SPECIAL REPORT

of the

ACADEMIC PRIORITIES, GRADUATE AND
PROGRAM AND BUDGET COUNCILS

concerning a

CERTIFICATE IN BUSINESS ANALYTICS

Presented at the
758th Regular Meeting of the Faculty Senate
April 28, 2016

COUNCIL MEMBERSHIP

ACADEMIC PRIORITIES COUNCIL

Faune Albert, Richard Bogartz (Chair), Nicholas Bromell, Elizabeth Chilton, Suzanne Daly, Kathleen Debevec, Jean DeMartinis, Piper Gaubatz, Bryan Harvey, Masoud Hashemi, Deborah Henson, Ayemisi Jimoh, Sangeeta Kamat, Stephen Magner, Ernest May, Katherine Newman, MJ Peterson, Monroe Rabin, James Rinderle, Peter Stern, Jack Wileden, Donna Zucker

GRADUATE COUNCIL


PROGRAM AND BUDGET COUNCIL

The Isenberg School of Management proposed to create a Certificate in Business Analytics. The proposed Certificate in Business Analytics will be offered by Isenberg School of Management Professional Programs at the University of Massachusetts Amherst. The Certificate in Business Analytics program will be administered both face-to-face and online (with some courses being offered both in Amherst as well as at the satellite campus) and requires the completion of fifteen (15) credit hours of designated graduate-level courses. The proposed Certificate in Business Analytics can be targeted toward anyone with an interest in advancing their knowledge in the area of business analytics and its associated applications (e.g., data sourcing/extraction, data visualization, data-driven strategic decision-making, etc.). Students will acquire core knowledge/skills that will allow them to understand and address current trends/issues in business analytics. Specific knowledge and skills include (but are not limited to) statistical analysis, business intelligence, process tracking/improvement, and context-specific key performance indicators.

The Academic Priorities Council voted to recommend approval of the proposal at its meeting on March 24, 2016.

The Academic Standards and Curriculum Committee (ASCC) of the Graduate Council met on February 3, 2016 and reviewed the proposal for a Certificate in Business Analytics. The ASCC recommended this proposal for approval.

On Wednesday, February 10, 2016, the Graduate Council unanimously approved the Certificate in Business Analytics, proposal #2294 in the Course and Curriculum Management System.

The Program Subcommittee of the Program and Budget Council met on December 9, 2015, reviewed the Certificate in Business Analytics proposal and recommended it for approval.

At its meeting on December 16, 2015, the Program and Budget Council unanimously approved the Certificate in Business Analytics, Proposal #2294 in the Course and Curriculum Management System.

MOVED: That the Faculty Senate approve the Certificate in Business Analytics, as presented in Sen. Doc. No. 16-053.
Briefly describe the Certificate.

The proposed Certificate in Business Analytics will be offered by Isenberg School of Management Professional Programs at the University of Massachusetts Amherst. The Certificate in Business Analytics program will be administered both face-to-face and online (with some courses being offered both in Amherst as well as at the satellite campus) and requires the completion of fifteen (15) credit hours of designated graduate-level courses.

Provide a brief overview of the process for developing this Certificate.

The Professional Programs office in the Isenberg School of Management met with all of the department chairs to discuss the long-term viability for offering a Certificate in Business Analytics. A set of courses that are currently being offered were identified that would meet the core requirements for this certificate and that could be effectively sourced and delivered on a consistent basis by the various departments. Before submitting the proposal for Faculty Senate approval, it was sent to Dean Mark Fuller for review.

Describe the Certificate's purpose and the particular knowledge and skills that will be acquired by participating students.

The proposed Certificate in Business Analytics can be targeted toward anyone with an interest in advancing their knowledge in the area of business analytics and its associated applications (e.g., data sourcing/extraction, data visualization, data-driven strategic decision-making, etc.). Students will acquire core knowledge/skills that will allow them to understand and address current trends/issues in business analytics. Specific knowledge and skills include (but are not limited to) statistical analysis, business intelligence, process tracking/improvement, and context-specific key performance indicators.

If this proposal requires no additional resources, say so and briefly explain why. If this proposal requires additional resources, explain how they will be paid for. For proposals involving instruction, indicate how many new enrollments are expected and whether the courses have room to accommodate them.

This proposal requires NO additional resources as all of the courses will be sourced on an additional compensation basis by existing faculty in the Isenberg School of Management or by affiliated experts who are either academically or professionally qualified. Expected enrollment is difficult to gauge. The Isenberg School of Management and the Isenberg MBA have a very strong reputation and we expect to see significant domestic as well as international interest in this certificate program—conservatively, we are expecting an initial enrollment of 10-15 students in 2016.

Note: These additional courses will be offered as electives in conjunction with the Isenberg MBA that can be taken on a stand-alone basis or as part of an MBA concentration. Given this synergy, we expect to see enrollments that will exceed those associated specifically with the certificate, which also mitigates the risk of offering courses solely dedicated to this certificate program.

Please describe the curriculum for this certificate, listing all required courses and possible electives, any prerequisites or GPA requirements, the recommended order or coursework and any other pertinent information. You may attach additional materials related to the curriculum at the end of this section.

15 credits total

Core Courses-9 credits:
1. SCH-MGMT 797AB - Data Management for Business Leaders (3 credits)-Perm Course Proposal 2327
2. SCH-MGMT 650 - Business Data Analysis and Statistical Methods (3 credits)
3. SCH-MGMT 697BA - Business Intelligence and Analytics (3 credits) - Perm Course Proposal 2326

Electives-6 credits:
Any 1, 2 or 3 credit hour course offered by the Isenberg School of Management or another school/college at UMass Amherst (see list of possible courses below) that have an appropriate focus are eligible to count as elective credit towards a Certificate in Business Analytics.
Possible Elective Course offerings (6 credits):

1. SCH-MGMT 697EC Special Topics-Rethinking eCommerce: Intro to Digital Business Strategy and Metrics (3-Credits)
2. SPORTMGT 697D Special Topics-Sport Analytics (3-Credits)
3. SCH-MGMT 697ML Special Topics- Social Media Management, Leadership, and Strategies (2-Credits)
4. SCH-MGMT 797QA Special Topics – Quality Analytics (1 or 2-Credits)
5. SCH-MGMT 697WA Web Analytics and SEO (3-Credits)
6. SCH-MGMT 697MP Six Sigma (1-Credit)
7. SCH-MGMT 697SD Six Sigma (1-Credit)
8. SCH-MGMT 697LP Six Sigma (1-Credit)
9. SCH-MGMT 698 Practicum (3-Credits)
10. SCH-MGMT 752X Deterministic Models – Business Process Optimization (3-Credits)
11. SOCIOL 795E Modeling Emergence (3-Credits)

*Explain how these courses represent a coherent course of study.*

The 9 credits of core curriculum provide students with a non-discipline specific foundation of business analytics and its associated applications (e.g., data sourcing/extraction, data visualization, data-driven strategic decision-making, etc.). The electives that students are able to choose from provide discipline specific content where foundational knowledge and skills can be applied.

*Describe how there is a clear educational objective that can be achieved in an efficient and well-defined manner.*

The demand for students trained in “big data” has been overwhelming in almost all sectors – information technology, life sciences, finance, and business (strategy and marketing). The certificate is an efficient and effective way to provide students with skills and knowledge of data science and business analytics that employers are seeking in qualified candidates.

*Explain how the course sequence offers a clear objective at the appropriate educational level.*

Courses in the Business Analytics certificate are all graduate level and are available through the Isenberg MBA Program, therefore, they are well established and are held to a high standard of quality. Faculty assigned to teach these established courses are graduate level instructors, clinical faculty and affiliated experts in the areas in which they teach, providing an experiential and hands on learning experience for those students who participate in the courses.

*Describe the perceived need for this Certificate.*

Employers are increasingly looking for qualified candidates who have the skills and knowledge that the Certificate in Business Analytics will provide. Students who complete the requirements of the certificate will be able to present themselves to employers seeking candidates who understand the value and benefits of data science, has experience working with data and business analytics and candidates who possess the ability to make better decisions based on data.

*If the courses that comprise the Certificate have been or currently are being offered, describe their schedule of availability. If the Certificate is comprised of new courses, describe their planned availability.*

The courses that have been identified for the certificate in Business Analytics are part of the MBA program already, and are offered throughout the academic year and during the summer semester in both online and face-to-face formats, as well as a blended.
If the Certificate requires or includes courses from outside the sponsoring department, provide evidence of agreement(s) with the unit(s) offering those courses. You may attach any memoranda of understanding below.

Memoranda of understanding attached to main proposal (linked). The Certificate in Business Analytics is part of a coordinated effort to increase the skills and knowledge of our students in the area of data science.

If applicable, please attach any memoranda of understanding from other departments or colleges below.

None at this time.

If the requirements for this Certificate overlap with those of another certificate or a degree or a degree program, describe that overlap.
(Note that if a student who has completed a certificate seeks clearance for a degree program that overlaps with that certificate program, the Registrar will note on the transcript that the certificate has been superseded by the degree.)

What type of student is allowed to participate in this certificate program? (e.g., matriculated UMass students, non-matriculated CPE students, Five College students, graduate students, students in a specific degree program, etc.)

Open to all.

What role will this Certificate play in relation to other departments or degree programs on campus? Certificates vary widely across campus and may represent a subset of an existing degree program, a multidisciplinary program, or an entirely free-standing area of focus.

The Certificate in Business Analytics is part of a coordinated effort to increase the skills and knowledge of our students in the area of data science.

Is this a transitional certificate program?
(Transitional certificate programs are comprised of core courses from specific degree programs and may act as stepping stones into those programs. If a student who has completed a transitional certificate matriculates to the University and completes the degree program associated with that certificate, the transcript will note that the certificate has been superseded by the degree.)

No
While the core and elective courses are offered through the MBA program, the MBA core curriculum is specific enough that a student could potentially earn the Certificate in Business Analytics and also earn the MBA - these two distinctions should be presented as two separate credentials.

If applicable, please attach any additional material relating to the certificate (such as requirement checklists for students, etc.) below.

None at this time.