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| Course Number | PLAN 680.1 | Classroom | Zoom & web-based |
| Course Name | Special Topics in Planning: Designing Intelligent Communities | | |
| Pre/Co-Requisites | | | |
| Instructor | Dr. T. P. Keenan | Office Hours/Location | By appointment; via Zoom |
| | Email: keenan@ucalgary.ca | | Phone: (403) 220-7437 |
| Class Dates | Mandatory real-time Zoom classes: Weds. Sept 8 – December 8, 09:00 am to 12 noon (see Detailed Schedule for exceptions) Other asynchronous assignments due during the term as noted. | | |
| Instructor Email Policy | All course communications should occur through D2L or your @ucalgary email. We will respond to emails within 48 hours. | | |
| Name and Email of Teaching Assistant(s) | Sabeen bin Zayyad Email: sabeen.binzayyad@ucalgary.ca | | |

Course Description

Thematic inquiry and design related to special topics in planning.

Intelligent Communities may be large or small, physical or virtual, and the concept is about much more than simply acquiring and using the latest high-tech gadgets. In many ways, smartness is a “platform technology” to develop and implement leading-edge ideas that involve goals that are broader than technological efficiency. The social, economic, technical, design, and ethical aspects must all be considered, and sometimes difficult decisions must be made.

The NYC-based Intelligent Community Forum (<http://www.intelligentcommunity.org/>) defines Intelligent Communities as those which are responding astutely to the challenges presented by globalization, the enormous changes in communications and information technology that have taken place over the past few decades, and the resulting economic transformations.

They note that these communities tend to display six key indicators:

- Excellent access to high-speed communications
- An extensive knowledge workforce
- A culture of innovation in businesses, governments, and institutions such as universities and hospitals
- Digital equality in both technology access and skills
- Sustainability, in terms of improving living standards without comprising the ability of future generations to do the same

- Advocacy to encourage others to embrace change as well as the courage and determination to help drive it.

Increasingly, thought leaders in this field are distinguishing between “smart” and “intelligent” communities. The former use technology in innovative ways to *run their towns or cities better*, providing valuable services to citizens and gaining efficiencies. Intelligent communities also take technology into account, then use it (or not) to *make better communities*. Putting a surveillance camera on every street corner would be “smart” in terms of improving citizen safety but might not be “intelligent” if it had a chilling effect on privacy and impacted the use of public spaces.

As another example, Christchurch, NZ deployed an extensive network of sensors to provide early warning of future earthquakes. They then realized that these sensors could also be used to monitor traffic, and even the movements of people, with serious privacy implications. Those seeking to bring smart technologies into play need to be cognizant of all aspects of a “smart” technology before implementing it.

Issues of citizen privacy, surveillance, and data usage will be an underlying philosophical theme, both in this course and in the development of Intelligent Communities, as evidenced by Google’s “Sidewalk Labs” experience in Toronto.

This course will involve a study of Smart Communities principles as well as how existing and proposed communities are trying to be “smart” and “intelligent”. Each student will make presentations on an emerging technology that is relevant to Intelligent Communities and of personal interest.

Then, singly or in small groups, students will formulate a well-informed personal vision of what makes a community “smart” and “intelligent”. This knowledge, understanding, and wisdom may provide a significant advantage as you pursue your chosen career, be it Planning, Architecture, or something else.

This course is suitable for graduate students in any of the course or thesis-based programs of SAPL, as well as from other faculties. Diversity of backgrounds is definitely a strength in this seminar.

Course Hours: 3 units (3-0)

Online Delivery

This course will take place online via Desire2Learn (D2L) and Zoom. Students are required to participate in both the asynchronous learning tasks using the D2L learning environment and the synchronous Zoom sessions. If unable to participate live due to unforeseen circumstances, inform the instructor in advance to work out an alternative participation activity (e.g., watch the recordings, submit a brief reflection, and actively contribute to the follow-up online discussion). Lectures and presentations will be recorded and made available to students.

Course Learning Outcomes

Upon completion of this course, students will be able to:

1. Create a personal definition of “Smart Community” and “Intelligent Community” that is consistent with, and expands upon, the generally accepted ones, and relates, in a meaningful way, to the student’s own interests.
2. Acquire sufficient technological background to appreciate the decisions that must be made in becoming a Smart/Intelligent Community
3. Critically evaluate existing communities that claim to already be, or are in the process of becoming, a Smart/Intelligent Community.
4. Understand the relationship between Smart/Intelligent Communities and concepts such as urban sprawl, energy conservation, economic opportunity, and sustainability.
5. 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 infrastructure projects such as Alberta’s SuperNet and Australia’s NBN.
6. Complete a substantial research project relating to the design of an actual or envisioned Smart Community, as well as an “Annotated Resource Binder” which helps to develop skills in rigorous academic research.

Learning Resources

Required readings, textbooks and learning materials: All required materials will be provided on D2L. However, students are encouraged to consult additional sources and good use of other materials will be considered in grading.

Technology requirements (D2L etc.): In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Broadband internet connection

Most current laptops will have a built-in webcam, speaker and microphone.

Additional Classroom Conduct and Related Information

Guidelines for Zoom Sessions in Online Classes

Zoom is a video conferencing program that will allow us to meet at specific times for a “live” video conference, so that we can have the opportunity to meet each other virtually and discuss relevant course topics as a learning community.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor’s permission.

The use of video conferencing programs relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith, and respect (as per the [Code of Conduct](#)). When entering Zoom or other video conferencing sessions (such as MS Teams), you play a role in helping create an effective, safe and respectful learning environment. Please be mindful of how your behaviour in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities.

Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies (e.g. [Student Non-Academic Misconduct Policy](#)). If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your zoom sessions visit:

<https://elearn.ucalgary.ca/guidelines-for-zoom/>

If you are unable to attend a Zoom session, please contact your instructor in advance to arrange an alternative activity for the missed session (e.g., to review the recorded session). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in Zoom sessions. Students will be advised by their instructor when they are expected to turn on their webcam (for group work, presentations, etc.).

The instructor may record online Zoom class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a Zoom session. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

| Assessment Components | | | |
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| Assessment Method | Description | Weight | Aligned Course Learning Outcome |
| Take-home quiz | Open book quiz on information technology concepts. Individual submission. | 10% | 2 |
| Presentation and discussion facilitation on a technology topic ("Minor Project") | Select, in conjunction with the instructor, a technology topic to research and present to class. Groups of two permitted. | 25% | 1,2,3,4 |
| Annotated Research Binder | To organize and document research. Individual submission. | 15% | 6 |
| Vision of an Intelligent Community ("Major Project") Group work permitted with increased expectations. | Class presentation and discussion facilitation. Groups of up to three permitted. | 15% | 1,2,3,4,5,6 |
| | Written final report with references (APA format) | 35% | |
| <p>Attendance and Participation Expectations: Students are expected to attend the Wednesday morning Zoom sessions and to participate fully. This involves group work and group presentations as well as two individual presentations.</p> <p>Guidelines for Submitting Assignments: Oral presentations to be given via Zoom; written presentations in appropriate D2L dropbox.</p> <p>Final Examinations: There is no final examination.</p> <p>Expectations for Writing (https://www.ucalgary.ca/pubs/calendar/current/e-2.html):</p> <p>Late Assignments: Will be accepted up to the last day of classes, with a possible penalty.</p> <p>Criteria that must be met to pass: It is not necessary to pass any particular component to pass the course.</p> | | | |

Grading Scale

| Grade | Grade Point Value | 4-Point Range | Percent | Description |
|-------|-------------------|---------------|----------|---|
| A+ | 4.00 | 4.00 | 95-100 | Outstanding - evaluated by instructor |
| A | 4.00 | 3.85-4.00 | 90-94.99 | Excellent - superior performance showing comprehensive understanding of the subject matter |
| A- | 3.70 | 3.50-3.84 | 85-89.99 | Very good performance |
| B+ | 3.30 | 3.15-3.49 | 80-84.99 | Good performance |
| B | 3.00 | 2.85-3.14 | 75-79.99 | Satisfactory performance |
| B- | 2.70 | 2.50-2.84 | 70-74.99 | Minimum pass for students in the Faculty of Graduate Studies |
| C+ | 2.30 | 2.15-2.49 | 65-69.99 | 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 | 60-64.99 | |
| C- | 1.70 | 1.50-1.84 | 55-59.99 | |
| D+ | 1.30 | 1.15-1.49 | 50-54.99 | |
| D | 1.00 | 0.50-1.14 | 45-49.99 | |
| F | 0.00 | 0-0.49 | 0-44.99 | |

A student who receives a "C+" or lower in any one course will be required to withdraw regardless of their grade point average (GPA) unless the program recommends otherwise. If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript.

| Topic Areas & Detailed Class Schedule | | |
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| Course Schedule Date | Topic (subject to change) | Assignments/Due Dates |
| Sep. 8, 2021 | Course intro and What is a Smart/Intelligent Community? | |
| Sep. 15, 2021 | The Key Technologies Behind Intelligent Communities | |
| Sep. 22, 2021 | Innovation and Urban Scientism | Technology Project proposal due |
| Sep. 29, 2021 | The People Side: Digital Divide, Happiness, etc. TA Guest Lecture: "Is Dubai a New Paradigm for Smart Cities?" | Technology Quiz due |
| Oct. 6, 2021 | Jobs and Sustainability | |
| Oct. 13, 2021 | NO CLASS SAPL Block Week | |
| Oct. 20, 2021 | Technology Presentations | Technology presentations due in oral and written form |
| Oct. 27, 2021 | The Role of Governments | |
| Nov. 3, 2021 | "Infinite Learning" (2019 ICF Theme); AI and Machine Learning | |
| Nov. 10, 2021 | NO CLASS Term Break | |
| Nov. 17, 2021 | Transportation and Big Data | |
| Nov. 24, 2021 | Vision and Future of an Intelligent Community | |
| Dec. 1, 2021 | Vision of an Intelligent Community | Final presentations session 1 |
| Dec. 8, 2021 | Vision of an Intelligent Community Course wrap-up | Final presentations session 2 |
| Dec. 9, 2021 | End of classes | Updated final presentations due in written form; Annotated resource binders due |
| Special Budgetary Requirements | | |
| None | | |
| CACB Student Performance Criteria | | |
| Not applicable. | | |

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University of Calgary Policies and Supports

COVID-19 PROCEDURE FOR SICK STUDENTS: <https://ucalgary.ca/risk/sites/default/files/Covid-19%20Folder/COVID-19-Procedure-for-Sick-Students.pdf>

ACADEMIC ACCOMMODATION

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>.

Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (<https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf>). Students who require an accommodation in relation to their coursework based on a protected ground other than Disability should communicate this need in writing to their Instructor.

SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/.

ACADEMIC MISCONDUCT

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For information on the Student Academic Misconduct Policy and Procedure please visit:

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf>

Additional information is available on the Academic Integrity Website

at <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>.

COPYRIGHT LEGISLATION:

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy (<https://www.ucalgary.ca/pubs/calendar/current/k.html>).

INSTRUCTOR INTELLECTUAL PROPERTY

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

SEXUAL VIOLENCE POLICY

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at <https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>

UNIVERSITY STUDENT APPEALS OFFICE: If a student has a concern about the course, academic matter, or a grade that they have been assigned, they must first communicate this concern with the instructor. If the concern cannot be resolved with the instructor, the student can proceed with an academic appeal, which normally begins with the Faculty. <https://www.ucalgary.ca/secretariat/student-appeals>

OTHER IMPORTANT INFORMATION

Please visit the Registrar's website at:

<https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk