Martin School of International Affairs

Bill L. Smith, Interim Director, Martin School of International Affairs (338 Admin. Bldg. 83844-3229; phone 208/885-6527).

Mrtn 404  (s) Special Topics (cr arr)

Materials Science and Engineering

Francis H. (Sam) Froes, Dept. Head, Dept. of Materials Science and Engineering (203B McClure Hall. 83844-3024; phone 208/885-6376).

MSE 101  Introduction to Metallurgy and Materials Science (2 cr)
See Met 101.

MSE 201  Elements of Materials Science (3 cr)
See Met 201.

MSE 202  Microstructural Evaluation (2 cr)
See Met 202.

MSE 308  Thermodynamics of Materials (3 cr)
See Met 308.

MSE 309  Transport Phenomena for Design (4 cr)
See Met 309.

MSE 313  Physical Metallurgy (4 cr)
See Met 313.

MSE ID341  Particulate Materials Processing (4 cr)
See Met 341.

MSE 344  Hydroprocessing of Materials (4 cr)
See Met 344.

MSE 400  (s) Seminar (cr arr)

MSE 404  (s) Special Topics (cr arr)

MSE ID407  Materials Fabrication (3 cr)
See Met 407.

MSE J410/J510  Plasma Processing of Materials (3 cr)
See Met J410/J510.

MSE 412  Mechanical Behavior of Materials (3 cr)
See Met 412.

MSE J413/J513  Phase Equilibria in Materials (3 cr)
See Met J413/J513.

MSE 414  Process Design (3 cr)
See Met 414.

MSE ID415  Materials Selection and Design (3 cr)
See Met 415.

MSE 417  Instrumental Analysis (3 cr)
See Met 417.

MSE ID-J421/J521  Light Metals (3 cr)
See Met J421/J521.
MSE J423/J523  Corrosion (3 cr)
See Met J423/J523.

MSE J427/J527  Ceramics Materials (3 cr)
See Met J427/J527.

MSE J428/J528  Advanced Engineering Ceramics (3 cr)
Ceramic crystal structure, phase diagrams and transformations, crystal properties and crystallography.

MSE ID-J429/J529  Melting, Casting, and Powder Metallurgy (3 cr)
See Met J429/J529.

MSE 430  Electrical, Optical, and Magnetic Properties of Materials (3 cr)
Materials for circuits, Magnetism and magnetic materials, Ferroelectric and piezoelectric materials, Semiconductors, Optical properties of semiconductor for Optoelectronics. (Spring only)
Prereq: Senior standing or Permission

MSE 432  Fundamentals of Thin Film Fabrication (3 cr)
Physical deposition, chemical deposition, post deposition process, film characterization, and film properties. (Fall, Alt/yr)
Prereq: Senior standing or Permission

MSE 434  Fundamentals of Polymeric Materials (3 cr)
Basic information on polymeric materials, both fundamentals and uses. (Fall only)
Prereq: Chem 111 and 112

MSE R-J437/R-J537  Radiation Effects on Materials (3 cr)
Interactions between radiation and solids.
Prereq: Permission

MSE 442  Pyroprocessing of Materials (4 cr)
See Met 442.

MSE 463  Mechanics of Materials Processing (3 cr)
Mechanics and energy balances in unit processes in materials manufacturing; processes include casting, rolling, extrusion and sheet forming; inelastic deformation applied to model some unit manufacturing processes; other processes explored as time and interest permit.
Prereq: ME 345 and Engr 350 or Equivalent

MSE 480  Transmission Electron Microscopy of Materials (3 cr)
See Met 480.

MSE 498  (s) Internship (cr arr)

MSE 499  (s) Directed Study (cr arr)

MSE 500  Master's Research and Thesis (cr arr)

MSE 501  (s) Seminar (cr arr)

MSE 502  (s) Directed Study (cr arr)

MSE 504  (s) Special Topics (cr arr)

MSE 510  Plasma Processing of Materials (3 cr)
See Met J410/J510.

MSE 513  Phase Equilibria in Materials (3 cr)
See Met J413/J513.

MSE 516  Magnetic Materials (3 cr)
See Met 516.

MSE 517  Kinetics of Metallurgical Reactions (3 cr)
Application of absolute rate theory; time and temperature dependence; kinetics of gas-solid reactions; corrosion, diffusion, and recrystallization. (Alt/yr)
Prereq: Permission
MSE 518 Advanced Mechanical Metallurgy (3 cr)
See Met 518.

MSE 521 Light Metals (3 cr)
See Met J421/J521.

MSE 523 Corrosion (3 cr)
See Met J423/J523.

MSE 525 Electronic Materials (3 cr)
See Met 525.

MSE 527 Ceramic Materials (3 cr)
See Met J427/J527.

MSE 528 Advanced Engineering Ceramics (3 cr)
See MSE J428/J528.

MSE 529 Melting, Casting, and Powder Metallurgy (3 cr)
See Met J429/J529.

MSE 533 Advanced X-ray Diffraction (3 cr)
Principles and applications to advanced problems.
Prereq: Permission

MSE R534 Radiation Effects in Materials (3 cr)
See Met 534.

MSE 535 Failure of Structural Materials (3 cr)
See Met 535.

MSE 536 Mechanics of Composite Materials (3 cr)
See ME 534

MSE R537 Radiation Effects on Materials (3 cr)
Interactions between radiation and solids.
Prereq: Permission

MSE 539 Advanced Mechanics of Materials (3 cr)
See ME 539.

MSE R550 Nuclear Reactor Fuels (3 cr)
Selection of materials and design of nuclear fuels, light water reactor fuels, metal and oxide dispersed fuels, high temperature ceramic fuels.
Prereq: Permission

MSE 563 Solid State Physics (3 cr)
See Phys 563.

MSE 598 (s) Internship (cr arr)

MSE 599 (s) Non-thesis Master’s Research (cr arr)

MSE 600 Doctoral Research and Dissertation (cr arr)

Mathematics

Monte Boisen, Dept. Chair, Dept. of Mathematics (300 Carol Ryrie Brink Hall 83844-1103; phone 208/885-6742).

Vertically-related courses in this subject field are: Math 170-175-275-471-472.

Credit Limitations: Math 108 carries no credit after Math 137 or 143; Math 137 carries no credit after 143; Math 143 carries no credit after 160 or 170; Math 170 carries 2 credits after 160; Math 160 carries no credit after 170, Math 215 carries no credit after 411 or 471.

Math 108 Intermediate Algebra (3 cr)
Carries no credit after Math 137 or 143. Review of algebra including factoring, rational expressions, exponents, radicals, quadratic equations, equations of lines. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures. Does not satisfy core requirement.

Math 123 Mathematics Applied To The Modern World (3 cr)  
_May be used as core credit in J-3-c._ Discussion of some aspects of mathematical thought through the study of problems taken from areas such as logic, number theory, geometry, probability, and combinatorics; discussion of historical development.

Math 130 Finite Mathematics (3 cr)  
_May be used as core credit in J-3-c._ Systems of linear equations and inequalities, matrices, linear programming, and probability.  
**Prereq:** 1 yr high school algebra, 1 yr plane geometry, and sufficient score on SAT, ACT, or COMPASS Math Test

Math 137 Algebra with Applications (3 cr)  
_May be used as core credit in J-3-c._ Carries no credit after Math 143. Algebraic, exponential, logarithmic functions, systems of equations, applications.  
**Prereq:** 1-1/2 years high school algebra, 1 yr high school plane geometry, and sufficient score on SAT, ACT, or COMPASS Math Test; or Math 108 with grade of C or better. It is recommended that Math 137 be taken within two years of passing Math 108 or its equivalent.

Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)  
_May be used as core credit in J-3-c._ Carries no credit after Math 160 or 170; carries 2 credits after Math 137. Algebraic, exponential, logarithmic functions; graph of conics; zeros of polynomials; systems of equations, induction. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures.  
**Prereq:** 1-1/2 yrs high school algebra, 1 yr high school plane geometry, and sufficient score on SAT, ACT, or COMPASS Math Test; or Math 108 with grade of C or better. It is recommended that Math 143 be taken within two years of passing Math 108 or its equivalent.

Math 144 Analytic Trigonometry (1 cr)  
Not open for cr to students who have previous high school or college cr in trigonometry. Trigonometric functions, inverse functions, applications. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures.  
**Prereq:** 2 yrs high school algebra (or Math 143) and 1 yr plane geometry, and/or **Coreq:** Math 143 or 170. Concurrent enrollment in Math 143 or 170 permitted.

Math 160 Survey of Calculus (4 cr)  
_May be used as core credit in J-3-c._ Carries no credit after Math 170. Functions, graphing, derivative, integral, exponential and logarithmic functions, functions of several variables. Primarily for students in business, life sciences or architecture who need only one semester of calculus.  
**Prereq:** One yr of high school geometry and one of the following: (1) 1-1/2 yrs high school algebra and sufficiently high score on SAT, ACT, or COMPASS Math Test, or (2) Math 137, or (3) Math 143.

Math 170 Analytic Geometry and Calculus I (4 cr)  
_May be used as core credit in J-3-c._ Carries 2 credits after Math 160. Functions, limits, continuity, differentiation, integration, applications, differentiation and integration of transcendental functions. Primarily for students in engineering, mathematics, science or computer science.  
**Prereq:** One of the following: a) Math 143 and Math 144, b) Math 143 and sufficiently high score on COMPASS Trig Test, or c) 2 yrs high school algebra and 1 yr plane geometry and ½ yr analytic trigonometry and sufficiently high score on SAT, ACT, or COMPASS Math Tests (College Algebra and Trigonometry). (Concurrent enrollment in 170 and 144 is permitted with permission of the department).

Math 175 Analytic Geometry and Calculus II (4 cr)  
Differentiation and integration of transcendental functions, integration techniques, general mean value theorem, numerical techniques, and series.  
**Prereq:** Math 170

Math 176 Discrete Mathematics (3 cr)  
Induction, set theory, graph theory, number systems, Boolean algebra, and elementary counting.  
**Prereq:** Two yrs high school algebra and sufficiently high score on SAT, ACT, or COMPASS Math Test; or Math 143

Math 204 (s) Special Topics (cr arr)

Math 215 Seminar in Topology of the Plane (3 cr)  
Carries no credit after Math 411 or 471. Primary goal is to teach students to prove theorems; open and closed sets, connectedness, compactness, continuity, etc. (Fall only)  
**Prereq:** Math 175 and permission

Math 235 Mathematics for Elementary Teachers I (3 cr)  
Mathematical development of arithmetic and problem solving as those subjects are currently taught in elementary schools. Three lec and one 1-hr lab a wk.  
**Prereq:** 1 year of plane geometry, and Math 143 or 137 (or sufficient score on SAT, ACT, or COMPASS Math Test)

Math 236 Mathematics for Elementary Teachers II (3 cr)
Mathematical development of informal geometry, problem solving, and probability and statistics as those subjects are currently taught in elementary schools. Three lec and one 1-hr lab a wk.

**Prereq:** Math 235

**Math 275** Analytic Geometry and Calculus III (3 cr)
Vectors, functions of several variables, and multiple integration.

**Prereq:** Math 175

**Math 299** (s) Directed Study (cr arr)

**Math 301** Early Childhood Mathematics (4 cr)
Focus on the mathematics for early childhood: numbers and operations, algebraic thinking, geometry, measurement, probability and statistics. Emphasis will be placed on reasoning, representation, connections and communication. This course is restricted to students from either the School of Family and Consumer Sciences or the College of Education. This course will not count as a 300 – level mathematics course in any major or minor in the College of Science. Recommended preparation: Stat 150. (Fall Only)

**Prereq:** One core math course

**Math 310** Ordinary Differential Equations (3 cr)
Classification, initial and boundary value problems of one variable, exact equations, methods of solving higher-order linear equations, second-order equations with constant coefficient, series solutions, systems of linear equations, Laplace transforms, and existence theorems. Recommended preparation: Math 275.

**Prereq:** Math 175

**Math H315** Topics in Pure Mathematics (3 cr)
A topic selected each yr that develops skill and appreciation for theoretical nature of mathematics. (Fall only)

**Prereq:** Permission of director of University Honors Program

**Math 326** Linear Optimization (3 cr)
Geometric solutions, simplex method, duality and revised simplex method, sensitivity, integer programming, applications. Recommended Preparation: Math 175. (Spring, Alt/yr)

**Prereq:** Math 160 or 170

**Math 330** Linear Algebra (3 cr)
Linear equations, matrices, linear transformations, eigenvalues, diagonalization; applications. Recommended Preparation: Math 175.

**Prereq:** Math 160 or 170

**Math 371** Mathematical Physics (3 cr)
See Phys 371.

**Math 376** Discrete Mathematics II (3 cr)
Selected topics from discrete mathematics such as graph theory, modeling, and optimization. Recommended for computer science majors. (Spring, Alt/yr)

**Prereq:** Math 176 or Permission

**Math 385** Theory of Computation (3 cr)
Same as CS 385. Mathematical models of computation, including finite automata and Turing machines. (Fall only)

**Prereq:** Permission

**Math 386** Theory of Numbers (3 cr)
Elementary number theory, including divisibility properties, congruences, and Diophantine equations. (Spring only)

**Prereq:** Math 175 or Permission

**Math 390** Axiomatic Geometry (3 cr)
May be used as core credit in J-3-d. Development of Euclidean and hyperbolic geometry using the axiomatic approach. (Spring, Alt/yr)

**Prereq:** High school geometry and Math 215, or Permission

**Math 391** Modern Geometry (3 cr)
Euclidean and non-Euclidean geometries, plus topics chosen from projective, transformational, and computational geometry. (Spring, Alt/yr)

**Prereq:** High School Geometry and Math 215, or Permission

**Math 395** Analysis of Algorithms (3 cr)
Same as CS 395. Measures of efficiency; standard methods and examples in the design and analysis of algorithms. (Spring only)

**Prereq:** Math 175

**Math 400** (s) Seminar (cr arr)

**Math 404** (s) Special Topics (cr arr)
Math 411 Elementary Topology (3 cr)
Metric spaces; topological spaces; compactness; connectedness, continuity. (Alt/ys)
Prereq: Math 275 or Permission

Math 420 Complex Variables (3 cr)
Complex numbers, elementary functions, derivatives, the residue theorem, conformal mappings, contour integration, infinite series, applications. (Alt/ys, Spring only)
Prereq: Math 275

Math 426 Discrete Optimization (3 cr)
Optimization on graphs, networks and flows, and related topics. Recommended Preparation: Math 175. (Fall, Alt/ys)

Math 432 Numerical Linear Algebra (3 cr)
Analysis of efficiency and accuracy of large linear algebra problems; special emphasis on solving linear equations and finding eigenvalues. (Fall, Alt/ys)
Prereq: Math 275, 330, and knowledge of a computer language

Math 433 Numerical Analysis (3 cr)
Analysis of numerical methods useful in solving applied problems; solution of nonlinear equations, interpolation, numerical differentiation and integration, numerical solution of differential equations. (Spring only)
Prereq: Math 275, 330, and knowledge of a computer language

Math 435 (s) Topics in Applied Mathematics (cr arr)
Topics chosen from fields of current interest in applied mathematics; inquire at the Department of Mathematics for a description of topics for future semesters.
Prereq: Permission

Math 437 Mathematical Biology (3 cr)
Modeling biological phenomena, mostly through differential equations; mathematical topics include stability analysis and limit cycles for nonlinear ODE's, spatial diffusion and traveling waves for PDE's; biological topics include models of predator-prey systems, infectious diseases, and competition. (Spring, Alt/ys)
Prereq: Math 310 or Permission

Math ID&WS451 Probability Theory (3 cr) WSU Math 443
Same as Stat 451. Random variables, expectation, special distributions (normal, binomial, exponential, etc.), moment generating functions, law of large numbers, central limit theorem. (Fall only)
Prereq: Math 275, Graduate standing, or Permission
Coreq: Math 275

Math ID&WS452 Mathematical Statistics (3 cr) WSU Math and Stat 456
Same as Stat 452. Estimation of parameters, confidence intervals, hypothesis testing, likelihood ratio test, sufficient statistics. (Spring only)
Prereq: Math 451 or Permission

Same as Stat J453/J544. Markov chains, stochastic processes, and other stochastic models; applications. Additional projects/assignments reqd for grad cr. (Spring, Alt/ys)
Prereq: Math 451 or Permission

Math 455 Applied Actuarial Science (1 cr)
Risk problems on the actuarial exam. Graded P/F. (Spring only)
Prereq: Math 451

Math 461 Abstract Algebra (3 cr)
Groups, rings, and fields. (Fall only)
Prereq: Math 330, and at least one of the following: Math 215, 386, 390

Math 462 Abstract Algebra (3 cr)
Groups, rings, and fields. (Spring only)
Prereq: Math 461

Math 471 Introduction to Analysis 1 (3 cr)
Topology of Euclidean n-space, limit and continuity, differentiation, integration. (Fall only)
Prereq: Math 275, Math 215, or Permission

Math 472 Introduction to Analysis 2 (3 cr)
Topology of Euclidean n-space, limit and continuity, differentiation, integration. (Spring only)
Prereq: Math 471 or Permission

Math 476 Combinatorics (3 cr)
Elementary counting methods, generating functions, recurrence relations, Polya's enumeration, enumeration of graphs, trees, searching, combinatorial algorithms. Recommended Preparation: Math 176, or 215, or 376. (Fall, Alt/ys)
Prereq: Math 175 and 330

Math 480 Partial Differential Equations (3 cr)
Intro to Fourier analysis, application to solution of partial differential equations; classical partial differential equations of engineering and physics. (Spring, Alt/ys)
Prereq: Math 310 or Permission

Math 490 Introduction to Set Theory (3 cr)
Set operations, functions, binary operations and relations, cardinal and ordinal numbers, axiom of choice, partially ordered sets, and Zorn's lemma. (Alt/ys)
Prereq: Math 275

Math 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission of department

Math 499 (s) Directed Study (cr arr)

Math 500 Master's Research and Thesis (cr arr)

Math 501 (s) Seminar (cr arr)

Math 502 (s) Directed Study (cr arr)

Math 504 (s) Special Topics (cr arr)

Math 505 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward grad degree programs.
Prereq: Permission

Math 510 Seminar on College Teaching of Mathematics (1 cr)
Development of skills in the teaching of college mathematics; includes structure of class time, test construction, and various methods of teaching mathematics; supervision of teaching assistants in their beginning teaching assignments. Graded P/F.
Prereq: Permission

Math 513 Problem Solving Through History (3 cr)
Historical study of approaches to solving problems in geometry, number theory, and set theory. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 514 Foundations of Calculus (3 cr)
Real numbers, sequences, topology of the real numbers, continuous functions, differentiation, and integration; emphasis on developing the conceptual understanding needed to teach calculus in secondary school. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 515 Problems in Geometry (3 cr)
Exploration of topics in geometry with emphasis on developing geometric reasoning and problem solving. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 516 Groups and Symmetry (3 cr)
Exploration of groups, symmetry, and permutations. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 519 (s) Special Topics (cr arr)
Special topics of interest to mathematics teachers. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.
Prereq: Permission

Math ID&WS521 Topology (3 cr) WSU Math 525
Basic concepts of point set and algebraic topology. (Fall, Alt/ys)

Math ID&WS522 Topology (3 cr) WSU Math 526
Basic concepts of point set and algebraic topology. (Spring, Alt/ys)
Math ID523 Algebraic Topology (3 cr) WSU Math 527
Basic homotopy theory, covering spaces, homology theory, and applications. (Alt/yr)

Math ID524 Algebraic Topology (3 cr) WSU Math 528
Basic homotopy theory, covering spaces, homology theory, and applications. (Alt/yr)

Math 525 (s) Seminar in Topology (1-3 cr, max arr)
Current literature.

Math 526 (s) Topics in Topology (1-3 cr, max 12)

Math 528 Differentiable Manifolds (3 cr)
Fundamentals of smooth manifolds, tangent spaces, vector fields, Lie groups, integration on manifolds, and applications.
Prereq: Math 411 or 521, and 471

Math ID&WS531 Complex Variables (3 cr) WSU Math 503
Theory of functions of a complex variable. (Spring, Alt/yr)

Math 535 Real Variables (3 cr)
Measure and integration theory for functions of one or several variables. (Alt/yr, Fall only)

Math 536 Probability Theory (3 cr)
Random variables, characteristic functions, convergence theorems, central limit theorem, conditional probability, and stochastic processes as developed from a measure theoretic basis. (Spring, Alt/yr)
Prereq: Math 535 or Permission

Math ID&WS538 Stochastic Models (3 cr)
See Math J453/J538.

Math ID&WS539 Theory of Ordinary Differential Equations (3 cr) WSU Math 512
Existence, uniqueness, and stability of solutions of first-order systems; other topics. (Fall, Alt/yr)

Math 540 Partial Differential Equations (3 cr)
Existence and uniqueness theorems for the wave, heat, and Laplace's equations of physics; additional topics such as nonlinear models in mathematical biology, perturbation methods, etc.
Prereq: Math 539 or Permission

Math ID&WS541 (s) Seminar in Analysis (1-3 cr, max arr) WSU Math 581
Current literature.

Math WS543 Approximation Theory (3 cr) WSU Math 543

Math WS544 Advanced Matrix Computations (3 cr) WSU Math 544

Math WS547 Numerical Analysis of Elliptic PDE's (3 cr) WSU Math 546

Math ID550 Linear Algebra (3 cr) WSU Math 554
Vector spaces, direct sums, quotient spaces, similarity, Jordan forms, inner products, eigenvalues, eigenvectors, spectral theory.
(Fall, Alt/yr)

Math ID551 Ring Theory (3 cr) WSU Math 551
Ideals, quotient rings, modules, radicals, semisimple Artinian rings, Noetherian rings. (Spring, Alt/yr)

Math ID552 Galois Theory (3 cr) WSU Math 552
Field extensions, automorphisms, normality, splitting fields, radical extensions, finite fields, separability. A knowledge of group theory is presumed. (Spring, Alt/yr)

Math 553 Group Theory (3 cr)
Permutation groups, isomorphisms, direct products, Sylow theory, normal series, abelian groups. (Fall, Alt/yr)

Math WS554 Advanced Topics in Geometry (3 cr) WSU Math 550
(Alt/yr)

Math ID&WS561 (s) Seminar in Algebra (1-3 cr, max arr) WSU Math 582
Current literature.
Math 563 Mathematical Methods for Population Genetics and Evolution (3 cr)
Same as Biol 563. Investigation of aspects of evolutionary biology with an emphasis on stochastic models and statistical methods; topics include: diffusion methods in molecular evolution, gene genealogies and the coalescent, inferring coalescent times from DNA sequences, population subdivision and F statistics, likelihood methods for phylogenetic inference, statistical hypothesis testing, the parametric bootstrap. (Fall, Alt/yr)
Prereq: Math 160 or 170 and Stat 251 or 301

Math ID&WS571 Functional Analysis (3 cr) WSU Math 504
Linear topological spaces and linear operators. (Fall, Alt/yr)
Prereq: Math 536

Math ID&WS572 Functional Analysis (3 cr) WSU Math 506
Linear topological spaces and linear operators. (Spring, Alt/yr)
Prereq: Math 536

Math 575 Graph Theory (3 cr)
Basic concepts and theorems; topics include trees and connectivity, eulerian and hamiltonian graphs, graph colorings, matchings, graph decomposition, and extremal graph theory. (Fall, Alt/yr)

Math 576 Graph Theory (3 cr)
Basic concepts and theorems; topics include trees and connectivity, eulerian and hamiltonian graphs, graph colorings, matchings, graph decomposition, and extremal graph theory. (Spring, Alt/yr)

Math 578 Combinatorial Optimization (3 cr)
Optimization problems on graphs, network flow problems, complexity analysis of algorithmic solutions, and related topics. (Fall, Alt/yr)

Math 581 (s) Seminar in Combinatorics (1-3 cr, max arr)

Math WS583 Seminar in Applied Mathematics (3 cr, max arr) WSU Math 583

Math 585 (s) Recent Developments in Mathematics (3 cr, max arr)
For students with extensive background in specific areas of mathematics.

Math 586 (s) Recent Developments in Mathematics (3 cr, max arr)
For students with extensive background in specific areas of mathematics.

Math 599 (s) Non-thesis Master’s Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Math 600 Doctoral Research and Dissertation (cr arr)