Criteria for QUEST Electives
February 9th, 2018

Scope
There are two categories of QUEST electives: “Regular” and “Data Analysis.”
A course may be on one list or both lists.
Any QUEST elective should be at least 3 credit hours and should be an upper-level course, 300-level or above or equivalent.
A study abroad course can be a QUEST elective. The student’s program must accept the course for credit at the University of Maryland.

Process
Any QUEST student who wishes to nominate a course as a QUEST elective should send an email to Dr. Pamela Armstrong, the QUEST Curriculum Review Committee (CRC) Chair, at parmstro@rhsmith.umd.edu.
Include in the email the following information:
(1) the course name and number,
(2) a copy of a current syllabus,
(3) the category of elective (regular or data analysis) and a description of how the course meets the criteria (requirements) for that category, and
(4) information about where the course is being offered (for study abroad courses).

If the course is eligible, the CRC will review the nomination and determine if the course can be counted as a QUEST elective. The CRC will send the outcome to the student who nominates the course.

REGULAR ELECTIVES

Purpose
QUEST electives are opportunities for QUEST students to learn about related topics that complement the material covered in the core courses and to explore linkages between the QUEST curriculum and other majors and disciplines.

Requirements
A QUEST elective should cover topics related to quality management, process improvement, system design, product design and development, or the management and execution of consulting projects.

Capstone design courses that focus on the application of material learned in other discipline-specific courses do not meet the criteria, because QUEST electives should expose students to new material that increases their knowledge of the QUEST program elements of quality management, process improvement, and system design. Capstone design courses can be QUEST electives if students will learn new material that increases their knowledge of the QUEST program elements of quality management, process improvement, and system design.
DATA ANALYSIS ELECTIVES

Purpose
The data analysis elective requirement gives QUEST students the opportunity to learn qualitative and quantitative data analysis skills that can be used in real-world projects.

The purpose of the data analysis course requirement is to ensure that all QUEST students have an understanding of how to properly collect, prepare, and analyze data to address real-world problems. The following criteria are based upon the data analysis learning outcome for the program.

Requirements
In a QUEST data analysis elective course, students should be able to do the following:
● structure a problem using statistics or quantitative methods to make better decisions;
● state the underlying assumptions and limitations of various analytical methods; and
● draw inferences from real data.

The course should also require students to prepare and analyze real-world data and to draw supportable conclusions from their analysis.

Relevant topics include the following:
● How to properly collect data
  ○ Data collection instruments that are appropriate to the research questions
  ○ Sound practices for collecting data
  ○ How to objectively assess assumptions underlying their models, and explain threats to validity
● How to clean data for analysis
● How to evaluate alternative analysis methods and select and justify appropriate method
● How to draw valid conclusions based on analysis
● How to apply conclusions to problem at-hand to evaluate alternatives and support recommendations