Several modifications to the BS Economics and Data Science proposal

By the BS DS Steering Committee

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See proposed BS EDSC Degree through incubator program

1. Comments on 2-3 below. We may need to discuss the formal meanings within IIT of "interdisciplinary program" and "more than one academic unit proposer." From the working academic meaning of "interdisciplinary," clearly BS EDSC is interdisciplinary. Second, because CoC (specifically AMAT and CS) are contributing a core of courses plus advising support, CoC must get some fraction of credit for the number of students enrolled in BS EDSC, thus the proposed modification that there is more than one academic proposer.
2. Modify: "Is this an interdisciplinary program: Yes"
3. Modify: "Is there more than one academic unit proposer: Yes"
4. Bulletin entry modification. Current: "Coursework in data science teaches students how to manage, manipulate, and parse data to extract knowledge and insight." Proposed: "Coursework in data science teaches students how to manage, analyze, and visualize data to find patterns and extract knowledge and insight."
5. BS 221 or STAT 225 should be allowed interchangeably
6. Move Math 332 Elementary Linear Algebra to Mathematics Requirements
7. Modify Math 474 to have a footnote: "Math 476 may be substituted for Math 474." Math 476 has fundamental differences in difficulty level; Math 474 should be the default unless the especially motivated student specifically chooses it, or an advisor sees that a student is sufficiently able to handle the material. Math 475, a prerequisite for Math 476, is a DS Elective for BS EDSC, so no sneaky "extra credits" here.
8. Move DS 261 Ethics and Privacy in Data Science to Data Science Requirements
9. Move DS 451 Data Science Life Cycle to Data Science Requirements
10. Add Econ 251 Introduction to Econometrics as a prerequisite to DS 451 Data Science Life Cycle, to read now as: PREREQUISITE(S): DS 251 or MATH 484 or CS 484 or CS 422 or ECON 251 (This will have to be done separately by BS DS Steering Committee as an information item in UGSC.)
11. Data Science Electives: The total number may need to be reduced due to other credit movements.
12. Add to Data Science Electives:
    a. CS 422 Data Mining
    b. CS 430 Introduction to Algorithms
    c. CS 584 Machine Learning

     d. MATH 475 Probability

     e. Math 497 Problem-Solving Projects for Business, Government, and Industry

13. Remove from Data Science Electives:

     a. PSYC 204 (perhaps appropriate as a general degree elective, but this course has a different focus and lower level of mathematical/computer science rigor than the other DS Electives)

14. Modify CS 115/CS 116 to have a footnote indicating that CS 201 can be taken instead. In the BS CS degree, the footnote reads: "CS 201 is a one-semester, accelerated course equivalent to the two-semester CS 115/CS 116 sequence."

15. In a couple places the proposal mentions the **department of data science** in CoC. Change these as follows:

     a. (2 places) From:

     "The Bachelor of Science in Economics and Data Science was developed by the Stuart School of Business faculty in consultation with the faculty and leadership of the Department of Data Science in the College of Computing as as well as industry experts and practitioners."

     To:

     "The Bachelor of Science in Economics and Data Science was developed by the Stuart School of Business faculty in consultation with the faculty and leadership of the College of Computing as well as industry experts and practitioners."

     b. From:

     "Students will be primarily advised by the Stuart Undergraduate Program Director with the assistance of a designated advisor in the Department of Data Science."

     To:

     ""Students will be primarily advised by the Stuart Undergraduate Program Director with the assistance of a designated advisor in the College of Computing."