

# **MS** in Analytics

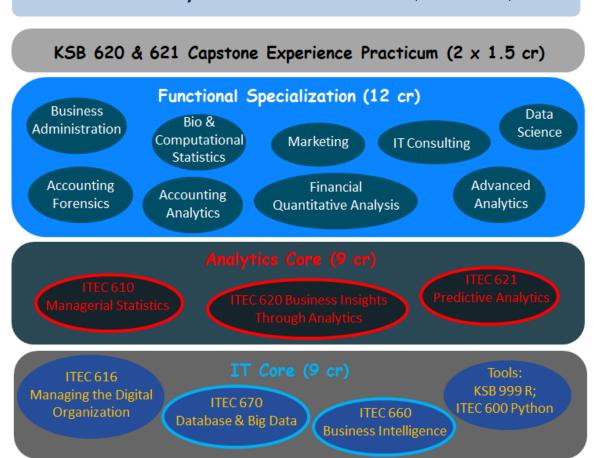
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A STEM degree – CIP Code 52.1301 – <u>learn more</u> (last updated 8/30/2020)

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For further information go to: <a href="http://www.american.edu/kogod/graduate/ms-anlt.cfm">http://www.american.edu/kogod/graduate/ms-anlt.cfm</a>
Curriculum overview: <a href="http://fs2.american.edu/alberto/www/analytics/msanalytics.pdf">http://fs2.american.edu/alberto/www/analytics/msanalytics.pdf</a>
Analytics Resources: <a href="http://fs2.american.edu/alberto/www/analytics/">http://fs2.american.edu/alberto/www/analytics/</a>
#14 ranking: <a href="https://fortune.com/education/business/best-online-masters-in-business-analytics/">https://fortune.com/education/business/best-online-masters-in-business-analytics/</a>

MS in Analytics Modular Curriculum (33 credit hours)



Required (red outline) and electives (blue outline) for Analytics Certificate 12 cr.

#### **Learning Objectives**

To give students the knowledge and skills to: (1) formulate an organizational problem; (2) identify the data necessary to analyze the problem; (3) select the most appropriate methods and tools to conduct the analysis; and (4) make data-driven decisions based on the results of this analysis. The program was designed to provide a framework in which students are not only trained on quantitative and analytical skills but also on a functional domain of specialization to enhance students' ability to better understand how to conduct analysis in that domain.



## MS in Analytics – Curriculum Overview (33 credit hours)

### **Capstone Experience**

KSB 620 & 621 Analytics Practicums – 3 credits (2 x 1.5 credits each semester)

### Analytics Core – 9 credits (must be completed in 1st. year)

- ITEC 610 Applied Managerial Statistics (required for Analytics certificate)
- ITEC 620 Business Insights through Analytics (required for Analytics certificate)
- ITEC 621 Predictive Analytics (required for Analytics certificate)

#### IT Core – 9 credits

- ITEC 616 Management Information Systems
- ITEC 660 Business Intelligence (elective for Analytics certificate)
- ITEC 670 Database and Big Data (elective for Analytics certificate)

### Functional Specialization – choose 12 credits from

- Advanced Analytics & IT Consulting: ITEC 643 Project Management; ITEC 630 Business Process Analysis; ITEC 623/MGMT 623 Organizational and Social Network Analytics; ITEC/SIS 724 Big Data Text Analytics; ITEC 600 Programming for Business Analytics (Python); ITEC 666 Cyber Security Risk Management; ITEC 667 Cyber Security Governance; ITEC 668 Cybersecurity Analytics
- Accounting Forensics: 12 credits 9 credits from ACCT-551 Forensic Accounting; ACCT-677 Financial Statement
  Analysis; ACCT-680 Advanced Forensic Accounting & Fraud Detection; plus 3 credits from ACCT-549 Contemporary
  Assurance & Audit Services; ACCT-550 Accounting Information Systems; ACCT-600 Ethics in Business & Accounting;
  ACCT-607 Financial Accounting; ACCT-760 Advanced Auditing & Professional Practice; FIN 614 Financial
  Management; and FIN 630 Financial Analysis of the Firm: Concepts and Applications.
- Quantitative Financial Analysis I: 12 credits from FIN 605 Managerial Economics; FIN 614 Financial Management; FIN 660 Financial Modeling; FIN 574 Quantitative Methods in Finance
- Quantitative Financial Analysis II: 12 credits from FIN 614 Financial Management; FIN 660 Financial Modeling; FIN 665 Quantitative Methods in Finance I; FIN 666 Quantitative Methods in Finance II.
- Marketing: 12 credits from MKTG 612 Marketing Management; MKTG 755 Applied Market Segmentation (1.5 cr.);
   MKTG 561 Customer Relationship Management and Database Marketing; MKTG 741 Digital Marketing (1.5 cr.);
   MKTG 767 Research for Marketing Decisions
- Data Science (CAS): 3 elective credits from Kogod plus 9 credits from STAT 615 Regression; STAT 613 Data Science; STAT 612 Statistical Programming in R; STAT-627 Statistical Machine Learning
- Biostatistics (CAS): 3 elective credits from Kogod plus 92 credits from STAT-615 Regression; STAT-620 Advanced Biostatistics (or STAT-524 Data Analysis or STAT-510 Survey Sampling); STAT-520 Multivariate Analysis; STAT-521 Categorical Data Analysis.
- Business Fundamentals courses from Kogod MS programs.
- Other Kogod or AU graduate courses approved by the Program Director or the IT&A Department Chair.

Note: all courses are 3 credits, except where noted.

Analytics Graduate Certificate (12 credits, B or higher grade required in all 4 courses):

- Required: ITEC 610, ITEC 620 and ITEC 621
- Electives: one of ITEC 660, ITEC 670, ITEC/MGMT 623, ITEC 668, ITEC/SIS 724