QUEST

Curriculum and Coursework

Information for

Cohorts 29 through 32

**This list is current as of Fall 2019 and is subject to change. Students are welcome to nominate other courses to be added to the list; the QUEST Curriculum Review Committee will review and approve nominations. To nominate a course, please contact Dr. Pamela Armstrong at parmstro@rhsmith.umd.edu.*

***If interested in viewing any of the syllabi for the courses, please contact Dr. Pamela Armstrong at parmstro@rhsmith.umd.edu.*

QUEST's 5 Course Curriculum

Three Required Courses

These courses are required for all QUEST students and are cohort-based courses

· **BMGT/ENES 190H**: Introduction to Design and Quality (4 credits)
· **BMGT/ENES 390H**: Designing Innovative Systems (3 credits)
· **BMGT/ENES 490H**: QUEST Capstone Professional Practicum (4 credits)

Two Elective Courses*

QUEST students are required to take at least one applied data analysis course before taking BMGT/ENES 490H and can select from the "QUEST-Only" or "Regular" electives to fulfill the second requirement during the semester of their choice.

Elective #1: Applied Data Analysis Elective (to be taken prior to BMGT/ENES 490H)		
Course Title	**Course Name**	**Prerequisites/Restrictions**
BMGT430	Linear Statistical Models in Business	BMGT 231 or BMGT 230 or permission of DOIT
BMGT431	Data Analytics	BMGT 430; restricted to OMBA majors and BA minors
BMGT438A/ ENES 489A	Applied Quantitative Analysis (QUEST-only)	
BMGT 452	Marketing Research Methods	BMGT 350 and BMGT 230
CMSC 320	Introduction to Data Science	Permission of CS dept
ECON 422	Econometrics I	Econ majors only
ENME 440	Applied Machine Learning for Engineering and Design	ENME392 or permission of MechE dept
ENME 466	Lean Six Sigma	ENME 392, BMGT 230, STAT 400 or similar

Elective #2: QUEST-only electives		
Course Title	**Course Name**	**Prerequisites/Restrictions**
BMGT/ENES 397	Mentoring Multidisciplinary Teams	BMGT/ENES 190H; Application required in spring of prior year
BMGT 408C	Quality Web Development in Business	Only offered in fall semesters
BMGT 438G/ ENES 489Q	Design and Innovation in Silicon Valley	Only offered in spring semesters
BMGT 438Q/ BMGT 438K/ BMGT 438L/ BMGT438R	Doing Business in Asia	Winter term
BMGT 438M/ BMGT 469O	Leading Innovation and Design in a Cross-Cultural Setting (Spain)	Winter term
BMGT/ENES 491	Scoping Experiential Learning Projects	BMGT/ENES 190H
ARHU398Q	Cross-Cultural Perspectives on Quality	Offered Spring 2020

Elective #2: Regular electives		
Course Title	**Course Name**	**Prerequisites/Restrictions**
BIOE 485	Capstone Design I Entrepreneurship, Regulatory Issues, and Ethics	21 credits in BIOE courses, BIOE major
BMGT 332	Operations Research for Management Decisions	BMGT 231 or BMGT 230 or comparable class; restricted to BMGT and QUEST with 53+ credits
BMGT 352	Customer Centric Innovation	BMGT 350
BMGT 385	Operations Management	BMGT 385 or ENME 426; restricted to BMGT and QUEST with 53+ credits
BMGT 403	Systems Analysis and Design	BMGT 301
BMGT 434	Analytics Consulting: Cases and Projects	BMGT 332 and MATH 120/140/220; restricted to BMGT and QUEST with 72+ credits
BMGT 452	Marketing Research Methods	BMGT 350 and BMGT 230
BMGT 485	Project Management	BMGT 231 or BMGT 230; restricted to BMGT and QUEST with 72+ credits
BMGT 487	Six Sigma Strategy and Methods	
BMGT498L	Innovo Consulting Practicum: Transform Learning	Application required in spring of prior year
CMSC 320	Introduction to Data Science	Permission of CS dept
CMSC 434	Introduction to Human-Computer Interaction	Permission of CS dept
CMSC 435	Software Engineering	Permission of CS dept
ENAE 481	Principles of Aircraft Design	Restricted to students in the AHS Helicopter Design Competition and requires permission of the department to enroll
ENAE 483	Principles of Space Systems Design	ENAE 404, ENAE 324, ENAE 362, and ENAE 432; Aerospace major or permission of dept
ENCE 320	Introduction to Project Management	Restricted to ENGR students; permission of ENCE dept
ENCE 325	Introduction to Construction Project Management	Restricted to ENGR, ARCH, and minor students
ENEE 408A	Microprocessor-Based Design	ENEE440 or permission of the instructor
ENEE 408G	Multimedia Signal Processing	ENEE 420 or 425
ENEE 408R	Electric Bikes	ENEE303, ENEE322, ENEE150 or CMSC216. Electrical or Computer Engineering senior status
ENEE 605	Design and Fabrication of Micro-Electro-Mechanical Systems	
ENES 460	Fundamentals of Technology Start-Up Ventures	Hinman CEOs students
ENES 462	Marketing High-Technology Products and Innovations	Hinman CEOs students
ENES 489P	Hands-On Systems Engineering Projects	
ENES 499	Senior Projects in Engineering	

ENME 371	Product Engineering and Manufacturing	MechE; ENES 221 and ENME 392 or STAT 400
ENME 421	Engineering Design Ideation	Completed or enrolled in ENME 371; Jr or higher
ENME 426	Production Management	
ENME 464	Cost Analysis for Engineers	ENME 464 or similar; permission of MechE dept
ENME 489Q	Managing for Innovation and Quality	Department permission required
ENSE 621	Systems Concepts, Issues, and Processes	Permission of Institute for Systems Research