

Response to Curriculum Committee

Sub-Committee Discussion Points for Proposal #93153: New Degree Program Proposal M.S. and Graduate Certificate in Data Analytics

1. Pre-Requisites – ST 515 and CS 516 (is CS 516 correct or a typo?)
We assume this is in response to the prerequisites to CS 513 (page 5 of the proposal). This should be ST 517 and CS 511.
2. The funding is not clear. Is funding being provided by Ecampus, the Department, and the Provost, all?
Support is provided by all: both Deans of our Department (Dean Dan Arp and Dean Sastry Pantula) are fully supportive of these proposed degrees. Data Analytics is a key strategic initiative in the College of Science Strategic Plan. We wrote a successful request to Ecampus providing support to develop the classes. Lisa Templeton, Alfonso Bradoch, Shannon Riggs are all aware and very supportive of these programs. They all recognize the need and potential success of these programs. The Colleges provided (with two to hire this year) faculty positions to teach the classes. One of the faculty positions was supported by the provost hiring initiative (from 2014-15). Also, given not only the workforce needs in this area globally, but also there is a much needed computational and data-enabled research program on our campus. New statistical approaches to deal with larger and larger datasets are needed. We anticipate additional hires in the future, contingent on the success of these programs and research funding at OSU.
3. Is an Office Specialist 2 appropriate for the position described, or should the hire be an Advisor?
Since this is an online program, the Office Specialist 2 is required to manage the application process. Part of the responsibility of the faculty hires will include evaluation of applicants to the program. A number of faculty will be involved in the capstone project. Faculty will provide advising.
4. Will the enrollment be there to support these programs? Evidence?
We are confident that we will obtain adequate enrollments based on information obtained from existing programs at other universities. Some of these programs have acceptance rates below 15%. A market analysis carried out in 2013 for the proposed OSU certificate program found that about 90% of students in similar certificate programs were currently employed. The analysis noted that industry professionals with five or more years of experience in positions that require statistical or analytical skills and who seek advancement or transition into new functional areas enroll in programs proposed.

See http://analytics.ncsu.edu/?page_id=248 that there are 158 companies who are looking to hire for 80 students graduating from NCSU. For example, the

program at NC State initially only accepted 40 students per year and now doubled the incoming class to 80 given demand. There are not many online programs, but the one at American University reports 100% placement, and indicates that there are 1408 job ads.

Recall, we are number 5 in the country for Ecampus, and we are going to build on that reputation. We have been in many conversations with Lisa Templeton who shares the enthusiasm and recognizes the potential success offered by these programs. Monster.com (on 11/17/15) had 288 job ads for data analytics managers; more than 1,000 for data analysts; and 155 for clinical data analyst.

We also attach the recent report from the Oregon Talent Council (formerly ETIC) which talks about Big Data in numerous places in this document. We noted areas in the document (highlighted in yellow) illustrating the importance of training a workforce to manage and analyze big data.

We also include a preview copy from the winter iMPACT magazine to also illustrate that other OSU Deans and Ed Ray recognize the need and value in understanding how to manage and interpret big data.

5. A biological component is mentioned but not described in the curriculum.
The current list of coursework more clearly emphasizes the courses related to a health analytics application. These courses would be advisable for students working in the pharmaceutical industry or healthcare organization. The attached recent report from the Oregon Talent Council addresses the need for interpreting the large data files now collected in the healthcare area (page 54).
6. It appears there are two areas of concentration, which courses are in these programs of study?
We simplified this based on the questions raised. One area of concentration is health analytics and the other was just a general statistics option. We dropped the 'general statistics concentration' since this did not seem necessary. The attached checklist of the proposed degrees clarifies this.
7. With each area of concentration consisting of 12 credits; should these be options (and transcript visible)?
This is now clarified in the list of coursework attached. If the option provides a visible transcript to indicate this, we agree to change this to 'option '.
8. Are the 5 courses + 1 project course being developed? By who? Funding? Are these to be redundant with existing courses? There is a statement that ST 516 will be adapted from ST 521 and ST 511; will ST 516 be unique? There is a statement that ST 517 and ST 518 will be adapted from ST 512 and ST 513; will ST 517 and ST 518 be unique?

ST 516 Developed

<i>ST 517</i>	<i>Nearly completely developed</i>
<i>ST 518</i>	<i>Developing in winter/spring/summer 2016</i>
<i>ST 566</i>	<i>Developing in 2016-2017 academic year</i>
<i>ST 558</i>	<i>Developing in 2016-2017 academic year</i>
<i>ST 595</i>	<i>Capstone will be developed in 2018.</i>

Since the proposed degrees are not theoretically based as with the MS in Statistics currently offered in the Department, these courses are all new courses. These programs are more applied than an MS degree in Statistics and targeted for the workforce needs. We believe that these new courses will be beneficial also for students in other programs and have already had a number of enquiries from faculty and students in the CAS. Current faculty developed or are developing these courses. The Ecampus program provided funds to provide summer support for faculty to develop these classes. The capstone course will assign a large data set obtained from industry and require analyses and report.

9. Is there really a health concentration?

Yes. See point 6 and the Checklist of courses that are attached.

10. Discrepancies in the total credits of courses in the three core areas. There is no way to know the actual total credits or total credits for each core because the new classes listed were not assigned credits. Secondly, there is the issue of "repurposing" existing courses to create new ones. (see the originator's notes in italics)

The checklist of courses now attached provides a clear description of credits for these degrees.

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