

Term Information

Effective Term Autumn 2021

General Information

Course Bulletin Listing/Subject Area Music
Fiscal Unit/Academic Org School Of Music - D0262
College/Academic Group Arts and Sciences
Level/Career Graduate, Undergraduate
Course Number/Catalog 5604
Course Title Introduction to Piano Technology
Transcript Abbreviation Intro Piano Tech
Course Description To provide the pianist and piano enthusiast a cursory understanding of the construction and maintenance of their instrument.
Semester Credit Hours/Units Fixed: 1

Offering Information

Length Of Course 14 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites None
Exclusions
Electronically Enforced Yes

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 50.0913
Subsidy Level Masters Course
Intended Rank Junior, Senior, Masters, Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Understand the basic care and maintenance of acoustic pianos
- Basic tuning techniques
- Become familiar with the development of the modern piano through its historical predecessors

Content Topic List

- Introduction and course expectations
- Origin and history
- Grand piano construction
- the square grand piano and upright piano construction

Sought Concurrence

No

Attachments

- Introduction to Piano Technology 5604.pdf
(Syllabus. Owner: Banks,Eva-Marie)
- Introduction to Piano Technology proposal and rationale.pdf: Rationale
(Other Supporting Documentation. Owner: Banks,Eva-Marie)
- Additional information from dept.pdf: Email from Undergrad Director
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- BA_MapAU2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- BME_Choral_MapAu2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- BME_General_MapAu2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- Comp_MapAU2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- Musicology_MapAu2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)
- Theory_MapAU2020.xlsx: Map
(Other Supporting Documentation. Owner: Heysel,Garett Robert)

Comments

COURSE REQUEST
5604 - Status: PENDING

Last Updated: Heysel,Garett Robert
04/24/2020

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Banks,Eva-Marie	04/07/2020 09:10 AM	Submitted for Approval
Approved	Woliver,Charles Patrick	04/07/2020 09:19 AM	Unit Approval
Approved	Heysel,Garett Robert	04/24/2020 11:00 AM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Oldroyd,Shelby Quinn Vankeerbergen,Bernadette Chantal	04/24/2020 11:00 AM	ASCCAO Approval

Introduction to Piano Technology
Mus 5604

Undergraduate and Graduate
Syllabus

Instructor: Mitch Staples
Contact information: Phone 614-292-4644
Email: Staples.13@osu.edu
Office Hours: Available by appointment

Class Time: To be determined
Location: H09

Prerequisites: None
Maximum class size: 15
Credit: 1
Contact time per week: 55 minutes
Format: Lecture

Exams: Mid-term and final

Course Description - The primary objective of this course is to provide the pianist and piano enthusiast a cursory understanding of the construction and maintenance of their instrument. Introductory instruction in the art and science of piano design, construction, tuning, and regulating are the central theme of the course. Also covered is the history of the piano industry. Demonstration of some repairs will be included as time permits. Although the curriculum is not designed to prepare the student to become a piano technician it is a firm base for further study.

Text Book: The Wonders of the Piano Catherine C. Biefeldt, Published by William Anton Publishing, Wood Dale, Illinois 1992 required. \$36.00 plus shipping. Available from Schaff Piano Supply, the class will do a group order at the beginning of the session.

Objectives: Students will be expected to know, understand, or demonstrate the following: The basic care and maintenance of acoustic pianos. Basic tuning techniques. Become familiar with the development of the modern piano through its historical predecessors. Learn what a skilled technician can do to bring a piano to concert readiness.

For graduate credit students will also write an essay highlighting how the piano will be utilized to enhance their chosen area of expertise.

Grading:

Attendance and class participation 40%*

Mid-term 20%**

Final 40%***

A (93-100%)

A- (90-92%)

B+ (87-89%)

B (83-86%)

B- (80-82%)

C+ (77-79%)

C (73-76%)

C- (70-82%)

D+ (67-69%)

D (63-66%)

E - Below 62%

*Lectures are interactive, questions are expected. Much of the course content is not covered in the text book therefore attendance and participation in classroom projects are essential. Each class attended earns 5 points with another 10 points earned through participation. Points lost for excused absences can be made up, please contact the instructor to be assigned a suitable activity.

Weekly Schedule of Assignments & Topics

Week 1 – Introduction, discuss student’s expectations, discuss student’s backgrounds. Discuss piano care and maintenance. Discuss optional string jig to be built outside of class.

Active Learning Objectives: The student will learn the basic care requirements of acoustic pianos. The student will have a clear understanding of the content and expectations of the course. Assignment for next week, watch factory tour videos. Read pages 1 - 24.

Week 2 – Discuss the origin and history of keyboard instruments including the early organ, hammered dulcimer, harpsichord, and clavichord. Compare Viennese (Silberman, Stein / Striecher) and English (Broadwood) forte piano construction and qualities.

Active Learning Objectives: The student will know the differences between English and Viennese forte piano design. Also you will gain an understanding of similar precursor instruments. Assignment for next week, read pages 25 - 36.

Week 3 – Discuss grand construction. Compare the modern grand to the forte piano. Trace the major changes in piano construction and reasons why. Introduce historical temperaments and pitch standards.

Active Learning Objectives: The student will learn how the construction of the piano changed through improved materials and manufacturing techniques. Also you will learn how pitch standards and tuning have changed.

Assignment for next week, read pages 37 - 46.

Week 4 – Discuss the square grand and early upright design. Discuss upright construction. Practice tuning unisons.

Active Learning Objectives: The student will demonstrate the basics of tuning a unison. Also you should learn the components of an upright piano.

Assignment for next week, read pages 47 - 64.

Week 5 - Explain partials of a vibrating string and beats. Discuss temperament. Review historical temperaments. Practice setting up a fourths and fifths temperament. Discuss replacing strings.

Active Learning Objectives: This will be a busy day, if time allows the student will tune a fifth and a fourth by hearing the correct beat rates. At the very least you should understand what partials are and how they harmonize.

Assignment for next week, read pages 111 – 114.

Week 6 – Discuss tuning hammer technique, inharmonicity, octave stretch.

Active Learning Objectives: This will be a nuts and bolts of tuning day. I don’t expect anyone to become proficient, but the student should know that there is more to tuning than following the reading of an electronic tuner.

Assignment for week 8, read handout on piano moving. Demonstrate some common repairs.

Week 7 – Review.

**Midterm test – Test will include questions from the assigned reading, and subjects introduced in class discussion and presentations of the prior seven weeks.

This will be a multiple choice and short answer format. Also students will be asked to tune a three string unison. The student will have one hour to complete it.

Week 8 - Discuss splicing broken strings. Discuss moving pianos. Discuss removing and reattaching the pedal lyre.

Active Learning Objectives: With practice I think a pianist should be able to replace or splice a broken string – at least in the treble section. This week the student will learn how a piano technician repairs a broken string. If time permits we will also discuss what is involved in moving a piano. Again you are not expected to gain proficiency but you should be able to recognize good work when you see it.

Assignment for next week, read pages 75 - 98

Week 9 - Overview of upright action regulation. Discuss hammer construction and voicing. Continue to practice tuning.

Active Learning Objectives: The student will be able to assess the condition of an upright action.

Assignment for next week, read pages 99 - 110.

Week 10 – Overview of grand action regulation. Continue to practice simple temperament tuning. Demonstrate the theory of octave stretching.

Active Learning Objectives: The student will be able to assess the condition of a grand action.

Assignment for next week, read pages 115 - 122

Week 11 – Overview of damper, unacorda and sostenuto regulation.

Active Learning Objectives: The student will be able to assess the function of the unacorda and sostenuto pedals.

Assignment for next week, read pages 65 – 74. Graduate credit students will write an essay highlighting how the piano will be utilized enhance their chosen area of expertise. This will be due on week 13.

Week 12 – Discuss soundboard construction. Discuss buying a piano. Practice action regulating. Continue to practice tuning.

Active Learning Objectives: The student will learn two methods of soundboard construction.

After our discussion you should know what to expect when you walk into a piano store or look at a piano for sale by its owner.

Assignment for next week, read pages 123 - 126.

Week 13 – Demonstrate and discuss voicing and fine regulating.

Active Learning Objectives: The student will hear how voicing changes the tone of a piano and learn the benefits of proper regulation.

Week 14 – Review

***Final Exam - Test will include questions from the assigned reading and subjects introduced in class discussion and presentations of the prior fourteen weeks. Also students will be asked to tune a three string unison, an octave, and a fifth.

This test will be short answer format. During the written test students will be asked to demonstrate some tuning skills for extra credit.

Policy Statements for Syllabi

“It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.”

“Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.”

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more

about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273- TALK or at suicidepreventionlifeline.org.

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

New Course Proposal

Rationale for the course proposal:

This course or something similar is offered at many large schools of music, usually by the piano technician. The content varies from a very superficial survey of the piano to in depth study and practice of piano tuning, repair and regulating. I prefer this course to include material for the performer and teacher. If a student is interested in pursuing additional study that student may continue on an individual basis.

The target student for this course is the pianist. All pianists should be shown the technical aspects of their instrument, its proper care, as well as its rich history. Other students who are considering piano technology as a profession may also benefit.

Subject: Maps for approved & requested course electives
Date: Thursday, April 23, 2020 at 11:17:09 AM Eastern Daylight Time
From: Edwards, Jan
To: Heysel, Garrett
CC: Hedgecoth, David
Attachments: MAPS.zip, image001.png

Hi Garrett,

I've attached maps for the relevant BA, BME, and BM degree programs. All changes appear under Electives and in red font. You will see additional courses in this section:

- 4665 was incorrectly listed as a *core* requirement; it is an elective.
- 2297, 5663, 5664 were approved in the last BME revision (2019) but I didn't map them on the BME sheets. The courses are now included in the appropriate maps (BME Choral, BME General)
- 5604 and 4588 are now included on the maps for the BA, BME, and appropriate BM degree programs.

Let me know if I missed anything.

Thank you, Garrett!

~Jan



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Buckeyes consider the environment before printing.