



Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Add Economics to the list of units participating in the LAS Major in Computer Science and an LAS Discipline (CS + X)

SPONSOR and COLLEGE CONTACT: Kelly Ritter, Associate Dean for Curricula and Academic Policy, College of Liberal Arts and Sciences, ritterk@illinois.edu, 333-1350

BRIEF DESCRIPTION: The LAS Major in Computer Science and an LAS Discipline was established in 2013 with four LAS units participating: Anthropology, Astronomy, Chemistry, and Linguistics. The major was designed to enable other LAS units to participate if they wished, upon collaboration with Computer Science and approval by the College of LAS. This proposal seeks to add Economics to the CS+X suite of programs.

JUSTIFICATION:

This degree is proposed because of the need for graduates with these skills, as requested by the industry, graduate programs, and faculty in both departments. The Departments of Economics and Computer Science have grown over the past five years, adding coursework and programs to fill areas of need in order to prepare students for changing industry. The combination of coursework is not intended to provide an economics student with computer science skills, or computer science students with economics background, but to offer students an integrated program where their knowledge in both curriculums will be complimentary and intertwined. Students will not only be able to work with large datasets (“Big Data”), but they will be able to create, analyze, and interpret this information.

Natural Area of Overlap:

Computer Science and Economics are a relevant curricular fit with a natural overlap. Combining these programs would provide students with enhanced quantitative analysis and programming skills. Economics students learn a variety of analytical skills, both theoretical and empirical, and apply these to virtually every field of human endeavor. The computer science curriculum fits well with economics, especially within some of the major fields, including econometrics, financial economics, industrial organization, and mathematical economics. There is an increasing need for more sophisticated skills to examine large administrative datasets (“Big Data”), thus combining the computer science and economics curriculums will produce students who are able to write their own code and develop their own software for analyzing these data sets.

Computation Infused in the Economics Discipline:

Many of our economics courses require students to have computational knowledge, and are teaching students programs such as Stata, R, SPSS, Python, and more. The economics faculty are hiring more undergraduate research assistants (RAs), and requests are growing for economics students with strong computation skills and coding experience. We are also building collaborations with other departments, and these units are requesting economics undergraduate RAs with database, statistical software, coding, programming, and computational knowledge to help on research in a variety of disciplines.

While not a requirement in the curriculum, economics students are encouraged to take CS courses to provide them with the ability to enhance their analysis and quantitative skills, and expand their future job and graduate school prospects. We also provide and encourage computational workshops to students, through ATLAS, Market Information Lab, Lynda.com, and other on- and off-campus sites. Coursework and workshops enhance skills, but they do not fully integrate the disciplines like the CS+ECON degree.

Employment Opportunities:

Workforce demands for students with a combination of Computer Science and Economics have increased significantly. Thus, this combined curriculum would provide a strong background for numerous careers and graduate programs. Recruiters have met with our Economics Career Specialist and emphasized the need for students with strong quantitative analysis and computational skills. We are approached by companies in the areas of consulting, banking, finance, insurance, among others, who are specifically seeking students with an economics and computational background. In addition, students with a strong quantitative analysis background are sought by the public sector, working for policy centers, government agencies, and non-profit organizations.

Students who have completed the Economics curriculum with a minor in CS and/or Informatics, have been very successful finding jobs and internships because of the skills within these two curriculums. Students majoring in economics have very good job placement in general, and the addition of computer science would make those students even more marketable.

Companies which hire students with this background include: AbbVie, Abbott, Accenture, AEP Energy, Allstate, Aon, Bank of America, Boeing, BP, Capital One, CitiBank, Deloitte, Ernst & Young, Goldman Sachs, HSBC, Huron Consulting, John Deere, JP Morgan Chase, KPMG, Mercer, Northrop Grumman, Siemens, State Farm, Wells Fargo, and many others. Some of the common job titles are: Financial Analyst, Economic Analyst, Technology Consultant, Pricing Analyst, Account Manager, Marketing Specialist, Risk Management Associate, Quantitative Management Associate, Business Development Manager, Technology Analyst, Transfer Pricing Analyst, Economic Valuation Services, IT Advisor, Financial Security Support Associate, Supply Chain Analytics, Trader, and many others.

Firms in the Research Park have numerous positions available (internships, part-time, and full-time) and are requesting students with a background in economics and data analytics, combined with programming, software and web development (<http://researchpark.illinois.edu/careers>). Some of the companies are: Capital One, Yahoo!, John Deere, Caterpillar, AbbVie, Dow Chemical, and many others. Some of the positions include: IT Finance, Innovation Developer, Development Analyst, Analytics Practicum, Sales/Business Development, and Data/Analytics.

Graduate Opportunities:

In addition to the career prospects, a CS+ECON degree would prepare students for numerous graduate school opportunities. Financial Engineering is a growing field involving quantitative analysis, financial theory, engineering methods, and the tools of mathematics and programming. The combination of the economics and computer science curricula would be a strong preparation for this graduate program and a career within the field. The addition of computer science to economics would also provide a strong background for other Master's and Doctoral programs in areas such as: Economics (including those focused on Policy, Development, and Econometrics), Finance, Statistics, Policy (Environmental, Educational, etc.), and Computer Science.

Selectivity

The CS+ECON is a rigorous degree, requiring the program to be selective. Students entering this degree are expected to have strong and proven programming ability as well as quantitative methods and critical and analytical skills. The GPA and Grades required to continue into the CS+ECON program are set at a high level as both Computer Science and Economics degrees are challenging, so students must be able to perform academically at a high level to manage the combination of both programs. CS+ECON is not a degree intended for students who are unable to get into the Engineering Computer Science, CS+MATH, or CS+STAT degrees. This program is for select students who have the specific interest and career goals necessitating the combined area of study. The academic requirements for acceptance into the degree are thus set at a high level of achievement, matching the requirements to be accepted into Computer Science, CS+MATH, and CS+ECON.

Course Requirements

The CS + Econ major follows the outline of coursework established in 2012 and revised in 2106 – 32-33 hours of CS courses, 9-10 hours in Math, a minimum of 24 hours in an LAS Discipline (this proposal requires 24 hours in Economics). In addition, IBHE requires that all new undergraduate degrees require 40 credit hours in upper division courses. Upper division courses have been described as 300- and 400- level coursework and some 200-level courses in which multiple prerequisites are required. The CS + Econ major itself requires 37 hours of upper division courses. Students pursuing this degree will also take many additional upper level courses, such as those fulfilling the campus Advanced Composition requirement and electives in CS and Economics at the 300 and 400-level.

BUDGETARY AND STAFF IMPLICATIONS:

1) Resources

a. How does the unit intend to financially support this proposal?

This proposal will not require new financial support. We anticipate low enrollments of around 10 students in the new major which is managed by the selective requirements to transfer into the major, and many students will come from the existing Economics Major or Computer Science Major. The CS+ECON Degree will be sufficiently challenging, resulting in small number of students from other departments choosing to change into the major.

The CS+ECON degree will require only a few new economics advanced elective courses in the topics of econometrics, quantitative economics, computational economics, and mathematical economics. As Economics hired new faculty, the

Department has been developing these type of elective courses. The CS courses in this proposed program are already offered, and are a part of the other CS+X curriculums.

- b. **How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?**

Over the past number of years both departments have increased the number of seats offered in courses, and developed new electives. Economics has created many quantitative-focused electives, and there is more space in these elective courses so students are able to select from a large variety. Economics will also be limiting enrollment into some of the quantitative-focused electives to the CS+ECON and BSLAS Economics majors. Computer Science restricts courses to students in select majors to allow them the ability to register. Neither department plans on taking away programs currently offered.

- c. **Will the unit need to seek campus or other external resources?** The departments do not need additional campus or other external resources for the CS+ECON program. Most majors will be students currently pursuing either Economics or Computer Science. Courses already exist for both of these programs and are offered regularly. As new hires are authorized, new advanced elective courses for the CS+ECON major will be created (also available to the BSLAS Economics majors which is being proposed as a new degree program).

- d. **Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.** There will be no financial arrangements from the College of LAS for the CS+ECON degree.

2) Resource Implications

- a. **Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.** The students in the CS+ECON degree will come primarily from students in the Economics or Computer Science degrees. There might be a few majors in the mathematical sciences or other areas interested, but most would have a specific interest of Economics and Computer Science. Due to the small number of students who will be in the CS+ECON major, there will be very little impact on faculty resources from this program alone. The combination of the BSLAS (newly proposed), Economics Minor in Econometrics, and the CS+ECON major will increase the number of students taking economics courses focused on quantitative methods, but over the past number of years the offerings have been increased, and we have managed to keep similar class sizes. Computer Science has worked on course offerings for all the CS+X programs, so this new program would not have a high impact.
- b. **Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units.** The CS+ECON program should not have too much impact on courses outside of these departments. The Math courses required are ones already required in the

Economics and Computer Science majors, or ones that are open. Since there will be a small number of students pursuing this program, the impact will be very small.

c. **Please address the impact on the University Library.**

Most of the materials for undergraduate economics and computer science courses are contained in textbooks or reading prepared by the professors. This is particularly true for the advanced elective courses that will compose the additional courses. The impact to the library is minimal, at the most.

d. **Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)**

The courses may require students to use their personal computers or campus computers. The current software packages necessary are readily available to the students through site licenses in computer labs or offered for free through the University.

The Departments work closely with FMS on room scheduling, and with computer labs when necessary for courses. Due to the small number of students in this program, we do not expect there to be an increased need of space beyond what will be used for existing courses. We will continue to ensure our courses are flexible, so they may be taught in many different formats, depending on the availability of the space, without sacrificing the curriculum and student experience. We work closely with the computer labs to request space as well, and we will continue working with all units to ensure our courses can be accommodated without taking from other units.

LOGISTICS

Proposed Selection of Students

Initially, we will only accept a limited number of current UIUC students (ICT/Transfer into CS+ECON), and reevaluate in future semesters.

The current transfer criteria are as follows:

- MATH 220 or 221 with a grade of A- or higher, or Credit (AP, IB, A-Level, Proficiency); If MATH 231 has been taken at the time of transfer, an A- or higher is required in this course as well
- CS 173 and CS 225 with an A- or above in both courses (and any additional CS courses taken at the time of transfer); at least two CS courses taken on the UIUC campus
Students will receive overrides for CS 'gateway' courses with approval from Economics Advisor (advisor will contact CS Advisor with approval)
- ECON 102 or 103, and ECON 203 with an A- or higher in both (and any additional ECON courses taken at the time of transfer); at least two ECON courses taken on the UIUC campus. *ECON Course grade requirement may be reevaluated and adjusted in future semesters if necessary, depending on success of students in program, capacity, and popularity*
- Overall 3.67 GPA or higher (both UIUC and Combined)

Students meeting these requirements will request CS+ECON in the LAS College Office during the declaration periods. A decision to transfer must be approved by the CS and Econ academic offices, and such decisions will be made taking into account the capacity of the program.

Students falling beneath these requirements may petition the CS Department.

Freshman applications will not be accepted for the CS+ECON Major. Interested students should apply to either Economics and/or CS (or another General Studies) and work on fulfilling the prerequisites.

If the on-campus transfer cycle is successful at identifying an appropriate number of students, we will consider whether freshman will be accepted, in consultation with the CS Department and the College of LAS. If freshman are accepted in the future, we will work with Admissions/LAS to manage the appropriate number of admits that both departments can handle.

If the CS+ECON curriculum became available for Freshman applications, students interested in the major would select CS+ECON as their primary choice, and list Economics as their second major choice. Thus, if they are not selected for CS+ECON, they may be considered for the Economics major and work towards a transfer into CS+ECON.

Proposed Academic Advising

Students would work closely with both the CS and ECON Advisors, and the Advisors will coordinate across the two departments. Initially, the Associate Director of Undergraduate Studies in Economics (Melissa Newell) would oversee these students, but eventually other advisors within Economics would assist for advising, while Melissa, LAS, and the CS Department would oversee and manage enrollments.

DESIRED EFFECTIVE DATE: Upon approval.

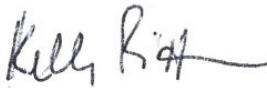
CLEARANCES:

Signatures:



Martin Perry, Head/chair of the sponsoring department or unit

Date:



College Representative:

9-19-17

Date:

Statement for Academic Catalog

Overview Tab (edits):

Computer Science and Liberal Arts and Sciences Discipline

The LAS major in Computer Science and an LAS Discipline is a flexible program for students who plan to pursue technical or professional careers in arts and sciences areas requiring a sound grounding in computer science. This major allows students to combine study of computer science with training in a field in Liberal Arts and Sciences to offer students novel perspectives in interdisciplinary work. Students can use the supporting coursework to prepare for employment immediately upon graduation or for pursuing graduate study in a wide variety of fields or to complete a significant body of courses in a single area, such as a double major or minor.

Students are strongly encouraged to get involved in undergraduate research through independent studies and funded research experiences, with the goal of learning from the University of Illinois CS and LAS internationally recognized scholars outside the classroom and participating in the exciting quest for new contributions to the field.

Students interested in Mathematics or Statistics should enroll in the Math/CS or Stat/CS degree.

Current approved curricula include:

Computer Science and Anthropology

Today, anthropologists use computational tools and algorithms to analyze large amounts of data either gathered from a field site or by studying on-line social communities and social networks. Students majoring in CS + Anthropology will have knowledge of how people live and communicate as social beings, which can inform best designs and user interfaces for software.

Computer Science and Astronomy

Astronomy is a computation-intensive discipline. Computational challenges in astronomy, including radio astronomical data processing, analysis of large optical image data sets, and dynamical and statistical simulation of astronomical systems, test the limits of currently available hardware and software and have led to significant advances in computational science. This major will offer computationally focused students with a grounding in astronomy for them to understand astronomically motivated computational challenges such as mysteries of the origins of life and our universe.

Computer Science and Chemistry

Students majoring in Computer Science and Chemistry are prepared for a variety of careers, including helping manufacturers design more productive and efficient processes, helping pharmaceutical firms characterize new compounds for drug discovery, and conducting research that requires studying the fundamental properties of atoms, molecules, and chemical reactions. Computer Science and Chemistry majors might develop computer models or simulate chemical and biochemical processes, perform statistical analysis of large data sets, or create visualizations of reaction pathways, molecular interactions, or other phenomena.

Computer Science and Economics

The Computer Science and Economics program provides students with enhanced quantitative analysis and programming skills. Students learn a variety of economic analytical skills, both theoretical and empirical, and computational skills. These are an asset for students interested in nearly all fields of economics, including the three of the core fields (microeconomics, macroeconomics, and econometrics), but also the applied fields of industrial organization, public economics, labor economics, development economics, international economics, and financial economics.

There is an increasing need for more sophisticated skills to examine large administrative datasets (“Big Data”), thus combining the computer science and economics curriculums will produce students who are able to write their own code and develop their own software for analyzing these data sets. Possible job opportunities for graduates include area such as banking, finance, insurance, policy centers, government agencies and non-profit organizations. The degree will also prepare students for various graduate programs, including areas of economics, finance, policy, and financial engineering.

Computer Science and Linguistics

The Computer Science and Linguistics program brings together students and faculty interested in different aspects of the computer – natural language relationship – i.e., studying the cognitive aspects of natural languages; endowing computers with human-like behavior and understanding of spoken and written natural language; and designing user-friendly computer programs and interfaces using natural language communication.

Students will be exposed to the tools of both disciplines — formal methods, philosophical analysis, computer programming, and empirical research — with the aim of acquiring the appropriate skills required by the field. Graduates will be successful in landing jobs in various areas, including natural language software design and applications, teaching and research, law, medicine, and public service. The innovative aspect of the program is its focus on relating computers to language, technology, and society where the combination has potential for great impact.

Computer Science and Philosophy

The computer science and philosophy major provides students strong analytical, critical, technical, and communication skills that will prove useful for careers in academia, industry, public service, and elsewhere. Computer science and philosophy share deep historical roots. Questions about the nature of algorithms, complexity, the ability of computers to think, and computation itself are as much philosophical as they are technical. Likewise, many basic philosophical questions – what does it take to know something, when does something cause something else, what makes an action right or wrong to do – matter for practical computer science applications. As computers and machines continue to play an ever-increasing role in our daily lives, there is also a corresponding need to think clearly about the ethical implications of machine technology with respect to, e.g., questions of privacy, security, equality, and justice. Tools from both computer science and philosophy help to clarify and to answer such questions, as well as many others.

Majors tab (edits to add Economics in Yellow)

[Computer Science and Anthropology](#)

[Computer Science and Astronomy](#)

[Computer Science and Chemistry](#)

[Computer Science and Economics](#)

[Computer Science and Linguistics](#)

[Computer Science and Philosophy](#)

Computer Science and Economics web page

Computer Science and Economics

For the degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Please see the computer science advisor as well as the economics advisor.

Computer Science email: academic@cs.illinois.edu

Economics email: econ@illinois.edu

Minimum required major and supporting course work normally equates to 66 hours, including 32 in Computer Science and 24 in the LAS discipline.

General education: Students must complete the Campus General Education requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours). Please see the computer science advisor as well as the advisor in your LAS discipline.

Minimum hours required for graduation: 120 hours

Required Computer Science Courses:		
CS 100	Freshman Orientation ¹	0-1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following STAT 200-Statistical Analysis STAT 212-Biostatistics ECON 202- Economic Statistics I CS 361-Probability & Statistics for Computer Science (recommended)		3
CS 374	Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)		
MATH 220 or 221	Calculus I	4-5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
Required Economics Coursework- minimum 24 hours		
Econ 102- Microeconomics Principles		3
Econ 103- Macroeconomics Principles		3
Econ 203- Economic Statistics II		3
Econ 302- Inter Microeconomics Theory		3
Four 400-level courses in Economics selected from an approved list of computation-focused courses		12
Total Hours		65-67

Appendix A- List of 400-level Economics computation-focused courses

ECON 465: Mathematical Economics;

ECON 471: Introduction to Applied Econometrics;

ECON 483: Economics of Innovation and Technology;

Various ECON 490 Topics Courses~ approved by Department

(examples include: Financial Econometrics, Financial Economics, Game Theory,
Economic Forecasting, Topics in Econometrics, Numerical Methods in Economics)

Appendix B: Faculty

CS Faculty with relevant interests

Hari Sundaram, Associate Professor of Computer Science and of Advertising

<https://cs.illinois.edu/directory/profile/hs1> & <http://sundaram.cs.illinois.edu/>

George Deltas and Hari Sundaram have spoken about the CS+ECON in the past year. Dr. Sundaram has research areas with a focus on Data Mining, Database and Information Systems, Information Retrieval, and Web Mining, with publications including the following: detecting the onset of coordinated behavior ([de Choudhury et. al., 2009](#)); the design of sampling methods ([de Choudhury et. al., 2010](#)), and he is interested in analyzing behavior of networked individuals in the physical world, through smartphones and wearable sensors—he has developed approximate pattern analysis algorithms ([Chen and Sundaram, 2006](#)) and temporal sampling techniques ([Boyd et. al., 2010](#)). Sundaram’s current research is motivated by the challenge: how can we persuade millions of people to adopt behaviors that would be beneficial to them? Example behaviors include: leading healthy lifestyles; reducing individual energy consumption and greater civic engagement.

Ruta Mehta, Assistant Professor – Algorithmic Game Theory and Mathematical Economics

<https://cs.illinois.edu/directory/profile/rutameht> and <http://rutamehta.cs.illinois.edu/>

Research interests in areas of algorithmic game theory, mathematical economics, and in design of efficient algorithms. Interested in the computability of equilibria, both market and Nash, under various settings, and also understanding the impact of strategic behavior in multi-agent situations

Economics Faculty Involvement

The Economics Department has faculty interested in computational issues for economic models. In addition to faculty teaching within this area, we also have faculty who are interested in building their own code and software for large data analysis for their research, and have hired students as undergraduate research assistants to assist. The following lists the most relevant faculty by economic focus area.

Econometrics Faculty:

Roger Koenker, Professor – *Econometrics, Quantile Regression*

<http://www.economics.illinois.edu/people/rkoenker/>

Anil Bera, Professor – *Econometrics*

<http://www.economics.illinois.edu/people/abera/>

Eun Yi Chung, Assistant Professor – *Econometrics*

<http://www.economics.illinois.edu/people/ChungEunYi.aspx>

JiHyung Lee, Assistant Professor – *Time Series Econometrics & Financial Econometrics*

<http://www.economics.illinois.edu/people/Lee.aspx>

Minchul Shin, Assistant Professor – *Time Series Econometrics and Macroeconomics*

<http://www.economics.illinois.edu/people/Shin.aspx>

Macroeconomics Faculty:

Woong Yong Park, Visiting Assistant Professor - *Time Series Econometrics and Macroeconomics*

<http://www.economics.illinois.edu/people/wypark.aspx>

Rui Zhao, Lecturer – *Macroeconomics, Economic Growth, and Asset Pricing*

<http://www.economics.illinois.edu/people/RuiZhao.aspx>

Microeconomics Faculty:

Stefan Krasa, *Professor – Microeconomics, Firm Finance*

<http://www.economics.illinois.edu/people/skrasa/>

In-Koo Cho, *Professor – Microeconomics, Game Theory, and Learning Models*

<http://www.economics.illinois.edu/people/inkoocho/>

Steven Williams, *Professor – Microeconomics, Mechanism Design*

<http://www.economics.illinois.edu/people/swillia3/>

Jorge Lemus, *Assistant Professor – Microeconomics and Industrial Organization*

<http://www.economics.illinois.edu/people/Lemus.aspx>

Industrial Organization

George Deltas, *Professor – Industrial Organization, Environmental Economics*

<http://www.economics.illinois.edu/people/deltas/>

Seung-Hyun Hong, *Associate Professor – Industrial Organization, Applied Econometrics*

<http://www.economics.illinois.edu/people/hyunhong/>

Guillermo Marshal, *Assistant Professor – Industrial Organization, Applied Econometrics*

<https://sites.google.com/site/guillermomarshal/>

Urban Economics

Daniel McMillen, *Professor – Urban Economics, Applied Econometrics and Real Estate*

<http://www.economics.illinois.edu/people/mcmillen/McMillen.aspx>

David Albouy, *Associate Professor – Public, Urban, and Labor Economics*

<http://davidalbouy.net/>

Development Economics

Marieke Kleemans, *Assistant Professor Development Economics & Labor Economics*

<http://www.economics.illinois.edu/people/Kleemans.aspx>

Rebecca Thornton, *Associate Professor – Development Economics*

<https://sites.google.com/a/illinois.edu/rebecca-thornton/>

Richard Akresh, *Associate Professor – Development Economics*

<http://www.economics.illinois.edu/people/akresh/>

Adam Osman, *Assistant Professor – Development Economics*

<http://www.economics.illinois.edu/people/aosman.aspx>

From: [Pitt, Leonard B](#)
To: [Perry, Martin](#)
Cc: [Newell, Melissa Allison](#); [Rutenbar, Rob](#)
Subject: Re: CS ECON Proposal
Date: Wednesday, April 12, 2017 9:08:59 AM
Attachments: [ECON_CS+ECON_Proposal_2017.04.12.docx](#)

Marty - great news - our faculty approved the CS+Econ proposal on Monday.
Having control of admissions into the program was key.

Do you think we can simply send the attached most-recent version of the proposal to LAS?
(note - name might be different than your prev. version, but I don't think anything has changed other than the date.)

If you agree this is ready to go, then feel free to send it, and cc me and Rob so they know CS is in the loop.

-Lenny

On Mar 19, 2017, at Mar 19,2:54 PM, Pitt, Leonard B <pitt@illinois.edu> wrote:

OK thanks. We'll make sure that our faculty gets the message.

Comments for later discussion at some point...
probably just ranking and taking the top N transfer applicants isn't what we want to do, since once you're that far in the tail of the distribution, slight increments and decrements are not discriminative, - more like arbitrary. What the Engr college has us (and all departments in the college) do is evaluate ICT/IDT on a more holistic (hate that word) basis, after looking over essays, related supporting activities, etc. This causes a lot of work for students (they have a portfolio with a bunch of questions they need to fill out) and us (we need to review), but allows us to pick a set of students that is diverse both demographically as well as in interest/approach to CS. I'm not suggesting that we go overboard, or that LAS would allow us to run our own mini transfer admissions department, but just saying that we may want a more involved approach than just skimming the top.

-Lenny

On Mar 19, 2017, at Mar 19,11:37 AM, Perry, Martin
<mkperry@illinois.edu> wrote:

Lenny

I am fine with all of these changes. I am guessing that Melissa will be too.

We can probably increase the GPA above 3.67. Melissa can look up the number of economics majors with GPA above 3.67, in total or as

sophomores.

Yes, I know that LAS prefers objective criteria for transfer into the CS+ program. But it seems that we should be able to rank the applicants by objective criteria and then impose a numerical limit, admitting based on that ranking. Within this structure, the reason for raising the GPA requirement for applicants is to make there that there are not too many ties in ranking the applicants, or too many disappointed students.

Marty

From: [Pitt, Leonard B](#)
To: [Newell, Melissa Allison](#)
Cc: [Perry, Martin](#); [Elli, Amy Lawrence](#)
Subject: Re: CS + Econ
Date: Tuesday, September 19, 2017 11:08:32 AM

I think if they're going to take ECON 203 for sure, then there is no problem adding ECON 202 to the group 200/212/361.

-Lenny

On Sep 19, 2017, at Sep 19,10:36 AM, Newell, Melissa Allison
<menewell@illinois.edu> wrote:

Hello Lenny,

LAS is gathering all of the final information needed for the CS+ECON proposal, and we were wondering about our ECON 202 Econ Statistics I course, and if it could be a substitution for the Stat course required in the major (and students would also take our ECON 203 as part of our required courses). I have attached a syllabus for our course, just in case it is necessary. Let us know if this would be okay.

Sincerely,
Melissa

Melissa Newell

Associate Director of Undergraduate Studies

University of Illinois at Urbana-Champaign | Department of Economics, LAS

Email: menewell@illinois.edu | **Office:** 217.333.2682 | **Web:**

<http://www.economics.illinois.edu/programs/undergrad/>

<[image001.jpg](#)>

From: Newell, Melissa Allison
Sent: Friday, August 18, 2017 2:39 PM
To: Pitt, Leonard B <pitt@illinois.edu>; Perry, Martin <mkperry@illinois.edu>
Subject: RE: CS + Econ

Hello Lenny,

Thank you so much for putting this together! I have attached the proposal with some updates~ in case LAS asks for some of the other sections I added them in. I also added a note asking about the section with the statistics courses (page 8)~ will one of our Statistics courses (ECON 202- Economics Statistics 1) approved as a choice among STAT 200, 212, and CS 361? Everything else looks great~ let me know if you would like me to send to Amy in LAS to get things going (I'm sure she will have some feedback we will need to change before finalizing). Thank you again!

Sincerely,

Melissa

Melissa Newell

Associate Director of Undergraduate Studies

University of Illinois at Urbana-Champaign | Department of Economics, LAS

Email: menewell@illinois.edu | **Office:** 217.333.2682 | **Web:**

<http://www.economics.illinois.edu/programs/undergrad/>

[<image001.jpg>](#)

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

EP.18.13

Office of the Provost and Vice Chancellor for Academic
Affairs

Swanlund Administration Building
601 East John Street
Champaign, IL 61820



September 21, 2017

Gay Miller, Chair
Senate Committee on Educational Policy
Office of the Senate
228 English Building, MC-461

Dear Professor Miller:

Enclosed is a copy of a proposal from the College of Liberal Arts and Sciences to add Economics to the list of majors available for the Bachelor of Science in Liberal Arts and Sciences in Computer Science and a Liberal Arts and Sciences discipline (CS + X).

Sincerely,

A handwritten signature in black ink, appearing to read 'Kathryn A. Martensen'.

Kathryn A. Martensen
Assistant Provost

Enclosures

c: K. Ritter
A. Elli
A. Edwards
E. Stuby

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

College of Liberal Arts and Sciences
Office of the Dean

2090 Lincoln Hall
702 S. Wright Street, MC-448
Urbana, IL 61801



September 19, 2017

Kathryn Martensen
Associate Provost
Office of the Provost and Vice Chancellor for Academic Affairs
207 Swanlund Administration Building
MC-304

Dear Kathy:

The Committee on Courses and Curricula on behalf of the Faculty of the College of Liberal Arts and Sciences has voted to approve the following proposal:

Add Economics to the BSLAS in Computer Science and an LAS Discipline

Please address all correspondence concerning this proposal to me. Per our earlier correspondence on how to add future pairings to the CS + X Degree, the BSLAS in Computer Science and Economics should be reviewed administratively by EPC.

Sincerely,

Kelly Ritter
Associate Dean

enclosures

C: Professor Marty Perry
Professor Lenny Pitt