

KEENE STATE COLLEGE PROGRAM OUTCOMES

SCHOOL OF PROFESSIONAL AND GRADUATE STUDIES

ARCHITECTURE

Knowledge: upon completion of the architecture major students will understand:

- Basic design principles underlying two- and three dimensional design.
- The relationship between aesthetic, social, cultural, historical, behavioral, environmental, and technical aspects in synthesizing design solutions.
- A basic visual vocabulary of cities, buildings and landscapes in their historical, cultural, social, philosophical, political, and religious contexts.
- Fundamentals of building sciences including basic: physics of structures, properties of materials, construction processes, and building systems.
- The science and practice of sustainable design
- Basics of architectural practice concerning ethics, client relations, regulatory factors, and contracts.

Skills: upon completion of the architecture major students will be able to:

- Apply design principles and theories, synthesizing concepts into architectural forms
- Gather and analyze information about human needs and behavior to inform the design process.
- Investigate appropriate materials and building systems for their designs.
- Analyze, research, and question how the built environment relates to a social, cultural, historical, religious, and political context.
- Apply basic principles (qualitative and quantitative) of sustainable design to analyze the environmental impact of their design solutions.
- Analyze simple structural problems and communicate with structural engineers.
- Employ and express design solutions using conventional and state of the art visual graphic media.
- Communicate architectural ideas in written and oral form.
- Collaborate and communicate with colleagues, clients, and others.

Create an on-going portfolio of individual architectural work.

Values: upon completion of the program students will be disposed to:

- Promote the value of aesthetics or beauty in our society.
- Encourage the growth of communities within a social, historical, and cultural context.
- Employ and promote principles and practices of environmentally sustainable design in architecture, urban planning, and their daily lives.
- Embrace teamwork and collaboration in all settings.
- Engage in service to their communities through design.

EDUCATION

Our program options have identified Danielson's four domains as our program objectives and we evaluate students' progress against these goals throughout their preparation. These domains/objectives are:

- Develop expertise in **planning and preparation**, demonstrating knowledge of subject matter, methodology, students, instructional goals, resources, instructional design, and assessment.
- Develop expertise in establishing a positive **classroom environment**, including establishing respect and rapport with students within a culture of learning, managing classroom procedures and student behavior, and effectively organizing classroom space.
- Develop expertise in **classroom instruction** by communicating clearly, using a variety of teaching techniques that engage students in their learning, providing feedback, and being flexible and responsive to students.
- Develop a sense of "professionalism" and demonstrate **professional responsibility and growth** by reflecting on their teaching, maintaining accurate records, and communicating effectively with families, colleagues, and administrators. In addition, students focus on the important **themes** also outlined in Danielson, which are reflected in the KSC Conceptual Framework: promoting equity, practicing cultural sensitivity, maintaining high expectations, providing developmentally appropriate activities, accommodating students with special needs, and incorporating technology into the classroom.

HEALTH SCIENCE

Upon completion of the Health Science curriculum, the student will be able to:

- Apply evidence-based knowledge and behavior change theories in the areas of substance abuse/addictions, physical activity and nutrition.
- Critically evaluate health information through the application of information literacy skills.
- Effectively communicate health information.
- Discuss the relationship between health, disease and public policy.
- Develop and apply culturally competent health initiatives.
- Design and deliver health education and promotion programs across the lifespan (asset based assessment, developing program goals and objectives, marketing, business management and program evaluation).
- Create and present a scholarly project through the use of research methods.
- Apply ethical principles in practical settings.
- Recognize the impact of social justice factors such as social, cultural, sexual, gender, and political issues on personal and community wellness.
- Develop an academic and professional portfolio that documents learning and community engagement.

PHYSICAL EDUCATION

ATHLETIC TRAINING

Candidates for selection to the Athletic Training Educational Program must demonstrate:

- the mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
- sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely and efficiently use equipment and materials during the assessment and treatment of patients.
- the ability to understand and speak the English language at a level consistent with competent professional practice.
- the ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively.
- the ability to record the physical examination results and a treatment plan clearly and accurately.
- the capacity to maintain composure and continue to function well during periods of high stress.
- the perseverance, diligence and commitment to complete the athletic training education program as outlined and sequenced.
- the flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.
- the affective skills and appropriate demeanor and rapport relating to professional education and quality patient care.

Athletic Training Program Outcomes

To insure that Keene State College Physical Education/Athletic Training graduates will be competent in the prevention, recognition, immediate care, and rehabilitation of athletic injuries, the following program outcomes have been established. These outcomes address the standards for athletic training programs set by CAATE (Commission on Accreditation of Athletic Training Education).

- **Foundational Behaviors of Professional Practice:** Athletic Trainers demonstrate foundational behaviors of professional practice including primacy of the patient, teamed approach to practice, legal practice, ethical practice, advancing knowledge, cultural competence, and professionalism.
- **Risk Management and Injury Prevention:** Athletic trainers possess an understanding of risk management and injury prevention and demonstrate the necessary skills to plan and implement prevention strategies.
- **Pathology of Injuries and Illnesses:** Athletic trainers possess an understanding of the cellular events and reactions and other pathological mechanisms in the development, progression and epidemiology of injuries, illnesses and diseases.
- **Orthopedic Clinical Examination and Diagnosis:** Athletic trainers possess the ability to clinically examine and diagnose a patient for the purpose of identifying (a) common

- acquired or congenital risk factors that would predispose the patient to injury and (b) musculoskeletal orthopedic injuries to determine proper care including the referral of the patient to other health care providers when appropriate.
- **Medical Conditions and Disabilities:** Athletic trainers possess an understanding of medical conditions and disabilities associated with physically active individuals.
 - **Acute Care of Injuries and Illnesses:** Athletic trainers recognize, assess, and treat patients with acute injuries and illnesses and provide appropriate medical referral.
 - **Therapeutic Modalities:** Athletic trainers plan, implement, document, and evaluate the efficacy of therapeutic modalities in the treatment of injuries to and illnesses of their patients.
 - **Conditioning and Rehabilitative Exercise:** Athletic trainers plan, implement, document, and evaluate the efficacy of therapeutic exercise programs for the rehabilitation and reconditioning of injuries and illnesses.
 - **Pharmacology:** Athletic trainers possess an understanding of pharmacologic applications and governing pharmacy regulations relevant to the treatment of injuries, illnesses, and diseases.
 - **Psychosocial Intervention and Referral:** Athletic trainers possess the ability to recognize, intervene, and refer when appropriate patients exhibiting sociocultural, mental, emotional, and psychological behavioral problems/issues.
 - **Nutritional Aspects of Injuries and Illnesses:** Athletic trainers possess an understanding of the nutritional aspects of injuries and illnesses.
 - **Health Care Administration:** Athletic trainers possess the knowledge and skills to develop, administer, and manage a health care facility and associated venues that provide health care to athletes and others involved in physical activity.
 - **Professional Development and Responsibility:** Athletic trainers possess the knowledge and skills to understand professional responsibilities and avenues of professional development to promote athletic training as a professional discipline.

PHYSICAL EDUCATION TEACHER CERTIFICATION

Program Outcomes:

- **Content Knowledge:** Physical education teachers understand physical education content and disciplinary concepts related to the development of a physically educated person.
- **Growth and Development:** Physical education teachers understand how individuals learn and develop and can provide opportunities that support their physical, cognitive, social, and emotional development.
- **Diverse Students:** Physical education teachers understand how individuals differ in their approaches to learning and create appropriate instruction adapted to these differences.
- **Management and Motivation:** Physical education teachers use an understanding of individual and group motivation and behavior to create a safe learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
- **Communication:** Physical education teachers use knowledge of effective verbal, nonverbal, and media communication techniques to enhance learning and engagement in physical activity settings.
- **Planning and Instruction:** Physical education teachers plan and implement a variety of developmentally appropriate instructional strategies to develop physically educated individuals, based on state and national (NASPE (K-12) standards.

- **Student Assessment:** Physical education teachers understand and use assessment to foster physical, cognitive, social and emotional development of students in physical activity.
- **Reflection:** Physical education teachers are reflective practitioners who evaluate the effects of their actions on others (e.g., students, parents/guardians, fellow professionals) and seek opportunities to grow professionally.
- **Technology:** Physical education teachers use information technology to enhance learning and to enhance personal professional productivity.
- **Collaboration:** Physical education teachers foster relationships with colleagues, parents/guardians, and community agencies to support students' growth and well-being.

TECHNOLGY STUDIES Product Design and Development Option

Primary Objectives:

As a result of completing the requirements for the Product Design and Development major, students will demonstrate competencies in:

- Creative problem-solving skills
- Visual literacy – Form and space relationships
- Design and communication skills
- Manufacturing materials, processes and testing
- Business literacy, Industrial planning and Control functions

SCHOOL OF ARTS AND HUMANITIES

The mission of the School of Arts and Humanities is to cultivate in our undergraduate students, and in the regional community, an understanding of the human condition through scholarly, artistic, and civic engagement. Faculty and staff work closely with students, encouraging them to think critically, communicate effectively, and create passionately, while preparing them for meaningful personal and professional lives.

In Arts and Humanities we value:

- Creativity, critical thinking, and discovery
- Teaching, learning, and scholarship
- Production, performance, and display of original, imaginative works of self-expression
- Mentoring and cultivating the intellectual development of students
- Understanding the past
- Communicating effectively
- Civic engagement, compassion, and responsibility
- Disciplinary rigor, currency, and integrity
- Interdisciplinarity and multidisciplinary
- Differing cultural perspectives

AMERICAN STUDIES

- Students will demonstrate an understanding of historical and contemporary American cultures.
- Students will demonstrate the basic elements of a variety of disciplines that relate to the study of American cultures.
- Students will demonstrate the ability to respond resourcefully to texts (including imaginative literature) in various historical and cultural contexts.
- Students will demonstrate the integration of forms of scholarship from more than one discipline to understand and interpret American cultures.
- Students will demonstrate the ability to write an effective documented essay that includes a thesis that integrates interdisciplinary approaches to American cultures.

English

1. Students understanding how several types of literature work, textually and intertextually.
2. Students understanding how literature relates to its historical, social, and cultural contexts.

Outcomes:

1. The student has demonstrated through written work an understanding of at least two types of literature (poetry / fiction / drama / nonfiction)
2. The student has demonstrated through written work the ability to analyze through an orderly critical approach the textual functioning of a particular work of literature.
3. The student has demonstrated through written work an understanding of how individual works of literature relate to each other intertextually.
4. The student has demonstrated through written work an understanding of how literature may embody a cultural perspective previously unfamiliar to the student.
5. The student has demonstrated through written work the ability to consider how historical, social, and cultural contexts may help shape a literary work.

Film Studies

To Be Expected of all Film Studies Students:

- They will know the basic terminology of analysis: e.g., mise-en-scene, wide angle, jump cut, continuity editing, auteurism, and so forth.
- They will know major events in world film history, which include: the birth of cinema, German Expressionism, Russian montage theory, Classical Hollywood period, Italian neorealism, French New Wave, American Independent and avant-garde, and so forth.
- They will have a knowledge of the major analytical frameworks of cinema studies, such as auteur theory, genre theory, ideological analysis, historical/biographical analysis, feminist theory, to mention some.
- They will have a knowledge of the major developments in film theory, which include theories of filmic realism and formalism, semiotics and structuralism, psychoanalytic film theory.
- That students understand the paradigms of the above developments and frameworks, well enough to be able to produce critical writings in these sub-fields of cinema studies.
- They will know the concepts of basic production techniques—syntax, techniques of lighting and editing, principles of sound, integration of thematic structure and logical outcomes of narrative/dramatic structure. They will know the difference between plot and theme, and form's relationship to these two.

Specifically of Critical Studies Option Students:

- Students will have a deep understanding of, and intellectual engagement in, particular theoretical models, as exhibited by work in seminars and the senior research project. These will be manifested by their participation in theoretical discourse in the seminar forum.

Specifically of Production Option Students:

- Students will know the necessity of proper documentation and pre-production and script preparation, the principles and practices of working with a crew, managing a budget, mastering the techniques of camera, sound, lighting, and editing, and the public relations responsibilities which ensue.

HISTORY

The major attempts to provide students with the ability to think and read analytically; to form sound opinions and support them with logical arguments based on evidence; to communicate ideas effectively; and to conduct historical research. The history major also provides students with a body of historical knowledge that will enable them to understand contemporary events of local, national and global importance, as well as to understand the various cultures and civilizations that make up the world community.

Learning Outcomes: In order to assess the efficacy of student learning in the above areas, the history department has developed a list of learning outcomes by course-level. They focus on students' facility with historical knowledge, and measurements of their critical thinking, reading, and writing skills.

- The primary learning outcome in 100-level courses is demonstrated facility with a body of historical knowledge.
- The primary learning outcomes in 200-level courses are basic proficiency in critical reading and critical written evaluations of texts, as well as demonstration of proper citation and documentation.
- The primary learning outcomes are advanced proficiency in critical reading and critical written evaluations of texts, as well as proficiency in analysis of historical theory and methods.
- The primary outcomes in 400-level courses are an advanced written interpretation of a variety of texts, proficiency in evaluation *and use* of historical methods and theory, and proficiency in oral presentations of students' written work and/or student critical discussions of texts.

HOLOCAUST STUDIES MINOR

Students will be able to demonstrate:

- substantial knowledge of the Holocaust, its historical and precipitating factors, and its legacy.
- an ability to view the Holocaust from multiple perspectives, including insight into Jewish and German culture.
- an ability to understand and distinguish among prejudice, discrimination, and racism, and between mass murder and genocide.
- an understanding of ethical issues.
- the ability to write and speak effectively about issues related to the Holocaust.
- an awareness of creative work (e.g., art, film, dance, literature) that emerged from this environment.

- enhanced critical and independent thought, and the ability to synthesize knowledge from different disciplines.
- comparative/historical analytic skills, and an ability to analyze contemporary political situations.
- information literacy skills through use of the resources of the Cohen Center and other sources.

JOURNALISM

Students will be able to demonstrate:

- Working knowledge of news/info-gathering research methods and tools.
- The ability to write a grammatically correct, accurate, objective, and comprehensive account of a news/public event for print, broadcast and the web, among other formats and styles.
- Working knowledge of media law, ethics, and related first amendment issues.
- Proficiency with a variety of mass media tools, including traditional and electronic newsgathering/ production equipment.
- An ability to analyze the relationship between mass media and society from historical and contemporary perspectives.

MODERN LANGUAGES

FRENCH MAJOR

- Students completing the French Major will be able to speak and write in French on a variety of current cultural topics, demonstrating a level of “Advanced-Low” on the proficiency scale established by the American Council on the Teaching of Foreign Languages (see www.actfl.org)
- Students will demonstrate an in-depth knowledge of the geography and culture of countries where the language is spoken, and of France’s historical and contemporary position in modern Europe and the world.
- Students will demonstrate the ability to read, summarize, and discuss literary features of short stories, fairy tales, essays, poetry, and plays with fluency.
- Students will develop the ability to clearly contrast French and American cultural values surrounding such topics as education, ethnicity, gender, history, and the natural environment.

FRENCH MINOR

- Students completing the French Minor will be able to speak and write in French on a variety of current cultural topics, demonstrating a level of “Advanced Low” on the proficiency scale established by the American Council on the Teaching of Foreign Languages (see www.actfl.org)
- Students will demonstrate knowledge of the geography and culture of countries where the language is spoken, and of France’s historical and contemporary position in modern Europe.
- Students will demonstrate the ability to read, summarize, and discuss literary features of short stories, fairy tales, essays, poetry, and plays.

- Students will develop the ability to contrast French and American cultural values surrounding such topics as education, ethnicity, history, and the natural environment.

SPANISH MAJOR

- Students completing the Spanish Major will be able to speak and write in Spanish on a variety of current cultural topics, demonstrating a level of “Advanced-Low” on the proficiency scale established by the American Council on the Teaching of Foreign Languages (see www.actfl.org)
- Students will demonstrate an in-depth knowledge of the geography and culture of countries where the language is spoken, and of Spain and Latin America’s historical and contemporary position in the modern world.
- Students will demonstrate the ability to read, summarize, and discuss literary features of short stories, fairy tales, essays, poetry, and plays with fluency.
- Students will develop the ability to clearly contrast Spanish and American cultural values surrounding such topics as education, ethnicity, gender, history, and the natural environment.

SPANISH MINOR

- Spanish minors will be able to speak and write in Spanish on a variety of current cultural topics, demonstrating a level of “Advanced Low” on the proficiency scale established by the American Council on the Teaching of Foreign Languages (see www.actfl.org)
- Students will demonstrate knowledge of the geography and culture of countries where the language is spoken, and of Spain and Latin America’s historical and contemporary position in the modern world.
- Students will demonstrate the ability to read, summarize, and discuss literary features of short stories, fairy tales, essays, poetry, and plays.
- Students will develop the ability to contrast Spanish and American cultural values surrounding such topics as education, ethnicity, history, and the natural environment.

GERMAN MINOR

- Students completing the German Minor will be able to speak and write in German on a variety of current cultural topics, demonstrating a level of “Advanced Low” on the proficiency scale established by the American Council on the Teaching of Foreign Languages (see www.actfl.org)
- Students will demonstrate knowledge of the geography and culture of countries where the language is spoken, and of Germany’s historical and contemporary position in modern Europe.
- Students will demonstrate the ability to read, summarize, and discuss literary features of short stories, fairy tales, essays, poetry, and plays.
- Students will develop the ability to contrast German and American cultural values surrounding such topics as education, ethnicity, history, and the natural environment.

Music Department Standards & Outcomes

Based on the 2007-08 National Association of Schools of Music Handbook

SECTION ONE – ALL B.M. DEGREE PROGRAMS AND CONCENTRATIONS

A. Common Body of Knowledge and Skills:

1. Performance.

Students must acquire:

- a. Technical skills requisite for artistic self-expression in at least one major performance area at a level appropriate for the particular music concentration.
- b. An overview understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory.
- c. The ability to read at sight with fluency demonstrating both general musicianship and, in the major performance area, a level of skill relevant to professional standards appropriate for the particular music concentration.
- d. Knowledge and skills sufficient to work as a leader and in collaboration on matters of musical interpretation. Rehearsal and conducting skills are required as appropriate to the particular music concentration.
- e. Keyboard competency.
- f. Growth in artistry, technical skills, collaborative competence and knowledge of repertory through regular ensemble experiences. Ensembles should be varied both in size and nature. Normally, performance study and ensemble experience continue throughout the baccalaureate program.

2. Musicianship Skills and Analysis.

Students must acquire:

- a. An understanding of the common elements and organizational patterns of music and their interaction, the ability to employ this understanding in aural, verbal, and visual analyses, and the ability to take aural dictation.
- b. Sufficient understanding of and capability with musical forms, processes, and structures to use this knowledge and skill in compositional, performance, analytical, scholarly, and pedagogical applications according to the requisites of their specializations.
- c. The ability to place music in historical, cultural, and stylistic contexts.

3. Composition and Improvisation.

Students must acquire a rudimentary capacity to create derivative or original music both extemporaneously and in written form; for example, the imitation of various musical styles, improvisation on pre-existing materials, the creation of original compositions, experimentation with various sound sources, and manipulating the common elements in non-traditional ways.

4. History and Repertory.

Students must acquire basic knowledge of music history and repertoires through the present time, including study and experience of musical language and achievement in addition to that of the primary culture encompassing the area of specialization.

5. Technology.

Students must acquire the ability to use technologies current to their area of specialization.

6. Synthesis.

While synthesis is a lifetime process, by the end of undergraduate study students must be able to work on musical problems by combining, as appropriate to the issue, their capabilities in performance; aural, verbal, and visual analysis; composition and improvisation; history and repertory; and technology.

B. Upon completion of degree program:

1. Students must demonstrate achievement of professional, entry-level competence in the major area, including significant technical mastery, capability to produce work and solve professional problems independently, and a coherent set of artistic/intellectual goals that are evident in their work. A senior project or presentation in the major area is required in many concentrations, and strongly recommended for all others.
2. Students are expected to have the ability to form and defend value judgments about music, and to communicate musical ideas, concepts, and requirements to professionals and laypersons related to the practice of the major field.

C. Best Practices, Recommendations per NASM handbook:

Students should have opportunities to:

1. Gain a basic understanding of the nature of professional work in their major field. Examples are: organizational structures and working patterns; artistic, intellectual, economic, technological, and political contexts; and development potential.
2. Acquire the skills necessary to assist in the development and advancement of their careers.
3. Develop teaching skills, particularly as related to their major area of study.
4. Continue to develop improvisational skills whether as an aspect of composition, musicianship, or performance studies.
5. Experience a broad range of repertory through attendance at events such as recitals, concerts, opera and music theatre productions, and other types of performances.
6. Explore areas of individual interest related to music in general or to the major. Examples are music bibliography, notations, aesthetics, acoustics, performance practices, specialized topics in history, musicology, ethnomusicology, analysis, and technology.

7. Explore multidisciplinary issues that include music.

8. Practice synthesis of a broad range of musical knowledge and skills, particularly through independent study that involves a minimum of faculty guidance, where the emphasis is on evaluation at completion.

D. General Studies Competencies per NASM standards:

1. The ability to think, speak, and write clearly and effectively.

2. An informed acquaintance with fields of study beyond music such as those in the arts and humanities, the natural and physical sciences, and the social sciences.

3. A functional awareness of the differences and commonalities regarding work in artistic, scientific, and humanistic domains.

4. Awareness that multiple disciplinary perspectives and techniques are available to consider all issues and responsibilities including, but not limited to, history, culture, moral and ethical issues, and decision-making.

5. The ability to identify possibilities and locate information in other fields that have bearing on musical questions and endeavors.

SECTION TWO – MUSIC PERFORMANCE (B.M.)

A. Common Body of Knowledge and Skills – See Section 1, A

1. Performance
2. Musicianship Skills and Analysis
3. Composition and Improvisation
4. History and Repertory
5. Technology
6. Synthesis

B. Results upon completion of degree program – See Section 1, B

C. Essential Competencies, Experiences, and Opportunities:

1. Comprehensive capabilities in the major performing medium including the ability to work independently to prepare performances at the highest possible level; knowledge of applicable solo and ensemble literature; and orientation to and experience with the fundamentals of pedagogy. For majors in Early Music, Historical Performance, or the equivalent, the ability to apply aural, improvisational, and language skills, knowledge of styles and performance practices, and general historical and cultural knowledge as required by the focus of the major is essential.
2. For performance majors in voice, the study and use of foreign languages and diction are essential.
3. Solo and ensemble performance in a variety of formal and informal settings. A senior recital is essential, and a junior recital is recommended.

D. Best Practices, Recommendations – See Section 1, C

E. General Studies Competencies – See Section 1, D

F. General Studies Best Practices – Recommendations per NASM handbook

Historical and analytical studies in the arts and studies in foreign languages are recommended for all performers.

SECTION THREE – MUSIC EDUCATION (B.M.)

A. Common Body of Knowledge and Skills – See Section 1, A

1. Performance
2. Musicianship Skills and Analysis
3. Composition and Improvisation
4. History and Repertory
5. Technology
6. Synthesis

B. Results upon completion of degree program – See Section 1, B

C. Essential Competencies, Experiences, and Opportunities:

a. Desirable Attributes

The prospective music teacher should have:

(1) Personal commitment to the art of music, to teaching music as an element of civilization, and to encouraging the artistic and intellectual development of students, plus the ability to fulfill these commitments as an independent professional.

(2) The ability to lead students to an understanding of music as an art form, as a means of communication, and as a part of their intellectual and cultural heritage.

(3) The capability to inspire others and to excite the imagination of students, engendering a respect for music and a desire for musical knowledge and experiences.

(4) The ability to articulate logical rationales for music as a basic component of general education, and to present the goals and objectives of a music program effectively to parents, professional colleagues, and administrators.

(5) The ability to work productively within specific education systems, promote scheduling patterns that optimize music instruction, maintain positive relationships with individuals of various social and ethnic groups, and be empathetic with students and colleagues of differing backgrounds.

(6) The ability to evaluate ideas, methods, and policies in the arts, the humanities, and in arts education for their impact on the musical and cultural development of students.

(7) The ability and desire to remain current with developments in the art of music and in teaching, to make independent, in-depth evaluations of their relevance, and to use the results to improve musicianship and teaching skills.

The following competencies and procedures provide means for developing these attributes:

b. Music Competencies

The profession of school music teacher now encompasses a wide range of traditional, emerging, and experimental purposes, approaches, content, and methods. Each institution makes choices about what, among many possibilities, it will offer prospective specialist music teachers. Institutions may offer a comprehensive curriculum involving two or more specializations and/or focus on one or more particular specializations.

The following standards provide a framework for developing and evaluating a wide variety of teacher preparation program goals and achievements.

Items b.(1), (2), (3), and (4) given here apply to all programs that prepare prospective music teachers.

Items c.(1), (2), (3), and (4) given below apply to specializations singly or in combination as determined by the focus and content of specific program offerings determined by each institution.

In addition to those basic competencies, experience, and opportunities outlined in Section 1, A-C, the following apply to the preparation of music teachers:

(1) Conducting and Musical Leadership. The prospective music teacher must be a competent conductor, able to create accurate and musically expressive performances with various types of performing groups and in general classroom situations. Instruction in conducting includes score reading and the integration of analysis, style, performance practices, instrumentation, and conducting techniques. Laboratory experiences that give the student opportunities to apply rehearsal techniques and procedures are essential. Prospective teachers in programs with less focus on the preparation of ensemble conductors must acquire conducting and musical leadership skills sufficient to teach effectively in their area(s) of specialization.

(2) Arranging. The prospective music teacher must be able to arrange and adapt music from a variety of sources to meet the needs and ability levels of individuals, school performing groups, and in classroom situations.

(3) Functional Performance. In addition to the skills required for all musicians, functional performance abilities in keyboard and the voice are essential. Functional performance abilities in instruments appropriate to the student's teaching specialization are also essential.

(4) Analysis/History/Literature. The prospective music teacher should be able to apply analytical and historical knowledge to curriculum development, lesson planning, and daily classroom and performance activities. Teachers should be prepared to relate their understanding of music with respect to styles, literature, multiple cultural sources, and historical development, both in general and as related to their area(s) of specialization.

c. Specialization Competencies

Institutions and other educational authorities make decisions about the extent to which music teachers will be prepared in one or more specializations. The following competencies apply singly or in combination consistent with the specialization objectives of each teacher preparation program in music.

Items b.(1), (2), (3), and (4) given above apply to all programs that prepare prospective music teachers.

Items c.(1), (2), (3), and (4) given here apply to specializations singly or in combination as determined by the focus and content of specific program offerings.

1. General Music

Listed below are essential competencies and experiences for the general music teaching specialization:

- (a) Musicianship, vocal, and pedagogical skills sufficient to teach general music.
- (b) Knowledge of content, methodologies, philosophies, materials, technologies, and curriculum development for general music.
- (c) The ability to lead performance-based instruction.
- (d) Laboratory and field experiences in teaching general music.

2. Vocal/Choral Music

Listed below are essential competencies and experiences for the vocal/choral teaching specialization:

- (a) Vocal and pedagogical skill sufficient to teach effective use of the voice.
- (b) Knowledge of content, methodologies, philosophies, materials, technologies, and curriculum development for vocal/choral music.
- (c) Experiences in solo vocal performance, as well as in both large and small choral ensembles.
- (d) Performance ability sufficient to use at least one instrument as a teaching tool and to provide, transpose, and improvise accompaniments.
- (e) Laboratory experience in teaching beginning vocal techniques individually, in small groups, and in larger classes.

3. Instrumental Music

Listed below are essential competencies and experiences for the instrumental music teaching specialization:

- (a) Knowledge of and performance ability on wind, string, and percussion instruments sufficient to teach beginning students effectively in groups.
- (b) Knowledge of content, methodologies, philosophies, materials, technologies, and curriculum development for instrumental music.
- (c) Experiences in solo instrumental performance, as well as in both small and large instrumental ensembles.
- (d) Laboratory experience in teaching beginning instrumental students individually, in small groups, and in larger classes.

(4) Specific Music Fields or Combinations.

Listed below are essential competencies and experiences for music teaching specialization(s) focused on either one or a combination of areas such as composition, electronic and computer music, ethnic music, guitar, small ensembles, jazz, keyboard, orchestral music, music history and theory, music in combination with other disciplines, music technologies, and popular music; or

combinations of one or more of these types of content with aspects of the general, vocal/choral, or instrumental specializations:

(a) Knowledge and skill in the selected area(s) of specialization sufficient to teach beginning and intermediate students effectively.

(b) Knowledge of content, methodologies, philosophies, materials, technologies, and curriculum development for the area(s) of specialization.

(c) In-depth experiences with the creative and/or performance and/or scholarly aspects of the selected area of specialization as required by the nature and content of that specialization.

(d) The ability to use instruments, equipment, and technologies associated with the area(s) of specialization.

(e) Laboratory experience in teaching beginning students in the area(s) of specialization, individually, in small groups, and in larger classes.

d. Teaching Competencies. The musician-teacher must be able to lead students to competency, apply music knowledge and skills in teaching situations, and integrate music instruction into the process of P–12 education.

Essential competencies are:

(1) Ability to teach music at various levels to different age groups and in a variety of classroom and ensemble settings in ways that develop knowledge of how music works syntactically as a communication medium and developmentally as an agent of civilization. This set of abilities includes effective classroom and rehearsal management.

(2) An understanding of child growth and development and an understanding of principles of learning as they relate to music.

(3) The ability to assess aptitudes, experiential backgrounds, orientations of individuals and groups of students, and the nature of subject matter, and to plan educational programs to meet assessed needs.

(4) Knowledge of current methods, materials, and repertoires available in various fields and levels of music education appropriate to the teaching specialization.

(5) The ability to accept, amend, or reject methods and materials based on personal assessment of specific teaching situations.

(6) An understanding of evaluative techniques and ability to apply them in assessing both the musical progress of students and the objectives and procedures of the curriculum.

e. Professional Procedures

In order to implement programs to achieve the competencies identified in the foregoing sections, the following standards and guidelines apply:

(1) Program purposes and requirements must be clear to prospective students, the profession, potential employers of graduates, and the public.

A program may focus on an area of specialization as listed above in items c.(1), (2), (3), and (4).

A program may focus on the traditional vocal / choral / general / instrumental combination. A program may have a unique focus or purpose that combines two or more of the many possible specializations as listed in item c.(4). Whatever choices are made about purpose and focus, degree titles and descriptions must be consistent with curricular content and requirements. The following information must be clearly stated for each music teacher preparation program offered by an institution:

- (a) the specific area(s) included in a comprehensive or specialization-focused program;
- (b) the subject matters to be addressed in the program and in supportive areas;
- (c) expectations regarding breadth and depth of study and engagement;
- (d) expectations for the development of artistic, intellectual, and pedagogical competencies, and specifically, what students must know and be able to do in order to graduate from the program; and
- (e) the relationship of program purposes, content, and graduation expectations to licensure requirements.

(2) Music education methods courses should be taught or supervised by the institution's music education faculty who have had successful experience teaching music in elementary and/or secondary schools, and who maintain close contact with such schools.

(3) Institutions should encourage observation and teaching experiences prior to formal admission to the teacher education program; ideally, such opportunities should be provided in actual school situations. These activities, as well as continuing laboratory experiences, must be supervised by qualified music personnel from the institution and the cooperating schools. The choice of sites must enable students to develop competencies consistent with standards outlined above, and must be approved by qualified music personnel from the institution.

(4) Institutions should establish specific evaluative procedures to assess students' progress and achievement. The program of evaluation should include an initial assessment of student potential for admission to the program, periodic assessment to determine progress throughout the program, and further assessment after graduation.

(5) Institutions should provide opportunities for advanced undergraduate study in such areas as conducting, composition, and analysis.

D. Best Practices, Recommendations – See Section 1, C

E. General Studies Competencies – See Section 1, D

SECTION FOUR – ALL B.A. IN MUSIC DEGREE PROGRAMS AND SPECIALIZATIONS: ESSENTIAL CONTENT AND COMPETENCIES

Common Body of Knowledge and Skills – See Section 1, A

1. Performance
2. Musicianship Skills and Analysis
3. Composition and Improvisation
4. History and Repertory
5. Technology
6. Synthesis

The Music Department understands that a Bachelor of Arts in Music diploma differs from a Bachelor of Music diploma. However, we strive to have our B.A. graduates exhibit the same knowledge and skills as our B.M. graduates through a common and rigorous core curriculum in the first two years of study. Such rigor will aid the B.A. in Music graduate, if she or he wishes, in pursuing a music-related career or in gaining admission into a NASM-accredited graduate program or both. The knowledge and skills of the B.M. degree do not conflict with the essential content and competencies of a B.A. in Music degree, nor are they additive, but rather are viewed as being complementary, integrative, and of benefit to B.A. in Music students.

1. Musicianship

a. Competencies

Students holding undergraduate liberal arts degrees must have:

- (1) The ability to hear, identify, and work conceptually with the elements of music such as rhythm, melody, harmony, structure, timbre, texture.
- (2) An understanding of and the ability to read and realize musical notation.
- (3) An understanding of compositional processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces.
- (4) An acquaintance with a wide selection of musical literature, the principal eras, genres, and cultural sources.
- (5) The ability to develop and defend musical judgments.

b. Operational Guidelines

These competencies should be pursued through making, listening to, and studying music.

2. Performance and Music Electives

a. Competencies

Students holding undergraduate liberal arts degrees must develop:

(1) Ability in performing areas at levels consistent with the goals and objectives of the specific liberal arts degree program being followed.

(2) Understanding of procedures for realizing a variety of musical styles.

(3) Knowledge and/or skills in one or more areas of music beyond basic musicianship appropriate to the individual's needs and interests, and consistent with the purposes of the specific liberal arts degree program being followed.

b. Operational Guidelines

(1) Instruction in a performing medium, participation in large and small ensembles, experience in solo performance, and opportunities to choose music electives are the means for developing these competencies.

(2) Opportunities are provided for advanced undergraduate study in various music specializations consistent with the liberal arts character of the degree. See Sections 5-9 below for B.A. in Music specializations, competencies, and best practices.

3. Levels

a. The Music Department shall make clear the levels of competency necessary to graduate

b. The levels specified must be consistent with expectations for an undergraduate liberal arts major in music.

4. General Education

a. Competencies

Normally, students graduating with liberal arts degrees have:

(1) The ability to think, speak, and write clearly and effectively, and to communicate with precision, cogency, and rhetorical force.

(2) An informed acquaintance with the mathematical and experimental methods of the physical and biological sciences; with the main forms of analysis and the historical and quantitative techniques needed for investigating the workings and developments of modern society.

(3) An ability to address culture and history from a variety of perspectives.

(4) Understanding of, and experience in thinking about, moral and ethical problems.

(5) The ability to respect, understand, and evaluate work in a variety of disciplines.

(6) The capacity to explain and defend views effectively and rationally.

(7) Understanding of and experience in one or more art forms other than music.

b. Operational Guidelines

These competencies are usually developed through studies in English composition and literature; foreign languages; history, social studies, and philosophy; visual and performing arts; natural science and mathematics. Precollegiate study, regular testing and counseling, and flexibility in course requirements are elements in achieving these competencies.

SECTION FIVE – MUSIC HISTORY AND LITERATURE (B.A.)

A. Essential Content and Competencies – See Section 4

B. Common Body of Knowledge and Skills – See Section 1, A

C. Results upon completion of degree program – See Section 1, B

D. Essential Competencies, Experiences, and Opportunities

1. The ability to work intellectually with relationships between music and music literature within cultural/historical contexts. Knowledge of a variety of cultures, various historical periods, and the ability to produce and defend scholarly work are essential.

2. An understanding of evolving relationships among musical structure, music history, and performance practices, and the influence of such evolutions on musical and cultural change.

3. Ability to use effectively the tools of scholarship including keyboard skills, spoken and written language, research techniques, advanced musical analysis, and applicable technologies. Reading skill in foreign languages is essential.

4. An opportunity for independent study that culminates in a senior project or thesis is strongly recommended.

E. Best Practices, Recommendations – See Section 1, C

F. General Studies Competencies – See Section 1, D

G. Best Practices, Recommendations for General Studies

Students majoring in music history and literature must prepare themselves in both music and the liberal arts, especially if they plan to undertake graduate study in historical musicology or ethnomusicology. Studies recommended would include those from such areas as social, political, cultural, and intellectual history; various national literatures; cultural anthropology; psychology; aesthetics; histories of the visual arts and theatre; and studies in interrelationships among the arts; acoustics, mathematics, and computer science; comparative religion and liturgies.

SECTION SIX – COMPOSITION (B.A.)

A. Essential Content and Competencies – See Section 4

B. Common Body of Knowledge and Skills – See Section 1, A

C. Results upon completion of degree program – See Section 1, B

D. Essential Competencies, Experiences, and Opportunities

1. Achievement of the highest possible level of skill in the use of basic concepts, tools, techniques, and procedures to develop a composition from concept to finished product. This involves the competency to work with both electronic and acoustic media; work with a variety of forms, styles, and notations; and apply principles of scoring appropriate to particular compositions.

2. Fluency in the use of tools needed by composers. This includes keyboard skills, spoken and written language, conducting and rehearsal skills, analytical techniques, and applicable technologies.

3. Opportunities to hear fully realized performances of the student's original compositions. Public presentation and critical assessment is an essential experience.

E. Best Practices, Recommendations – See Section 1, C

F. General Studies Competencies – See Section 1, D

G. Best Practices, Recommendations for General Studies

Study in such areas as computer science, acoustics, and media is strongly recommended.

SECTION SEVEN – MUSIC THEORY (B.A.)

A. Essential Content and Competencies – See Section 4

B. Common Body of Knowledge and Skills – See Section 1, A

C. Results upon completion of degree program – See Section 1, B

D. Essential Competencies, Experiences, and Opportunities

1. Advanced capabilities in musical analysis including the ability to produce and discuss analytical work from an independent perspective. This includes the ability to compare and evaluate the results of various analytical procedures.
2. An understanding of the relationships between theory and composition. This includes original and imitative work in composition and a basic understanding of the relationships among musical structure, aesthetic effect, and cultural context.
3. Ability to use the tools of theoretical work including keyboard skills, spoken and written language, research techniques, and applicable technologies.
4. An opportunity for independent study that culminates in a senior project or thesis is strongly recommended.

E. Best Practices, Recommendations – See Section 1, C

F. General Studies Competencies – See Section 1, D

G. Best Practices, Recommendations for General Studies

Study in such areas as computer science, film and theatre technology, acoustics, and aesthetics is strongly recommended.

SECTION EIGHT – MUSIC TECHNOLOGY (B.A.)

A. Essential Content and Competencies – See Section Four

B. Common Body of Knowledge and Skills – See Section 1, A

C. Results upon completion of degree program – See Section 1, B

D. Essential Competencies, Experiences, and Opportunities

This section is currently under development.

E. Best Practices, Recommendations – See Section 1, C

F. General Studies Competencies – See Section 1, D

G. Best Practices, Recommendations for General Studies

Study in such areas as computer science, acoustics, and aesthetics is strongly recommended.

SECTION NINE – MUSIC FOR ELEMENTARY TEACHERS (B.A.)

A. Essential Content and Competencies – See Section Four

B. Common Body of Knowledge and Skills – See Section 1, A

C. Results upon completion of degree program – See Section 1, B

D. Essential Competencies, Experiences, and Opportunities

This section is currently under development.

E. Best Practices, Recommendations – See Section 1, C

F. General Studies Competencies – See Section 1, D

G. Best Practices, Recommendations for General Studies

This section is currently under development.

THEATRE AND DANCE

TAD Graduates will be able to demonstrate:

1) Collaboration Skills, 2) Communication Skills, 3) Critical Thinking, 4) Creative Problem Solving, 5) Interpretive Skills, 6) Artistic Scholarship and 7) Self Awareness

General Outcomes

- Students will be able to formulate insightful questions, articulate perspectives, and defend specific points of view.
- Students will be able to present their work in an articulate, engaging, and professional manner.
- Students will be able to select a topic and research and write a major research paper.
- Students will demonstrate an understanding of the use of time –management.
- Students will demonstrate an understanding of the creative processes involved in theatre and dance.
- Students will be able to attend and/or participate in the performance of a play or dance concert with an appreciation for and understanding of the process involved in the mounting of a production for public viewing.

Conceptual and Critical Thought

- Students will develop the symbiosis of creative and critical thought necessary for understanding the arts.
- Students will demonstrate an ability to critically and creatively discuss history and literature using objective, detailed descriptions, and discipline based analytic vocabulary.
- Students will demonstrate an ability to think and write critically and creatively in evaluating the theatre experience.
- Students will demonstrate an ability to critically and creatively discuss their artistic work using objective, detailed descriptions, and discipline based analytic vocabulary.
- Students will demonstrate an ability to identify the historical relevance of western theatre in modern thought.
- Students will demonstrate an ability to analyze text as well as performance with an ability to discern, evaluate and discuss creative choices.
- Students will demonstrate an ability to employ script analysis through scoring, including beats, intentions/objectives, tactics/strategies.
- Students will demonstrate an ability to formulate insightful questions, articulate perspectives, and defend specific points of view.
- Students will demonstrate an ability to compare and contrast individual works of performing art.
- Students will demonstrate an ability to discuss the art of Theatre and Dance and its relation to the work of Theatre Artists and Dancers.
- Students will demonstrate an understanding of intention & objective.
- Students will demonstrate and articulate an understanding of play and choreographic structure.
- Students will demonstrate an understanding of how a character is built through the use of research and analysis of the world of the play.
- Students will demonstrate an understanding of how physical and vocal choices are rooted in a character's psychology.
- Students will demonstrate an understanding of and be able to articulate the definition of style in performance.
- Students will be able to identify the cultural influences that determine a character's behavioral choices.
- Students will be able to demonstrate an understanding of the uniqueness of language and movement within a specific dramatic style.
- Students will demonstrate an understanding of how a character's behavior is adjusted based on relationships.
- Students will demonstrate an understanding of how characters adjust to psychological obstacles.
- Students demonstrate an understanding of the nature of the collaborative process that defines the performing art.
- Students will demonstrate an understanding of the organization of a production and the processes of communication between the disparate groups involved.

History, Research and Writing

- Students will be able to select a topic and research and write a major research paper.
- Students will be able to read and write analytical reports on a number of dramatic and choreographic works from a range of historical periods.

- Students will have a better knowledge of the important historical figures of (acting, directing, choreography, and design, etc.)
- Students will demonstrate an understanding of the development of character through analysis of research on a particular time period or theatrical movement.
- Students will be able to demonstrate a working knowledge of essential artists and theorists, critics, authors, and producers through discussion and in reflective research papers.
- Students will demonstrate an understanding of the concept of refining ones work through proofing and revising.

Physicality

- Students will demonstrate an ability to integrate space, time, and energy considerations in performance.
- Students will demonstrate an awareness of the body's connection to mind and emotion.
- Students will demonstrate an ability to connect the inner life of a character with outer physical expression.

Performance

- Students will take responsibility for integrity and intent in individual performance work.
- Students will demonstrate an ability to explore and develop a variety of options in stage performance.
- Students will demonstrate confidence in their performance techniques.
- Students will demonstrate an ability to retain text and choreography and perform in lengthy and complex productions.
- Students will understand the importance of and demonstrate an ability to construct and even lead basic vocal and physical warm-ups.
- Students will demonstrate an understanding of stage positions and their use.
- Students will understand the concept of and demonstrate an ability to play a character from moment-to-moment.
- Students will demonstrate an ability to control the range of their circles of concentration.
- Students will discover and develop their personal voices as theatrical artists.
- Students will demonstrate an ability to express thoughts and action through the use of dialogue.

Design and Craft

- Students will demonstrate an understand of the designer's role in the production process.
- Students will have a better knowledge of the history of theatre and its relationship to theatrical design.
- Students will demonstrate an understanding of the basic principles that govern design.
- Students will demonstrate an understanding of the creative and collaborative process.
- Students will demonstrate an understanding of the use of time-management.
- Students will safely demonstrate a proficiency with the tools and methods used in scenic, lighting and costume design.
- Using theatrical safety guidelines students will be able to critically assess their work practices and environment.

- Students will demonstrate a sound understanding of the process of mounting a theatrical production.
- Students will demonstrate an understanding of the role of a backstage running crew.
- Students will demonstrate a clear understanding of the role of teamwork in the theatre.
- Students will demonstrate an ability to read measurements and transfer such data from plans to physical projects.
- Students will demonstrate an ability to read and understand scenic, lighting, costume and construction drafting or plates.
- Students will demonstrate an ability to assess a projects logistics and proceed to build specific scenic element, props, or costume pieces.

WOMENS' STUDIES MINOR

Students will:

- explain and analyze the social construction of race, class and gender;
- recognize social, economic, and global inequality;
- promote social justice, diversity, and activism;
- analyze current events, their historical roots and their impact on women's lives;
- identify key theoretical questions debated in feminist scholarship and apply that knowledge to other disciplines;
- connect feminist theory and feminist practice;
- argue persuasively in defense of a feminist perspective;
- examine feminist questions from interdisciplinary perspectives;
- analyze the ethical considerations of power and privilege;
- recognize the differences between interdisciplinary and disciplinary knowledge;
- analyze the politics of knowledge production.

SCHOOL OF NATURAL AND SOCIAL SCIENCES

APPLIED COMPUTER SCIENCE

Students will:

- be capable of demonstrating advanced microcomputer hardware support in the PC microcomputer area.
- demonstrate software development skills in at least one computer language through the commonly accepted level of "data structures"
- demonstrate an introductory understanding of a computer architecture other than Microsoft Windows, currently either Unix, Linux, or iSeries.
- demonstrate software development skills in at least one other computer language not taught in 2 above.
- demonstrate their knowledge of computer science material and their education course material through successful completion of methods and student teaching. (Teacher Cert)

ANTHROPOLOGY

Objective: Apply an Anthropological perspective to social and cultural phenomena.

Learning Outcomes:

- After completion of introductory anthropology courses, students will be able to define anthropology and distinguish it from other disciplines in the social sciences.
- Upon completion of introductory anthropology courses, students will demonstrate the ability to use anthropological concepts to understand important ways in which peoples and cultures in the world vary from each other and are similar.
- Upon completion of the minor, students will be able to recognize the value of anthropology.
- Upon completion of the minor, students will be able to demonstrate their understanding of the fundamental ways in which cultures are similar and different from each other.
- Upon completion of the minor, students will be able to demonstrate their awareness of basic theoretical explanations for cultural similarities and differences.
- Upon completion of the minor, students will be able to demonstrate a basic knowledge of how to do cultural anthropological research.

Objective: Apply an Anthropological perspective to human evolution.

Learning Outcomes:

- After completion of the introductory anthropology courses, students will demonstrate a basic understanding of the biological and cultural changes and adaptations that occurred in *Homo sapiens sapiens* and their primate precursors to form humankind as it now exists.

Objective: Examine one's own life and values using these perspectives.

Learning Outcome:

- Introductory and advanced students will demonstrate the ability to think reflexively about their particular worldview(s) from a variety of perspectives so they can better understand their orientation to the world.

Objective: To develop a basic understanding of ethnographic and archaeological methods.

Learning Outcome:

- Advanced students will demonstrate a rudimentary ability to collect and analyze ethnographic data.

Or

- Advanced students will demonstrate a basic understanding of how archaeological data are collected and analyzed.

Objective: View social and cultural phenomena with an informed global and cross-cultural perspective.

Learning Outcomes:

- Students will be able to identify, interpret and compare diverse cultural beliefs and customs.
- Students will be able to challenge ethnocentric notions and practices that lead to gross inequalities of opportunity and treatment in social life.
- Students will be able to demonstrate an understanding of particular cultures, including non-Western cultures, as adaptive and meaningful systems.

Objective: Understand the centrality of gender, race, class, and culture in different societies.

Learning Outcomes:

- Introductory students will demonstrate a recognition of the importance of global, multicultural, and gender-sensitive perspectives.
- Students will be able to discuss the significance of race, class, gender, and culture as organizing concepts in anthropology.

Objective: Understand and evaluate anthropological theory and research.

Learning Outcomes:

Students will be able to apply theory to explicate cultural phenomena.

CHEMISTRY BA

The graduating Chemistry professional will:

- have a knowledge of and an ability to apply algebra, and statistical methods to the solution of chemically related problems
- have an understanding of the applications and principles of chemistry to the analysis of systems
- have the ability to characterize systems, including the ability to systematically acquire, analyze, and interpret data
- have the ability to recognize, formulate, and model processes with the primary intent of recommending and implementing process improvement
- be able to effectively serve on interdisciplinary teams and, in many cases, be capable of leading / facilitating these teams
- understand that chemistry is a profession imposing significant social and ethical responsibilities with global implications that must be effectively addressed
- have the ability to evaluate, select and use the modern computer and information technology tools and techniques required for professional practice in the physical sciences
- understand the major concepts and assumptions of chemistry as it relates the physical sciences to technology and society

- understand the principles of chemistry, procedures of inquiry, and scientific dispositions, and learning experiences that make these aspects of the subject matter meaningful
- understand the importance of developing critical thinking, problem solving and performance skills as related to the profession
- understand the role of communication and the use of knowledge of effective verbal and nonverbal techniques to foster active inquiry, collaboration, and supportive interaction in the field
- understand the meaning of life-long learning, and foster relationships with colleagues and agencies in the larger community to develop professionally

CHEMISTRY BS

The graduating BS Chemistry professional will:

- have a knowledge of and an ability to apply calculus, linear algebra, and statistical methods to the solution of chemical and physics related problems
- have an understanding of the applications and principles of chemistry and calculus-based physics to the analysis of systems
- have the ability to characterize systems, including the ability to systematically acquire, analyze, and interpret data
- have the ability to recognize, formulate, and model processes with the primary intent of recommending and implementing process improvement
- be able to effectively serve on interdisciplinary teams and, in many cases, be capable of leading / facilitating these teams
- understand that chemistry and physics are professions imposing significant social and ethical responsibilities with global implications that must be effectively addressed
- have the ability to evaluate, select and use computer and information technology tools and techniques required for professional practice in the physical sciences
- understand the major concepts and assumptions of chemistry and physics as it relates the physical sciences to technology and society
- understand the principles of physics and chemistry, procedures of inquiry, and scientific dispositions, and learning experiences that make these aspects of the subject matter meaningful
- understand the importance of developing critical thinking, problem solving and performance skills as related to the profession
- understand the role of communication and the use of knowledge of effective verbal and nonverbal techniques to foster active inquiry, collaboration, and supportive interaction in the field
- understand the meaning of life-long learning, and foster relationships with colleagues and agencies in the larger community to develop professionally

CHEMISTRY-PHYSICS

The graduating Chemistry/Physics professional will:

- have a knowledge of and an ability to apply calculus, linear algebra, and statistical methods to the solution of chemical and physics related problems
- have an understanding of the applications and principles of chemistry and calculus-based physics to the analysis of systems
- have the ability to characterize systems, including the ability to systematically acquire, analyze, and interpret data

- have the ability to recognize, formulate, and model processes with the primary intent of recommending and implementing process improvement
- be able to effectively serve on interdisciplinary teams and, in many cases, be capable of leading / facilitating these teams
- understand that chemistry and physics are professions imposing significant social and ethical responsibilities with global implications that must be effectively addressed
- have the ability to evaluate, select and use computer and information technology tools and techniques required for professional practice in the physical sciences
- understand the major concepts and assumptions of chemistry and physics as it relates the physical sciences to technology and society
- understand the principles of physics and chemistry, procedures of inquiry, and scientific dispositions, and learning experiences that make these aspects of the subject matter meaningful
- understand the importance of developing critical thinking, problem solving and performance skills as related to the profession
- understand the role of communication and the use of knowledge of effective verbal and nonverbal techniques to foster active inquiry, collaboration, and supportive interaction in the field
- understand the meaning of life-long learning, and foster relationships with colleagues and agencies in the larger community to develop professionally

COMPUTER MATH

Students will demonstrate:

- software development skills in at least two computer programming languages;
- competency in either Web Page Construction or Computer Hardware Fundamentals;
- understanding in fundamental data structures and algorithms that are commonly used in computer science, mathematics, and other applied areas;
- competency at the intermediate-advanced level in at least two areas from software engineering, database systems or computer networks;
- the understanding of how computer science and mathematics affect life in various professional disciplines;
- technical skills in completing mathematical processes;
- an ability to communicate mathematics effectively;
- an ability to apply technology to mathematics; and
- Students will possess breadth and depth of knowledge of mathematics.

CRIMINAL JUSTICE MINOR

Students will be able to:

- apply a liberal arts perspective to understand the criminal justice system;
- define, explain, and critically assess the function of the U.S. criminal justice system;
- identify and understand major steps in the judicial/legal process;
- understand criminality from various perspectives (psychological, sociological, philosophical, historical and political);

- analyze the law within a changing political, historical, economic, moral and cultural context.

ECONOMICS

Students demonstrate five basic kinds of understanding:

- The ability to think abstractly.
- Awareness of the assumptions behind different paradigms
- Knowledge of trade-offs faced by economic policymakers.
- How price signals lead to resource allocation in a market economy.
- The links between the fate of the US economy and global flows of goods, , and labor.

In addition, students will demonstrate:

- basic economic literacy;
- the ability to apply tools of economic analysis to real world phenomena and increases; proficiency with economic data and graphs;
- awareness of links between economics and other disciplines;
- an ability to apply the tools of economic analysis to real world phenomena;
- an ability to think logically and critically about economic issues;
- proficiency with economic models;
- ability to conduct and present economic research.

ENVIRONMENTAL STUDIES

Students are expected to demonstrate

Critical thinking and problem solving skills including

- Ability to identify and search different sources of professional information
- Reading and comprehending information (different sources of written material as well as data sets)
- Ability to ask meaningful questions
- Understanding the role and importance of scientific research, policy, economic, and ethical issues for professional knowledge and decision making
- Ability to differentiate between relevant and less important aspects of an issue
- Ability to consider a range of realistic solutions to an environmental problem
- The ability to design and implement studies
- Ability to recognize biases

Analytical and quantitative reasoning skills including

- Knowledge and understanding of key elements in the research process
- Ability to follow laboratory manuals and safety protocols
- Recognizing potential sources of errors and biases in data
- Interpretation of data sets, including the use and limitation of statistical tools
- Ability to do back of the envelope calculations
- Visualization and interpretation of spatial data sets

Communication skills including

- Ability to develop a meaningful claim, and to support claim with an argument
- Ability to organize claims, ideas etc. in a meaningful way
- Visual communication of data sets (e.g. graphs, conceptual models, maps etc.)
- Ability to address in writing different audiences (scientific, professional, and lay)
- Preparing and delivering oral presentations to different audiences

Skills associated with moral and character development

- Recognition of personal value system
- Awareness of ethical issues associated with environmental issues
- Ethical reasoning

Knowledge/Content based outcomes

- Understand and apply legal and policy aspects of selected environmental issues
- Understand economic aspect of selected environmental issues
- Understand scientific concepts associated with causes and consequences of selected environmental issues
- Understand the ethical issues of environmental issues

GENERAL SCIENCE

For all of the options:

At the end of this program, students will be able to:

- Explain concepts, solve problems, and perform laboratory techniques at an introductory level, in each of the following areas:
 - Life Science
 - Physical Science
 - Earth-Space science
- Demonstrate a specific content area concentration beyond the general science requirement in one of the following:
 - Biology
 - Chemistry
 - Environmental science
 - Earth-space science
- Comprehend, apply evaluate and synthesize knowledge of the following:
 - Fundamental units
 - Derived units
 - Systems of measurement
- Apply mathematical (at least through the level of college algebra) and statistical concepts
- Apply computer technology, hardware and software, to acquire and analyze data and to collect and communicate information
- Integrate knowledge from the history and philosophy of science
- Use various instruments, including computer-based and manual to observe and record natural phenomena

For options 2 & 3 (Education)

In the area of instructional performance, the candidate shall have the ability to

- Design and teach general science school laboratory activities which incorporate scientific processes and promote scientific habits of mind

- Integrate the knowledge of the methods of teaching reading, writing, communication, and study skills essential to the effective mastery of science content
- Relate science to technological issues that influence society and the ethical and moral consequences of decisions related to those issues
- Model and teach safe laboratory and field practices, including personal safety and equipment storage and upkeep; and waste handling and disposal
- Identify the organizations, agencies and journals that contribute to the professional growth of a science teacher
- Integrate examples of common themes exhibited in all of the science into teaching and course design including:
 - Systems
 - Models
 - Constancy or stability
 - Change
 - Evolution
 - Scale
- Design learning activities which foster questioning, open-ended investigations, the development of cooperative group skills, and promote practice in decision making and problem solving
- Select, adapt, evaluate, and use age-appropriate strategies and materials for the learning of science, including the recommendation of national and state curriculum projects (National Science Education Standards, Atlas, NH State Science Frameworks) and scientific groups
- Organize, present, and evaluate science ideas in a manner which emphasized conceptual understanding and in ways which provide for optimal learning experience for school students of all ability levels

GEOGRAPHY

A geographically informed person will understand:

- The world in spatial terms
- Places and regions
- Physical systems
- Human systems
- Environment and society
- Geography as an applied discipline

LEARNING OUTCOMES:

The students will be able to:

- Use maps, mental maps, geographic representations, and geospatial technologies
- Analyze spatial organization of people, places, and environments
- Identify physical and human characteristics of places and regions
- Recognize how culture and experience influence people's perceptions of places and regions
- Identify Earth's dynamic physical processes
- Distinguish among the characteristics and spatial distribution of Earth's ecosystems

- Recognize processes, patterns, distribution and functions of human migration and settlement
- Discern forces of global cooperation and conflict
- Comprehend the relationship between humans and the environment
- Analyze resource use and distribution
- Apply geography to interpret the past and present, and to plan for the future

GEOLOGY

Desired Learning Outcomes

We want our students to understand the workings of the natural world and the process of science, to be able to read, observe and think critically, reason quantitatively, undertake research, and communicate effectively—in other words, to engage in the scientific process. We would like geology and Integrative Studies students to acquire, to different degrees, the following:

Knowledge of:

- the methods and history of scientific inquiry as an approach to observing and thinking about the world around us;
- internal and surficial Earth processes, of descriptions of major Earth systems, and of the history of the Earth;
- Earth materials and resources, through the study and interpretation of rocks and their constituent minerals, with an understanding of fundamental relationships between chemical composition, mineralogy, rock-type, tectonic setting, and global biogeochemical cycling;
- environmental issues related to earth processes, materials and systems;
- environmental monitoring methods;
- laboratory methods used in geology;
- the contributions of geology to society; and
- the vocabulary of geology, both verbal and visual (*i.e.*, map representations).

And the ability to:

- take accurate and complete notes in the field;
- use the methods of scientific inquiry, with practice in the skills of observation, analysis, problem solving and critical thinking;
- work cooperatively in teams;
- use computers in addressing quantitative problems, in managing and analyzing large datasets, and in preparing maps, graphs, illustrations and figures for scientific reports;
- identify fossils, minerals, and rocks and their origins;
- recognize and map bodies of rock exposed in the field and from imagery;
- correlate bodies of rock from surface and subsurface information and recognize spatial relationships;
- effectively use subsurface data and integrate it with surface data;
- interpret geologic structures, age sequences, geologic histories, and conditions of formation;
- find, review, and comprehend appropriate scientific literature;
- think and visualize in 3 (spatial) and 4 (space & time) dimensions, over a wide range of length and time scales (atomic to universal, instantaneous to forever);

- reason quantitatively, and to apply quantitative approaches in problem solving and scientific investigation;
- effectively communicate scientific information and ideas in writing, orally, and visually;
- apply current technology and theories; and think critically, define problems, quantify parameters and provide solutions;

MATEMATICS

Students will possess:

- Technical skill in completing mathematical processes;
- Breadth and depth of knowledge of mathematics;
- An understanding of the relationship of mathematics to other disciplines;
- An ability to communicate mathematics effectively;
- A capability of understanding and interpreting written materials in mathematics;
- An ability to use technology to do mathematics.

Consistent with this mission and program goals, we have constructed

PHYSICS MINOR

The graduating Physics minor will:

- have a knowledge of and an ability to apply calculus, linear algebra, and statistical methods to the solution of chemical and physics related problems
- have an understanding of the applications and principles of calculus-based physics to the analysis of systems
- have the ability to characterize systems, including the ability to systematically acquire, analyze, and interpret data
- have the ability to recognize, formulate, and model processes with the primary intent of recommending and implementing process improvement
- be able to effectively serve on interdisciplinary teams and, in many cases, be capable of leading / facilitating these teams
- understand that physics is a professions imposing significant social and ethical responsibilities with global implications that must be effectively addressed
- have the ability to evaluate, select and use the modern computer and information technology tools and techniques required for professional practice in the physics
- understand the major concepts and assumptions of physics as it relates the physical and life sciences to technology and society
- understand the principles of physics, procedures of inquiry, and scientific dispositions, and learning experiences that make these aspects of the subject matter meaningful
- understand the importance of developing critical thinking, problem solving and performance skills as related to the profession
- understand the role of communication and the use of knowledge of effective verbal and nonverbal techniques to foster active inquiry, collaboration, and supportive interaction in the field
- understand the meaning of life-long learning, and foster relationships with colleagues and agencies in the larger community to develop professionally

PSYCHOLOGY

Students will:

- Understand and be able to critically evaluate research literature in psychology.
- Have familiarity with major theories and research that explain development and behavior.
- Apply theory and research to explain the behavior and development of self and others.
- Be able to present information effectively, orally, and in writing.
- Be able to coordinate multiple perspectives when interpreting research, theory, and practice.

SOCIOLOGY

Students completing the B.A. Program in Sociology will be able to:

- Think sociologically
- Read and understand literature on complex social issues.
- Apply a comparative and international perspective to the study of social phenomena.
- Collect and analyze sociological data using appropriate research methods.
- Write a substantial research paper analyzing an important sociological issue.
- Critically assess, discuss, and write essays drawing on theoretical perspectives.
- Use sociological knowledge and abilities to contribute to their community and society.

SOCIAL SCIENCE

Students completing the Social Science Major will be able to:

- Think like a social scientist
- Read and understand literature from the various social science disciplines.
- Apply a comparative and international perspective to the study of social scientific phenomena.
- Write a substantial research paper analyzing an area of interest from a social scientific perspective.
- Critically assess, discuss, and write essays drawing on various social science perspectives.
- Using their knowledge of the social sciences to contribute to their classrooms (if applicable), community and society.

INTEGRATIVE STUDIES PROGRAM

The Integrative Studies Program provides students the opportunity to develop essential knowledge and skills associated with a liberal arts education and liberal learning. The program consists of three sets of program outcomes: disciplinary and interdisciplinary, skills, and integrative. Essential questions that frame the program outcomes are: How do critical and creative thinking, researching, writing and evaluating quantitative information inform scholarly endeavors? How are the arts and humanities constructed and defined and how do they change, shape, provoke, and represent our perceptions and our world? What assumptions, methodologies and theoretical constructs define today's sciences and how are they used to understand our world? How are the skills, concepts, and values developed across disciplines applied to questions fundamental to today's interdependent world?

I. Foundations

Thinking and Writing

Students will be able to:

- demonstrate skills and ways of thinking that are essential for all students as they move through the academic curriculum.
- write about an issue of special interest to them by focusing on a creative and complex question, investigating the question with critical analysis of readings, research and data, and using appropriate research techniques in documentation.

Quantitative Literacy

Students will be able to:

- apply the basic methods of descriptive statistics, including both pictorial representations and numerical summary measures, to analyze data.
- use appropriate software to create spreadsheets, tables, graphs and charts.
- read and interpret visually represented data.
- distinguish among various types of growth models (e.g., linear, exponential) and the types of situations for which the models are appropriate.
- critically read and interpret a quantitative problem.
- pose a question in the form of a mathematical model in order to solve the problem.
- apply prior knowledge to solve a new problem.

II. Developing Perspectives and Breadth of Knowledge

Modes of Inquiry

Perspectives Outcomes:

Students will be able to:

- articulate an understanding of representative theories in the natural and social sciences
- explore language use, linguistic forms, and language's ability to change society and ourselves.
- distinguish and assess the impact that knowledge and methodology in the natural and social sciences have on our understanding of self, society and environment
- critically and creatively engage in the aesthetic and intellectual components of the fine and performing arts.
- articulate the ways that the arts and humanities shape, change, provoke, and represent our world and our perception of the world.
- understand and interpret diverse evidence about past societies and cultures.
- understand how the scientific method differs from other modes of inquiry and ways of knowing.
- evaluate diverse approaches to the study of history and their relationship to power, privilege and difference
- use and understand the power of mathematics, statistics, and qualitative analysis to represent and investigate ideas and evidence, as well as evaluate data dependent arguments.
- analyze a creative text within its cultural, aesthetic, historical, and intellectual contexts.
- identify the values and concerns expressed in creative works.

III. Making Connections (4 credits)

Integrating Modes of Inquiry

Interdisciplinary Outcomes

Students will be able to:

- cross disciplinary boundaries to reveal new patterns and connections that reframe knowledge.
- analyze the assumptions and actions of society from multiple perspectives.
- examine national and international issues through artistic, philosophical, cultural, scientific, technological, economic, social and political lenses.
- assess their own roles and responsibilities as members of diverse communities

Integrative Studies Program Skills Outcomes

Reading

- Identify contextual issues (author, date of publication, etc.)
- Read with an awareness of purpose
- Identify goals to focus attention
- Ask questions that lead to greater understanding of material
- Select information relevant to a purpose
- Demonstrate the ability to summarize and identify key points
- Demonstrate an understanding and ability to relate discipline- or interdisciplinary specific information to theories presented in a course

Writing

- Write with purpose
- Write for an audience
- Organize, state and develop ideas clearly
- Write with syntactical and grammatical competence
- Understand and value academic honesty
- Write with an organizational schema
- Ask questions that lead to a richer product
- Incorporate research appropriately
- Write with authority
- Cultivate disciplinary and interdisciplinary expertise necessary to question sources, develop ideas, and offer interpretations
- Develop complex positions or arguments through writing

Information Literacy

- Identify general kinds of information available in Mason Library and at KSC
- Find a broad array of informational material both physically, in the stacks, and on electronic sources
- Evaluate usefulness and reliability of information and sources
- Incorporate information into written work and oral presentations
- Properly cite sources
- Identify discipline-specific scholarly sources within and beyond KSC
- Utilize discipline-specific resources in order to find information
- Evaluate sophistication of sources for potential information appropriate to task
- Develop research (paper or project) using information appropriately

Critical Thinking

- Demonstrate the ability and willingness to approach a particular idea, problem, task, or goal from multiple perspectives
- Ask sophisticated questions when engaging an idea, problem, task, or goal
- Analyze and interpret evidence, conjectures, and alternative strategies related to a given idea, problem, task, or goal
- Gather evidence, formulate conjectures, and implement alternative strategies related to a given idea, problem, task, or goal
- Analyze and interpret arguments made by oneself and by others to formulate and defend a conjecture or thesis
- Synthesize information, arguments, and perspectives in order to create new meaning, insight, and understanding
- Develop analytical arguments
- Apply critical thinking to important ethical and societal issues and problems
- Acknowledge and develop both insight and perspective

Creative Thinking

- Use novel ideas, perspectives, or solutions when engaging with a problem, task, or goal
- Engage a problem, task, or goal with sustained effort over a period of time
- Use multiple models or representations of ideas
- Express personal ideas, points of view, or feelings and bring those to a product
- Invent and re-apply ideas
- Confront questions with multiple answers
- Form new combinations of ideas
- Reframe new ideas (metaphors, analogies, use of models)
- Consider diverse points of view in order to reconstruct them imaginatively, emphatically, and accurately
- Demonstrate open-mindedness and flexibility in thinking
- Create new uses for existing patterns or structures
- Go beyond standard schema when investigating a problem
- Solve unstructured problems

Critical Dialogue

- Organize what one wishes to convey
- Speak with purpose when conveying thoughts/ideas
- Avoid “fillers” (uh, you know, like) when conveying thoughts/ideas
- Develop the skill to use emotional involvement as a tool of respectful engagement with the listener
- Meet allotted time guidelines
- Project voice so all can hear
- Use language appropriate for the audience or other discussion participants
- Demonstrate thoroughness of research and effective preparation in making a formal presentation
- Engage the listener through verbal and non-verbal behaviors
- Demonstrate an awareness of the listener and the response of others to what is being said
- Use paraphrase or restatement in responding to a listener
- Demonstrate active listening in order to avoid disengagement with the speaker
- Maintain focus on the content of the presentation, regardless of the speaker’s style of delivery
- Demonstrate appropriate nonverbal behaviors (attention, engagement)
- Practice listening objectively
- Recognize emotional involvement while listening
- Practice mental engagement with the speaker in order to formulate thoughtful questions based on conversations and presentations
- Make notes regarding key points in order to question or respond effectively

Technological Fluency

- Use email to communicate with classmates and professors (successfully sending, receiving, and manipulating a variety of file-formats)
- Use Internet search techniques and engines with discrimination to find resources and information
- Format text documents, including academic papers, using an approved style
- Use appropriate presentation software to deliver a formal presentation
- Use a database and/or spreadsheet to access and set up information
- Use an information management program (e.g., SPSS, e-portfolio, institutional repository) to organize, interpret and convey ideas
- Employ computer media (visual images, sound, graphical displays, etc.) as appropriate in academic work

Quantitative Reasoning

- Use an array of numerical manipulations to interpret basic information
- Read and interpret graphs, charts and tables in common media
- Analyze the relationships between two variables
- Use the basic measurements of statistics
- Use symbolic expressions to represent, convey, and interpret relationships among variables
- Develop and apply appropriate quantitative-oriented problem-solving strategies
- Read and interpret graphs, charts and tables in discipline specific media
- Perform simple data analysis, both numerical and graphical
- Draw conclusions and inferences supported by own data analysis
- Critically evaluate conclusions and inferences drawn by others based on data presented as support

Integrative Outcomes

Diversity

Students will be able to:

- recognize how differences shape approaches to identity, knowledge, and power.
- apply diverse perspectives and experiences to develop disciplinary arguments.

Ethics

Students will be able to:

- identify the ethical issues within a discipline.
- solve an ethical problem associated with a discipline.

Global Issues

Students will be able to:

- approach global issues from multiple perspectives in deriving solutions to potential conflicts.
- critique a discipline through the lens of other cultural values.
- demonstrate a commitment to analyzing and/or solving global issues.
- demonstrate knowledge about cultures, societies, religious worldviews and /or political/economic systems outside of the western context.
- demonstrate an understanding of non-western cultures from the context of those cultures.

Social and Environmental Engagement

Students will be able to:

- identify elements of social and/or environmental structures: individual, group and system.
- demonstrate a commitment to analyzing and/or solving social and/or environmental issues.
articulate the interrelations of natural and social-cultural systems, and the ways in which human agency can both degrade and sustain the environment.