

## SBES Mathematics Requirements

- An M.S. degree student must complete a **minimum** of three (3) semester-hours approved by the advisory committee.
- A Ph. D. degree student must complete a **minimum** of six (6) semester-hours approved by the student's advisory committee. No more than three hours may be in statistics; however, the math requirement does not require statistics.

Courses offered at Virginia Tech and at Wake Forest that are approved for the math requirement are listed below. Engineering courses often have considerable mathematics content; however, these courses will not count toward the mathematics requirement but can be used to fulfill the engineering course requirement. Students who would like to take a class not listed below should first get permission of their major advisor and then submit a request to the chair of the graduate program committee. (Students are encouraged to investigate this option as we can not anticipate all the math courses that could be available or would be applicable for an individual student's needs.)

### Approved VA Tech Courses for SBES Mathematics Requirement



MATH	Any 5000-level or higher course <b>with some exceptions</b> *
STAT	Any 5000-level or higher course <b>with some exceptions</b> *
CHE/BSE/BMES	
5044	Engineering mathematics
ME 5744	Methods of mechanical engineering analysis

### \* The following VA Tech MATH and STAT courses do not meet the SBES math requirement:

MATH 5894	Final examination
MATH 5974	Independent study
MATH 5994	Research & thesis
MATH 7994	Research & dissertation
STAT 5984	Final examination
STAT 5904	Project & report
STAT 5924	Graduate seminar
STAT 5974	Independent study
STAT 5994	Research & thesis
STAT 7994	Research & dissertation



\*\* A list of suggested courses by individual theme areas for the VT Campus can be found as an appendix in the SBES Graduate Handbook.

### Approved Wake Forest Statistics Courses



CPTS 730	Introduction to statistics
CPTS 732	Applied linear models
HES 721	Data analysis and interpretation
MATH 656	Statistical methods
MATH 657	Probability
MATH 658	Mathematical statistics
MATH 662	Multivariate statistics

### Approved Wake Forest Math Courses for the Biomedical Imaging and the Medical Physics Theme Areas



MATH 617	Complex analysis
MATH 624	Linear algebra II
MATH 626	Numerical linear algebra
MATH 652	Partial differential equations
MATH 655	Introduction to numerical methods
MATH 717	Optimization in Banach spaces
MATH 752	Topics in applied mathematics
MATH 753	Nonlinear optimization
MATH 761	Stochastic processes

### Approved Wake Forest Math Courses for the Biomechanics Theme Area



MATH 617	Complex analysis
MATH 624	Linear algebra II
MATH 626	Numerical linear algebra
MATH 652	Partial differential equations
MATH 655	Introduction to numerical methods
MATH 717	Optimization in Banach spaces
MATH 753	Nonlinear optimization
MATH 761	Stochastic processes

### Approved Wake Forest Math Courses for the Cell & Tissue Engineering Theme Area



MATH 624	Linear algebra II
MATH 626	Numerical linear algebra
MATH 652	Partial differential equations
MATH 753	Nonlinear optimization