

to produce leaders of character to serve in the nation's defense. The cornerstone of the leadership program is developing self-confidence, teamwork, responsibility, professional ethics, and the development of all aspects of leadership.

Students at the University of Delaware can earn a commission as a Second Lieutenant in the U.S. Army upon completion of the military science program and a baccalaureate degree. The normal four-year ROTC program requires the completion of eight one-semester courses, totaling 12 credit hours, and successful completion of a five-week leadership camp during the summer prior to the senior year. Many challenging and fun training events are scheduled.

ROTC PROGRAM

The ROTC program consists of two major subsets – the Basic Course and the Advanced Course. Both courses are straightforward rather than conceptual and tend to be small (25 or less) with much personal interaction between the cadre and the students.

Basic Course – for freshmen and sophomores. A series of four 1-credit classes that are open to all students with no military obligation. Student instruction includes basic leadership skills, orientation to the US Army, time management and other academic skills, decision making, and adventure training opportunities (rappelling, land navigation, etc.).

Faculty and the advanced course cadets form support groups and act as mentors to the basic course students, providing assistance and a positive environment. Students enrolled in the basic course can compete for 2- and 3-year scholarships that will pay full tuition/fees and provide stipends.

While the Army may not be for everyone, and some of the Basic Course students decide not to continue in the Advanced program, they all unequivocally state that the ROTC Basic Course instruction provided them with excellent life skills, abilities, and confidence.

Advanced Course – for juniors and seniors leading to a commission as a Second Lieutenant. This series of four 2-credit classes involves advanced practical leadership and military skills training, including a five-week summer training camp at Fort Lewis in the State of Washington. Students are paid and all travel, medical needs, lodging, and meals are provided while attending Advanced Camp.

No military obligation is incurred until the beginning of this phase. Once the student satisfactorily completes all ROTC requirements and graduates from the University, he/she receives a commission in the US Army (Active Duty or Reserve status).

Army ROTC Benefits

Four, three, and two-year scholarships are awarded to deserving ROTC students each year. Scholarships provide for total tuition costs (in- or out-of-state rates), up to \$20,000 per year, plus a \$900 book allowance and a tiered stipend which starts at \$3,000 annually. All these benefits may be combined with other scholarship benefits. The Military Sciences Department has additional scholarship incentives worth over \$90,000 to award to freshman through senior cadets for academic excellence. Typically, 70% of all UD ROTC students are on some type of scholarship incentive.

Many of the graduating cadets elect to go on Active Duty to put their ROTC leadership training into practice. The annual salary for a new Second Lieutenant exceeds \$35,000.

For those cadets who request and receive Reserve Forces duty, many receive better civilian jobs (increased pay and responsibility) because of the practical leadership training and experience they gained in the ROTC program.

Most UD degree programs accept all 12 military science credits toward graduation. Exceptions are those in the College of Engineering and in the Departments of Medical Technology, Nursing, and Nutrition and Dietetics, each of which accepts 4 credits. ROTC credits can be applied toward a leadership minor.

MUSIC

Telephone: (302) 831-2577

<http://www.music.udel.edu/>

Faculty Listing: <http://www.music.udel.edu/faculty/directory/>

DEPARTMENT OVERVIEW

The mission of the Department of Music is to provide the best educational opportunities for our music majors' professional development as performers, educators, and scholars. We seek to provide optimal resources for significant musical growth through departmental ensembles, private study, and academic music courses available to the general student and others of the University community. We provide opportunities for cultural enrichment to the University community and its constituencies, as well as leadership and support to music educators and other professional musicians in the region.

MAJORS & MINORS

The curricula for undergraduate students majoring in music lead to the degrees Bachelor of Music and Bachelor of Art. The programs in the degree Bachelor of Music are directed to those who intend to become professional musicians. They offer opportunities to major in Music Education, Theory/Composition, or Applied Music (band or orchestral instruments, piano, classical guitar, and voice). The degree Bachelor of Arts offers the opportunity for professional study in music within a liberal arts context. The degree Bachelor of Arts with a concentration in music management studies provides additional opportunities preparing students for administrative careers within the not-for-profit and for-profit sectors of the music industry. All programs in music provide effective preparation for graduate study.

A minor in music is available in applied music, church music, musical studies, jazz studies or music management studies.

DEPARTMENT POLICIES

Entering majors are expected to demonstrate a high level of musical achievement and aptitude. Placement auditions and musicality tests for those students who wish to enter in the fall semester should be completed by June 1 of the preceding spring and must be completed before acceptance is granted. *Acceptance to the University does not indicate acceptance as a music major.* Students who transfer from accredited colleges are placed in appropriate levels of music theory, literature, and applied music according to the results of tests given at the time of transfer.

Part-time music majors must have the permission of the department chair to enroll for private study.

Credit for large ensembles, as required by various curricula, is given only for participation during the fall and spring semesters. The Department of Music requires the successful completion of a Sophomore Review before continuation as a music major. Detailed information about these and other aspects of curricular policy is published in the Department's *Student Handbook*, available online at www.music.udel.edu/current/.

OPPORTUNITIES FOR NON-MAJORS

For the general University undergraduate, the department offers courses in the fundamentals of music, music literature, and class study of voice and organ. All courses in the department are available to any University student who meets course and department prerequisites. Some music courses may be taken as partial fulfillment of breadth requirements in the College of Arts and Sciences. Private study is also available to freshmen in the University Honors Program and to other non-majors, on a space-available basis, through the Music Merit Program. Auditions for these programs are held during the first week of the academic year by arrangement with the

department office. A variety of performing organizations are available to all University students: marching band, wind and jazz ensembles, orchestra, choral groups, the early music ensemble, opera workshop, steel band, and various chamber ensembles.

The department is a leader in the development and implementation of instructional technology. It is an accredited institutional member of the National Association of Schools of Music.

**DEGREE: BACHELOR OF ARTS
MAJOR: MUSIC**

CURRICULUM CREDITS

See page 86 for University and College requirements.

MAJOR REQUIREMENTS

No more than 45 credits of Music courses may count toward the degree.

Applied Music

MUSC 100	Recital Attendance (four semesters required)	0
MUSC 153	Private Study: BA/Minor	2
MUSC 154	Private Study: BA/Minor	2
MUSC 175	Class Piano: Elementary I	1
MUSC 253	Private Study: BA/Minor	2
MUSC 254	Private Study: BA/Minor	2

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 295/296	Advanced Harmony I and II	6

Ensemble

Four Semesters		4
Students must consult with the Department for appropriate ensemble placement. Students must be enrolled in an appropriate ensemble during all semesters in which they are enrolled in Private Study.		

Literature

MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1827 to the Present	3

ELECTIVES

After required courses are completed sufficient elective credits must be taken to meet the minimum credit requirement for the degree.

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 124

**DEGREE: BACHELOR OF ARTS
MAJOR: MUSIC
CONCENTRATION: MUSIC MANAGEMENT STUDIES**

CURRICULUM CREDITS

See page 86 for University and College Requirements.

MAJOR REQUIREMENTS

No more than 57 credits of Music courses may count toward the degree.

Applied Music

MUSC 153	Private Study: BA/Minor	2
MUSC 154	Private Study: BA/Minor	2
MUSC 175	Class Piano: Elementary I	1
MUSC 253	Private Study: BA/Minor	2
MUSC 254	Private Study: BA/Minor	2

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 295/296	Advanced Harmony I and II	6

Ensemble

Four semesters		4
Students must consult with the Department for appropriate ensemble placement. Students must be enrolled in an appropriate ensemble during all semesters in which they are enrolled in Private Study.		

Literature

MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1825 to the Present	3

Music Management

MUSC 388	Principles of Music Industry Practice	3
MUSC 389	Elements of Music Management	3
MUSC 309	Patterns of Patronage	3
MUSC 464	Internship	1-3

ELECTIVES

After required courses are completed sufficient non-music elective credits must be taken to meet the minimum credit requirement for the degree.

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 124

**DEGREE: BACHELOR OF MUSIC
MAJOR: APPLIED MUSIC-INSTRUMENTAL
CONCENTRATION: PRINCIPAL INSTRUMENTS**

The concentration designates the student's principal instrument. A list of instrumental options can be found in the chart on page vi at the front of this catalog, or can be obtained from the Department or the University Advisement Center.

CURRICULUM CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
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First Year Experience (see p. 64) 0-4

Discovery Learning Experience (see p. 64) 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3

A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4

MATH 113	Contemporary Mathematics (designed for students who do not intend to continue the study of mathematics)	
MATH 114	College Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)	
MATH 115	Pre-Calculus (designed for students who intend to continue the study of mathematics)	
MATH 221	Calculus I	
MATH 241	Analytic Geometry and Calculus A	
Successful performance on the college proficiency exam (0 credits awarded).		

English literature course (200-level – Group A or B) 3

HIST 101 Western Civilization to 1648 3

HIST 102 Western Civilization: 1648 to the Present 3

Foreign Language

Two semesters of the same modern foreign language 8

BREADTH REQUIREMENTS (See pages 91-97)

Group A 6

Understanding and appreciation of the creative arts and humanities. (This requirement is satisfied by MUSC 195 and 196.)

Group B 15
The study of culture and institutions over time. Fifteen credits representing at least two areas. (This requirement is satisfied by MUSC 311, 312, 313, HIST 101, and 102.)

Group C 9
Empirically based study of human beings and their environment. Nine credits representing at least two areas. (MUSC 309 is recommended for partial fulfillment of this requirement.)

Group D 6
The study of natural phenomena through experiment and analysis.

MAJOR REQUIREMENTS

Applied Music

MUSC 100 Recital Attendance (six semesters required) 0
MUSC 151 Private Study 2
MUSC 152 Private Study 2
MUSC 251 Private Study 2
MUSC 252 Private Study 2
MUSC 357 Advanced Private Study 3
MUSC 358 Advanced Private Study 3
MUSC 457 Advanced Private Study 4
MUSC 458 Advanced Private Study 4
MUSC 175/176 Class Piano: Elementary I and II 2
MUSC 301 Junior Recital 0
MUSC 401 Senior Recital 0

Theory

MUSC 185/186 Ear Training and Sight Singing I and II 4
MUSC 195/196 Harmony I and II 6
MUSC 285/286 Advanced Ear Training and Sight Singing I and II 4
MUSC 295/296 Advanced Harmony I and II 6
MUSC 335 Basic Conducting 2
MUSC Theory electives 4-6

Ensemble

Twelve credits selected from the following: 12
MUSC 113 Marching Band, MUSC 114 Symphonic Band, MUSC 115 Wind Ensemble, MUSC 116 Jazz Ensemble, MUSC 117 University Orchestra, MUSC 118 Percussion Ensemble, and MUSC 321 Ensemble.
(All Ensembles may be repeated.)

Guitarists must complete the following:

MUSC 321 Ensemble: Guitar 8
Two semesters of any departmental ensemble 2

Literature

MUSC 211 Introduction to Music History 3
MUSC 311 Music History: 400-1600 3
MUSC 312 Music History: 1600-1827 3
MUSC 313 Music History: 1827 to the Present 3
MUSC 403 Chamber Music Literature 3
MUSC 405 Symphonic Literature 3

Music Electives

Excludes private study on primary instrument. 7-9
May include two credits of ensemble.

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 125

**DEGREE: BACHELOR OF MUSIC
MAJOR: APPLIED MUSIC-PIANO**

CURRICULUM	CREDITS
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UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing
(minimum grade C-) 3

First Year Experience (see p. 64) 0-4

Discovery Learning Experience (see p. 64) 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3
A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4
MATH 113 Contemporary Mathematics
(designed for students who do not intend to continue the study of mathematics)
MATH 114 College Mathematics and Statistics
(designed for students who do not intend to continue the study of mathematics)
MATH 115 Pre-Calculus
(designed for students who intend to continue the study of mathematics)
MATH 221 Calculus I
MATH 241 Analytic Geometry and Calculus A
Successful performance on the college proficiency exam (0 credits awarded).

English literature course (200-level – Group A or B) 3
HIST 101 Western Civilization to 1648 3
HIST 102 Western Civilization: 1648 to the Present 3

Foreign Language
Two semesters of the same modern foreign language. 8

BREADTH REQUIREMENTS (See pages 91-97)

Group A 6
Understanding and appreciation of the creative arts and humanities. (This requirement is satisfied by MUSC 195 and 196.)

Group B 15
The study of culture and institutions over time. Fifteen credits representing at least two areas. (This requirement is satisfied by MUSC 311, 312, 313, HIST 101, and 102.)

Group C 9
Empirically based study of human beings and their environment. Nine credits representing at least two areas. (MUSC 309 is recommended for partial fulfillment of this requirement.)

Group D 6
The study of natural phenomena through experiment and analysis.

MAJOR REQUIREMENTS

Applied Music

MUSC 100 Recital Attendance (six semesters required) 0
MUSC 151 Private Study 2
MUSC 152 Private Study 2
MUSC 251 Private Study 2
MUSC 252 Private Study 2
MUSC 357 Advanced Private Study 3
MUSC 358 Advanced Private Study 3
MUSC 457 Advanced Private Study 4
MUSC 458 Advanced Private Study 4
MUSC 481 Pedagogy and Literature 3
MUSC 155 Private Study (Harpisichord or Organ)
or
MUSC 179 Class Organ 1
MUSC 301 Junior Recital 0
MUSC 401 Senior Recital 0

Theory

MUSC 185/186 Ear Training and Sight Singing I and II 4
MUSC 285/286 Advanced Ear Training and Sight Singing I and II 4
MUSC 195/196 Harmony I and II 6
MUSC 295/296 Advanced Harmony I and II 6
MUSC 393 Keyboard Harmony 2
MUSC 335 Basic Conducting 2
MUSC Theory courses 4-6

Ensemble

Two semesters of any departmental ensemble 2
MUSC 241 Accompanying Chamber Music: Piano (4 semesters) 4
MUSC 441 Accompanying Chamber Music: Piano (2 semesters) 2

Literature

MUSC 211 Introduction to Music History 3
MUSC 311 Music History: 400-1600 3
MUSC 312 Music History: 1600-1827 3

MUSC 313	Music History: 1825 to the Present	3
MUSC 363	Keyboard Literature I	3

One of the following courses:

MUSC 403	Chamber Music Literature	
or		
MUSC 405	Symphonic Literature	3

Music Electives

Excludes private study on primary instrument. 8
 May include two credits of ensemble.

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 126

**DEGREE: BACHELOR OF MUSIC
 MAJOR: APPLIED MUSIC - VOICE**

CURRICULUM	CREDITS
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UNIVERSITY REQUIREMENTS

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
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First Year Experience (see p. 64) 0-4

Discovery Learning Experience (see p. 64) 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3

A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4

MATH 113	Contemporary Mathematics (designed for students who do not intend to continue the study of mathematics)	
MATH 114	College Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)	
MATH 115	Pre-Calculus (designed for students who intend to continue the study of mathematics)	
MATH 221	Calculus I	
MATH 241	Analytic Geometry and Calculus A	
Successful performance on the college proficiency exam (0 credits awarded).		

HIST 102 Western Civilization: 1648 to the Present. 3

Languages courses (French, German and Italian) 24

THEA 226 Acting I 3

BREADTH REQUIREMENTS (See pages 91-97)

Group A 6

Understanding and appreciation of the creative arts and humanities. (This requirement is satisfied by MUSC 195 and 196.)

Group B 12

The study of culture and institutions over time. Twelve credits representing at least two areas. (This requirement is satisfied by MUSC 311, 312, 313 and HIST 102.)

Group C 6

Empirically based study of human beings and their environment. Six credits representing at least two areas. (MUSC 309 is recommended for partial fulfillment of this requirement.)

Group D 3

The study of natural phenomena through experiment and analysis.

MAJOR REQUIREMENTS

Applied Music

MUSC 100	Recital Attendance (six semesters required)	0
MUSC 151	Private Study	2
MUSC 152	Private Study	2
MUSC 251	Private Study	2

MUSC 252	Private Study	2
MUSC 357	Advanced Private Study	3
MUSC 358	Advanced Private Study	3
MUSC 457	Advanced Private Study	4
MUSC 458	Advanced Private Study	4
MUSC 175	Class Piano: Elementary I	1
MUSC 176	Class Piano: Elementary II	1
MUSC 275	Class Piano: Intermediate I	1
MUSC 276	Class Piano: Intermediate II	1
MUSC 301	Junior Recital	0
MUSC 401	Senior Recital	0

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6
MUSC 295/296	Advanced Harmony I and II	6
MUSC 335	Basic Conducting	2

Ensemble: One of the following (any 8 semesters) 8

MUSC 108	University Singers	
or		
MUSC 109	Schola Cantorum	
or		
MUSC 110	Chorale	

Literature

MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1827 to the Present	3

Related Music Studies

MUSC 171	Diction: English and Italian	1
MUSC 271	Diction: German	1
MUSC 272	Diction: French	1
MUSC 480	Vocal Pedagogy	3
MUSC 489	Opera Workshop	1
Two of the following courses:		
MUSC 426	German Lieder	2
MUSC 427	French Art Song	2
MUSC 428	Twentieth-Century Art Song	2

Music Electives

Six credits from the following: 6

MUSC 103	Introduction to Italian Opera	
MUSC 104	Introduction to Opera	
MUSC 395	Form Analysis	
MUSC 407	Contemporary Music Literature	
or one of the following courses not taken as a Related Music Studies course:		
MUSC 426	German Lieder	
MUSC 427	French Art Song	
MUSC 428	Twentieth-Century Art Song	

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 130

**DEGREE: BACHELOR OF MUSIC
 MAJOR: MUSIC EDUCATION - INSTRUMENTAL
 CONCENTRATION: PRINCIPAL INSTRUMENT**

The concentration designates the student's principal instrument. A list of instrumental options can be found in the chart on page vi at the front of this catalog, or can be obtained from the Department or the College of Arts and Sciences Advisement Center.

CURRICULUM	CREDITS
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UNIVERSITY REQUIREMENTS

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
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First Year Experience (see p. 64) 0-4

Discovery Learning Experience (see p. 64) 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related courses content (see p. 64-66). 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3
 A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4
 MATH 113 Contemporary Mathematics
 (designed for students who do not intend to continue the study of mathematics)
 MATH 114 College Mathematics and Statistics
 (designed for students who do not intend to continue the study of mathematics)
 MATH 115 Pre-Calculus
 (designed for students who intend to continue the study of mathematics)
 MATH 221 Calculus I
 MATH 241 Analytic Geometry and Calculus A
 Successful performance on the college proficiency exam (0 credits awarded).

BREADTH REQUIREMENTS (See pages 91-97)

Group A 9
 Understanding and appreciation of the creative arts and humanities. Nine credits representing at least two areas. (This requirement is partially satisfied by MUSC 195 and 196.)

Group B 9
 The study of culture and institutions over time. (MUSC 311, 312, and 313 satisfy this requirement.)

Group C 9
 Empirically based study of human beings and their environment. Nine credits representing at least two areas. (MUSC 309 is recommended for partial fulfillment of this requirement.)

Group D 4
 The study of natural phenomena through experiment and analysis. One science course with an associated laboratory.

MAJOR REQUIREMENTS

Applied Music

MUSC 100 Recital Attendance (six semesters required) 0
 MUSC 151 Private Study 2
 MUSC 152 Private Study 2
 MUSC 251 Private Study 2
 MUSC 252 Private Study 2
 MUSC 351 Private Study 2
 MUSC 352 Private Study 2
 MUSC 451 Private Study 2
 MUSC 175 Class Piano: Elementary I 1
 MUSC 176 Class Piano: Elementary II 1
 MUSC 275 Class Piano: Intermediate I 1
 MUSC 276 Class Piano: Intermediate II 1
 MUSC 174 Class Voice: Beginning 1
 MUSC 301 Junior Recital 0

Theory

MUSC 185/186 Ear Training and Sight Singing I and II 4
 MUSC 285/286 Advanced Ear Training and Sight Singing I and II 4
 MUSC 195/196 Harmony I and II 6
 MUSC 295/296 Advanced Harmony I and II 6
 MUSC 431 Orchestration 2

Ensemble

MUSC 113 Marching Band 3
 An additional four credits from MUSC 113, 114, 115, 117 4

Literature

MUSC 211 Introduction to Music History 3
 MUSC 311 Music History: 400-1600 3
 MUSC 312 Music History: 1600-1827 3
 MUSC 313 Music History: 1827 to the Present 3

Secondary Instruments

MUSC 214 Stringed Instruments Class 1
 MUSC 215 High Brass Instruments Class 1
 MUSC 216 Low Brass Instruments Class 1
 MUSC 217/218 Woodwind Instruments Class I and II 2
 MUSC 219 Percussion Instruments 1

Music Methods

MUED 179 Freshman Seminar in Music Education 1
 MUSC 287 Music Technology 3
 MUSC 335 Basic Conducting 2
 MUED 279 Practicum in Music Education 3
 MUED 337 Instrumental Conducting 2
 MUED 379 Music in the Elementary and Junior High (or Middle) School 3
 MUED 479 Secondary Music Materials and Approaches 3

Music Electives

Six music electives excluding ensemble and private study on primary instrument 6

Professional Studies

EDUC 413 Adolescent Development and Educational Psychology 4
 EDUC 414 Teaching Exceptional Adolescents 3
 EDUC 419 Diversity in Secondary Education 3
 EDUC 400 Student Teaching 9

Grade of C- or better required in all major and Professional Studies courses.

To be eligible to student teach, Music Education students must have a GPA of 2.75 in their music major and an overall GPA of 2.5. Students must also pass a teacher competency test as established by the University Council on Teacher Education. Students should consult the teacher education program coordinator (see list on p. 205) to obtain the student teaching application and other information concerning student teaching policies.

CREDITS TO TOTAL A MINIMUM OF 130

**DEGREE: BACHELOR OF MUSIC
 MAJOR: MUSIC EDUCATION - GENERAL/CHORAL
 CONCENTRATION: PIANO**

CURRICULUM CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing
 (minimum grade C-) 3
 First Year Experience (see p. 64) 0-4
 Discovery Learning Experience (see p. 64) 3
 Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3
 A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4

MATH 113 Contemporary Mathematics
 (designed for students who do not intend to continue the study of mathematics)
 MATH 114 College Mathematics and Statistics
 (designed for students who do not intend to continue the study of mathematics)
 MATH 115 Pre-Calculus
 (designed for students who intend to continue the study of mathematics)
 MATH 221 Calculus I
 MATH 241 Analytic Geometry and Calculus A
 Successful performance on the college proficiency exam (0 credits awarded).

BREADTH REQUIREMENTS (See pages 91-97)

Group A 9
 Understanding and appreciation of the creative arts and humanities. Nine credits representing at least two areas. (This requirement is partially satisfied by MUSC 195 and 196.)

Group B 9
 The study of culture and institutions over time. (MUSC 311, 312, and 313 satisfy this requirement.)

Group C 9
 Empirically based study of human beings and their environment. Nine credits representing at least two areas. (MUSC 309 is recommended for partial fulfillment of this requirement.)

Group D 4
The study of natural phenomena through experiment and analysis. One science course with an associated laboratory.

MAJOR REQUIREMENTS

Applied Music

MUSC 100	Recital Attendance (six semesters required)	0
MUSC 151	Private Study: Piano	2
MUSC 152	Private Study: Piano	2
MUSC 251	Private Study: Piano	2
MUSC 252	Private Study: Piano	2
MUSC 351	Private Study: Piano	2
MUSC 352	Private Study: Piano	2
MUSC 451	Private Study: Piano	2
MUSC 155	Private Study: Voice (four semesters required)	4
MUSC 480	Vocal Pedagogy	3
MUSC 171	Diction: English and Italian	1
MUSC 271	Diction: German	1
MUSC 272	Diction: French	1
MUSC 301	Junior Recital	0

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6
MUSC 295/296	Advanced Harmony I and II	6
MUSC 407	Contemporary Music Literature	3
or		
MUSC 431	Orchestration	2

Ensemble: One of the following (any 7 semesters) 7

MUSC 108	University Singers	
or		
MUSC 109	Schola Cantorum	
or		
MUSC 110	Chorale	

Literature

MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1827 to the Present	3
MUSC 328	Choral Literature	2

Secondary Instruments

MUSC 214	Stringed Instruments Class	1
MUSC 215	High Brass Instruments Class	1
or		
MUSC 217	Woodwind Instruments Class I	

Music Methods

MUED 179	Freshman Seminar in Music Education	1
MUSC 287	Music Technology	3
MUSC 335	Basic Conducting	2
MUED 279	Practicum in Music Education	3
MUED 336	Choral Conducting	2
MUED 379	Music in the Elementary and Junior High (or Middle) School	3
MUED 479	Secondary Music Materials and Approaches	3

Music Electives

Three credits of music electives excluding ensemble and private study on primary instrument. (MUSC 407 recommended) 3

Professional Studies

EDUC 413	Adolescent Development and Educational Psychology	4
EDUC 414	Teaching Exceptional Adolescents	3
EDUC 419	Diversity in Secondary Education	3
EDUC 400	Student Teaching	9

Grade of C- or better required in all major and Professional Studies courses.

To be eligible to student teach, Music Education students must have a GPA of 2.75 in their music major and an overall GPA of 2.5. Students must also pass a teacher competency test as established by the University Council on Teacher Education. Students should consult the teacher education program coordinator (see list on p. 205) to obtain the student teaching application and other information concerning student teaching policies.

CREDITS TO TOTAL A MINIMUM OF 130

DEGREE: BACHELOR OF MUSIC
MAJOR: MUSIC EDUCATION - GENERAL/CHORAL
CONCENTRATION: VOICE

CURRICULUM CREDITS

UNIVERSITY REQUIREMENTS

ENGL 110 Critical Reading and Writing (minimum grade C-) 3

First Year Experience (see p. 64) 0-4

Discovery Learning Experience (see p. 64) 3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3
A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)

Mathematics: One of the following 0-4

- MATH 113 Contemporary Mathematics (designed for students who do not intend to continue the study of mathematics)
 - MATH 114 College Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)
 - MATH 115 Pre-Calculus (designed for students who intend to continue the study of mathematics)
 - MATH 221 Calculus I
 - MATH 241 Analytic Geometry and Calculus A
- Successful performance on the college proficiency exam (0 credits awarded).

BREADTH REQUIREMENTS (See pages 91-97)

Group A 9
Understanding and appreciation of the creative arts and humanities. Nine credits representing at least two areas. (This requirement is partially satisfied by MUSC 195 and 196.)

Group B 9
The study of culture and institutions over time. (MUSC 311, 312, and 313 satisfy this requirement.)

Group C 9
Empirically based study of human beings and their environment. Nine credits representing at least two areas. (Music 309 is recommended for partial fulfillment of this requirement.)

Group D 4
The study of natural phenomena through experiment and analysis. One science course with an associated laboratory.

MAJOR REQUIREMENTS

Applied Music

MUSC 100	Recital Attendance (six semesters required)	0
MUSC 151	Private Study	2
MUSC 152	Private Study	2
MUSC 251	Private Study	2
MUSC 252	Private Study	2
MUSC 351	Private Study	2
MUSC 352	Private Study	2
MUSC 451	Private Study	2
MUSC 175	Class Piano: Elementary I	1
MUSC 176	Class Piano: Elementary II	1
MUSC 275	Class Piano: Intermediate I	1
MUSC 276	Class Piano: Intermediate II	1
MUSC 171	Diction: English and Italian	1
MUSC 271	Diction: German	1
MUSC 272	Diction: French	1
MUSC 480	Vocal Pedagogy	3
MUSC 301	Junior Recital	0

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6

MUSC 295/296	Advanced Harmony I and II	6
MUSC 407	Contemporary Music Literature	3
or		
MUSC 431	Orchestration	2
Ensemble: One of the following (any 7 semesters)		
MUSC 108	University Singers	7
or		
MUSC 109	Schola Cantorum	
or		
MUSC 110	Chorale	
Literature		
MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1827 to the Present	3
MUSC 328	Choral Literature	2

Secondary Instruments

MUSC 214	Stringed Instruments Class	1
MUSC 215	High Brass Instruments Class	1
or		
MUSC 217	Woodwind Instruments Class I	

Music Methods

MUED 179	Freshman Seminar in Music Education	1
MUSC 287	Music Technology	3
MUSC 335	Basic Conducting	2
MUED 279	Practicum in Music Education	3
MUED 336	Choral Conducting	2
MUED 379	Music in the Elementary and Junior High (or Middle) School	3
MUED 479	Secondary Music Materials and Approaches	3

Music Electives

Three credits of music electives excluding ensemble and private study on primary instrument. (MUSC 407 recommended) 3

Professional Studies

EDUC 413	Adolescent Development and Educational Psychology	4
EDUC 414	Teaching Exceptional Adolescents	3
EDUC 419	Diversity in Secondary Education	3
EDUC 400	Student Teaching	9

Grade of C- or better required in all major and Professional Studies courses.

To be eligible to student teach, Music Education students must have a GPA of 2.75 in their music major and an overall GPA of 2.5. Students must also pass a teacher competency test as established by the University Council on Teacher Education. Students should consult the teacher education program coordinator (see list on p. 205) to obtain the student teaching application and other information concerning student teaching policies.

CREDITS TO TOTAL A MINIMUM OF 130

DEGREE: BACHELOR OF MUSIC
MAJOR: THEORY/COMPOSITION
CONCENTRATIONS: THEORY/COMPOSITION

CURRICULUM CREDITS**UNIVERSITY REQUIREMENTS**

ENGL 110	Critical Reading and Writing (minimum grade C-)	3
First Year Experience (see p. 64)		0-4
Discovery Learning Experience (see p. 64)		3

Three credits in an approved course or courses stressing multi-cultural, ethnic, and/or gender-related course content (see p. 64-66) 3

COLLEGE REQUIREMENTS

Writing: (minimum grade C-)	3
A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for second writing requirement, pages 89-91.)	

Mathematics: One of the following	0-4
MATH 113	Contemporary Mathematics (designed for students who do not intend to continue the study of mathematics)
MATH 114	College Mathematics and Statistics (designed for students who do not intend to continue the study of mathematics)
MATH 115	Pre-Calculus (designed for students who intend to continue the study of mathematics)
MATH 221	Calculus I
MATH 241	Analytic Geometry and Calculus A
Successful performance on the college proficiency exam (0 credits awarded).	

Modern Languages and History:

Twelve credits in one of the following:	
French, German, or Italian	12
HIST 101	Western Civilization to 1648
HIST 102	Western Civilization 1648 to the Present

BREADTH REQUIREMENTS (See pages 91-97)

Two 200-level or higher English literature courses selected from 6
 Group A or B. It is recommended that one of these courses be a poetry course.

Group A 6
 Understanding and appreciation of the creative arts and humanities. (This requirement is satisfied by MUSC 195 and 196.)

Group B 15
 The study of culture and institutions over time. Fifteen credits representing at least two areas. (This requirement is satisfied by MUSC 311, 312, 313, HIST 101, and 102.)

Group C 9
 Empirically based study of human beings and their environment. Nine credits representing at least two areas. (Music 309 is recommended for partial fulfillment of this requirement.)

Group D 9
 The study of natural phenomena through experiment and analysis. Nine credits in at least two areas.

MAJOR REQUIREMENTS**Applied Music**

MUSC 100	Recital Attendance (six semesters required)	0
MUSC 175/176	Class Piano: Elementary I and II	2
MUSC 275/276	Class Piano: Intermediate I and II	2

Secondary Instruments and Conducting

MUSC 214	Stringed Instruments Class	1
MUSC 215	High Brass Instruments Class	1
MUSC 217	Woodwind Instruments Class I	1
MUSC 219	Percussion Instruments	1
MUSC 335	Basic Conducting	2

Theory

MUSC 185/186	Ear Training and Sight Singing I and II	4
MUSC 285/286	Advanced Ear Training and Sight Singing I and II	4
MUSC 195/196	Harmony I and II	6
MUSC 295/296	Advanced Harmony I and II	6
MUSC 287	Music Technology	3
MUSC 431	Orchestration	2
MUSC 392	Contrapuntal Writing	2
MUSC 393	Keyboard Harmony I	2
MUSC 395	Form Analysis	3
MUSC 484	Recording Techniques	3

One of the following concentrations (Theory or Composition): 13**Theory Concentration**

MUSC 298	Beginning Composition (2 semesters)
MUSC 419	Music Theory Research
MUSC 421	Special Projects in Music Theory
Music Electives (Applied study is recommended)	

Composition Concentration

MUSC 298	Beginning Composition (4 semesters)
MUSC 420	Advanced Composition (three semesters required)

Literature

MUSC 211	Introduction to Music History	3
MUSC 311	Music History: 400-1600	3
MUSC 312	Music History: 1600-1827	3
MUSC 313	Music History: 1827 to the Present	3
MUSC 407	Contemporary Music Literature	3

Ensemble

A variety of ensembles are recommended, including Chamber ensembles. . . . 4

Grade of C- or better required in all courses in major.

CREDITS TO TOTAL A MINIMUM OF 128

**HONORS BACHELOR OF ARTS:
MUSIC**

**HONORS BACHELOR OF MUSIC:
THEORY AND COMPOSITION**

The recipient must complete:

1. All requirements for the Bachelor of Arts in Music or the Bachelor of Music in Theory and Composition.
2. All the University's generic requirements for the Honors Degree (see p. 48 of this catalog).

MINOR IN MUSIC

A minimum grade of C- is required in each course for music minors.

**MUSIC MINOR: APPLIED MUSIC-PRINCIPAL
INSTRUMENT**

This title represents all applied music minors, the actual titles of which include the name of the instrument of study (e.g. Applied Music-Bassoon). A list of applied music minors can be found in the chart on page ix in the front of this catalog, or can be obtained from the Department or the Academic Advisement Center.

The Applied Music minor is for nonmusic majors with some musical background who wish to continue their musical training on a more formal basis or music majors who wish to receive formal training on an additional instrument. Places in the minor program are dependent upon the total load of the applied faculty member involved. Admission into the Applied Music minor is determined by audition and musicality testing. The requirements are:

	CREDITS
MUSC 175 Class Piano	1
Not required of persons minoring in Applied Music-Piano.	
MUSC 153, 154, 253, 254 Private Study: BA/Minor	8
Lessons will be 1/2 hour per week and will include a repertory class.	
Ensemble	4
Ensemble and private study must be taken concurrently. (See Ensemble Policy in the Department of Music Student Handbook) Music Minors with principal instrument of piano, organ or guitar must refer to the Department for required ensembles.	
MUSC 185 and 195 Ear Training and Sight Singing/Harmony I	5
Music Literature/History	3
(MUSC 101 and 102 do not fulfill this requirement. Any other music history course will do.)	

TOTAL CREDITS 21
(For Piano minors 20)

MUSIC MINOR: CHURCH MUSIC

The minor in Church Music is directed to the university student who wishes to learn about fundamental aspects of the field of church music. The minor is open to music majors as well as non-majors with appropriate background in keyboard and musical studies. Admission requires departmental approval, based on audition. The program comprises a sequence of courses focusing on historical information, skills, and practical experience relative to the field of church music. Upon completion of the minor, many students will be prepared for positions as church musicians.

	CREDITS
REQUIRED COURSES:	
MUSC 179 Organ Class	1
MUSC 279 Introduction to the Organ	2
(normally taken concurrently)	
MUSC 153, MUSC 154, MUSC 253 Private Study: BA/Minor	6
(may be taken in Organ or Voice)	

Ensemble (taken concurrently with applied study)	3
MUSC 212 History of Liturgy and Hymns	3
MUSC 291 Practicum in Church Music	1
MUSC 292 Organ Improvisation and Service Playing	2
(Prerequisites: MUSC 185 and 195; and two semesters of organ study, or permission of the instructor)	
MUSC 400 Internship	1-3
(Prerequisites: MUSC 212, 291, 292)	

TOTAL CREDITS 19-21

MUSIC MINOR: JAZZ STUDIES

The Music Minor in Jazz Studies offers a concentrated study of the history, theory, and performance elements of the field of jazz. It is directed towards two groups of students: (1) The non-music major who desires a focused study of jazz and its performance techniques; (2) Music Majors who wish to round out their education in music with a structured study of jazz. For this group, the Minor is an important component in a comprehensive education in Music. The requirements are:

	CREDITS
MUSC 181, 182, 281, 282, 283 Private Study: Jazz Styles/Tech.	10
MUSC 116 (four semesters), MUSC 321 Ensemble	5
MUSC 197 Jazz Harmony	3
MUSC 207 History of Jazz	3

TOTAL CREDITS 21

MUSIC MINOR: MUSIC MANAGEMENT STUDIES

The minor in music management studies examines the theory and practice of core principles in both the nonprofit and the for-profit sectors of music. The minor is intended for music majors who wish to broaden the scope of their studies and enhance their career options; and non-music majors with a foundation in applied music and/or music theory who wish to develop administrative careers within the music industry.

Students who are not also music majors must successfully complete (with a grade of C- or better) at least 8-11 credits of specified music courses, including a sequence of music theory courses, before declaring the minor or registering for the core courses listed below. A musicality test will be required for placement in music theory classes. The advisor for music management studies must approve the selection of music courses. Students interested in the minor in Music Management Studies are strongly urged to seek advisement from the music department no later than their sophomore year. Curriculum sheets for this minor are available in the music office. More information about requirements for this minor may be found at: www.music.udel.edu/current/non-majors.html

All students selecting the minor, both music majors and non-music majors, will complete a core component of 10-12 credits as follows:

	CREDITS
MUSC 388 Principles of Music Industry Practice	3
MUSC 389 Elements of Music Management	3
MUSC 309 Patterns of Patronage	3
MUSC 464 Internship	1-3

TOTAL CREDITS 18-23

MUSIC MINOR: MUSICAL STUDIES

The Musical Studies minor is for nonmusic majors who wish to increase their knowledge and understanding of the history and theory of music. No audition is required for admission into the Musical Studies minor. The requirements are:

	CREDITS
MUSC 185 Ear Training and Sight Singing I	2
MUSC 195 Harmony I	3
MUSC 211 Introduction to Music History	3
MUSC 311 Music History: 400 - 1600	3
or	
MUSC 312 Music History: 1600 - 1827	3
or	
MUSC 313 Music History: 1827 to Present	3
MUSC Ensemble	2

MUSC History/Literature Elective (MUSC 101 and 102 do not fulfill this requirement. Any other music history course will do.) 3
 MUSC Theory Elective
 (MUSC 186, 196, 197, 287, 385) 2-3

Grade of C- or better required in all courses in minor.

TOTAL CREDITS 18-19

NEUROSCIENCE

E-mail: skeen@udel.edu

This interdepartmental major between Biological Sciences and Psychology is designed for students with an interest in the interdisciplinary field of neuroscience. The major prepares students for graduate programs in neuroscience, neuropsychology, physiology, and pharmacology, and for positions in pharmaceutical and biotechnology companies. It also provides preparation for professional programs in medicine, physical therapy, and related areas.

In this interdepartmental major students first learn the fundamentals of biology and psychology and then concentrate on courses that examine the structure and function of the nervous system and its relationship to behavior. Detailed instructions regarding an interdepartmental major are available from the Departments or the University Advisement Center.

PHILOSOPHY

Telephone: (302) 831-2359

<http://www.udel.edu/Philosophy/default.html>

Faculty Listing:

<http://www.udel.edu/Philosophy/content/home/people.htm>

Philosophy provides training in basic methods of reasoning, both clear thinking procedures for everyday decision making and more formal techniques of logical analysis. It examines fundamental issues and ideas about our knowledge and values. It furnishes a critical perspective on the methods and results of other disciplines.

A major, a minor, or a concentration in philosophy is a useful background for many careers including the teaching of philosophy. Majors often go on to graduate work in other Arts and Sciences disciplines, as well as to further schooling in law, theology, education, data processing, or business. In general, philosophy offers all students opportunities to develop their critical and analytical skills.

The American Philosophical Association's national headquarters is on the Delaware campus www.apa.udel.edu/apa/.

DEGREE: BACHELOR OF ARTS

MAJOR: PHILOSOPHY

CURRICULUM

CREDITS

See page 86 for University and College requirements.

MAJOR REQUIREMENTS

Both of the following History of Philosophy courses 6
 PHIL 301 Ancient Philosophy
 PHIL 303 Modern Philosophy

One of the following Logic courses 3
 PHIL 105 Critical Thinking
 PHIL 205 Logic

One of the following Ethics courses 3
 PHIL 201 Social and Political Philosophy
 PHIL 203 Ethics

One of the following Epistemology courses 3
 PHIL 305 Twentieth Century Philosophy
 PHIL 306 Philosophy of Science
 PHIL 320 Theory of Knowledge

One of the following Metaphysics courses 3
 PHIL 305 Twentieth Century Philosophy
 PHIL 315 Metaphysics
 PHIL 330 Philosophy of Mind
 PHIL 465 Senior Seminar 3

Three Philosophy elective courses, to include 9
 One three-credit course at the 300-level or above
 One three-credit course with multicultural content
 Note that PHIL 305 can be used to satisfy either the requirement in Epistemology or the requirement in Metaphysics, but not both. A student who takes PHIL 305 must take at least one additional course from one of those two categories.

ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credit requirement for the degree.

CREDITS TO TOTAL A MINIMUM OF 124

HONORS BACHELOR OF ARTS: PHILOSOPHY

The recipient must complete:

- All requirements for the Bachelor of Arts in Philosophy.
- All the University's generic requirements for the Honors Degree (see p. 48 of this catalog).
 - At least six of the twelve Honors credits required in the major must be at the 300-level or higher.
 - At least three of these Honors credits must be in either PHIL 301 or PHIL 303.

MINOR IN PHILOSOPHY

A minor in philosophy requires a minimum of 15 credits, consisting of PHIL 105 or 205; PHIL 301 or PHIL 303; an additional 300-level PHIL course; and two PHIL electives.

PHYSICS AND ASTRONOMY

Telephone: (302) 831-2661

<http://www.physics.udel.edu/>

Faculty Listing: <http://www.physics.udel.edu/contact/>

The Department of Physics and Astronomy offers an undergraduate major program leading to the B.S. in physics, with the option of a concentration in astronomy/astrophysics, chemical physics, or materials physics. A concentration in Geophysics is offered as an option within the B.S. degree in Geology (see page 221). There are also majors leading to the B.A. in physics and to the B.A. in Physics Education, as well as a minor in physics.

The department maintains a balanced program of instruction for students who wish to acquire some understanding of physics as part of their cultural background, as well as for those who require training in physics in preparation for engineering or scientific careers. Intermediate and advanced courses are offered for students who plan teaching or research careers in physics or related disciplines.

The research activity of the staff of the Physics and Astronomy Department and of the staff of the Bartol Research Institute, which is affiliated with the University of Delaware and housed in Sharp Laboratory, is diverse and substantial. Undergraduate participation in research is encouraged.