



# THE ENTREPRENEURIAL EXPERIENCE

## ENTP 6398.501 / SYSM 6315.501

## Fall 2016

**Class Meeting**  
Wednesday 7:00-9:45 PM, JSOM 2.901  
**Office Hours:** Tue/Thu 1:30 – 3:30 PM  
or by appointment

**Dr. Rajiv R. Shah**  
SOM 4.204  
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**Phone:** (972) 883-5904

### COURSE DESCRIPTION

The objective of this course is to actively engage with a partner company, *AT&T-IoT-Smart Cities*, to assist with identifying and evaluating emerging market and business opportunities, *Smart Cities ecosystems as applied to 5 verticals – (1) Energy & Utilities, (2) Transportation, (3) Citizen Engagement, (4) Public Safety, and (5) Infrastructure*, so they **can leverage core competencies to expand their presence into viable new commercial products or service businesses**. Each class offering can explore 5 business opportunities for the partner company, *AT&T*.

Students will be organized into 5 teams, each team focusing on one of the above 5 different potential market opportunities, for the duration of the course. Each team will prepare a detailed market assessment, define functional and technical requirements, identify key players (customers, competitors and potential alliance partners), and develop a market entry strategy (target market, value proposition, sources of competitive advantage, partners and alliances, etc.) for the partner company. The course will be conducted informally, as a seminar, with weekly readings and class discussions, and four checkpoint papers and presentations to faculty and company representatives. Deliverables will include four interim reports/class presentations and one final report/presentation which will be made to a group of senior managers from the partner company.

### LEARNING OBJECTIVES

Upon successful completion of this course, students will:

- Develop a theoretical and practical understanding of the concepts, tools and frameworks used to analyze and interpret market opportunities, evaluate technical tradeoffs and identify potential sources of competitive advantage.
- Demonstrate the ability to apply the concepts, tools and frameworks presented in the readings and lectures to the analysis, interpretation and prioritization of product/market opportunities within a specified market/technology domain.
- Gain practical experience in the research and evaluation of new business opportunities and in the development and recommendation of market entry strategies in pursuit of those opportunities.
- Demonstrate the ability to develop and communicate appropriate recommendations for action with respect to market entry strategies for a company seeking to enter a new market.
- Develop and enhance the ability to effectively prepare and present business plans and communicate the results and conclusions of their study to senior corporate management.

### REQUIRED COURSE MATERIALS:

#### Readings:

##### Required Reading:

1. **Bruce Barringer**, (pbak). Preparing Effective Business Plans: An Entrepreneurial Approach. Way. 2014, Pearson/Prentice, ISBN # 13-978-0-13-350697-6. (Available at UTD Bookstore and Off-Campus Books).

##### Additional Reading:

2. **Alexander Osterwalder & Yves Pigneur**, Business Model Generation, A Handbook for Visionaries, Game Changers, and Challengers, Wiley, 2010 (Additional Reading)
3. **Steve Blank and Bob Dorf**, The Startup Owner's Manual - The Step-by-Step Guide for Building a Great Company, K&S Ranch Publishers, 2012 (Additional Reading)
4. **Eric Ries**, The Lean Startup, Crown Business Publishing, 2011
5. **Ron Adner**, The Wide Lens - A New Strategy for Innovation, Penguin Books, 2012 (Additional Reading)



## SELF-INTRODUCTION

Each student should post a Self-Introduction in the Discussion area of eLearning prior to the first class. Guidelines are provided on the eLearning Discussion page. This information will be used to set up the grade book and assist in the formation of groups if necessary for the course.

## FORMATION OF GROUPS

If appropriate, most of the work in this course will be performed in groups. Students will be assigned into small groups (1 to 4 members) by the instructors during the first week of the course.

## LECTURE NOTES

The MS PowerPoint slides used in lectures and case discussions and other course-related materials will be posted on ELearning ([http://eLearning .utdallas.edu](http://eLearning.utdallas.edu)) under course ID ENTP 6398.501. You should be able to access ELearning with your UTD UNIX ID and password. Call computer services at (972) 883-2911 if you need assistance.

## COURSE REQUIREMENTS & GRADING

The list of assigned readings and cases is attached. Supplemental materials may be provided or posted electronically. Advance preparation and enthusiastic participation in class discussions is an important part of the learning experience in this course and will be evaluated.

The course has been designed to allow flexible management of your time. There will be no quizzes or exams. Your grade will be based on group written assignments, presentations and your contributions to class discussions as summarized in the table below: **\*For further details specific to the Project with AT&T see Appendix-1\***

Group Projects and Presentations - Work Assignments (WA)(*)	Due Date	Pages	% grade
1. WA#1: Phase-1: Each Team to Research/ Ecosystem for 1 of 5 Verticals	Sept 14, 2016	8-10	15%
2. WA#2: Phase-2a: Market Research on What Other Smart Cities Have Done	Oct 05, 2016	8-10	15%
3. WA#3: Phases-2b/2c: Zero-in: Specific Cities, Solutions, Value Propositions	Oct 26, 2016	8-10	15%
4. WA#4: Phase-3: Go to Market Strategies for each City by Each Team	Nov 16, 2016	8-10	15%
5. WA#5: Final Report/ Presentation/Recommendations: Each Team/City	Dec 07, 2016	20-25	25%
6. Individual Class Participation	All Sessions	N/A	15%
(*) : MS-Word/Excel and MS-PPT slides expected for all assignments, WA#1 through WA#5	Total		100 %

**GRADE SCALE:** A = 90% OR GREATER; B = 80% TO 89%; C = 70% TO 79%; D = 60% TO 69%

### Peer Evaluation

A peer evaluation process will be utilized to adjust individual grades on all group assignments. The peer evaluation form (attached) should be completed individually, sealed in an envelope and turned in with the final written assignment on **December 7<sup>th</sup>**.

### Presentations

Each group will be responsible for or more papers/presentations during the semester. These presentations should be prepared using MS PowerPoint. An electronic copy of each paper/presentation should be sent to the instructors ([rajiv.shah@utdallas.edu](mailto:rajiv.shah@utdallas.edu); [laxman@utdallas.edu](mailto:laxman@utdallas.edu)) by 5:00 pm on the day of the presentation. Hard copy handouts (6 slides to a page) should be provided for each instructor and class member. Presentations will be evaluated on multiple factors, including (a) fully addressing the requirements; (b) critical evaluation and effective insights of the subject matter; (c) demonstrated ability to apply the course concepts and frameworks in your analysis; (d) logical conclusions and effective recommendations; and (e) effective presentation (slides), delivery and ability to respond to questions. *Class Participation*

Fifteen percent (15%) of your grade will be based on the quality of your preparation and active participation in class discussions and exercises. From time to time, it may be necessary to miss a class due to illness or personal business. Please let me know in advance. Keep in mind that written assignments must be emailed by the due date, regardless. If participation becomes an issue, your grade will be impacted.



Session #	Topic	Description	Who
S01 08/24	Partner Company	Overview of AT&T –UTD IoT Smart Cities Collaboration Project for Go-to-Market Strategies	AT&T
S02 08/31	Course Overview	Course Overview Discussion of 1 <sup>st</sup> Module: <u>Phase-1</u> : Each Team to Research/ Ecosystem for 1 of 5 Verticals	RS
S03 09/07	1 <sup>st</sup> Module	Additional Discussion of Module-1, as needed.	RS
S04 09/14		<u>Presentation of 1<sup>st</sup> Module</u>	<u>Class</u>
S05 09/21	2 <sup>nd</sup> Module	Discussion of 2 <sup>nd</sup> Module: <u>Phase-2a</u> : Market Research on What Other Smart Cities Have Done	RS
S06 09/28		Additional Discussion of Module-2, as needed.	
S07 10/05		<u>Presentation of 2nd Module</u>	<u>Class</u>
S08 10/12	3 <sup>rd</sup> Module	Discussion of 3rd Module: <u>Phases-2b/2c</u> : Zero-in: Specific Cities, Solutions, Value Propositions	RS
S09 10/19		Additional Discussion of Module-3, as needed	
S10 10/26		<u>Presentation of 3rd Module</u>	<u>Class</u>
S11 11/02	4 <sup>th</sup> Module	Discussion of 4th Module: <u>Phase-3</u> : Go to Market Strategies for each City by Each Team	RS
S12 11/09		Additional Discussion of Module-4, as needed	
S13 11/16		<u>Presentation of 4th Module</u>	<u>Class</u>
11/23			
S14 11/30	5 <sup>th</sup> Module	Discussion/ Preparation for 5 <sup>th</sup> & Final Module Final Report/ Presentation/Recommendations: Each Team/City	<u>RS/Class</u>
S15 12/07		<u>5th and Final Module Presentation:</u> <u>Consolidated Plan Presentation</u>	<u>Class</u>

## GUIDELINES FOR WRITTEN ASSIGNMENTS

**Due Dates-** Written assignments will be due at the beginning of class on the date assigned (and can be emailed to me if you are unable to attend the class). Late papers turned in at or before the next class session following the due date will be graded, but 10 points will be deducted from the grade. Late papers turned in at or before the second class session following the due date will be graded, but 15 points will be deducted from the grade. Late papers not received by the beginning of the second class session following the due date will receive a zero. Consideration may be given for extenuating circumstances with prior notification.

**Format-** Your name (or the group identification and names of all group members) the course number and the date should appear in a header at the beginning of each page of the document. The body of each written assignment should comply with the page length guidelines specified for the assignment. The use of charts and exhibits is encouraged, to the extent that they help you make your points. Charts and exhibits should be numbered and appropriately referenced in the document. A list of references should be attached as required. Cover pages, charts or exhibits, and lists of references are not included in the page count. The manuscript should use 11-12 point type, double-spaced, with 1" margins all around. Appropriate titles and section headings should be used. Number the pages and staple in the upper left corner. Binders and report covers are neither necessary nor desired.



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**Presentation Format-** Use MS PowerPoint. Keep it simple (no videos, sound effects, etc.) Limit animation to that required for an effective presentation. Provide electronic copy to instructor no later than 5:00 PM on due date. Attach a hard copy of your slides to your paper (six slides per page is fine).

**Outline Form Response-** Most of the assignments specify an outline form response. A statement of the question followed by a bulleted or numbered list of the key items in your response is expected.

**Essay Form Response-** Other assignments specify an essay form response. A well organized paper that addresses the case questions and uses section headings, bulleted lists, charts and exhibits as appropriate to clearly communicate your message is expected.

**Electronic Submissions-** If you submit a paper by email, the file name should identify the course, assignment number and your group ID. For example, "ENTP 6398\_2\_Group A.doc" would identify Group A's written assignment 2.

Effective written and oral communications are critically important in the business world. It is equally important that students "put their best foot forward" in classroom presentations and written assignments. Poor organization, convoluted sentence structures, mangled grammar and misspelled words have no place in effective communications, and will be considered in the evaluation of your work and ideas.

### UNIVERSITY POLICIES

**Off-campus Instruction and Course Activities-** Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address [http://www.utdallas.edu/BusinessAffairs/Travel\\_Risk\\_Activities.htm](http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm). Additional information is available from the office of the school dean. Below is a description of any travel and/or risk-related activity associated with this course.

**Student Conduct & Discipline-** The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

**Academic Integrity-** The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

**Email Use-** The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

**Withdrawal from Class-** The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

**Student Grievance Procedures-** Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the



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respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

**Incomplete Grade Policy-** As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

**Disability Services-** The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22, and PO Box 830688, Richardson, Texas 75083-0688, (972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

**Religious Holy Days-** The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, and Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

## Appendix-1

# AT&T – UTD IoT Smart-Cities Collaboration Project

## Overview:

1. **Solution Domains (or Verticals) of Interest:** 5 verticals have been identified as being of interest – (a) Energy & Utilities, (b) Transportation, (c) Citizen Engagement, (d) Public Safety and (e) Infrastructure. AT&T has provided example solutions in each.
2. **Ecosystem enabler:** AT&T Smart Cities team either sells direct or wholesales connectivity to solution providers that fall into their five solution domains. Solution providers who purchase connectivity in a wholesale dynamic and then resell it as a part of their solution are



known as a Value-Added- Resellers (or VARs). This would be the **B-to-B leg of a B-to-B-to-C model.**

3. **Trusted advisor:** AT&T Smart Cities team is working to enable their internal sales channels to directly sell solutions to cities, municipalities, utilities, and education/military/military bases. Some solutions are built internally by ATT, and some will be reselling best-in-breed solutions from the existing global players.
4. **Target Cities of Interest:** AT&T currently has good relationships and understanding of the dynamics in NFL cities. For the purposes of this project, we want to exclude NFL cities from evaluation.

## Objectives:

With the above in mind, AT&T's objectives for this collaboration have three phased-components to be pursued sequentially -

1. **Phase-1:** Research and Identify *Ecosystem Players* and Value-Chain (and what end-user solutions they are offering) for each of the 5 solution domains or verticals. For each solution domain develop a comprehensive understanding of relevant companies that have solutions that might utilize cellular connectivity – market landscape of these companies, new up and coming players, how these companies are monetizing their products, the need for connectivity and estimated number of connection points, potential disruptive technologies specific to each vertical, similar to the WAZE app for traffic flow. Need to develop a good understanding of the solution providers, their solutions and the associated use cases and value propositions for the end users.
2. **Phase-2:** Research and Identify *Target Cities* (excluding the 32 NFL cities) and provide, based on qualitative and quantitative research, a prioritized go to market strategy of how these cities could be pursued.
  - a. **Phase-2a:** Begin by researching *what cities globally have already employed smart city solutions in the 5 verticals* – current landscape of cities and technologies, potential cost savings to the city, investment required, sources and uses of funding and capital, etc. Document ROI and environmental sustainability metrics when available for individual solutions.
  - b. **Phase-2b:** Next, *research cities in the US*, other than the 32 NFL cities, to identify cities that would benefit from specific smart city solutions in each of the 5 verticals.
  - c. **Phase-2c:** Finally, what is AT&T's *Value Proposition* in this space? Why should a city utilize AT&T as a provider of Smart City solutions as opposed to going directly to point solution providers directly?
3. **Phase-3:** *Go-to-Market Strategy – for each city and vertical(s?) pairing*, develop a detailed go-to-market plan, a clear definition of product-service offerings, specific ecosystem partner companies; potential cost savings, environmental sustainability impact for the city; estimated



market size and take rates; proposed pricing, promotion and roll-out plans; based on pricing plans and adoption rates estimated revenue plan; capital and investment required and estimated operating expenses; estimated ROI.

## Work Plan for Student Teams:

The following table maps the above discussion into a meaningful work plan and schedule for student teams – 5 student teams, with each student team focused on 1 of 5 verticals in Phase-1, and eventually in Phase-3, on 1 city.

Group Projects and Presentations - Work Assignments (WA)(*)	Due Date	Pages	% grade
7. WA#1: Phase-1: Each Team to Research/ Ecosystem for 1 of 5 Verticals	<a href="#">Sept 14, 2016</a>	8-10	15%
8. WA#2: Phase-2a: Market Research on What Other Smart Cities Have Done	<a href="#">Oct 05, 2016</a>	8-10	15%
9. WA#3: Phases-2b/2c: Zero-in: Specific Cities, Solutions, Value Propositions	<a href="#">Oct 26, 2016</a>	8-10	15%
10. WA#4: Phase-3: Go to Market Strategies for each City by Each Team	<a href="#">Nov 16, 2016</a>	8-10	15%
11. WA#5: Final Report/ Presentation/Recommendations: Each Team/City	<a href="#">Dec 07, 2016</a>	20-25	25%
12. Individual Class Participation	All Sessions	N/A	15%
(*) : MS-Word/Excel and MS-PPT slides expected for all assignments, WA#1 through WA#5			<b>Total</b> 100 %

THE UNIVERSITY OF TEXAS AT DALLAS



## A Collaboration between AT&T and UT Dallas

### The Entrepreneurial Experience (ENTP 6398/SYSM 6315)

Internet-of-Things (IoT) as it Relates to Smart Cities

Fall 2016

Wednesdays, 7 – 9:45 p.m.

Working with our client company, AT&T, students in ENTP 6398/SYSM 6315 will explore how established, successful and often large companies leverage their core competencies to expand into new product and service areas.

If you are looking for real-world experience identifying and developing potential business opportunities for existing companies, this class is for you!

For more information, contact  
Dr. Rajiv Shah at [rajiv.shah@utdallas.edu](mailto:rajiv.shah@utdallas.edu) or 972-883-5904.





## UT Dallas and AT&T Course Collaboration

Secure connectivity is the thread woven through all smart city deployments. AT&T is a global Internet of Things (IoT) leader and uniquely positioned to deliver in the Smart City space. The Smart City organization is housed within AT&T's IoT group and represents the next growth opportunity for the IoT.

**You will have the opportunity to learn more about the Smart City ecosystem with a focus on these five verticals.**



**You will have the opportunity to work within these verticals to:**

- Identify customers that will need Smart City solutions. Specifically, what solutions/products should AT&T pursue to sell?
- Document relevant data points from industry-accepted organizations (Gartner, Forrester, Machina, industry players)

Dive into the different potential cities and better understand each individual city dynamic. For this portion AT&T is looking to gain insight into:

- What is the current smart city landscape within the city?
- What is a go to market strategy for that city?
- What's the potential savings a city could see?
- What funding or resources does a city have to help initiate a smart city program?

**For more information, contact Dr. Rajiv Shah at [rajiv.shah@utdallas.edu](mailto:rajiv.shah@utdallas.edu) or 972-883-5904.**

**The research and data you produce during this course will help inform the AT&T Smart Cities strategy. The city that your team presents could become AT&T's next Smart City.**

