

## APPROVED GRADUATE SCHOOL COURSES

The table below contains courses offered by Duke's Graduate School that are approved to count as a MEM technical elective. [For courses offered by Duke's Fuqua School of Business and approved as MEM technical electives, go to pages 6-8 on this document.](#) Please refer to the document called "Unapproved Technical Electives from the Graduate School and Fuqua" if you do not find the course you are looking for in this document.

Notes:

1. Most courses at Duke University are classified as Undergraduate or Graduated according to their course number

Undergraduate-level courses: 0-499

Graduate-level courses: 500+

Undergraduate courses are not approved as technical electives for the MEM Program. Graduate courses, however, may be approved if they are substantially equivalent to Engineering Management courses, in terms of content, goals, rigor, and applicability to the MEM degree. Additionally, to be approved, they must include a technical component.

2. All graduate-level Pratt School of Engineering courses are approved to count as a MEM technical elective.

3. Graduate-level non-Pratt courses that are part of an approved multidisciplinary concentration are approved to count as a MEM technical elective. (See Course Registration Guide)

4. Not all graduate courses have the same credit equivalency (3-credits) as Engineering Management courses. While you may take an approved graduate course that carries 1.5 or 2 credits, it will not satisfy a full technical elective requirement. You may take multiple 1.5 or 2 credit courses to satisfy a full technical elective requirement, as shown in the example below:

EGRMGMT 590.xx (3 credits)  
EGRMGMT 590.xx (3 credits)  
EGRMGMT 590.xx (3 credits)  
ENVIRON 520.xx (1.5 credits)  
ENVIRON 521.xx (1.5 credits)  
TOTAL: 12 credits

EGRMGMT 590.xx (3 credits)  
EGRMGMT 590.xx (3 credits)  
EGRMGMT 590.xx (3 credits)  
ENVIRON 593.xx (2 credits)  
ENVIRON 635.xx (1.5 credits)  
TOTAL: 12.5 credits\*

\*A minimum of 12 approved technical elective credits must be completed to fully satisfy the MEM technical elective requirements.

5. Sometimes courses are taught under a pilot number or an advanced topics designation; thus, it is worthwhile to check both the number and the title of the course.

## GRADUATE COURSES APPROVED AS TECHNICAL ELECTIVES

ACCTG 597	Financial Statement Analysis (Fall 2022, Fuqua Professor Permission required)
BA 901	Game Theory
BA 910 (510)	Bayesian Inference & Decision Theory (cross-listed with STA 502 (221))
BA 925 (252)	Behavior Decision Theory
BA 991 (591)	Analytical Approaches to Marketing
CELLBIO 503 (203)	Introduction to Physiology
CHEM 501 (301)	Analytical Chemistry
CHEM 511 (311)	Biological Chemistry
COMPSCI 510 (210)	Operating Systems
COMPSCI 512 (212)	Distributed Information Systems
COMPSCI 514 (214)	Computer Networks and Distributed Systems
COMPSCI 516 (216)	Data-Intensive Computing Systems
COMPSCI 527	Computer Vision
COMPSCI 530 (230)	Design and Analysis of Algorithms
COMPSCI 531	Introduction to Algorithms
COMPSCI 571 (271)	Machine Learning
COMPSCI 590.XX (296.XX)	Nanocomputing
COMPSCI 590.XX (296.XX)	Bionanotechnology
COMPSCI 590.XX (296.XX)	Computational Microeconomics
COMPSCI 590.XX (296.XX)	Computer Information for Learning Market Design
COMPSCI 662 (262)	Computational Systems Biology
COMPSCI 671D	Machine Learning
ECON 552 (252)	Economic Growth
ECON 571 (257)	Financial Markets and Investments
ECON 572 (271)	Intermediate Finance
ECON 601 (205)	Microeconomics
ECON 602 (210)	Macroeconomic Theory
ECON 620 (8054)	Game Theory with Applications of Economics and other Social Sciences
ECON 608 (239)	Introduction to Econometrics
ECON 673 (225)	Mathematical Finance
ECON 674	Financial Derivatives
ECON 703 (341)	Econometrics I
EGR 590 (9477)	Special Topics in Engineering: eLuminate Design and Innovation Studio (offered Fall 2022)
ENERGY 590	Special Topics in Energy: Intro to Solar Project Development
ENERGY 620	Energy Finance (pre-req EGRMGMT 530 or financial background)
ENERGY 630	Transportation and Energy
ENERGY 631	Energy Technology and Environmental Impact (cross-listed with ENVIRON 631)
ENERGY 635	Energy Economics and Policy (cross-listed with ENVIRON 635; <b>Note: only 1.5 credits; only counts for half of a technical elective</b> )
ENERGY 638	Environmental Life Cycle Analysis & Decision (cross-listed with ENVIRON 638)
ENERGY 715	Understanding Energy Models and Modeling (cross-listed with ENERGY 715)

ENERGY 716	Modeling for Energy Systems
ENERGY 727	Energy Law
ENERGY 790	Renewables and the World's Poor
ENERGY 791 – I	Connections in Energy: Project (Bass Connection Project; <b>Note: only 1.5 credits; only counts for half of a technical elective</b> )
ENERGY 811	Sustainable Systems Theory and Drivers (cross-listed with ENVIRON 811)
ENVIRON 520 (270)	Resource and Environmental Economics ( <b>Note: only 1.5 credits; only counts for half of a technical elective</b> )
ENVIRON 521	Resource & Environmental Economics II ( <b>Note: only 1.5 credits; only counts for half of a technical elective</b> )
ENVIRON 531 (271)	Economic Analysis of Resource Environmental Policies
ENVIRON 535 (235)	Air Quality Management
ENVIRON 559	Fundamentals of Geographic Information Systems and Geospatial Analysis
ENVIRON 577	Environmental Politics
ENVIRON 590.XX (298)	Energy Technology
ENVIRON 590.XX (298)	Energy Economics and Policy
ENVIRON 590.XX (298)	World Trade in Energy
ENVIRON 590.XX (298)	Business Strategy for Environmental Sustainability
ENVIRON 590.XX (298)	Sustainable Cities
ENVIRON 590.XX (298)	Transportation: Environment & Energy
ENVIRON 590.XX (298)	Energy Modeling
ENVIRON 590.XX (298)	Environmental Life Cycle Analysis and Decision Making
ENVIRON 590.XX (298)	Environmental Decision Analysis
ENVIRON 590.XX	Intro to Solar Project Development
ENVIRON 593	Independent Studies and Projects ( <b>Note: only 2 credits; only counts as 2 credits of a technical elective</b> )
ENVIRON 635	Energy Economics and Policy (cross-listed with ENERGY 635 ( <b>Note: only 1.5 credits; only counts for half of a technical elective</b> ))
ENVIRON 638	Environmental Life Cycle Analysis & Decision (cross-listed with ENERGY 638)
ENVIRON 710	Applied Data Analysis for Environmental Sciences
ENVIRON 711 (211)	Energy & Environment (cross-listed with ENERGY 711)
ENVIRON 715	Understanding Energy Models and Modeling (cross-listed with ENERGY 715)
ENVIRON 716	Modeling for Energy Systems
ENVIRON 717	Markets for Electric Power
ENVIRON 752 (252)	Sustainability and Renewable Resource Economics
ENVIRON 761	Geospatial Analysis for Conservation Management
ENVIRON 767	Entrepreneurial Experience
ENVIRON 790-60	Special Topics: Topic: Built Environment
ENVIRON 811	Sustainable Systems Theory and Drivers (cross-listed with ENERGY 811)

ENVIRON 830	Building Energy on Campus: Evaluating Efficiency and Conservation Measures at Duke
ENVIRON 831	Sustainable Business Strategy
ENVIRON 832 (385)	Environmental Decision Analysis
ENVIRON 835	Environmental Law (cross-listed with LAW 235)
ENVIRON 859	Advanced Geospatial Analysis
ENVIRON 872L	Environmental Data Analytics
ENVIRON XXX	Environmental Life Cycle Analysis and Decision Making
<b>FINANCE 653</b>	<b>Fixed Income Securities (Fall 2022* M01, Fuqua professor permission required)</b>
GLHLTH 501 (255)	Global Health Capstone
GLHLTH 690	Global Health Studies Suppl, Fin, & Org in Health
GLHLTH 701 (310)	Global Health Challenges
GLHLTH 750 (340)	Health Systems in Developing Countries
GLHLTH 755	Global Health Policy: Transforming Evidence into Action
<b>HLTHMGMT 712</b>	<b>Medical Device Strategy (Fall 2022* M01, Fuqua professor permission required)</b>
IDS 701	Data to Decision (Note: same as Fundamentals of Data Science; cannot take both)
IDS 702	Modeling and Representation of Data
IDS 703	Data Scraping and Introduction to Text Analysis
IDS 704	Data Science Ethics (Note: only 1.5 credits; only counts for half of a technical elective)
IDS 705	Principles of Machine Learning
IDS 706	Data Management Systems
IDS 707	Data, Logic, Visualization, and Storytelling (Note: only 1.5 credits; only counts for half of a technical elective)
IE 510	Social Innovation Practicum
IE 550	Innovation and Cryptoventures
IE 590	Hacking4Defense
IE 590	Special Topics: New Ventures Clinic - Healthcare
IE 710	Research and Technology Translation
IE 720	Biodesign
IE 720	Design in Healthcare 1
IE 721	Design in Healthcare 2
IE 748	New Ventures Discovery
IE 750	New Ventures Development
IE 752	New Ventures Delivery
IE 800	Business and Organization Fundamentals for Entrepreneurial Action
IE 835	Innovations in Drug Development
ISS 591	Independent Study: How Do Cyberattacks Hurt Me? (Bass Connections Course)
LAW 235	Environmental Law (cross-listed with ENVIRON 835)
LAW 270	Intellectual Property
LAW 321	Innovation in the Life Sciences Industry
LAW 346	Intellectual Capital and Competitive Strategy
LAW 347	Health Care Law and Policy
LAW 353	Equity Evaluation and Financial Statement Analysis
LAW 364	Global Health
LAW 375	International Intellectual Property
MATH 531	Basic Analysis I

MATH 532 (204)	Basic Analysis II
MATH 551-01	Applied Partial Differential Equations and Complex Variables
MATH 575 (228)	Mathematical Fluid Dynamics
MATH 581	Mathematical Finance
MATH 582	Financial Derivatives
MATH 757	Linear Programming
NANOSCI 511	Foundations Nanoscale Sci/Tech (C/L ECE 511)
NANOSCI 616 (316)	Bionanotechnology
NURSING 657	Healthcare Innovation and Entrepreneurship
OPERATNS 823 (Formerly OPERATNS 471)	Operations Strategy ( <i>Students must submit resume and 200 words on their reasons for taking the course to the instructor</i> ) No auditors permitted. (Fall 2022* M02, Fuqua faculty permission required.)
PHARM 533	Essentials of Pharmacology and Toxicology
PHARM 554	Mammalian Toxicology
PUBPOL 320	Globalization and Governance
PUBPOL 559	Technology & Innovation Policy Practicum (cross-listed with SOCIOL & ISIS)
PUBPOL 590	Special Topics: Intro to Population, Health and Policy
PUBPOL 590	Special Topics: Technology & Innovation Policy Practicum
PUBPOL 590S (264S)	Globalization and Health Equity Seminar
PUBPOL 590S	Human Centered Design
PUBPOL 598	Economic Growth and Development Policy (C/L PUBPOL 286)
PUBPOL 743	Design and Analysis of Public Private Partnerships
PUBPOL 790	Science, Tech, and Development Policy
PUBPOL 890	Education and Human Capital Policy
STA XXX (231)	Behavior Decision Theory
STA 502 (221)	Bayesian Inference & Decision Theory (cross-listed with BA 510)
STA 521L	Modern Regression and Predictive Modeling (prereq/coreq of STA 601 – Bayesian and Modern Statistical Data Analysis)
STA 561D	Probabilistic Machine Learning
STA 601 (290L)	Bayesian and Modern Statistical Data Analysis
STA 611 (213)	Introduction to Statistical Meth
STA 621 (253)	Applied Stochastic Processes (offered Fall 2022)
STA 623 (226)	Statistical Decision Theory
STA 663L	Statistical Computing and Computation
STA 711 (205)	Probability and Measure Theory (offered Fall 2022)
STA 732 (215)	Statistical Inference
STA 831 (214)	Probability and Statistical Models
STA 863	Advanced Modeling and Scientific Computing
STRATEGY 627	Business Strategy for Sustainability (Fall 2022* M01, Fuqua faculty permission required)
STRATEGY 838 (Formerly STRATEGY 333)	Entrepreneurial Strategy (Fall 2022*, M02, Fuqua faculty permission required.)
STRATEGY 842 (previously STRATEGY 338)	Strategic Modeling and Business Dynamics (Fall 2022* M01, Fuqua faculty permission required)

# FUQUA SCHOOL OF BUSINESS COURSES ACCEPTED BY MEM PROGRAM

## Notes:

- 1) This table has courses offered by Duke's Fuqua School of Business that have been approved as MEM technical electives. Please see the document called "Unapproved Technical Electives from the Graduate School and Fuqua" if you don't find the course you're looking for in this document.
- 2) Course offering change every semester, so please be aware that not every course listed below will be available for you to take. Please see the Fuqua Available Courses document on the [MEM internal site](#) or Sakai for an updated list of available courses for the semester you are registering for. **If a course is not listed on the Fuqua Available Courses document, please do not contact the instructor for permission to enroll in the course.**
- 3) All available Fuqua courses require the instructor's permission to enroll, and it is ultimately up to the instructor to determine whether or not MEM students will be allowed into a particular class. Decisions are based on classroom size, enrollment caps, students' academic/personal fit for the class, instructor willingness to take additional students, etc. **Please understand that we work closely with the Fuqua Registrar's Office to make classes available to you, but enrollment is not guaranteed. \*Course offerings may vary from semester to semester.**
- 4) Sometimes courses are taught under a pilot number or an advanced topics designation; thus, it is worthwhile to check both the number and the title of the course.
- 5) Any Fuqua course with a suffix after the number is part of Fuqua's Executive MBA Program. These courses do not allow non-Executive MBA students to participate and should all be considered as rejected.

## ACCEPTED AS TECHNICAL ELECTIVES

<i>COURSE NUMBER</i>	<i>TITLE</i>
ACCOUNTG 597 (441)	Financial Statement Analysis (Fall 2022* M01, Fuqua faculty permission required)
ACCOUNTING 598 (442)	Valuation and Fundamental Analysis
ACCOUNTG 898.XX (491.XX)	Information Systems to Support Strategy
DECISION 611 (312)	Decision Models
DECISION 613 (410)	Strategic Modeling and Business Dynamics
DECISION 614 (411)	Forecasting
DECISION 617 (483)	Information Management
DECISION 898 (491)	Decision Tools for Environmental Stability
ENRGYENV 625	Energy, Markets, and Innovation
ENRGYENV 626 (380)	Environmental Sustainability
ENRGYENV 627	Business Strategies for Sustainability
FINANCE 646 (351)	Corporate Finance
FINANCE 647 (Formerly FINANCE 352)	Investments (Fall 2022* M02, Fuqua faculty permission required)
FINANCE 648 (Formerly FINANCE 353)	Derivatives (Fall 2022* M02, Fuqua faculty permission required)
FINANCE 651 (356)	Entrepreneurial Finance
FINANCE 653 (Formerly FINANCE 450)	Fixed Income Securities (Fall 2022* M01, Fuqua faculty permission required)
FINANCE 654 (Formerly FINANCE 451)	Advanced Corporate Finance (Fall 2022* Mo2, Fuqua faculty permission required)
FINANCE 656 (453)	Global Asset Allocation and Speculative Strategies
FINANCE 657 (454)	Financial Engineering

FINANCE 658 (455)	Corporate Restructuring
FINANCE 661 (458)	Raising Capital: Financial Instruments, Institutions & Strategy
FINANCE 662 (459)	Real Estate Entrepreneurship
FINANCE 898.XX (491.XX)	Real Estate Development
FINANCE 898.XX (491.XX)	Quantitative Finance
FINANCE 898.XX (491.XX)	Project Finance
FUQINTRD 697	Innovation and Cryptoventures
HLTHMGMT 710 (325)	Health Care in the 21 <sup>st</sup> Century
HLTHMGMT 711 (326)	Economics of Strategy of Health Sector Management
<b>HLTHMGMT 712 (327)</b>	<b>Medical Device Strategy (Fall 2022 M01, Fuqua faculty permission required)</b>
HLTHMGMT 713 (366)	Biotechnology: Drug Discovery
HLTHMGMT 715 (368)	Healthcare Marketing
HLTHMGMT 716 (408)	Management of Health Systems and Policy
HLTHMGMT 717 (409)	Economics and Management of the Pharmaceutical Industry
HLTHMGMT 898.XX (491.XX)	Healthcare Operations – Prerequisite – Operations Management
MANAGEMENT 738	Managing Innovation in a Global Organization
MANAGEMENT 750 (426)	Social Entrepreneurship
MANAGEMENT 754 (431)	Mentored Study in Entrepreneurship
MANAGEMENT 898.XX (491.XX)	Entrepreneurial Execution/Planning
MANAGEMENT 898.XX (491.XX)	New Product Development
MANAGEMENT 898.XX (491.XX)	Technology Strategy
MANAGEMENT 896 (490)	Duke New Ventures Clinic
MARKETING 796 (361)	Marketing Intelligence
MARKETING 797 (362)	Consumer Behavior
MARKETING 799 (460)	Product Management
MARKETING 800 (461)	Marketing Communications Management
MARKETING 802 (463)	Marketing of Innovations
MARKETING 803 (464)	Customer Relationship Management
MARKETING 808 (469)	Strategy and Tactics of Pricing
MARKETING 896 (490)	Marketing Practicum
MARKETING 898.XX (491.XX)	New Venture Planning (or New Venture Clinic)
MGMTCOM 896 (490)	Small Business Consulting
MGRECON 781 (301)	Global Economic Environment of the Firm
MGRECON 784	Game Theory for Strategic Advantage
MGRECON 788 (431)	Competitive Analysis
MGRECON 898.XX (491.XX)	Data Mining



OPERATNS 820 (370)	Operations Management (students should take EGRMGMT 562 unless there is a scheduling conflict)
OPERATNS 822 (470)	Information Systems for Production Management
OPERATNS 823 (Formerly OPERATNS 471)	Operations Strategy ( <i>Students must submit resume and 200 words on their reasons for taking the course to the instructor</i> ) No auditors permitted. (Fall 2022* M02, Fuqua faculty permission required.)
OPERATNS 824 (472)	Service Operation Management – <b>Prerequisite – EGRMGMT 562 (262) Operations Management</b>
OPERATNS 827 (475)	International Operations Management – Prerequisite/Co-requisite – Operations Management
OPERATNS 828 (476)	Supply Chain Management (students should take EGRMGMT 563 unless there is a scheduling conflict)
OPERATNS 898.XX	Quality and Six Sigma
STRATEGY 627	Business Strategy for Sustainability (Fall 2022* M01, Fuqua faculty permission required)
STRATEGY 838 (Formerly STRATEGY 333)	Entrepreneurial Strategy (Fall 2022*, M02, Fuqua faculty permission required.)
STRATEGY 842 (previously STRATEGY 338)	Strategic Modeling and Business Dynamics (Fall 2022* M01, Fuqua faculty permission required)
STRATEGY 843 (339)	Intellectual Capital
STRATEGY 845	Entrepreneurial Execution and Planning
STRATEGY 896 (490)	Strategic Planning Practicum
STRATEGY 848 (491)	New Ventures Creation 1: Opportunity Evaluation
STRATEGY 849	New Ventures Development (Fall 2022* M01, Fuqua faculty permission required)
STRATEGY 850	New Ventures Creation 2: Strategy Development 2
STRATEGY 851 (491)	New Ventures Creation 3: Operating Plan Development 1
STRATEGY 852 (491)	New Ventures Creation 3: Operating Plan Development 2