

- MAT-3240 Probability Theory with Statistics** **3 credits**
 Prerequisite: MAT-2030 and MAT-2532.
 An introduction to probability theory for students with a background in calculus. Topics to be covered will include sample spaces, permutations and combinations, discrete and continuous random variables, probability density functions, the binomial distribution, the normal distribution and its use in approximating the binomial, curve fitting by least squares, and with numerous applications. (Fall semester, even years)
- MAT-3310 Differential Equations** **3 credits**
 Prerequisite: MAT-2532 or permission of the instructor.
 A study of first- and second-order ordinary differential equations, many of their applications, and related topics. (Fall semesters, odd years) (Shared course in VSC)
- MAT-4130 Abstract Algebra** **3 credits**
 Prerequisite: MAT-2532 and MAT-3210, or permission of the instructor.
 This course introduces the fundamental concepts of groups, rings, and fields (Spring semesters, odd years) (Shared course in VSC)
- MAT-4140 Geometry** **3 credits**
 Prerequisite: MAT-2532 and MAT-3210, or permission of the instructor.
 The foundations of Euclidean geometry and an introduction to hyperbolic and Riemannian geometry. The historical and philosophical implications of the discovery of non-Euclidean geometry are examined. Topics may include the contributions of Gauss, Hilbert, Saccheri, Bolyai, Lobachevsky, and others. (Spring semesters, even years) (Shared course in VSC)
- MAT-4710 Special Topics in Mathematics** **3 credits**
 Prerequisite: MAT-2532 and MAT-3210, or permission of the instructor.
 This course is offered to advanced students as circumstances warrant. Topics are identified based on student and faculty interests. (Shared course in VSC)
- MAT-4930 Senior Project in Mathematics** **3 credits**
 Prerequisite: Senior standing, prior completion of the core assessment examination, and at least 9 credits of approved electives for the mathematics degree.
 This course is intended to give students the opportunity to engage in a significant capstone project in mathematics, allowing them to demonstrate the mathematical maturity they have attained from their work in the field. Each student's project proposal will require advance approval by the Mathematics Department and will culminate in a presentation to members of the mathematics faculty and other interested parties. All degree candidates in mathematics will be required to complete this experience satisfactorily.

Music (MUS)

- MUS-1015 Meet the Masters** **3 credits**
 Prerequisite: None.
 The goal of this course is to demystify and make accessible the world of classical music. We will develop some basic ideas and terminology with which we can discuss and share ideas about music. We will listen to the music in the context of the lives of the various composers and will use the above ideas and terminology to develop listening skills that will enable us to understand and, consequently, to appreciate and enjoy what we are hearing.
- MUS-1030 Music Fundamentals** **3 credits**
 Prerequisite: None.
 This is a course for beginning students interested in learning how to read and write music. Includes basic writing skills such as staff notation (pitch, rhythm, dynamic markings), and basic reading, ear training, and listening skills. (Shared course in VSC)
- MUS-1XXX Music Fundamentals II** **3 credits**
 Prerequisite: MUS-1030
 This course is offered as a continuation of Music Fundamentals, completing the cycle of music-reading and basic musical skills needed for entering Music Theory I. While Music Fundamentals covers basic note values, rhythms, time signature, key signatures, scales and chords, Music Fundamentals II is an in-depth practicum for developing ear training and sight-reading skills associated with the fundamentals of music training. The course will provide added detail to score-reading, chord-use, and composition as well. As an added skill, students will learn to enter musical compositions and homework on the computer music-writing program, called Sibelius. There will be a listening component to this course, including simple classical and folk music, learning to listen for the basic elements of music, including melody, harmony, and rhythm. Students will be asked to identify each of those elements. Basic keyboard skills will also be introduced in this class.
- MUS-1050 Elementary Piano Class** **2 credits**
 Prerequisite: None.
 Students in this class learn basic keyboard techniques through group instruction. The fundamentals of musical theory and structure and fundamental keyboard harmony are also stressed. No prior instruction required. May be repeated for credit.
- MUS-1051/1052 Keyboard Harmony I, II** **1 credit**
 Prerequisite: None. Must be taken concurrently with corresponding theory and ear training courses.
 Prerequisite for MUS-1051: MUS-1051.
 This four-semester sequence reinforces the student's understanding of theoretical concepts by requiring that they be applied to the keyboard.

MUS-1061/1062 Ear Training I, II Prerequisite: None. Prerequisite for MUS-1062: MUS-1061. Must be taken concurrently with corresponding theory and keyboard harmony sections. A four-semester sequence aimed at developing and establishing skills in interval recognition, sight singing, slofege, and rhythmic, melodic and harmonic dictation.	1 credit
MUS-1120 Applied Music Lessons Prerequisite: Prior experience and ability to read music. Intensive private study in music through the performance of advanced concert repertoire. (Shared course in VSC)	1 credit
MUS-1231/1232 Music Theory I, II Prerequisite: MUS-1030. Prerequisite for MUS 1232 is MUS-1231. Music Theory I is an intermediate theory course designed for music majors who already have a grasp of music fundamentals. The course includes form and analysis, and four-part harmony and voice leading. This course is a pre-requisite for advanced classical or jazz theory. Should be taken concurrently with Keyboard Harmony I and Ear Training I. Music Theory II is a continuation of Music Theory I. Non-harmonic tones, figured bass, continuation of study of musical forms. (Shared course in VSC)	3 credits each
MUS-2013/2014 Jazz/Contemporary Music Theory III, IV Prerequisite: MUS-1231, 1232 or permission. Following two semesters of traditional music theory, students who choose to study jazz/contemporary theory will build from the traditional foundation of music theory but will focus on advanced aspects of the jazz/contemporary idiom. Emphasis is placed on the use of standard notation combined with chord symbols in a "lead sheet" format. Composition will be a core ingredient of the course. This will allow the analysis of melody, harmony, rhythm, form and sound to be explored in a personal and creative way. Several techniques of jazz/contemporary composition will be covered in addition to the study of many classic jazz/contemporary performers.	3 credits
MUS-2023/2024 Ear Training III, IV Prerequisite: MUS-1062. Prerequisite for MUS-2024: MUS-2023.	1 credit
MUS-2040 Foreign Language Diction Prerequisite: None. This course is designed to provide students with the necessary tools to facilitate the pronunciation of all of the Indo-European languages encountered in the field of vocal music. Students will be introduced to the symbols that comprise the International Phonetic Alphabet (IPA) and will then systematically apply these in the transliteration of texts.	2 credits
MUS-2053/2054 Keyboard Harmony III, IV Prerequisite: MUS-1052. Prerequisite for MUS-2054: MUS-2053.	1 credit
MUS-2111/2112 Jazz/Contemporary Ear Training III, IV To be taken concurrently with MUS 2011/2012. Coinciding with Jazz Theory, this course will cover both traditional and contemporary forms of ear training techniques. Traditional exercises such as interval identification, sight singing, rhythm studies, melodic/harmonic/rhythmic/formal standpoint. Students will learn to hear different styles of music from the aforementioned standpoint without the aid of an instrument, i.e. "by ear".	1 credit each
MUS-2120 String Instrument Teaching Methods Prerequisite: MUS-1231 or concurrent enrollment. Basic techniques of violin, viola, cello and double bass. Selection and presentation of teaching materials.	2 credits
MUS-2130 Woodwind Instrument Teaching Methods Prerequisite: MUS-1231 or concurrent enrollment. Basic techniques of flute, oboe, clarinet, saxophone and bassoon. Selection and presentation of teaching materials.	2 credits
MUS-2140 Brass Instrument Teaching Methods Prerequisite: MUS-1231 or concurrent enrollment. Basic techniques of trumpet, horn, trombone and tuba. Selection and presentation of teaching materials.	2 credits
MUS-2160 Introduction to Technology in Music Prerequisite: None. This course introduces students to the new music technologies by surveying software applications for music composition, orchestration, recording, etc. Topics include music synthesis, midi, and sequencing. Hands-on experience. (Shared course in VSC)	2 credits
MUS-2211/2212 Jazz/Contemporary Keyboard III, IV To be taken concurrently with MUS 2011/2012. Coinciding with Jazz Theory, this course will give each student a basic foundation in the application of jazz/commercial theory to the keyboard. Harmonic concepts such as chord construction, diatonic progressions, chord/scale relationships, song structure, etc. will be among the subjects covered. Emphasis will be on developing accompaniment skills in the jazz/commercial style. Interpretation of chord symbols from the "lead sheet" format will enable students to more fully understand jazz harmony and to have the ability to accompany other musicians, students, etc.	1 credit each

MUS-2220 Music Ensemble	1 credit
Prerequisite: None. (Shared course in VSC)	
Chamber Singers* (must be concurrently enrolled in Concert Choir)	
Brass Ensemble	Percussion Ensemble
Concert Band	Woodwind Ensemble
Concert Choir	Jazz Ensembles
MUS-2231 Studio Recording I	3 credits
Prerequisite: MUS-2160 or permission of the instructor.	
This course offers students a hands-on opportunity to explore the exciting world of multi-track recording. Topics include studio setup, use of the equipment in the recording studio, over-dubbing, mixing and general producing concepts.	
MUS-2240 Percussion Instrument Teaching Methods	2 credits
Prerequisite: MUS-1231 or concurrent enrollment in MUS-1231.	
Basic techniques of snare drum, tympani, mallet instruments and other instruments of the percussion battery. Selection and presentation of teaching materials.	
MUS-2310 Jazz Improvisation	3 credits
Prerequisite: MUS-1231, 1232, or permission of the instructor. Should be taken concurrently with or after MUS-2313, 2314.	
Topics explored in this course include scale/chord relationships, nomenclature, ear training, and analysis performance of common jazz/commercial forms and devices.	
MUS-2313/2314 Music Theory III/IV	3 credits each
Prerequisite: MUS-1232.	
Prerequisite for MUS 2314 is MUS-2313.	
Advanced music theory for music majors. Pre-requisite: Music Theory I and II. Classical studies of advanced form and analysis including baroque, classical, romantic and 20th century forms. (Shared course in VSC)	
MUS-2330 Elementary Voice Class	3 credits
Prerequisite: None.	
This course is designed for the beginning vocal student wishing to improve his or her voice. Proper vocal technique is employed along with an introduction to beginning vocal literature. The anatomy of the vocal mechanism is discussed.	
MUS-2350/4010 Music Theater Production	3 credits
Prerequisite: None.	
This course is designed to give students a complete experience preparing for a performance of either a full book musical or a musical theater revue. Meetings will be scheduled from two to four times per week; students will be guided through the process of exploring and creating a character through the medium of singing. Emphasis will be placed on the differences between the rigors of moving from speech to song and vice versa that are presented by the musical theater medium. Students will also learn how to work in cooperation with on-stage colleagues, musicians and crew. In addition, they will learn how to care for their general and vocal health during the critical pre- and mid-production periods. In addition, the cast will study the particular attributes of each show or shows being performed, vis-a-vis political and social/historical context as well as any significant literary connections or foundations.	
MUS-2810/4810 Internship in Music	1-12 credits
Prerequisite: None. (Shared course in VSC)	
MUS-2910/4910 Independent Study in Music	1-12 credits
MUS-3031 History of Western Music I	4 credits
Prerequisite: MUS-1231, 1232 or the equivalent.	
A detailed survey of the art of music, covering the history of musical styles through the study of composers, their works and pertinent historical relationships. Periods include the origins of music, Greek music systems and thought, church liturgy, and Medieval, Renaissance, Baroque, Rococo, Pre-Classical and Classical music.	
MUS-3032 History of Western Music II	4 credits
Prerequisite: MUS-1231, 1232 or the equivalent.	
A detailed survey of the art of music from the Romantic Period to the present, including Impressionism, Atonalism, Verism, "Neoclassicism," Expressionism, serial music, aleatory music, electronic techniques and the influence of folk and popular music. The course covers the study of composers, their works and pertinent historical relationships.	
MUS-3040 Jazz in America	3 credits
Prerequisite: None.	
This course combines a look at the historical development of jazz in America (including a stylistic examination of such major figures as Louis Armstrong, Duke Ellington, Charlie Parker, Miles Davis, and John Coltrane) with a discussion of various critical issues pertaining to its evolution and how it expresses and illuminates aspects of American history and culture. Students will sharpen their appreciation and understanding of historically important styles of jazz and develop an awareness of how the music and its performers have contributed to and reflected America's ongoing social and cultural development.	

- MUS-3050 The Social History of Rock and Roll** **3 credits**
 Prerequisite: None.
 An interdisciplinary study of the evolution of rock music from 1950 to the present, with attention to the social climate of this period. Social issues examined include rock 'n' roll and racism, the hippie culture, technological advances, economic forces and the political climate. Students study a specific rock style as a field project. Open to all students; previous background or experience in musical study and performance is not required.
- MUS-3060 Vocal Pedagogy K-12** **2 credits**
 Prerequisite: None.
 Students in the course will receive a thorough grounding in the structure and function of the vocal mechanism, combined with a survey of the standard pedagogical approaches to healthy phonation and singing technique. Special emphasis will be given to the particular psychological and technical problems manifested by children in various stages of development. The net gain from this course will be the ability to deal more effectively and efficiently with young voices, resulting in a significant improvement in the sound of one's choral ensembles.
- MUS-3080 Choral Literature** **2 credits**
 Prerequisite: Permission of instructor.
 The study and performance of choral literature written for vocal ensembles of all sizes. Literature studied spans all historical periods and styles from the early Renaissance through the 20th century. May be repeated for credit.
- MUS-3090 Song Interpretation: Bringing Songs to Life** **3 credits**
 Prerequisite: MUS-2330 and THA2121
 The overall objective of this course is to provide singing actors with the tools to make a song come alive onstage without relying on the context of a show, props, costumes and makeup. We explore each song from the dual perspectives of textual/dramatic and musical structure. Once we have come to a thorough understanding of what the song is "about" we employ various acting techniques to help each singer to arrive at a performance that is honest, meaningful, convincing and effective. The semester's work is presented in a final cabaret performance.
- MUS-3130 Composition** **3 credits**
 Prerequisite: MUS-1231, 1232 or equivalent.
 Students learn to write in styles from Baroque to Contemporary. During the latter part of the class, the development of personal style is stressed, and students often meet with the instructor on a one-to-one basis.
- MUS-3140 Jazz Arranging** **3 credits**
 Prerequisite: MUS1231, 1232, 2011, 2012 or permission of the instructor.
 A study of techniques in writing for the common instruments found in a band. Emphasis is on the trumpet, trombone, saxophone and rhythm section instruments. Students learn the correct notation for each of the above. Other topics include music copying, two-part writing, and arranging for the small combo. Written arrangements are required.
- MUS-3160 Elementary School Music Methods** **3 credits**
 Prerequisite: None.
 A survey of teaching methods for music in the elementary school classroom through singing, playing, movement and listening experiences. Emphasis on the child's voice and on the development of creative educational materials. Students also learn about special instructional techniques, including the Orff, Kodaly and Delcroze methods.
- MUS-3210 Secondary School Music Methods** **3 credits**
 Prerequisite: None.
 Emphasis in the course is on vocal and instrumental music in the secondary schools, organization and rehearsal techniques. General music classes and musical theater also receive attention.
- MUS-3215 Music Technology for the Classroom** **3 credits**
 Prerequisites: MUS-1231, MUS-1232
 Wonderful opportunities exist for using music and technology in many classroom settings: elementary, middle school, special services, general music, chorus, and instrumental music. This course will explore some of the tools that are available in music composition, computer assisted instruction, music keyboards, multimedia and presentation formats. The course is designed to meet the needs of a variety of individuals with varied backgrounds and abilities in music.
- MUS-3220 History of Blues** **3 credits**
 Prerequisite: None.
 This course traces the history and development of blues from African origins through the rural blues of Mississippi, the East Coast and Texas to the electric blues of Chicago, the blues revival of the 1960's and modern blues today. A close examination of the music itself, the people who make it, the rural and urban social contexts that have supported it, the mutual influence and interconnection of blues and rock-and-roll, and the relationship of blues to African-American history and culture.
- MUS-3230 Survey of American Musical Theater** **3 credits**
 Prerequisite: None.
 This course will follow the development of the American (Broadway) musical from its roots in the musical revue and operetta at the beginning of this century to its full flowering in the 1940's and onward. Primary emphasis will be given to the works of the major creators of the genre.

MUS-3240 Applied Music Lessons	2 credits
Prerequisite: MUS-1120 or equivalent. Permission of the instructor required.	
A study of techniques and literature in the music performance media. One hour per week.	
MUS-3272 Studio Recording II	3 credits
Prerequisite: MUS-2231.	
A continuation of MUS-2231 at a more advanced level. Topics covered include continued research in analogue recording, as well as information required to work with the most recent technology in digital recording.	
MUS-3330 Worlds of Music	3 credits
Prerequisite: None.	
A survey course dealing with diverse styles and musical sounds found among the different cultures of the world, including Asian, African and Black American. Examples of the various forms and styles of music are presented both recorded and live by guest lecturers/performers. Students build simple non-Western musical instruments and study a specific musical culture as a field project. Open to all students; previous background or experience in musical study and performance is not required.	
MUS-3350 Music of the Americas	3 credits
Prerequisite: None.	
This course will acquaint students with various styles of North and South American music, and place those styles in social and cultural perspective. The course will examine Brazilian, Reggae, Afro-Cuban, Cajun and Zydeco, the cultural elements that influenced their development and how each style has influenced American popular music.	
MUS-3401 Conducting I	3 credits
Prerequisite: None.	
This course covers fundamentals of baton technique, score study and analysis, score reading, principles of interpretation, and rehearsal technique using representative works from choral and instrumental literature.	
MUS-3402 Conducting II	3 credits
Prerequisite: MUS-3401.	
This course is a continuation of MUS-3401 with an emphasis on extensive refinement of techniques.	
MUS-3710 Special Topics in Music	3 credits
MUS-3720 Seminar in Music Education	2 credits
Prerequisite: Open to music education majors only.	
Repeatable for credit. To be taken in rotation with elementary and secondary music methods courses and continuously thereafter until the practicum. Course addresses on-going issues of professional concern, and development of a professional portfolio.	
MUS-4020 Final Production in Studio Recording	2 credits
Prerequisite: MUS-1231, 1232, 2011, 2012, 2160, 2231, 3140, 3272.	
Students will design individual projects that combine various skills in composition, performance, engineering and production. The project will culminate in the production of a professional quality compact disk recording containing each student's proposed musical format.	
MUS-4030 Applied Music Lessons	3 credits
Prerequisite: MUS-1120	
MUS-4720 Senior Recital	2 credits
Prerequisite: None.	
A public presentation of representative works in student's primary applied area. Fulfillment of all requirements outlined in the student handbook. Consent of department chairperson. (Shared course in VSC)	

Outdoor Education and Recreation (OER)

OER-1000 Introduction to Outdoor Education	4 credits
Prerequisite: Outdoor Education major or permission of instructor.	
This course introduces students to the field of outdoor education through a variety of firsthand outdoor learning experiences in combination with classroom sessions. The course includes an introduction to historical and philosophical backgrounds of the field as well as career exploration. Integral to the course is participation in a range of adventure-based experiences, activities that emphasize an understanding and appreciation of the natural environment, and outdoor learning experiences integrating various curriculum content areas.	
OER-1030 Outdoor Education Activities	0.5 credits each
Prerequisite: None.	
Snowshoeing	Cross-Country Skiing
Introduction to River Kayaking	Flyfishing
OER-1050 Hiking and Camping	1 credit
Prerequisite: None.	
In this course students will be introduced to outdoor living and travel skills. Topics will include personal preparedness, equipment selection, camp craft skills, outdoor cooking, basic land navigation, trip planning, low-impact practices and safety. This course includes a multi-day trip.	

OER-1060 Ropes Course Prerequisite: None. In this class students will have an opportunity to experience group initiative problems, trust building activities, and low and high ropes course challenges. Students will gain an understanding of how the ropes course is a valuable recreational, educational and developmental tool.	1 credit
OER-1061 Backpacking Prerequisite: None. This course is designed to introduce students to backpacking and to provide them with the skills and knowledge to safely participate in this recreational activity on their own. Topics will include personal preparedness, equipment selection, camp craft skills, trip planning, low-impact practices, outdoor living skills and safety. This course includes a multi-day trip.	1 credit
OER-1070 Orienteering Prerequisite: None. This course will include instruction in map and compass use for land navigation. Through practical outdoor experiences students will gain the skills and knowledge to participate in the recreational sport of orienteering and to aid them in wilderness travel.	1 credit
OER-1131 Rock Climbing I Prerequisite: None. This course is designed to introduce students to technical rock climbing. The instruction focuses on personal preparedness, equipment selection and use, knot-tying, belaying and rappelling techniques, climbing movement, safety practices, and ethics for climbing and the environment. (Shared course in VSC)	1 credit
OER-1161 Whitewater Kayaking Prerequisite: Introduction to River Kayaking or equivalent kayaking experience. Permission of instructor required. This course is designed to enable kayakers to negotiate the challenge of whitewater, focusing on equipment, river dynamics, and safety procedures. Students will be taught in controlled and off-campus locations.	1 credit
OER-1162 Coastal Kayaking Prerequisite: None. This course is designed as an introduction to recreational kayak touring. Course content will include physical preparation, equipment requirements, paddling and self-rescue skills, and minimum-impact techniques. It will focus primarily on the experience of lake touring and will include some exposure to technical skill development. Students will practice skills in the college pool and partake in an off-campus field trip.	1 credit
OER-1170 Ice Climbing Prerequisite: OER-1131 or equivalent or permission of the instructor required. This course introduces students to technical ice climbing, focusing on personal preparedness for cold weather environments, equipment selection and use, low-impact practices and safety. Students will be taught in controlled and off-campus locations. (Shared course in VSC)	1 credit
OER-2XXX Coastal Kayak Guide Training Prerequisite: Kayaking experience is required. Recommended: OER-1161 and OER-1162 The Coastal Kayak Guide Training is an intensive multi-day program designed to expose students to the skills required to instruct and lead groups in open water kayaking conditions. The training focuses on the development of personal paddling skills, instructional tactics, sea "person"-ship, rescues, leadership and decision making. The course is a blend of dry land presentations and on-water practical sessions; since the goal is to expose students to a variety of sea states, the schedule will be dynamic and the days will be long and more often than not, wet. The majority of on-water sessions will be scenario-driven and taught in the context of skills development tours, where students may function as the instructor/guide. Participants will have ample opportunity for self assessment, instructor assessment, and peer assessment. In addition, students will be required to perform both written and practical skills assessments. The training may occur on inland bodies of water such as Lake Champlain, Vermont and/or on coastal waters. Students may have the opportunity to assess for nationally or internationally recognized paddlesport certifications.	2 credits
OER-2050 Rock Climbing Instructor Prerequisite: OER-1131 or equivalent rock climbing experience and permission of instructor. This course serves as an introduction to the philosophy and principles of top rope climbing instruction. Emphasis will be placed on technical safety systems, site and participant management, and curriculum development. The intent of this course is to introduce students to the skills involved in basic top rope climbing programs found in camps, schools and outdoor centers. The in-the-field sessions will include bouldering, selection of equipment, anchor systems, rope management, climbing techniques and personal climbing experience.	2 credits
OER-2060 Wilderness First Responder Prerequisite: Not open to first-year students This course prepares students to provide emergency medical care in remote areas involving prolonged patient care and severe environments. Certification available upon successful completion of the course. (Shared course in VSC)	4 credits
OER-2062 Advanced Backpacking Prerequisite: OER-1061 or equivalent backpacking experience and permission of instructor required. This course is designed to provide students with the opportunity to enhance their backpacking skills and experiences, and to learn the intricacies of group leadership for backpacking. Topics will include route planning, equipment selection and care, meal and ration planning, group travel, decision-making, recognizing weather patterns, and group safety. The field session of this course may include greater challenges than those found in the introductory backpacking course due to weather conditions, length of trip and/or terrain.	2 credits

- OER-2080 Advanced Rock Craft** **2 credits**
 Prerequisite: OER-1131.
 This course is designed to give students a wider breadth of knowledge and experience in the rock-climbing arena. This class will provide field days in which students will participate in a progression of skill development that will allow students to experience and learn safe and efficient techniques for rock climbing from basic movement to advanced anchor construction.
- OER-2140 Ropes Course Leadership** **2 credits**
 Prerequisite: OER-1060 or permission of instructor.
 This course prepares students to lead groups in team building challenges, focusing on selected initiative tasks, trust building exercises, and ropes course programming. (Shared course in VSC)
- OER-2810 Internship in Outdoor Education** **1-12 credits**
 Prerequisite: Contract required. This shared course may have different prerequisites at the other VSC colleges. (Shared course in VSC)
- OER-2910/4910 Independent Study in Outdoor Education** **1-12 credits**
- OER-3010 Learning in the Outdoors** **4 credits**
 Prerequisite: EDU-2040 or 2170 or PSY-2070, or permission of instructor.
 This course involves the development and implementation of a program of outdoor education activities conducted for the sixth grade students of Grand Isle County at Camp Abnaki, North Hero, Vermont. Students develop instructional, recreational and counseling activities in various disciplines. Class preparation and planning sessions precede the week-long residential component. A fee is charged for food service and facility usage during the May program.
- OER-3020 Program Planning in Outdoor Education** **3 credits**
 Prerequisite: Junior or senior standing.
 Study of the principles for administering safe, high-quality outdoor education experiences, including program philosophy and goals, risk management and liability, fiscal administration and budgeting, organization, and leadership and program evaluation. This shared course may have different prerequisites at the other VSC colleges. (Shared course in VSC)
- OER-3070 Adventure Education Theory and Practice** **3 credits**
 Prerequisite: Minimum of three outdoor education activity classes; junior or senior standing.
 This course explores the nature of the adventure participant's experience from a variety of theoretical perspectives including risk-seeking, motivations, fear, optimal arousal, self-efficacy, attribution, expectancy and flow theory. Also explored are experiential education, leadership theories as applied to adventure education, and the ethics of adventure leadership. Students will participate in role playing scenarios, simulations and field trips to better understand the functioning of these theories in practice.
- OER-3150 Winter Expedition** **3 credits**
 Prerequisite: Permission of instructor
 This course is designed to develop the essential skills and knowledge associated with winter backcountry travel. Topics may include personal preparation; physical conditioning; equipment selection, use and care; backcountry touring and travel techniques; winter camping skills; shelter construction; thermoregulation and energy conservation techniques; snow science; avalanche assessment; route selection; trip planning; nutrition; and group management skills. Students will be expected to create an interdisciplinary aspect to the course by researching and presenting information on such topics as: Geology, Glaciology, Mountain Weather, Cold Weather injuries, Ecology, etc. This course involves lecture and an extended expedition. Course topics, travel techniques and venue of the expedition may change annually.
- OER-4030 Wilderness Leadership Techniques** **4 credits**
 Prerequisite: OER-2060 (or equivalent), OER-2062, OER-3070; junior or senior standing.
 This course provides practical applications of advanced skills of trip planning, logistics, risk management, group leadership techniques, effective instruction, expedition behavior and low-impact wilderness travel and camping practices. The course will include an extended field experience. Modes of travel used on the trips (backpacking, canoeing, snowshoeing, ski touring, etc.) will be determined by the time of year the course is offered.
- OER-4710 Special Topics in Outdoor Education and Recreation** **3 credits**
- OER-4810 Internship in Outdoor Education** **1-12 credits**
 Prerequisite: OER-3010. Junior or senior standing, 2.5 cumulative GPA, leadership documentation for Adventure Education and Wilderness Leadership majors only, and faculty recommendation. Contract required. This shared course may have different prerequisites at the other VSC colleges. (Shared course in VSC)
- OER-4900 Research in Outdoor Education** **3 credits**
 Prerequisite: MAT-2030; junior or senior standing.
 This course consists of a survey of research in the field of outdoor education, giving students a perspective on past trends as well as contemporary research themes. The connections of theory with practice will be explored. Students will design and carry out a simple outdoor education research project of their own.

Physical Education (PED)

PED-1010 Physical Education Activities Prerequisite: None. Beginning Volleyball, Aerobics: Total Body Conditioning, Yoga, Water Aerobics, Weight Training (coed), Women's Weight Training, Tae Kwon Do, Advanced Tae Kwon Do, Winter Sports Conditioning, Tennis	.5 credits each
PED-1150 Foundations of Physical Education Prerequisite: None. This course is designed to introduce students to the foundations of the profession of physical education. Students will explore topics such as the historical and philosophical bases of physical education and related fields, the role and objectives of physical education and sport in our society, current trends and issues, career opportunities, and professional involvement. (Shared course in VSC.)	3 credits
PED-2030 Educational Games, Dance and Gymnastics Prerequisite: None. This course will introduce students to a variety of active games, dance and educational gymnastic experiences for children. Students will learn how to design, modify, present and evaluate these activities.	2 credits
PED-2040 Team Sports Prerequisite: None. This course will provide students with opportunities to analyze the similarities and differences among various team sports. Students will learn how to design, modify, present and evaluate a selection of team sports activities.	2 credits
PED-2110 Individual, Dual and Lifetime Activities Prerequisite: None. This course will introduce students to a variety of individual, dual and lifetime physical activities. Students will learn how to design, modify, present and evaluate these activities.	2 credits
PED-2810 Internship in Elementary Physical Education Corequisite: EDU-3120, contract required.	.5 credits
PED-2810 Internship in Physical Education for Exceptional Populations Corequisite: EDU-2110, contract required.	.5 credits
PED-2910/4910 Independent Study in Physical Education	1-12 credits
PED-3120 Measurement and Evaluation Prerequisite: None This course is designed to apply principles of measurement and evaluation to teaching physical education. A special emphasis will be placed on test construction, selection, and administration. Additionally, the student will be presented with various assessment tools in the psychomotor, cognitive, and affective domains used in physical education. (Shared course in the VSC.)	3 credits
PED-3140 Methods of Teaching Secondary School Physical Education Prerequisite: EDU-2170 and PED-1150 or permission of instructor. Examines theory and implementation of the secondary physical education curriculum. Includes practical application in the field. This shared course may have different prerequisites at the other VSC colleges. (Shared course in VSC) Note: PED-4830 Physical Education practicum can now be found under EDU-4835.	4 credits (with lab)

Philosophy (PHI)

PHI-1010 Introduction to Philosophy Prerequisite: None. This course is a survey of some of major philosophical issues, including our knowledge of reality, the nature of the mind or self, the existence of God, the problem of evil, freedom and determinism, morality and the good life. (Shared course in VSC)	3 credits
PHI-1030 Introduction to Logic Prerequisite: None. This course is a study of the principles of good reasoning, including the nature of argument and inference, deductive and inductive reasoning, and informal fallacies. (Shared course in VSC)	3 credits
PHI-1040 Introduction to Ethics Prerequisite: None. This course introduces some of the major ethical theories about morally right action, the morally good person, and the just society. Such theories may include ethical absolutism, ethical relativism, ethical egoism, utilitarianism, formalism, and rights theory. Topics may be drawn from contemporary moral issues such as capital punishment, abortion, and euthanasia. (Shared course in VSC)	3 credits
PHI-2910/4910 Independent Study in Philosophy	1-12 credit

PHI-3150 Philosophy Through Literature **3 credits**
Prerequisite: Two semesters of philosophy or literature.
Philosophical problems and world views, as presented in literature from Greek tragedies to contemporary novels, are surveyed in this course. Particular attention is given to historical, political and scientific events that formed and changed the concept of our place in the universe.

Physics (PHY)

PHY-1041 Physics I **4 credits (with lab)**
Prerequisite: PLM-0003, PLM-0004, PLM-0005, MAT-1020, MAT-1103, MAT-1330, MAT-1420, MAT-1421, MAT-1520, or MAT-2532.
Provides students in engineering technology the basic principles of physics. (Shared course in VSC)

PHY-1042 Physics II **4 credits (with lab)**
Prerequisite: PHY-1041 or PHY-2041.
This is a continuation of PHY 1041 for electrical and computer engineering technology students. Emphasis is on understanding the basic physical principles as they relate to practical situations and semiconductor physics. (Shared course in VSC)

PHY-2910/4910 Independent Study in Physics **1-12 credits**

Political Science (POS)

NOTE: Upper-level (3000/4000) courses in Political Science are offered on a rotating basis, generally every other year.

POS-1010 Introduction to Political Science **3 credits**
Prerequisite: None.
A survey and analysis of modern political regimes, movements, parties, governmental organizations and the relations between social interests and authority and the values and processes of government. (Shared course in VSC)

POS-1020 American Politics and Government **3 credits**
Prerequisite: None.
Introduction to key topics and fundamental issues of American politics and government, including political parties, elections, interest groups, the authority and function of the various branches and levels of government, the rights of the individual and the pursuit of justice, equality, life, liberty and happiness. (Shared course in VSC)

POS-1040 African-American History and Politics **3 credits**
Prerequisite: None.
From slavery to emancipation, through civil rights movements and urban racial conflict, this course examines the cultural, economic and political dynamics of African-American life. Through books, films, essays and music, the course considers the contributions of Sojourner Truth, Dubois, Brentt, King, Malcolm X, Spike Lee, Toni Morrison and others.

POS-2010 Observation of the Legislative Process **3 credits**
Prerequisite: None.
This course gives students an opportunity to observe the legislative process, party caucuses, committee meetings and public hearings.

POS-2050 International Economics and Politics **3 credits**
Prerequisite: None.
This course examines fundamental contemporary global issues such as conflict and peace, resource and human crisis conditions, mechanisms of trade and transnational investment, shifting power balances, and problems of development. Designed to prepare students for further sophisticated investigation of international subjects, the course focuses on tools for analyzing the global vicissitudes that impinge on the lives of all citizens.

POS-2110 State and Local Government **3 credits**
Prerequisite: None.
This course provides a study of the principles and problems of American government at the state and local level.

POS-2810/4810 Internship in Political Science **1-12 credits**

POS-2910/4910 Independent Study in Political Science **1-12 credits**

POS-3XXX Church State Separation: The First Amendment to the United States Constitution **3 credits**
Prerequisite: None
This course examines the history, theory, and application of the role of religion in forming and maintaining social values and governmental structure. The course focuses primarily on the American model of separation of church and state as the primary device that has both maintained a high sense of ethical values in public life and a high respect for divergent religious beliefs and practices. The study focuses on the growth and interrelationship among religious beliefs, ethical ideals, and governmental structure as seen in western history and political philosophy leading to the creating and later interpretation of the First Amendment to the American Constitution. Student work from both primary and secondary sources including Plato, Sophocles, Aristotle, Moses, Jesus Chris, Augustine, Mohammad, Thomas Aquinas, Emanuel Kant, Friedrich Nietzsche, John Stuart Mill, John Rawls, Martin Luther King, Jr., and Telliard de Chardin, among others. Students will examine and test theories relative to the separation of church and state.

- POS-3010 Survey of Western Political Thought** **3 credits**
 Prerequisite: None
 An examination of European/Asian views of the citizen, the state, law, justice, and the nature and use of power, plus an analysis of modern global doctrines on communism, democracy, fascism, internationalism, liberalism and Nazism.
 (Fall semesters, odd years)
- POS-3030 Contemporary Political Theory: Race, Class and Gender** **3 credits**
 Prerequisite: None.
 This course focuses on contemporary issues that relate to the dynamics of race, class and gender. Specific problems are examined to demonstrate that these categories must be studied in detail in order to understand our contemporary lives and the social, political and economic institutions that affect them.
 (Spring semesters, even years)
- POS-3040 The Politics of Gender** **3 credits**
 Prerequisite: None.
 This course explores the politics and philosophies of gender relationships. It examines the dynamic of power and the political forces that shape the relationships between men and women, women and women, and men and men. Of particular interest are the social institutions and activities that shape and express power relationships in everyday life.
- POS-3050 Environmental Ethics and Politics** **3 credits**
 Prerequisite: None.
 This course explores the relationships between our natural and human environments. How do our socio-economic concerns affect our ethical relationships within this total environment? How is our ethical understanding of ourselves related to our connection with nature? The class will consider a variety of issues and problems that seek to understand ecological limits and the moral obligations that need to be confronted.
- POS-3060 Vermont Politics** **3 credits**
 Prerequisite: None.
 Vermont Politics examines the electoral and political party structures, partisan activities, interest groups, the role of the media, and other timely issues. (Fall semesters, odd years) (Shared course in VSC)
- POS-3070 Terrorism, Religion, and the Nation-State** **3 credits**
 Prerequisite: None
 This course will offer a rapid background in the histories and theologies of Judaism, Christianity, Islam, and Hinduism – the four religions in the territories of which terrorism seems to be endemic and which regions (primarily the Middle East and India) have been divided into a myriad of artificial states. The instructor will explain the effect of reactions to the encroaching storm of modernity with its accompanying tidal waves of democracy and capitalism, and also give a brief explanation of the histories of the various nation states in the regions above. Different interpretations of “terrorism” will also be discussed. Is terrorism a tool and a weapon of war on par with guns and fighter-bombers? Is it anarchism? Nihilism? Cold-blooded murder? Is it a romantic throwback to some romantic notion of what some peoples’ ancestors used to do? What exactly? The students and professor will debate together the effect of reactions to the encroaching storm of modernity with the accompanying tidal waves of capitalism, democracy, innumerable new religions sects and the loosening-up of the authoritarian patriarchal and moral systems.
- POS-3150 Campaigns and Elections** **3 credits**
 Prerequisite: None.
 Students examine activities of critical importance to elected officials and gain an understanding of the choices that face such officials in their dealings with the electorate. The way voters choose among candidates, factors which influence voter turnout, and campaign strategy and tactics are among topics discussed. Polls and surveys and the raising and spending of campaign funds also receive attention. Students are encouraged to work for the candidate of their choice.
- POS-3160 Modern Politics Through Drama and Fiction** **3 credits**
 Prerequisite: None.
 This course provides an intensive reading of world literature dealing with systems of government, ideologies and the vicissitudes of political power. Each student prepares an interpretation of a political situation or problem based on a literary text (read by the entire class) and on individual research. Topics vary with each offering.
- POS-3170 U. S. Constitutional Law** **3 credits**
 Prerequisite: None.
 This course examines Supreme Court decisions, constitutional law in the United States, and the rights of state governments and of the individual. (Shared course in VSC)
- POS-3210 Canadian Politics** **3 credits**
 Prerequisite: None.
 This course will examine the Canadian parliamentary system of government. The class will meet with members of parliament, political leaders and representatives of the media.
- POS-3220 Genocide: Inhumanity Across the Ages** **3 credits**
 Prerequisite: None.
 The study of the history and geographical background of, and the political, economic and religious motivations for, physical and cultural genocide.

POS-3230 Third World Politics	3 credits
Prerequisite: None.	
Students explore the integration of life and ideology as exemplified by selected revolutionary figures of Africa, Asia and Third World America. Students are responsible for conveying to the class, in seminar style, their assessments of typical Third World leaders and thinkers, including conservative and revisionist figures.	
POS-3270 Revolutions, Transformed Economics, and Social Change	3 credits
Prerequisite: None; Recommended: One POS or HIS course	
From 1688 to 1978 the world was wracked by a series of violent upheavals referred to as revolutions that affect our lives on a daily basis on every continent on the globe. From the English revolution in 1688, through the American in 1776 and the French in 1789, the Bolshevik in 1917, to that of Iran in 1978, the Christian and Muslim fundamentalist revolutionary movements in the 21st century. What were/are these movements? How do they come about? What factors play a role in their development? What are their religious, national, psychological, economic and social consequences? Who leads and participates in them, wins and loses, and why? We shall study all.	
POS-4010 American Foreign Policy	3 credits
Prerequisite: None.	
In this course, students analyze the forces behind the formulation of American foreign policy and its objectives and strategies since 1776. Particular emphasis is given to the period from World War II to the present. (Spring semesters, even years)	
POS-4020 International Relations	3 credits
Prerequisite: None.	
This seminar provides an investigation of the political and economic elements of national power, transnational interests and international organizations.	
POS-4730 Senior Seminar in Political Science	3 credits
Prerequisite: None.	
Senior-level students choose a major topic for collective investigation, complete a common core of reading and contribute individual research presentations on aspects of that topic.	
 <i>Psychology (PSY)</i>	
PSY-1010 Introduction to Psychology	3 credits
Prerequisite: None.	
This course is a survey of major concepts, issues, theories, and research methods in psychology. In the process, it offers a sense of how psychological issues are involved in students' personal lives. Course content includes such topics as states of consciousness, learning, memory, development, motivation, emotion, stress management, theories of personality, abnormal behavior, approaches to therapy, intelligence, social psychology, neurophysiology, and sensation and perception. (Shared course in VSC)	
PSY-2040 Social Psychology	3 credits
Prerequisite: None.	
This course presents a systematic study of how people think about, influence and relate to one another. Course content includes topics such as attitudes, norms, aggression, conformity, attraction, self-justification, prejudice, group processes, interpersonal interaction and communication, altruism, conflict resolution, persuasion and impression formation. There is a broad opportunity for application of these concepts to understanding the self and interpersonal relationships, as well as to social issues of importance, such as war and peace, consumer behavior, and political strategy. (Shared course in VSC)	
PSY-2070 Developmental Psychology	3 credits
Prerequisite: PSY-1010.	
This course focuses on emotional, cognitive, identity, social, and moral development throughout the life span with special emphases on the theories of Piaget, Freud, Erikson, and Kohlberg.	
PSY-2410 Research Methods in Psychology	3 credits
Prerequisite: PSY-1010, MAT-2030.	
The purpose of this course is to provide students with an introduction to the theory and practice of research in the broad field of psychology. The emphasis of the course is practical and behavioral; students design research working individually and in teams. The course acquaints students with survey research, and experimental, correlational, and quasi-experimental designs.	
PSY-2420 Group Process: Theory and Practice	3 credits
Prerequisite: PSY-1010.	
This course acquaints students with current theory, practice in interpersonal communication, and group dynamics, including recent social, educational, and therapeutic uses of small groups.	
PSY-2810/4810 Internship in Psychology	1-12 credits
Prerequisite: Permission of internship coordinator. (Shared course in VSC)	
PSY-2910/4910 Independent Study in Psychology	1-12 credits