that have a technology component. At the conclusion of the course, students should have basic understanding of e-Public Health approaches to choose the appropriate technology before embarking on a public health research or practice project, and best practices for assembling and managing a team to successfully build and implement a technology-delivered project.

II. Course Prerequisites
MPH students, PhD students, or other graduate students (or permission of the instructor)

III. Course Goals and Objectives
The goals of the course include:
1. Increase understanding of ways that technology may be used for recruitment, assessment, and intervention in public health research and practice.
2. Provide students with greater insights into the opportunities and challenges that accompany different forms of technologies (e.g., online, smartphone) for use in public health research and practice.
3. Provide students with the skills to develop and plan an e-public health intervention.
4. Provide students with practical project management strategies to oversee studies or interventions that include a technology component.
IV. Methods of Instruction and Work Expectations
Methods of instruction include lectures, in-class discussions, course readings, and peer feedback sessions. Researchers, developers, and technology experts will be invited to give presentations that address concepts discussed in class. Students are expected to attend class, complete reading assignments, participate in class discussions, complete homework on time, and contribute to an atmosphere of curiosity and learning. This is a 2 credit course and, therefore, students can expect to spend approximately 6 hours per week outside of class preparing for class discussions, assignments, and quizzes.

V. Course Text and Readings
Required course textbooks are:


Additional readings and handouts, including scientific studies and other articles from peer-review journals and other public health publications, will be assigned during the course. Links to assigned readings will be posted on the Moodle course web site (see below), which students are expected to check regularly. Assigned journal articles can also be downloaded from the university libraries website (https://www.lib.umn.edu). If you have problems accessing the course website or materials, please contact the course instructor by 12:00 p.m. (noon) on Friday since s/he may not be available to assist you on weekends.

VI. Course Outline/Weekly Schedule
*Note: Course syllabus may change during the semester. Changes will be announced in class and posted on the course website. Students are responsible for being aware of any changes made to the syllabus.*

Access Course Moodle Site
- Go to www.umn.edu click on the “myU” button
- Login with your University ID and password
- Scroll to your course and click on the Moodle site link.

Week 1: January 26, 2015
Topics: Introduction and Course Overview: Defining e-Public Health and Theories of Information Technology Adoption

*Course Textbook Reading:*

*Additional Readings:*

*In-Class Activity:* How do you define e-Public Health?

Week 2: February 2, 2015
Topics: Survey and Assessment using Technology

*Course Textbook Reading:*
**Additional Reading:**

**In-Class Activity:** Designing an Online Survey

Week 3: February 9, 2015

Topics: Recruitment and Retention using Technology: Reaching your Target Audience

**Course Textbook Reading:**

**Additional Readings:**


**In-Class Activity:** Developing a recruitment plan using information from Pew Internet Project

Week 4: February 16, 2015

Topics: Technology-based Health Program Development & Online Interventions for Public Health

**Course Textbook Reading:**

**Additional Readings:**


**In-Class Activity:** (1) Using: [http://nnlm.gov/outreach/consumer/evalsite.html](http://nnlm.gov/outreach/consumer/evalsite.html), evaluate health websites with respect to the criteria.

**Peer Feedback Session 1:** Project Concept Paper

Week 5: February 23, 2015

Topics: Social Media Interventions for Public Health

**Additional Readings:**


Assignment 1 Due: Project Concept Paper

Week 6: March 2, 2015

Topics: Designing your Intervention: Introduction to Design and Understanding Your Audience

Course Textbook Readings:


In-Class Activity: Designing Personas

Week 7: March 9, 2015

Topics: Designing your Intervention: Design Diagrams

Course Textbook Readings:


Guest Lecture: TBD (professional from web company with experience creating websites) OR developing site maps and wireframes

March 16, 2015: SPRING BREAK!!

Week 8: March 23, 2015

Topics: Telephone and Text Messaging Interventions for Public Health

Additional Readings:


**Peer Feedback Session 2:** Personas Paper

**Week 9:** March 30, 2015

**Topics:** Mobile App Interventions for Public Health

**Additional Readings:**


**Guest lecture:** TBD (professional with experience creating mobile apps)

**Assignment 2 Due:** Personas Paper

**Week 10:** April 6, 2015

**Topics:** Specialized Technologies for Public Health Intervention; Usability Testing

**Course Textbook Readings:**


**Additional Readings:**


**Week 11:** April 13, 2015

**Topics:** Content Management System, Back-end Reporting, and Data Management & Working with Vendors
Additional Readings:


**Guest lecture:** TBD (project coordinator with experience in backend data bases and working with vendors)

**Peer Feedback Session 3:** Project Site Map and Wireframes

**Week 12:** April 20, 2015

**Topics:** Human subjects, Ethics, and Data Privacy in Technology-based Research and Practice

**Course Textbook Reading:**


**Additional Reading:**


**Assignment 3 Due:** Project Site Map and Wireframes

**Week 13:** April 27, 2015

**Topics:** Project Presentations

**Assignment 4 Due:** Project Presentation

**Week 14:** May 4, 2015

**Topics:** Project Presentations & Wrap-up

**Assignment 4 Due:** Project Presentation

**Final Project Due on Scheduled Final Examination Day**

VII. Evaluation and Grading

Final Grades for the class will be calculated based on performance in the following areas:

**Peer Feedback Sessions (10% of grade):**

You will have the opportunity to gain peer feedback on your assignment the week before each assignment is due. Peer feedback is a valuable way to gain insight into the potential strengths and weaknesses of your approach. You will be randomly paired with a peer at the beginning of the semester, and this peer will provide feedback on each of your assignments (to provide continuity as you develop your project). After each peer review session, your peer will rate the effort that you put in for the peer review session on a 1 to 10 scale (i.e., how much effort you put into the assignment before class and how useful the feedback was
during the peer review session). Points will be tallied at the end of the semester and pro-rated to account for 10% of your final grade.

**Project Concept Paper (20% of grade):**
You will be asked to provide a concept sheet for your project. The concept sheet will answer the following questions: a) What public health topic you are addressing?; b) Has there been formative research or an intervention reported in the scientific literature that will inform your intervention?; c) Who is the intended users of the intervention?; c) What technology (or technologies) will you be using to implement your intervention and why?; d) With respect to the Technology Acceptance Model 3, what potential challenges to you foresee in implementing your intervention with your target population?; e) Any other relevant information that you or the vendor need to know before starting to develop the intervention. The paper should be between 5-7 pages.

**Personas (15% of grade):**
Following recommendations provided in the course textbook (by Brown), create 2-3 personas that represent typical users of your intervention. Personas should represent potential users of the intervention, and be sufficiently developed to guide the development of the project site map and wireframes. The paper should be between 2-3 pages (with additional support pages as necessary).

**Project Site Map and Wireframes (25% of grade):**
Following recommendations provided in the course textbook (by Brown), develop a project site map and wireframes. The project site map is a graphical representations of all pages of your intervention and what overall features will be presented on each page. Site maps should contain sufficient information to allow the viewer to understand how the intervention will flow and what components are nested within other components of the intervention. Wireframes are a simplified (either paper and pencil or using a computer graphics tool) view of what content should appear on each screen of the final product. Following recommendations provided in the course textbook (by Brown), develop wireframes for 2-3 substantive page of your intervention. Wireframes should include a sketch of the page, and a typed version of the elements on that page that explains each feature and why that feature is provided on that page. The length of this assignment will vary depending on the number of unique substantive pages in your intervention, but should be between 5-10 pages.

**Project Presentation (10% of grade):**
Each student will have an allotted time (10-15 minutes) to present her or his project to the class. Each student may choose to present the project in whatever format s/he deems most impactful, but should generally follow the advice presented in the course readings by Brown. Several minutes will be left after each presentation for audience questions and feedback.

**Final Project (20% of grade):**
The final project will be the all of the assignments (Project Concept and Specification Sheet, Personas, Project Site Map and Wireframes), plus a description of the team members who should be involved and usability testing plan. Based on the feedback you receive from peers and the instructor on the assignments, you are encouraged to edit to improve components of the final project. The list of team members should include both research team members and vendor team members. The usability plan should provide a detailed description of what methods for usability testing you will use, how many persons from your target population you plan to lead through usability testing, the methods of data collection you will use to get feedback about your project, and how that data will be analyzed.

*Extra credit is not offered in this course. Students’ final grades will be calculated based on their performance on class assignments.*

*Assignments handed in late (without permission by instructor or proof of medical emergency) will be penalized by subtracting 5% points off of the grade for each day late (excluding weekends). Late assignments will be accepted up to 2 weeks after the due date, after which a 0% for that assignment will be given.*
**Grading**

**Final grades** will be assigned as follows:

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<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A</td>
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<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<td>83-86</td>
<td>B</td>
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<td>80-82</td>
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<td>77-79</td>
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<td>73-76</td>
<td>C</td>
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<td>70-72</td>
<td>C-</td>
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<td>60-69</td>
<td>D</td>
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<tr>
<td>59 or below</td>
<td>F</td>
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For students taking this class S/N a minimum of 80% is required for a passing grade. Students may change grading options during the initial registration period or during the first two weeks of the semester. The grading option may not be changed after the second week of the term.

**Course Evaluation**

The SPH will collect student course evaluations electronically using a software system called CoursEval: www.sph.umn.edu/courseval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPHGrades: www.sph.umn.edu/grades. All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

**Incomplete Contracts**

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student’s college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: www.sph.umn.edu/grades.

**University of Minnesota Uniform Grading and Transcript Policy**

A link to the policy can be found at onестop.umn.edu.

**VIII. Other Course Information and Policies**

**Grade Option Change** (if applicable):

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

**Course Withdrawal:**

Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at sph-ssc@umn.edu for further information.
Student Conduct Code:
The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: Student Conduct Code. To review the Student Conduct Code, please see: http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom:
Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference: http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html.

Scholastic Dishonesty:
You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code: http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: http://www1.umn.edu/oscai/integrity/student/index.html. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences:
Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html.

Appropriate Student Use of Class Notes and Course Materials:
Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html.
Sexual Harassment:
"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf

Equity, Diversity, Equal Opportunity, and Affirmative Action:
The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Accommodations:
The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center Student Services is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DRC at 612-626-1333 or drc@umn.edu to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DS website, https://diversity.umn.edu/disability/.

Mental Health and Stress Management:
As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: http://www.mentalhealth.umn.edu.

The Office of Student Affairs at the University of Minnesota:
The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development – Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Student Conduct and Academic Integrity, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service.

For more information, please see the Office of Student Affairs at http://www.osa.umn.edu/index.html.

Academic Freedom and Responsibility: for courses that do not involve students in research:

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this
freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled."

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, (Dr Kristin Anderson, SPH Dean of Student Affairs), or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

**Student Academic Success Services (SASS):** [http://www.sass.umn.edu](http://www.sass.umn.edu): Students who wish to improve their academic performance may find assistance from Student Academic Support Services. While tutoring and advising are not offered, SASS provides resources such as individual consultations, workshops, and self-help materials.

*Template update 8/2014*