

**Advanced Special Topics in Environmental Design:
Smart Communities** **EVDS 683.11 H(3-0)**

Fall 2012

Instructor Contact Information

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Office location and office hours

PF4184

Office hours are Wednesday after class, and by appointment.

Introduction

Thematic inquiry and design related to urban design, architecture, environmental science, industrial design and planning.

This course provides an introduction to the emerging field of Smart Communities, showcasing groups and individuals that have made a conscious and deliberate effort to use information and communications technology (ICT) to transform their life and work in significant and fundamental ways. Smart Communities may be physical or virtual, and the concept is more about the creative use of ICT infrastructure than merely building it. The social, economic, technical, design and ethical aspects of Smart Communities will all be considered.

Objectives

1. To build a personal and meaningful definition of a Smart Community that is consistent with, and expands upon, the generally accepted ones.
2. To acquire sufficient technological background to appreciate the decisions that must be made in becoming a Smart Community
3. To critically evaluate existing communities that claim to already be, or in the process of becoming, a Smart Community.
4. To understand the relationship between Smart Communities and concepts such as urban sprawl, energy conservation, economic opportunity, and sustainability.
5. To appreciate the past, present and future of the Smart Community movement, and how it relates to, and differs from, concepts such as Teleports, Creative Cities and Alberta's Supernet.
6. To complete a substantial research project relating to the design of an actual or envisioned Smart Community, as well as an electronic "Resource Binder" consisting of relevant information, suitably annotated.

Teaching Approach

This is a seminar course. Active participation will be expected. No specific technical background is required as relevant concepts will be introduced in class and through background readings.

The course will begin with a brief immersion in information and communications technology, intended to prepare those with only a general knowledge of this field to adequately understand and evaluate the technological issues and decisions involved in building and sustaining a Smart Community. Existing communities that make "Smart Community" claims will be assessed through written materials, their web pages, interviews and guest speakers.

Students will prepare both a minor and a major presentation, the first on a very limited topic area chosen in consultation with the instructor, and the latter on a vision and roadmap for creating a specific Smart Community. The major presentation will also be documented in written form. Students may opt to work in groups of two for the major presentation and written paper. In doing so, they agree to accept the grade assigned to their group as their own grade for these components, and acknowledge that the expectation for the quantity and quality of these components is substantially higher if two students are working on it.

Content: Topic Areas and Detailed Class Schedule

1. ICT primer for non-specialists, covering the terminology and concepts of information and computer technology, especially as it relates to Smart Community applications.
2. The definition(s) of a Smart Community and why everyone wants to be one.
3. Applications that foster Smart Communities.
4. The non-commercial and NGO Smart Communities movements
5. Commercial smart community programs, e.g. IBM's Smarter Planet
6. The social, economic, political and other implications of being a Smart Community.
7. Networking among Smart Communities.
8. Are virtual Smart Communities fundamentally the same or different from geographical ones?
9. Future trends

The class will meet on campus on Wednesday evenings, 1800-2050. However, on occasion special events such as the Design Matters lecture series, held at the Downtown Campus, may be utilized instead of the on-campus session. Notice of special events will be provided in the previous class meeting and also by email.

Means of Evaluation

The course evaluation will be based on the assignments and projects completed during the term, which include written assignments, presentation of work and facilitating discussions. There will be no final examination. It is not necessary to pass any particular component to obtain a passing grade in the course.

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|---|------|
| o Open Book Quiz on Information Technology concepts and terminology | 10% |
| o Class presentation and discussion facilitation on a Limited scope topic ("Minor project") | 25% |
| o Annotated Resource Binder (to be described in class) | 15% |
| o Class presentation on your vision of a Smart Community ("Major project") | 15% |
| o Written paper on your vision of a Smart Community ("Major project") | 35% |
| Total | 100% |

Grading Scale

| Letter Grade | 4-Point Scale | 4-Point Range | Percent | Description |
|--------------|---------------|---------------|----------|---|
| A+ | 4.00 | 4.00 | 92.5-100 | Outstanding - evaluated by instructor |
| A | 4.00 | 3.85-4.00 | 85-92.49 | Excellent - superior performance showing comprehensive understanding of the subject matter |
| A- | 3.70 | 3.50-3.84 | 80-84.99 | Very good performance |
| B+ | 3.30 | 3.15-3.49 | 76-79.99 | Good performance |
| B | 3.00 | 2.85-3.14 | 73-75.99 | Satisfactory performance |
| B- | 2.70 | 2.50-2.84 | 70-72.99 | Minimum pass for students in the Faculty of Graduate Studies |
| C+ | 2.30 | 2.15-2.49 | 66-69.99 | All final grades below B- are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. |
| C | 2.00 | 1.85-2.14 | 63-65.99 | |
| C- | 1.70 | 1.50-1.84 | 60-62.99 | |
| D+ | 1.30 | 1.15-1.49 | 56-59.99 | |
| D | 1.00 | 0.50-1.14 | 50-55.99 | |
| F | 0.00 | 0-0.49 | 0-49.99 | |

Note: A student who receives a B- or lower in two or more courses will be required to withdraw regardless of their grade point average unless the program recommends otherwise. Individual programs may require a higher minimum passing grade. A grade point value of 3.0 on the 4-Point Scale is the minimum acceptable average that a graduate student must maintain throughout the program as computed at the end of each registration anniversary year of the program. A student who receives a grade of F will normally be required to withdraw unless the program recommends otherwise.

Readings

There is no required textbook for this course. A list of online readings and web pages will be provided through the University of Calgary Blackboard Academic Suite. Students are expected to log on to this system at least once a week to keep abreast of course announcements and other documents.

Special Budgetary Requirements

None.

Notes:

1. Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor.
2. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. (<http://www.ucalgary.ca/drc/node/46>) Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
3. Plagiarism - Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test), (b) parts of the work are taken from another source without reference to the original author, (c) the whole work (e.g., an essay) is copied from another source, and/or, (d) a student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.
4. Information regarding the Freedom of Information and Protection of Privacy Act (<http://www.ucalgary.ca/secretariat/privacy>) and how this impacts the receipt and delivery of course material
5. Emergency Evacuation/Assembly Points (<http://www.ucalgary.ca/emergencyplan/assemblypoints>)
6. Safewalk information (<http://www.ucalgary.ca/security/safewalk>)
7. Contact Info for: Student Union (<http://www.su.ucalgary.ca/page/affordability-accessibility-su-structure/contact-info>); Graduate Student representative (<http://www.ucalgary.ca/gsa/>) and Student Ombudsman's Office (<http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights>).