

Advanced Calculus

Introduction to topology; theorems on continuity, differentiation, integration, and convergence; introduction to differentiable manifolds. Prerequisite: MATH421.

MATH441, 442 Alt G (4,4)

Algebra

Study of groups, rings, fields, modules, vector spaces, and algebras. Prerequisites: MATH281, 355.

MATH471, 472 Alt G (8)

Geometry

Intuitive background and outline of axiomatic development of Euclidean, non-Euclidean, affine, and projective spaces. Relation of these topics to secondary teaching. Prerequisite: MATH173.

MATH487 Alt (variable)

Special Topics in Mathematics

Consult the instructor in regard to the topic to be covered. Prerequisite: Consent of teacher.

MATH495 (1-4)

Independent Study

Enables students to pursue topics in mathematics not offered in other scheduled courses. Ordinarily a minimum of 4 hours of study per week is expected for each credit. Grades are assigned on the basis of a procedure such as oral or written exams or reports selected by a faculty supervisor.

STATISTICS

STAT251 (4)

Probability Theory with Statistical Applications

Concepts of probability for students desiring a deeper understanding of the principles underlying statistical methods. Definitions of probability random variables, probability distributions, estimators, and statistical decision theory. Prerequisite: MATH163, 171, or 182.

STAT285 (4)

Elementary Statistics

A study of basic descriptive and inferential statistics, including elementary probability and probability distributions, statistical inference involving the binomial, normal, and t distributions, and hypothesis testing. Prerequisite: MPE 2.0. Does not apply to a mathematics major or minor.

STAT285 V (6 qtr; 4 sem)

Elementary Statistics

Distance education—see content above.

STAT286 (4)

Statistical Methods

An introduction to multiple regression, analysis of variance, and non-parametric methods. Prerequisite: STAT251 or 285.

STAT455 (4)

Analysis of Variance

Tests of hypotheses concerning 2 or more populations, contingency table analysis, one-way and two-way analysis of variance, and experimental designs. Prerequisite: STAT286.

HONORS IN MATHEMATICS

MATH271-50 (1)

Honors in Mathematics

The study of mathematical problems where the solution depends more on insight and creativity than on routine computation. Repeatable to 3 credits. Prerequisite: MATH173 and consent of instructor.

GRADUATE LEVEL MATHEMATICS

MATH530 (2-4)

Topics in Teaching Mathematics

- A. Algebra
- B. Geometry
- C. Analysis
- D. Applications

Consult with department chair regarding availability in any given year. Repeatable to 8 credits.

MATH540 Alt (2-4)

Topics in Mathematics

Consult with the instructor in regard to the topic to be covered. Prerequisite: Consent of the instructor. Repeatable to 8 credits.

MUSIC

Hamel Hall, Room 210
(616) 471-3600; FAX (616) 471-6339
music@andrews.edu

Faculty

- Peter J. Cooper, *Chair*
- Lilianne Doukhan
- Carlos A. Flores
- Julia S. Lindsay
- Kenneth D. Logan
- Alan F. Mitchell
- Carla L. Trynchuk
- Stephen P. Zork

Academic Programs	Credits
BA: Music	60
BA/BS in Elementary Music Education	58
Bachelor of Music (B.Mus.)	75
Music Education	52-54
Music Performance	60
Minor in Music	33
Minor in Elementary Music Education	40
MA: Music	48
Master of Music (M.Mus.)	48
Music Education	
Performance	

The Music Department is committed to providing a vibrant environment to nurture artistic and creative growth in all students of music. It strives to encourage and guide students through classroom interaction and practical experiences as they mature into music professionals, and to mentor students in responsible use of their talents for service to Christ and humanity.

Bachelor of Music curricula provide a comprehensive exposure to and experience with the performance, history, and theory of music. Students receive hands-on supervised teaching experience in studio or classroom teaching. Bachelor of Arts/Science curricula are for students wishing to pursue concerted study in music within a liberal arts context.

Non-music majors may take courses in music or participate in music lessons or ensembles for for credit or non-credit. See General Education section and course descriptions below for further clarification.

The Andrews University Music Department has been a member of the National Association of Schools of Music since 1964. Music majors may choose to join the student chapter of Music Educators National Conference as well as the Music Department Society of Student Musicians. Selected students are chosen yearly for induction into Pi Kappa Lambda, the national music honor society.

ENROLLMENT

Student Handbook. The *Music Department Student Handbook*, available at the Music Department office, provides clarification of general guidelines, requirements, and standards as well as information concerning recital attendance, recital requirements, and financial aid and departmental scholarships.

Applied Music General Requirements. All music majors register in applied music for 4 years in residence and until they complete their senior recital.

Jury Requirements. All music majors participate in a jury at least twice during the school year. See the *Music Department Student Handbook* for full details.

Ensemble Requirements.

MUCT111,112,113, 121, 122, 123; MUED301, 458; MUHL456; MUED375-05; 3 credits of performance in piano; 2 credits of performance in voice; 6 credits of ensemble; 4 credits of electives*; Piano Proficiency.

*Students are encouraged to acquire elective credit through attendance at professional workshops and seminars for which college credit is available. Students should check the validity of a particular event with advisers prior to attendance.

Graduate Programs

Admission Requirements and Procedures

- General requirements for admission to graduate study as stated in the Admissions section of this bulletin.
- Musicians with various backgrounds often qualify to study music at the graduate level. Normally, a baccalaureate degree with a major in music is required; however, the following categories may also qualify:
 1. Students with an earned baccalaureate degree within any major, assuming adequate undergraduate preparation in music.
 2. Students who have completed programs comparable to the baccalaureate degree from non-United States institutions.
- The Music Department requires placement examinations in music history and literature, music theory, piano proficiency, and an audition in the major area of performance for all

works from various periods of music history. Repeatable. (Alternate years and summers with MUHL519.)

MUSIC EDUCATION

MUED301 (3)
Conducting I

The theory and application of basic conducting principles.

MUED302 (3)
Conducting II

The application of theory and techniques unique to the conducting of both choral and instrumental ensembles. Prerequisite: MUED301 or equivalent.

MUED304 (3)

Instrumental Conducting and Literature

Score analysis; score preparation and programming; study of significant band, orchestra, and ensemble literature. Prerequisite: MUED302 or equivalent.

MUED305 (3)

Choral Conducting and Literature

Score analysis; score preparation and programming; special techniques in conducting choral music. Prerequisite: MUED302 or equivalent.

MUED375 (2)

Music Methods

Fundamentals of performing and teaching ensemble instruments and voice with emphasis on their use in band, choir, and orchestra. (Brass [section 02], percussion [section 05], and vocal [section 06] are all taught in the same year, and string [section 04] and woodwind [section 03] are taught alternate years). Repeatable to 10 credits.

MUED420 Alt g (3)

Piano Pedagogy

Materials and methods of private and class piano instruction.

MUED430 g (1-4)

Topics in _____

A study of selected topics related to the music profession. Consult current class schedule for topics covered each year. Repeatable with different topics.

MUED450 Alt g (2)

Teaching Practicum

Supervised teaching. Required for all undergraduate performance majors.

MUED458 g (4)

Music in the Elementary School

Methods and materials used in musical programs of the elementary grades including rhythm, singing, playing, and listening activities.

MUED459 Alt g (4)

Music Methods and Materials

Methods and materials for the teaching of music in the secondary school with emphasis on the organization and administration of choral and instrumental ensembles.

MUED464 g (1)

Score Reading

Development of keyboard skills in score reading. Graded choral and orchestral literature from two-stave four-part writing to open score is practiced. Repeatable (only 2 credits apply toward

a degree).

MUED475 Alt g (3)

Voice Production and Pedagogy

A comprehensive study of current methodology directed toward the achievement of artistic singing and productive studio procedures.

MUED478 Alt g (3)

Organ Pedagogy

Organ teaching and emphasis on keyboard and pedal technique, interpretation, sight reading, and repertoire.

MUED479 Alt g (3)

String Pedagogy

A study of beginning through advanced pedagogi-

MUPF496-50 (2)

Honors Music Recital (Senior)

A memorized recital under the supervision of a music honors committee. A research document on compositions performed is required. May be taken in lieu of certain required and applied music courses. May count toward fulfillment of General Education Breadth Requirement. Non-music majors taking this course under this circumstance must obtain permission of the instructor in order to enroll.

INDEPENDENT STUDY

MUPF495 (1-4)

Independent Study
