

Course Bulletin

122287	Statistics			
Subject: MATH	Catalog Nbr: 0166			
	2023 FALL	Primary	Joshua Enxing	Joshua.Enxing@tufts.edu
	2024 SPRG	Primary	Merek Johnson	Merek.Johnson@tufts.edu
	2024 SPRG	Primary	David Smyth	David.Smyth@tufts.edu
	2024 SPRG	Primary	Samantha Petti	Samantha.Petti@tufts.edu
	2024 SUMR	Primary	Bruce Boghosian	bruce.boghosian@tufts.edu
<p>Statistical estimation, sampling distributions of estimators, hypothesis testing, regression, analysis of variance, and nonparametric methods. Recommendations: MATH 165 or permission of instructor.</p>				

144299	Human Development And Learning			
Subject: EDO	Catalog Nbr: 0230			
<p>Introduction to theories of human development and learning, with a particular focus on relevance to education. Investigation of constructivist and socio-cultural perspective. Experience with a fundamental methodology, the clinical interview.</p>				

144300	Education Of The Exceptional Child			
Subject: EDO	Catalog Nbr: 0242			
	2022 SUMR	Primary	Erin Seaton	ee.Seaton@tufts.edu
<p>(Cross-listed w/ ED 142) Starting with a history of special education, introduces students to effective responses to the diverse needs of exceptional learners in an inclusive classroom. Building on a strengths perspective, topics include brain and biological development and supporting students with specific learning disabilities, executive functioning disorders, autism spectrum disorders, and mood and behavioral disorders in schools. Emphasizing the need for collaboration among school professionals, students participate in a case study and consultation project.</p>				

144301	Critical Foundations of Education			
Subject: EDO	Catalog Nbr: 0260			
<p>Considers the history of education within the borders of the United States as a struggle over access and resources, and as assertion of sovereignty or independence. Attention to reproduction of and resistance to hierarchies of class, race, gender, nation, and sexuality. Emphasizes the struggles of groups to gain access to or determine their own schooling in the 19th and 20th centuries.</p>				

144305	Introduction to Teaching in the Elementary School			
Subject:	Catalog Nbr:			

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EDO	0203				
	2022 SUMR	Primary	Andrew Izsak	Andrew.Izsak@tufts.edu	
	2022 SUMR	Primary	Rebecca Petersen	Rebecca.Petersen@tufts.edu	
Seminar examining issues that relate to curriculum and teaching in urban elementary schools. Topics focus on constructivist theories and critical perspectives of learning and development for children with diverse needs, interests, abilities, and educational and cultural backgrounds. Students in this course concurrently engage in a pre-practicum in local urban elementary schools.					

144306	Elementary Science and Mathematics Learning Environments				
	Subject:	Catalog Nbr:			
	EDO	0215			
	2022 FALL	Primary	Brian Gravel	brian.gravel@tufts.edu	
Through interviews of students, readings from STEM education research, and in-class science inquiry, mathematical problem solving, and design activities, participants develop multiple perspectives on the development of knowledge and reasoning in STEM. Students will consider current teaching practices in elementary science, mathematics, and integrated STEM courses, and they design their own instructional plans.					

144307	Practice of Teaching Elementary STEM				
	Subject:	Catalog Nbr:			
	EDO	0225			
Concurrent experiences teaching STEM in elementary school student teaching settings. Participants present video, transcripts, and student work from their teaching, primarily as data to study regarding their students' thinking: How to recognize, interpret, and respond to students' ideas and reasoning. Prerequisite: consent.					

144308	Interdisciplinary Elementary Curriculum 1				
	Subject:	Catalog Nbr:			
	EDO	0216			
This two-semester sequence of courses focuses on the curricula of language arts and social studies in the fall semester and on mathematics and science in the spring semester. Emphasis on the intersection between teacher knowledge and children's understanding of content and concepts.					

144309	Interdisciplinary Elementary Curriculum 2				
	Subject:	Catalog Nbr:			
	EDO	0217			
	2022 FALL	Primary	Cortney Denman	Cortney.Denman@tufts.edu	
This two-semester sequence of courses focuses on the curricula of language arts and social studies in the fall semester and on mathematics and science in the spring semester. Emphasis on the intersection between teacher knowledge and children's understanding of content and concepts.					

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144310	Arts and Expression in the Elementary Classroom
Subject: EDO	Catalog Nbr: 0295
<p>This class examines the topic of color through the lens of humanities and aesthetics to mine the ways visual literacy can inform and interface with a science, technology, engineering, and mathematics (STEM) curriculum. Specifically, students in this class will be introduced to some of the socio-economic and cultural history of color as a topic of study as well as its perceptual and aesthetic reception. Carefully chosen studio exercises performed in class and at home complement the academic content. These exercises will develop students' artistic sensitivity, inform their perception of color, and help hone visual sensibilities. The numerous drawing and color mixing, exercises are an integral part of the course as they enable students to explore how visual arts complement teaching and learning STEAM content courses.</p>	

144311	Foundations of Literacies in Elementary Schools
Subject: EDO	Catalog Nbr: 0290
<p>This class focuses on both the conceptual and practical aspects of literacy instruction and learning, emphasizing literacy development and instruction for grades k-6. Overall this course is intended to develop an understanding of the theory and practices of literacy instruction that will allow for flexibility, critical understanding, and creativity in instruction. Students in this course will: (a) Deepen their understandings of the reading and writing process; (b) Reflect on themselves as a reader/writer and as a teacher of readers/writers; (c) Explore and critically evaluate classroom structures and materials to support developing readers and writers.</p>	

144313	Practice of Teaching in the Elementary School
Subject: EDO	Catalog Nbr: 0204
<p>Seminar examining issues that relate to curriculum and teaching in urban elementary schools. Topics focus on constructivist theories of learning and development for children with diverse needs, interests, abilities, and educational and cultural backgrounds. Students in this course concurrently engage in a pre-practicum in local urban elementary schools.</p>	

144315	Introduction To Teaching in the Middle School
Subject: EDO	Catalog Nbr: 0201
<p>A study of the aims, development, and practice of middle and high schools. Includes 75 hours of prepracticum</p>	

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observation and participation in a school setting. Students seeking initial teacher licensure are required to take this course during the semester prior to supervised student teaching.

144317	Practices of Teaching in the Middle School
Subject: EDO	Catalog Nbr: 0202
Supervised classroom practice in middle or secondary school teaching with a weekly seminar. This course requires presence at the school for the entire school day for a minimum of twelve consecutive weeks.	

144318	Curriculum and Pedagogies in Science I
Subject: EDO	Catalog Nbr: 0211
Through interviews of students and readings from science education research, participants develop multiple perspectives on the development of scientific knowledge and reasoning, consider current teaching practices in middle and secondary school science, and design their own instructional plans.	

144319	Curriculum and Pedagogies in Mathematics I
Subject: EDO	Catalog Nbr: 0212
Explores models of learning, reasoning, and understanding in mathematics through readings from education and cognitive science research, practical experience, and experimental interviews in the context of secondary, postsecondary, middle, and elementary curriculum.	

144320	Curriculum & Pedagogies of Science and Mathematics II
Subject: EDO	Catalog Nbr: 0221
Concurrent experiences teaching science in K-12 student teaching, university assistantships, or other instructional settings. Participants present video, transcripts, and student work from their teaching, primarily as data to study regarding their students' thinking: How to recognize, interpret, and respond to students' ideas and reasoning. Prerequisite: consent.	

144321	Arithmetic for Middle School Teachers
Subject: EDO	Catalog Nbr: 0231
Covers number and operations topics often taught in the middle grades. Mathematical topics come from arithmetic with whole numbers and with fractions. Particular emphasis is placed on topics related to multiplication and division. The course also provides experience with core practices of mathematics as a discipline, including persevering on challenging problems, reasoning with quantities, attending to mathematical structures, and constructing and critiquing arguments. Students learn to reason about problem	

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situations with math drawings (e.g. number lines) and to use that reasoning to develop explanations for many of the computations commonly taught in middle grades.

144322	Algebra for Middle School Teachers
Subject: EDO	Catalog Nbr: 0232
<p>EDO 232 builds on EDO 231 and covers proportional relationships and algebra topics often taught in the middle grades. Particular emphasis is placed on the role of multiplication and division in understanding proportional relationships and linear equations. The course also provides experience with core practices of mathematics as a discipline, including persevering on challenging problems, reasoning with quantities, attending to mathematical structures, and constructing and critiquing arguments. Students learn to reason about problem situations with math drawings (e.g., number lines) and to use that reasoning to see how topics from algebra, such as equations and slopes of lines, are a natural outcome of reasoning about multiplication and division.</p>	

144402	Foundations of Literacies in Middle Schools
Subject: EDO	Catalog Nbr: 0293
<p>This course is designed to provide an understanding of language and the literacy processes for teaching in middle schools. The course emphasizes reading and writing in content areas, as well as instructional strategies to support students' literacy development. It focuses on the foundations of reading, writing, speaking, and listening and the ways they are developed and used in learning discipline-specific curriculum, including adaptations for culturally diverse and exceptional learners.</p>	

144587	Life and Environmental Sciences for Middle School Teachers
Subject: EDO	Catalog Nbr: 0233
<p>This is a course in biological inquiry for MAT students who will be teaching Middle School sciences. We will primarily practice doing biological inquiry. We will also think critically about what it means to do biology and how the doing of biology is represented in curricula and standards. Finally, we will reflect on how our doing of biology helps us identify and cultivate our students doing biology, who may have a variety of different experiences and resources for engaging in this work. The course will address the CAP Standards (Curriculum, Planning, and Assessment) and Element 1.A.1 (Subject Matter Knowledge).</p>	