CAS/GRS New Course Proposal Form
This form is to be used when proposing a new CAS or GRS course.

This form should be submitted to Senior Academic Administrator Peter Law (617-353-7243) as a PDF file to pgl@bu.edu. For further information or assistance, contact Associate Dean Susan Jackson (617-353-2410; sjackson@bu.edu) about CAS courses or Associate Dean Jeffrey Hughes (617-353-2690; hughes@bu.edu) about GRS courses.

DEPARTMENT OR PROGRAM: Computer Science
DATE SUBMITTED: September 8, 2016

COURSE NUMBER: CAS CS 299 E

COURSE TITLE: Internship Seminar

INSTRUCTOR(S): Mark Crovella

TO BE FIRST OFFERED: Sem./Year: _Summer__/ __2017__

SHORT TITLE: The “short title” appears in the course inventory, on the Link University Class Schedule, and on student transcripts and must be 15 characters maximum including spaces. It should be as clear as possible.

COURSE DESCRIPTION: This is the description that appears in the CAS and/or GRS Bulletin and The Link. It is the first guide that students have as to what the course is about. The description can contain no more than 40 words.

Opportunity for students to gain professional experience at technology firms and to learn about entrepreneurship in technology. Availability depends on market needs.

PREREQUISITES: Indicate “None” or list all elements of the prerequisites, clearly indicating “AND” or “OR” where appropriate. Here are three examples: “Junior standing or CAS ZN300 or consent of instructor”; “CAS ZN108 and CAS ZN203 and CAS PQ206; or consent of instructor”; “For SED students only.”

1. State the prerequisites:
   None.

2. Explain the need for these prerequisites:

CREDITS: (check one)

☐ Half course: 2 credits
☐ Variable: Please describe.
X Full course: 4 credits
☐ Other: Please describe.
Provide a rationale for this number of credits, bearing in mind that for a CAS or GRS course to carry 4 credits, 1) it must normally be scheduled to meet at least 150 minutes/week, AND 2) combined instruction and assignments, as detailed in the attached course syllabus, must anticipate at least 12 total hours/week of student effort to achieve course objectives.

The objective of this class is to introduce students to industry environments via internships and to expose students to issues surrounding entrepreneurship in the technology industry. Students will work for firms where they will collaborate with professional technologists and contribute to the success of a technology firm.

The course will consist of two components: an internship at a company in the technology industry, and a lecture and discussion series with prominent entrepreneurs. The lecture series will also include students presenting to each other the scientific and practical issues underlying the projects they are working on. There will be one weekly lecture, followed by discussion. Students must attend all lectures and also must work at their internships at least 20 hours total every week during the term to receive 4.0 academic credits.

The academic portion of the final grade is based on two components: (a) participation in the lecture/discussion series; and (b) an internship journal and final project.

The internship journal consists of one entry per week. Entries should include details about work assignments: new skills acquired, employer expectations, student expectations and observations about the operations and technologies used within the business, and any ideas for changes you might suggest, either to the internship or the business itself. The journal should also cover a summary of the weekly lecture and discussion.

The final project consists of a concept for a hypothetical startup, and a “pitch” for that startup. The goal is to understand the many varied constraints and considerations that factor into developing ideas for new technology businesses.

DIVISIONAL STUDIES CREDIT: Is this course intended to fulfill Divisional Studies requirements?

☐ No.
☐ Yes. If yes, please indicate which division ______________________ and explain why the course should qualify for Divisional Studies credit. Refer to criteria listed here and specify whether this course is intended for “short” or “expanded” divisional list.

HOW FREQUENTLY WILL THE COURSE BE OFFERED?
☐ Every semester ☐ Once a year, fall ☐ Once a year, spring ☐ Every other year
☐ Other: Explain: Initially, once a year, but potentially more often in future years.
NEED FOR THE COURSE: Explain the need for the course and its intended impact. How will it strengthen your overall curriculum? Will it be required or fulfill a requirement for degrees/majors/minors offered by your department/program or for degrees in other departments/school/colleges? Which students are most likely to be served by this course? How will it contribute to program learning outcomes for those students? If you see the course as being of “possible” or “likely” interest to students in another departments/program, please consult directly with colleagues in that unit. (You must attach appropriate cognate comments using cognate comment form if this course is intended to serve students in specific other programs. See FURTHER INFORMATION below about cognate comment.)

This course is a component of a new program initiated by the College of Arts and Sciences, whose working title is “BU in San Francisco.” BU in SF is a residential study/internship program. Participating students engage in both a traditional paid internship in the technology sector and a group learning experience. The goal of the group experience is to provide students broader knowledge of the technology industry than can be obtained just via their internship.

BU in SF provides exceptionally motivated students with a richer opportunity to (a) learn about and make contact with a larger set of companies than otherwise, and (b) share in a residential community with their BU peers during their experience. To enable the latter, BU's Study Abroad office coordinates housing and support for students while in the Bay Area. The educational portion of the program (this course) carries academic credit.

The program's pilot year is 2017. Target for summer 2017 is to enroll 12 Computer Science or related majors. Subject to a successful first season, we expect the program to grow and broaden. In subsequent seasons we expect to broaden participation to larger student populations, encompassing additional engineering areas, design (including user experience design), and management (including product management).

ENROLLMENT: How many undergraduate and/or graduate students do you expect to enroll in the initial offering of this course?

Initial target enrollment is 12 undergraduate students. Future years are expected to grow in size.

CROSS-LISTING: Is this course to be cross-listed or taught with another course? If so, specify. Chairs/directors of all cross-listing units must co-sign this proposal on the signature line below.

OVERLAP:

1. Are there courses in the UIS Course Inventory (CC00) with the same number and/or title as this course?
   X No.

   ☐ Yes. If yes, any active course(s) with the same number or title as the proposed course will be phased out upon approval of this proposal.

   NOTE: A course number cannot be reused if a different course by that number has been offered in the past five years.

2. Relationship to other courses in your program or others: Is there any significant overlap between this course and others offered by your department/program or by others? (You must attach appropriate
cognate comments using cognate comment form if this course might be perceived as overlapping with courses in another department/program. See FURTHER INFORMATION below.)

No significant overlaps.

FACILITIES AND EQUIPMENT: What, if any, are the new or special facilities or equipment needs of the course (e.g., laboratory, library, instructional technology, consumables)? Are currently available facilities, equipment, and other resources adequate for the proposed course? (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

No new resources.

STAFFING: How will the staffing of this course, in terms of faculty and, where relevant, teaching fellows, affect staffing support for other courses? For example, are there other courses that will not be taught as often as now? Is the staffing of this course the result of recent or expected expansion of faculty? (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

This course will be overseen by a BU/CS faculty member, who will support an instructor on the ground in the Bay Area. At present, it has not been determined whether the person on the ground will be a CS faculty member, or a part time instructor.

BUDGET AND COST: What, if any, are the other new budgetary needs or implications related to the start-up or continued offering of this course? If start-up or continuation of the course will entail costs not already discussed, identify them and how you expect to cover them. (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

The course itself does not entail new expenses.

EXTERNAL PROGRAMS: If this course is being offered at an external program/campus, please provide a brief description of that program and attach a CV for the proposed instructor.

FURTHER INFORMATION THAT MUST BE ATTACHED IN ORDER FOR THIS PROPOSAL TO BE CONSIDERED:

- A complete week-by-week SYLLABUS with student learning objectives, readings, and assignments that reflects the specifications of the course described in this proposal; that is, appropriate level, credits, etc. (See guidelines on “Writing a Syllabus” on the Center for Excellence & Innovation in Teaching website.) Be sure that syllabus includes your expectations for academic honesty, with URL for pertinent undergraduate or GRS academic conduct code(s).

- Cognate comment from chairs or directors of relevant departments and/or programs. Use the form here under “Curriculum Review & Modification.” You can consult with Susan Jackson (CAS) or Jeffrey
Hughes (GRS) to determine which departments or programs inside and outside of CAS would be appropriate.

DEPARTMENT CONTACT NAME AND POSITION: Mark Crovella

DEPARTMENT CONTACT EMAIL AND PHONE: CROVELLA@BU.EDU

DEPARTMENT APPROVAL: ___________________________________________________________  
Department Chair  Date

______________________________________________________  
Other Department Chair(s) (for cross-listed courses)  Date
CAS/GRS CURRICULUM COMMITTEE APPROVAL:

☐ Approved  Date: ______________________
☐ Tabled  Date: ______________________
☐ Not Approved  Date: ______________________

Divisional Studies Credit:

☐ Endorsed
  ☐ HU
  ☐ MCS
  ☐ NS
  ☐ SS
☐ Not endorsed

______________________________________________________________
Curriculum Committee Chair Signature and Date
Comments:

PROVISIONAL APPROVAL REQUESTED for Semester/Year ______________________

______________________________________________________________
Dean of Arts & Sciences Signature and Date
Comments:

CAS FACULTY: Faculty Meeting Date: ______________________  ☐ Approved  ☐ Not Approved

______________________________________________________________
Curriculum Administrator Signature and Date
Comments:
This course is an academic component tied to your internship in the BU in San Francisco Program. It is designed to complement the internship experience by broadening your range of experience beyond the confines of your specific internship, introducing you to key concepts related to technology entrepreneurship, building contacts among your peers and through exposure to key members of the technology industry, and providing you with skills related to developing, refining, assessing, and “pitching” technology based ventures.

The skills developed in this course will aid you regardless of whether you go on to work in the Bay Area and regardless of whether your career path leads to entrepreneurship. The skills developed in this course, such as critical analysis of technology, and effective and persuasive communication, will be valuable across a wide range of career paths and contexts.

Credit for the course will be based on
- Participation (discussions, open house visits, and final project pitch)
- Reflection Journal
- Final Project Pitch
- Your blog contribution

There will be one weekly meeting, which will be a lecture followed by discussion or a visit to a company open house including discussion with company leaders. Students must attend all meetings and also must work at their internships at least 20 hours total every week during the term to receive 4.0 academic credits.

Each student will maintain a journal in which they record each week observations that they gleaned from their internship experience and/or from the weekly meeting as relates to entrepreneurship. Entries should include details about work assignments: new skills acquired, employer expectations, student expectations and observations about the operations and technologies used within the business, and any ideas for changes you might suggest, either to the internship or the business itself. The journal should also cover a summary of the weekly lecture and discussion.

Further, each student will develop (working in a team) a concept for a hypothetical startup, and develop a “pitch” for that startup. The goal is to understand the many varied constraints and considerations that factor into developing ideas for new technology businesses.
Learning Outcomes

As a result of completing this course, students will:
- Gain an understanding of a range of business models in the technology sector, and the rationales needed for starting new businesses under various models;
- Develop skills for critically analyzing technology startups and evaluating potential in new business ideas;
- Gain skills for working creatively in teams; and
- Understand the wide range of workplace structures and software development practices used in the technology industry.

The course will meet once per week, for 1 ½ hours. Some weeks there will be 1-2 hours of reading assignments before class. Some weeks there will be a short report to be prepared before class.

Course Schedule

Week 1
   Introduction
   Each student gives short presentation describing their work environment and goals for the summer.

Week 2
   Guest speaker from a medium sized startup (40-80 employees). Discussion will focus on the evolution of startups from initial founding to Series A funding. Role of the “pivot” and how early stage companies are “pitched.”. Pre-class reading: analysis of firms in the same space as the startup.

Week 3
   Guest speaker from late stage startup (100 – 500 employees). Discussion will focus on role of Board of Directors, market forces, scaling, and exit strategies. Pre-class reading: analysis of firms in the same space as the startup.

Week 4
   Guest speaker from established technology firm (public company, > 100 employees). Discussion will focus on corporate culture, sustaining innovation, establishing best practices. Pre-class reading: analysis of firms in the same space as the firm.

Week 5
   Students form teams to begin brainstorming hypothetical startup pitches. Work on this continues through the week.
Week 6
Each team provides a written summary of their startup pitch. Each team discusses pitch idea with panel of industry leaders drawn from ranks of BU alumni in the bay area. Pitches are refined.

Week 7
Each student makes a 10-minute presentation summarizing observations about their internship work environments and assignments. Key questions: role of team, software engineering practices, company culture.

Week 8
Open house at one of the smaller firms providing internships to students. Meeting with key leaders in the firm, with opportunity to pose questions about entrepreneurship in the context of the firm.

Week 9
Second open house at one of the larger firms providing internships to students. Meeting with key leaders in the firm, with opportunity to pose questions about entrepreneurship in the context of the firm. Reflection Journal is due.

Week 10
Each student team makes a 15 minute presentation on their startup pitch, which they have been refining since Week 5. A panel of alums provides critical feedback and each pitch is assessed in terms of strengths and weaknesses.