GRADUATE COUNCIL

PROPOSAL FOR CHANGE IN EXISTING COURSE/PROGRAM

ORIGINATING UNIT: Neeley

TYPE OF ACTION:

_____ Change in existing course

_____X____ Change in existing program

TYPE OF CHANGE REQUESTED:

_____ Number **_____ Title**

_____ Description **_____ Prerequisite(s)**

_____ Drop course/program **_____X_____ Program Requirements**

_____X_____ Other (specify) - The change adds two additional courses (ACCT 70560 Mergers & Acquisitions in Accounting and ACCT 70290 Advanced Audit & Risk Assessment) to the list of electives for the analytics certificate.

Semester and Year Change(s) take effect: Spring 2020

Appropriate Computer Abbreviation (30 spaces or less):

n/a

DESCRIPTION OF CHANGE (omit if dropping a course or program):

Present catalog copy:

Analytics Certificate
This program provides opportunities for Neeley graduate business students to earn a Certificate designation by completing 7.5 hours of Analytics graduate coursework. Primary topics include statistics, data management and data visualization plus additional depth in discipline-specific analytics tools and methods.

Core (4.5)

INSC 60010	Statistical Models	1.5
INSC 60050	Business Analytics	1.5

INSC 60070	Data Visualization	1.5

Electives (choose 3.0 hours from approved list)

BUSI 70200	Business Intelligence and Analytics	1.5
FINA 70523	Financial Modeling	3.0
INSC 71110	Predictive Analytics with SAP	1.5
INSC 71130	Data Analytics Simulation	1.5
MARK 70110	Marketing Analytics	1.5
MARK 70200	Customer Relationship Marketing	1.5
MARK 70390	Digital Marketing Analytics	1.5
MARK 70210	Analytics for Innovation	1.5
MANA 70970	People Analytics	1.5

Proposed catalog copy:

Analytics Certificate

This program provides opportunities for Neeley graduate business students to earn a Certificate designation by completing 7.5 hours of Analytics graduate coursework. Primary topics include statistics, data management and data visualization plus additional depth in discipline-specific analytics tools and methods.

Core (4.5)

INSC 60010	Statistical Models	1.5
INSC 60050	Business Analytics	1.5
INSC 60070	Data Visualization	1.5

Electives (choose 3.0 hours from approved list)

ACCT 70290	Advanced Audit & Risk Assessment	1.5
ACCT 70560	Mergers & Acquisitions in Acctg	1.5
BUSI 70200	Business Intelligence and Analytics	1.5
FINA 70523	Financial Modeling	3.0
INSC 71100	ERP Simulation	1.5
INSC 71110	Predictive Analytics with SAP	1.5
INSC 71130	Data Analytics Simulation	1.5
MARK 70110	Marketing Analytics	1.5
MARK 70200	Customer Relationship Marketing	1.5

MARK 70390	Digital Marketing Analytics	1.5
MARK 70210	Analytics for Innovation	1.5
MANA 70970	People Analytics	1.5

Supporting EVIDENCE OR JUSTIFICATION:

Explain how the change(s) will affect the current outcomes and assessment mechanisms?

The change adds two additional courses to the list of electives for the analytics certificate. This provides two incremental course options for students pursuing the certificate. Below is a discussion of each courses' contribution to the certificate objectives:

ACCT 70560 Mergers & Acquisitions in Acctg

1. A primary objective of this course is to teach MAc students (and MBA or MS SC students as elective) on the valuation and analysis of merger or acquisitions. The course emphasizing development of student knowledge in a variety of areas including:

   - developing tax efficient deals,
   - analyzing the strategic goals of a merger or acquisition, and
   - understanding the process involved in the deal.

   Each of these areas require students to perform in-depth analyses using statistical or data analytic methods. Through discussions with professionals in the area of advisory for mergers and acquisitions we noted that students must learn and employ data analytics methods and tools to evaluate multiple deals from the perspective of both buyer and seller, generating and communicating insights regarding various aspects of the deal, including: risk; customers and markets; vendors and workforce; contingent liabilities; tax provisions; intellectual property; other tangible and intangible assets.

2. The entire course will be heavily embedded with analytics tools. During the course, students will apply various business analytics tools for analyses. Tools that will be incorporated into the course include the following:
   a. Use of SQL for data extraction
   b. Tableau for data visualization
   c. PowerBI, Alteryx, or R for data analysis

   While the purpose of the course is not to facilitate student learning of these software platforms, faculty will support student use of these applications to achieve learning objective associated with analysis toward mergers and acquisition.

3. Student learning will be measured using several case studies, which are outlined in the attached syllabus. The case studies that directly relate to the learning objectives of data analytic instruction include the following:

   Case study – where students will use analytics to assess the strategic goals and risks of merger or acquisition and communicate insights from analytics.
   Case study – where students form teams and analyze the valuation of a firm from either the buyer's side or the seller's side, and use insights drawn from analytics to negotiate the outcome of a merger or acquisition.
   Case study – where students will use analytics to formulate a recommendation regarding some aspect(s) of the due diligence process necessary for successful M&A. (For example, evaluating contingent liabilities).

ACCT 70290 Advanced Audit & Risk Assessment

1. The primary goal of this course is to provide students the opportunity to gain knowledge regarding risk assessment for performing audit and assurance services. The topics of discussion include engagement acceptance, planning, analytical procedure and the identification and response to risk factors in the audit. Each of these areas requires that students critically assess client information and it also requires students to synthesize information from multiple areas including financial reporting information, public information available in investor blogs and sites and well as transaction level data provided by clients.
2. The course will be heavily embedded with analytic tools and statistical analyses. For example, the course will allow students to apply their knowledge of the following software learned in other courses:
    a. SQL for data extraction and summarization
    b. Tableau for data visualization
    c. Alteryx, PowerBI, R for data analyses
    d. Other (as technology changes the course must change to adapt to the software needed in the audit profession).

    While the primary purpose of this course is not to teach students to use the above mentioned software but for the faculty to support student learning of risk assessment and audit processes using data analytic tools. This will require that students demonstrate and develop their knowledge of these tools and apply that knowledge to disciple-specific areas of audit and risk assessment.

3. Student learning will be measured using several methodologies, which are outlined in the included syllabus. Outlined below are the assessments that directly relate to the learning objectives of data analytic instruction and include the following:
    - Practical Application - Revenue Risk & Sample Selection (data analytics)
      To complete this project, students will be given a large data set of revenue transactions from a food delivery company. The food delivery company operates in a state where weather and snowfall are correlated with recorded revenue. Students must analyze the daily revenue transactions to identify patters and anomalies. Students may use a combination of Tableau, R or Alteryx to analyze the data. Students will be required to join two data sets, perform regressions or other statistical analysis and make selections. Students will submit a memo documenting their processes and outcomes.

    - Practical Application - Inventory and purchases Risk assessment (data analytics)
      The goal of this practical application is to provide students the opportunity to analyze data regarding inventory, cost of sales and revenue. Students will be provided messy data from a fictitious company and asked to clean the data and perform analyses consistent with calculating inventory obsolescence reserve in audit practice. This requires understanding of the product times of inventory, classifications and date of last sale of inventory. Studentswill be able to use any software they choose to perform this analysis.

    - Practical Application - journal entry consideration (data analytics)

The goal of this project is to provide student the opportunity to engage in journal entry testing consistent with the expectations of authoritative guidance and audit practice. Students will be provided with the general ledger and a list of journal entries for a fictitious company. They will be asked to verify complete data and analyze the journal entries to identify entries that may include recording errors or fraud. Students may use any software to perform this analysis, however Tableau is encouraged for pattern recognition.

ADDITIONAL RESOURCES REQUIRED:

Faculty: none

Space: none

Equipment: none

Library: none

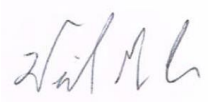
Other:

CHANGE IN TEACHING LOAD:

Does this change affect any other units of the University? _____ Yes ___X__ No

If yes, submit supporting statement signed by chair of affected unit.

If cross-listed, provide evidence of approval by all curriculum committees appropriate to both the originating and the cross-listed units.



Chair of Originating Unit: **Signature:_____**

Name:____David Allen_____

Unit:_____Neeley_____

Revised 12/07