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| For Academic Affairs and Research Use Only | |
| Proposal Number |  |
| CIP Code: |  |
| Degree Code: |  |

**New or Modified Course Proposal Form**

**[ ] Undergraduate Curriculum Council**

**[X] Graduate Council**

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| **[X]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| Kelly Fish 2/6/2021 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| James Doering 2/8/2021 **Department Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (if applicable)** |
| John Mello 2/9/2021  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Director of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| Melody Lo 2/9/2021 **College Dean** | Alan Utter 2/26/2021  **Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (if applicable)** |  |

1. **Contact Person (Name, Email Address, Phone Number)**

Dr. Matthew Hill, [mdhill@astate.edu](mailto:mdhill@astate.edu), 870-972-3960

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Fall 2021

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

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|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)**  *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **MIS** |
| **Number\*** |  | **6203** |
| **Title** |  | Business Intelligence Using Case Studies |
| **Description\*\*** |  | Uses case studies to apply tools and techniques from business analytics to create business intelligence that can inform decision making. Specific topics include using Python to create data tables and to enable data visualization. |

***\**** (Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*. )

\*\*Forty words or fewer as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. **Yes / No** Are there any prerequisites? Yes
   1. If yes, which ones?

Sufficient background in mathematics, statistics, and/or business, as determined by the Director of Professional Excellence. Also, MIS 6103 Fundamentals of Business Analytics.

* 1. Why or why not?

The course requires numeracy and quantitative skills.

MIS 66103 covers the basic concepts required to complete the cases.

1. **Yes / No** Is this course restricted to a specific major? No
   1. If yes, which major? Enter text...
2. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

Enter text...

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture via asynchronous online format

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard Letter

1. **Yes / No** Is this course dual-listed (undergraduate/graduate)? No
2. **Yes / No** Is this course cross-listed? No

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

Enter text...

**b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

Enter text...

1. **Yes / No** Is this course in support of a new program? Yes

a. If yes, what program?

Graduate Certificate in Business Analytics

1. **Yes / No** Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)? No

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

MIS 6203 is a 3 credit hour course

Required Materials:

Python Data Science Handbook: Essential Tools for Working with Data by Jake Vander Plas (1st Edition 2016).

Data Science For Business: What You Need To Know About Data Mining And Data-Analytic Thinking by Foster Provost & Tom Fawcett

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| Week 1 | Python Crash Course -- Data Tables in Pandas |
| Week 2 | Python Crash Course -- Visualization |
| Week 3 | Case Study 1: Employee Churn Analysis for HR department |
| Week 4 | Case Study 1: Employee Churn Analysis for HR department |
| Week 5 | Case Study 2:  Market Campaign Analysis for Market department |
| Week 6 | Case Study 2:  Market Campaign Analysis for Market department |
| Week 7 | Case Study 3: Predict future sales for Sales department |
| Week 8 | Case Study 3: Predict future sales for Sales department |
| Week 9 | Case Study 4: Imaging Analysis for Operational department |
| Week 10 | Case Study 4: Imaging Analysis for Operational department |
| Week 11 | Case study 5: A/B testing for Optimizing Ads |
| Week 12 | Case study 5: A/B testing for Optimizing Ads |
| Week 13 | Case Study 6: Netflix Recommender system Introduction |
| Week 14 | Case Study 6: Netflix Recommender system Introduction |
| Week 15 | Case Due and Course Wrapup |
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1. **Proposed special features** **[Modification requested? Yes/No]**

None

1. **Department staffing and classroom/lab resources**

None

1. Will this require additional faculty, supplies, etc.?

No new faculty line is required. An honorarium will be paid to academically qualified industry professionals. The course will be self-supported.

1. **Yes / No** Does this course require course fees? No

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

This course is offered to support the planned Graduate Certificate in Business Analytics. Upon completing this course students will be able to make improved business decisions based on data analytics.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

This course is essential to the mission of the Graduate Certificate of Business Analytics, which is to uniquely position individuals for success in careers involving business analytics that span various areas of business.

c. Student population served.

Students seeking the Certificate in Business Analytics will be required to take this course.

d. Rationale for the level of the course (lower, upper, or graduate).

The topics and examples used in the course are at the managerial level.

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes / No** Do the proposed modifications result in a change to the assessment plan?

*If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

Students will master the skills and competencies associated with business analytics.

The Graduate Certificate in Business Analytics will be considered a sub-segment of the MBA program. The MBA program has a fully developed assessment plan to include the following student learning outcomes.

Students will

•             demonstrate an ability to communicate effectively in writing

•             demonstrate an ability to use oral communication effectively

•             demonstrate an ability to lead and productively participate in group situations

•             understand the role of business ethics when solving problems and making decisions

•             apply quantitative and qualitative knowledge to solve problems and make decisions

The Graduate Certificate in Business Analytics will contribute to all of these outcomes and will specifically develop students’ knowledge application/problem solving skills and writing skills.

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

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| **Program-Level Outcome 1 (from question #19)** | Students will master the skills and competencies associated with business analytics. |
| Assessment Measure | Direct: Assignments and cases. Indirect: Student evaluations |
| Assessment  Timetable | Assessment occurs each time the course is taught. |
| Who is responsible for assessing and reporting on the results? | Faculty teaching the course, Director of Assessment, and Director of Professional Excellence and MBA Programs |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

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| **Outcome 1** | Students will use Python for data analysis using business data. |
| Which learning activities are responsible for this outcome? | Virtual discussions, extensive readings (textbook and online materials), and applied exercises. |
| Assessment Measure | Direct: Assignments and cases. Indirect: Student evaluations |

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| **Outcome 2** | Students will use Python for data visualization using business data. |
| Which learning activities are responsible for this outcome? | Virtual discussions, extensive readings (textbook and online materials), and applied exercises. |
| Assessment Measure | Direct: Assignments and cases. Indirect: Student evaluations |

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| **Outcome 3** | Students will communicate the business intelligence derived from their data analysis and data visualization performed in Python. |
| Which learning activities are responsible for this outcome? | Virtual discussions, extensive readings (textbook and online materials), and applied exercises. |
| Assessment Measure | Direct: Assignments and cases. Indirect: Student evaluations |

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

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**MGMT 6453. Seminar in Contemporary Management Issues** A comprehensive study of selected concepts and theories in the field of management. Prerequisite, permission of professor.

**MGMT 6463. Leadership Development** Leadership theories and their applications are exam­ined. Development of leadership skills is emphasized.

**MGMT 670V. Management Internship** Provides practical management experience by assign­ing students to work in a meaningful capacity in an outside organization. Detailed paper required. Must have approval of Internship Proposal by graduate business programs director and depart­ment chair. Only three hours credit may be applied to degree requirements. Prerequisite, Must have completed 15 hours of graduate courses toward degree as eligibility for internship.

**MGMT 6793. Business Ethics and Social Responsibility** Examines ethical decision making and the various issues in business including social responsibility, environmental protection, priva­cy, individual rights, OSHA, product liability, equality of opportunity and the morality of capitalism.

**Management Information Systems (MIS)**

**MIS 6093. Directed Individual Study** Detailed individual research directed by graduate fac­ulty, resulting in a paper and presentation. Consent of instructor and approval of prospectus by graduate business programs director required.

**MIS 6203. Business Intelligence Using Case Studies** Uses case studies to apply tools and techniques from business analytics to create business intelligence that can inform decision making. Specific topics include using Python to create data tables and to enable data visualization.

**MIS 6413. Management Information Systems** The spectrum of the information needs of organizations. (1) Provides understanding of the uses of information by operational subsystems such as production, finance, marketing, personnel, etc. (2) Provides an analysis of the information needs of middle and top-level management, and the use of information systems to aid managers in the decision-making process. (3) Provide student with an understanding of the use of informa­tion systems to gain competitive advantage and how to manage information as an organizational resource.

**MIS 6423. Network and Telecommunication Management** Study of the technical and managerial issues related to design, operation and maintenance of computer networks. Topics include communication architectures, LANs and WANs, the World Wide Web, and the Internet.

**MIS 6453. Global Electronic Commerce** Provides an understanding of e-commerce as a modern business methodology that addresses the needs of organizations, merchants, and con­sumers for the delivery of goods and services using information technology. Prerequisite, Gradu­ate standing, basic computer literacy.

**MIS 6463. Information Systems Analysis and Design** Covers basic structured analysis strategies and tools available for the systems study. Discusses the techniques for designing and implementing structured systems from logical designs.

**MIS 6473. Data Mining** Study of the knowledge discovery process, and how decision sup­port systems (DSS) can be utilized to incorporate data mining algorithms for decision-making.

**MIS 6483. Supply Chain and Enterprise Systems** Study of the integration of internal and external supply chains. Adopts both managerial and information technology perspectives, including SCM, ERP, MRP II, and CRM along with supporting processes.

**MIS 6493. Seminar for Information Systems** A study of new concepts, topics, and is­sues in Information Systems as heralded in current literature. Students are expected to research and report on pertinent topics as to the effects on management and the impact on society.

**MIS 6513. Healthcare Informatics** A study of the emerging field of health and medical informatics with emphasis on generating, storing and accessing healthcare information for man­agement decision making, analyses and evaluation, and research.

**MIS 6523. Simulation for Predictive Decision-Making** Modeling and representing real-world, complex systems on computers to study their behavior in uncertain environments through well-structured experimentation to identify best course of action by predicting the outcomes of