

Music 668: Instrument Repair

Instructor: Eric Scarbrough

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Office Hours: M-F 7:00am 3:00pm

Texts:

There is no text book required for this class. Hand outs will be provided in class.

Suggested readings:

Thorp, Reg. The Complete Woodwind Repair Manual. Elkhorn, Wisconsin: Allied Supply

Brand, Erick. Selmer Band Instrument Repairing Manual. Elkhart, Indiana: H. & A. Selmer Inc. 1939

Course Description:

Development of practical skills in identifying and correcting minor repair problems on band and orchestral instruments

Course Objectives:

- 1) To learn the accepted repair nomenclature to effectively communicate with a repair technician.
- 2) To learn basic repair processes in regards to brass and woodwind instruments.
- 3) To learn acceptable emergency field repairs.
- 4) To learn accepted repair terms
- 5) To learn to properly diagnose common problems

Required Materials:

- 1) A repair kit will be available the first day of class for purchase
 - a. The repair kit includes two screwdrivers (small and medium), a flute pad iron, a clarinet pad iron, flat nose pliers, a spring hook, a can of contact cement, a rawhide mallet, and two sheets of cork.
- 2) Students are expected to provide the following items
 - a. Two one inch three ring binder and 16 dividers
 - b. A pocket knife (cannot be very sharp)
 - c. Matches or a lighter
 - d. Small container with a screw on lid (baby food containers are perfect)
 - e. Small container with a lid (Altoids tins are ideal)
 - f. Small metric ruler (metal is preferred)
 - g. A sharpened non-mechanical #2 pencil

Suggested Materials:

- 1) A shop apron
- 2) Butane Torch
- 3) Butane refill canister
- 4) Mouthpieces for play testing (Clarinet and Trumpet)

Attendance Policy:

Due to the fact all work is done in class, attendance is mandatory. Excused absences must be communicated to the instructor and a time scheduled to make up the missed work before the next class.

First Aid:

Please use caution while completing tasks. If you are uncomfortable with using a specific tool or completing a procedure please notify the instructor and an alternative method will be arranged. A first aid kit will be made available during class times. If you are injured please notify the instructor immediately.

Course Evaluation:

15% Clarinet overhaul

You will be expected to demonstrate the techniques of clarinet overhaul using criteria presented in class

15% Flute overhaul

You will be expected to demonstrate the techniques of flute overhaul using criteria presented in class

25% Midterm

Written exam covering instrument nomenclature

10% Brass repairs

You will be expected to demonstrate the proper technique for temporary brass repairs

25% Final exam

Written exam over repair terms and a visual instrument inspection

10% Class participation

Participation requires the following elements: attending class; carefully preparing all assignments before class; paying attention at all times; and avoiding distracted or distracting behavior (such as using electronic devices for non-course related activities, reading or conversing about non-course related material, or acting inappropriately toward other students, guests, or the instructor). You should listen to others, respond to ideas proposed by your classmates, ask relevant questions of the instructor, attempt to answer the instructor's questions, and take responsibility for keeping the discourse on track. Attendance, active engagement with the course materials, and appropriateness of comments and behavior will be assessed at each class session. If there is any reason you cannot fully participate in class, inform me as soon as possible so that we may discuss your options.

Grading Scale:

94-100	A = Shows excellent ability in repair techniques as well as problem diagnosis and a mastery of repair terms and nomenclature. Performs perfectly on midterms and final
91-93	A-
89-90	B+
84-88	B = Shows a passable ability in repair techniques as well problem diagnosis and knows the most commonly used terms. Performs well on midterm and final
79-83	B-
74-79	C+
69-73	C = Is able to reassemble instruments and diagnose simple problems. Only the most basic of repair terms and nomenclature are memorized. Performs passably on midterm and final
61-68	D = Very slow in reassembling instruments or diagnosing problems. Repair terms and nomenclature are not memorized. Performs poorly on midterm and final.
62-0	E = Inability to reassemble an instrument or diagnose problems. Repair terms and nomenclature are not memorized. Does not finish or take midterm or final

Disability Statement:

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. The Office for Disability Services--614-292-3307, rm 150 Pomerene Hall--will coordinate reasonable accommodations for students with documented disabilities.

Academic Misconduct:

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). See the Code of Student Conduct (http://studentaffairs.osu.edu/resource_csc.asp).

Schedule	Class activities	Suggested studies
Day One	Introduction Handouts Safety talk Construction of a feeler gauge disassemble and assemble the clarinet	Study instrument nomenclature Study the corking outline for clarinet
Day Two	Disassemble and reassemble clarinet Remove and install tenon cork Remove and install key cork	Study the padding outline of the clarinet
Day Three	Remove all pads and install new pads Level and iron pads Reassemble clarinet and seat pads Begin regulation if time allows	Study the regulation process for the clarinet
Day Four	Regulate the clarinet Begin graded clarinet overhaul if time allows	Review the overhaul process of the clarinet
Day Five	Graded clarinet overhaul	Study the disassemble process of the flute. Study the padding process of the flute Study Flute overhaul
Day Six	Disassemble and reassemble the flute Removal and replacement of key cork Removal of pads if time allows	Study the process of shimming flute pads
Day Seven	Installation of pads and shims Leveling pads and adding shims as necessary Seating pads	Study Flute regulation
Day Eight	Regulating the flute Begin graded flute overhaul if time allows	Study the flute overhaul process
Day Nine	Graded Flute overhaul	Study saxophone disassembly and assembly Study Saxophone padding
Day Ten	Saxophone assembly and disassembly Removal and instillation of pads	Study nomenclature for midterm
Day eleven	MIDTERM	Study Horn repair methods
Day twelve	Disassemble and reassemble the Horn Restraining Horn rotors	Study Trumpet repair methods
Day Thirteen	Disassemble and reassemble the trumpet Removal and instillation of a water key cork Discuss valve porting Practice removing dents from brass	Study Trombone repair methods
Day Fourteen	Discuss trombone hand slide alignment Graded Brass repair	Study repair methods and prepare questions about repair methods
Day Fifteen	Discussion of repair methods used in a repair facility Demonstrations of common repair methods and tools On hand experience of repair methods	Study oboe disassembly and reassembly Study oboe padding
Day Sixteen	Disassemble and reassemble an oboe Removal and installation of a cork pad Discuss regulation of the oboe and bassoon	Study oboe regulation

Day Seventeen	Regulation of the oboe	Study brand types and history Prepare questions about makers
Day Eighteen	Show and tell of various instrument brands, types, and models Discussion of makers Discussion on how to evaluate the quality of instruments	Study diagnostic methods Prepare questions about the final Study repair terms
Day Nineteen	Review for the final Q&A	Study for the Final
Day Twenty	FINAL EXAM	