Q: What undergraduate degrees are offered by the MAMS department?
A: We have the BA (major Math or Stat), BS in Mathematics, BS in Applied Mathematics, BS in Math and Physics, BS in Statistics.

Q: Where should I go if I want to declare a major in the MAMS department?
A: You should see one of the department Academic Representatives, currently they are:

Applied Math: Prof. Somersalo or Prof. Zhang,
Math: Prof. Butler,
Math and Physics: Prof. Hurley or Prof. Somersalo,
Statistics: Prof. Fitzgibbon or Prof. Williamson.

Once you have declared, you will be assigned an advisor in the department. If you have general questions about the department, you should see Prof. Butler.

Q: Where can I find the requirements for the degrees?
A: The current requirements are at:
https://bulletin.case.edu/collegeofartsandsciences/mathematics/
Q: Which Math courses count as technical electives for the BA or BS in Mathematics?

A: Any 300 level or above Math or Stat course.

Q: Which non-Math courses count as technical electives for the BA or BS in Mathematics?

A: Courses with substantial mathematical content. These need to be approved by your advisor and should relate to your program of study.

Q: If I take a course that is cross listed as a Math course but under the other number, can it still count as a technical elective?

A: Yes, as long as the cross listing in Math is the 300 level or higher.

Q: Can the capstone and the department seminar be used as technical electives?

A: Yes

Q: Am I required to take the MAMS Department Seminar and Capstone for the major?

A: No, the Capstone and Department seminar are SAGES requirements, not MAMS Department Requirements.

Q: Which courses satisfy the professional core for the BS in Applied Mathematics?

A: Courses that satisfy the professional core are 300 or above and are in areas where the student intends to apply their applied mathematics skills. Students have chosen to include courses in Economics, Statistics, Public
Health, Sociology, Psychology, Law, Biology, Cognitive Science and Biochemistry

The main difference between technical electives and professional core is that technical electives courses should have substantial mathematical content, while professional core courses should be at an advanced (300+) level in the field of application.

Q: Which Stat courses count as technical electives for the BA or BS in Statistics
A: Any 300 level or above Stat course.

Q: Which courses satisfy the computing requirement in Statistics:
A: PQHS 414. Data Management and Statistical Programming (3)
MATH 304. Discrete Mathematics (3) (same as CSDS/ECSE 302)
MATH 330. Scientific Computing: Fundamentals and Applications (3)
DSCI 351. Exploratory Data Science for Energy and Manufacturing

Common CSDS/ECSE courses used:
CSDS/ECSE 233. Introduction to Data Structures (3)
CSDS/ECSE 281. Logic Design and Computer Organization (3)
CSDS/ECSE 290. Introduction to Computer Game Design and Implementation (3)

Other courses - seek permission from advisor
Q: Which non-Stat courses count as technical electives for the BA or BS in Statistics?

A:  
- MATH 431. Introduction to Numerical Analysis I (3)
- MATH 433. Numerical Solutions of Nonlinear Systems and Optimization (3)
- MATH 444. Mathematics of Data Mining and Pattern Recognition. (3)
- MATH 491 and 492. Probability I and II (3 + 3)
- ECON 326. Econometrics (3)
- PQHS 415. Statistical Computing and Data Analytics (3)
- PQHS 435. Survival Data Analysis (3)
- PQHS 453. Categorical Data Analysis (3)
- PQHS 459. Longitudinal Data Analysis (3)
- PQHS 471. Machine Learning and Data Mining (3)
- OPRE 345. Decision Theory (3)

Q: When should I start thinking about the Capstone?

A: Assuming you’re planning to do the Capstone in MAMS, start looking for a Capstone Advisor in the Spring of your third year.

Q: What is expected for a Capstone Project?

A: Students pursue theoretical, experimental, or teaching research under the supervision of a Capstone Advisor – ordinarily a member of the MAMS Department faculty. Results and conclusions of the project are summarized in written form and in a public presentation, e.g., in the annual MAMS Capstone Symposium, or in the CWRU Intersections Symposium and Poster Sessions.

Q: How do I register for a Capstone project?
A: In order to register, a student must first obtain the consent of a Capstone Advisor. Students are strongly encouraged to begin well in advance of registration to initiate discussions with a potential Capstone Advisor. Before granting approval, an advisor may require a Capstone Proposal outlining the goals and the expected background, methodology and time frame of the project.

Q: How do I find a Capstone Advisor?

A: Ask your favorite MAMS teacher -- or just ask around!

Q: If I'm interested in the BS/MS, who should I see?

A: Professor Nick Gurski or Eric Jackson