Department of Music Student Handbook



SCHOOL OF FINE ARTS AND HUMANITIES

Casper College 2021-2022

Directory

Faculty and Adjunct Directory

Name	Specialization	Office	Phone #	Email
Nathan Baker, M.A.	Theory, Music Technology, and Low Brass	MU 210	307-268-2538	nbaker@caspercollege.edu
Larry Burger (adjunct)	Audio and Recording	MU 228	307-268-3320	lburger@caspercollege.edu
Eugenie Burkett, D.M.A.	Percussion	MU 204	307-268-2603	eugenie.burkett@caspercollege.edu
Jennifer Cowell-DePaolo, M.M.	Orchestra Director, Violin, Class Piano, and Music Department Chair	MU 211	307-268-2231	jcowell@caspercollege.edu
Gary DePaolo, M. Ed. (adjunct)	Viola and Violin	MU 211	307-268-2231	gdepaolo@caspercollege.edu
Paula Flynn, M.M. (adjunct)	Piano and Class Piano	MU 201	307-268-2487	pflynn@caspercollege.edu
Jane Ann Hamman, B.M. (adjunct)	Harp	MU 205	307-268-3102	jhamman@caspercollege.edu
Donna McIntire, B.M. (adjunct)	Organ	MU 201	307-268-2487	mcintire@caspercollege.edu
Joshua Mietz, D.M.A.	Clarinet, Saxophone, and Jazz Ensemble Director	MU 206	307-268-2246	joshuamietz@caspercollege.edu
Katherine Smith, M.M. (adjunct)	French Horn	MU 209	307-268-2628	katherine.smith@caspercollege.edu
Delores Thornton, B.A. (adjunct)	Flute and Flute Ensemble Director	MU 205	307-268-2487	thornton@caspercollege.edu
Veronica Turner, M.M. (adjunct)	Voice	MU 208	307-268-2685	veronicaturner@caspercollege.edu
Zachary Vreeman, D.M.A.	Choir Director	MU 207	307-268-2603	zvreeman@caspercollege.edu
Donald Williams, M.M. (adjunct)	Trumpet	MU 209	307-268-2628	donald.williams@caspercollege.edu

Administration Directory

Eric Unruh, D.M.	Dean	MU 132	307-268-2537	unruh@caspercollege.edu
Kathy Coe, B.S.	Academic Assistant	MU 137	307-268-2606	kcoe@caspercollege.edu

Casper College is an equal opportunity institution and as such, does not discriminate on the basis of race, sex, color, national origin, religion, age, veteran status, political affiliation, disability, sexual orientation, gender identity, or any other characteristic protected under applicable federal, state, or local law in admission or access to or treatment or employment in its educational programs or activities. Direct inquiries or complaints concerning Title IV, Title IX, and Section 504 to Linda Toohey, associate vice president for student services, at 125 College Dr., Casper, WY 82601, 307-268-2667, or linda.toohey@caspercollege.edu, or the U.S. Department of Education, Office for Civil Rights, 1244 Speer Blvd., Ste. 310, Denver, CO 80204-3582, 303-844-5695 or TDD 303-844-3417.

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Sound Advice

...a message from the Dean

As a music student at Casper College, you are joining a half-century tradition of opportunity and excellence. Undoubtedly, you will enjoy the exceptionally beautiful music building, where every detail was implemented to ensure a real-world music experience for you. The acoustically tuned rehearsal spaces around the perimeter of the building are well equipped, and the gorgeous Wheeler Concert Hall is one of the most beautiful and vibrant performance spaces you may encounter. Faculty are highly qualified and dedicated to providing the foundation for intelligent and communicative music making. In short, this is a very special place.

There are many things that make Casper College a great place to begin one's career in music. As a serious musician, you are expected not only to perform, but also to attend a wide variety of concert offerings. Fortunately, Casper has many performance organizations, such as the Wyoming Symphony Orchestra, musical theatre at the Gertrude Krampert Center for Theatre and Dance, the Casper Chamber Music Society, the ARTCORE series, and an almost overwhelming array of performances by Casper College ensembles.

I encourage you to take advantage of these fine opportunities, remembering that a good musician is first and foremost a good listener. In addition, there are many fine campus activities outside the music department that will make your experience at Casper College exponentially rewarding and fulfilling, and can lead to greater success down the road.

Casper College is committed to the "Complete College Wyoming" initiative, endorsed by the Governor. As such, there are many things in place to make it possible for you to graduate in two years. Your assigned advisor, normally your applied instructor, will use a program map to keep you on track. If you veer off the map, it is possible that you will be unable to graduate at the conclusion of your fourth semester. Be diligent, and you will complete your degree on time and be prepared to transfer to a baccalaureate institution.

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Many graduates of Casper College transfer to renowned universities and colleges nationwide and achieve much success. I expect that you will soon join our distinguished alumni and enjoy a productive and satisfying career in music.

Here is some sound advice for music students:

- Brush up on music fundamentals before you attend Casper College.
- · Attend class, and be on time.
- Be prepared to submit all coursework on time.
- Practice, practice, practice your instrument according to your teacher's guidelines.
- Let your teacher know when you're having difficulty in class. Consult with your teachers on a regular basis. They are here for you.
- If you're ill, call the instructor and let them know when you expect to return to class.
- As tempting as it may be, limit your ensembles to those most crucial. Balance your desire to perform with your academic classes that also deserve your fullest attention.
- Attend as many concerts as you can. Strive to hear a wide variety of performances.
- Perform as often as you are prepared and able.
- Keep on your degree "track," including your general education classes. Plan to graduate.
- Strive for excellence in all classes. This is very important for transfer.

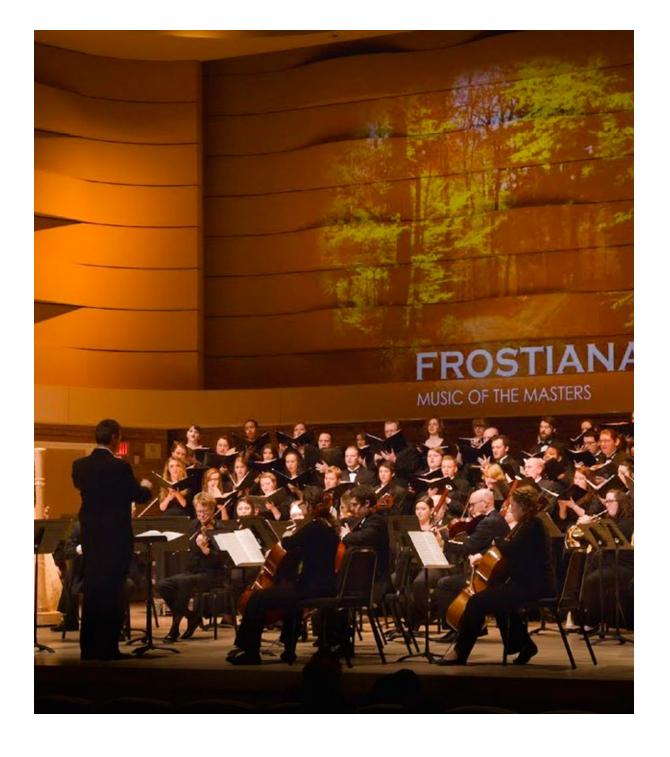
Casper College is an accredited institutional member of the National Association of Schools of Music (NASM). To learn more about NASM, please visit the website at nasm.arts-accredit.org.

Best wishes for success!

Eric W. Unruh, D.M., Dean

School of Fine Arts and Humanities





Casper College Mission Statement

VISION

Casper College strives to provide an education for a lifetime that will prepare individuals to thrive and adapt in an ever-changing world.

MISSION

Casper College is a public, comprehensive two-year institution with a primary focus on student success that provides learning opportunities to enrich the lives of our students and community.

VALUES

In support of our college and community mission, Casper College holds the following core values:

- Integrity Hard work, accountability, trust, open communication, and respect.
- People Growth, support, personal development, and positive relationships.
- Diversity Thought, culture, and experience.
- Forward Thinking Intentional, innovative, and sustainable planning in the pursuit of excellence
- Community Partnership and service..

Department of Music Vision and Mision Statement

The Casper College Music Department strives to develop a regional reputation for excellence and innovation in music education by utilizing our unique strengths to address the needs of our students and community. We work hard to provide students with a comprehensive and individualized education to prepare them for lifelong music-making as professional and nonprofessional musicians while enriching the cultural life of our community.



Placement Exams

Casper College is an open-enrollment institution; incoming students can declare their major field of study and gain entrance into the program. The music department, however, is committed to accept students who have the skills to be successful. As such, the department assesses students who wish to enter the program, and provides an opportunity for a pathway to success.

The factors that allow students to be placed into the degree curriculum include:

- Perform a successful audition on the declared instrument or voice.
- Take brief placement tests in written music theory and aural theory.

Note: Students with a background in piano can request to take a placement piano exam, and will be advised to enroll at the appropriate skill level.

Theory placement exams provide evidence that a student has an opportunity for success in the music curriculum. The theory placement exam assesses the student's ability to recognize note names on the staff, to identify basic rhythmic patterns, and to perceive and relate melodic contour (sound) to notation.

Prior to registering for the music theory course sequence, all prospective music majors must complete the theory placement exam. Students who do not demonstrate entry-level proficiency in music reading and/or aural theory rudiments will enroll in "Music Fundamentals" (MUSC 1010), which is offered concurrently with "Written Theory I," "Aural Theory I," and "Class Piano I," the three courses that form the core of the music theory sequence.



Degree Options

Music majors may select from three NASM-listed degree options:

Associate of Arts in Music
Associate of Fine Arts in Music Education
Associate of Fine Arts in Instrumental
or Vocal Performance

Musical theatre majors may select the NAST-listed degree

Associate of Arts in Musical Theatre

Registration and Advising

Once students declare music as a major they are assigned to a music department advisor. Typically, the advisor is the student's studio instructor. Advisors are available to deal with curricular matters and any career issues students might encounter in the course of their studies. Students will meet with their advisors during the official advising day each semester. At that time the student and the advisor will update the student's checklist and determine the appropriate courses for the coming term — music degree maps, arranged by semester, are provided on your MyCCinfo "Advising" tab. Many changes, such as dropping or adding a course, may require the advisor's consent. Students who hold activity scholarship contracts must keep their obligations. They should consult their advisor when a change in a core course or ensemble may adversely affect their ability to comply with the responsibilities for the scholarship. Students are encouraged to meet their advisor during the instructor's posted office hours. If class schedules conflict with these hours, it will be necessary to phone or email the instructor to make an appointment.

- The music and theater departments collaborate on the Associate of Arts in Musical Theatre degree, intended for students who wish to pursue a career in performing and/or teaching musical theatre. The degree is listed with the National Association of Schools of Theatre (arts-accredit.org).
- The Associate of Arts in Music degree allows a student to pursue a degree in music within a liberal arts framework. Associate of Arts degree students declare an area of specialization within the music field and complete the same music core courses as other music degree students.
- The Associate of Fine Arts in Music Education degree prepares students for the Bachelor of Music Education degree. This degree is designed for persons considering a career in public school teaching music. If you anticipate transferring to the University of Wyoming, please check with your advisor about current university requirements.
- The Associate of Fine Arts in Performance degree is designed for students who desire a career in music performance.

Scholarships and Activity Awards

A number of music activity awards and other special awards based primarily on talent are awarded annually to music majors and nonmusic majors. Most awards are renewable up to six semesters if the student maintains minimum requirements as established by the contract for each award.

Complete the scholarship application online at caspercollege.edu/music-department

Applications for specifically named, endowed music scholarship awards are handled through the same activity scholarship procedure. They are:

The Constance Atwood Meyer Scholarship for music majors

The Charles M. and Cara Lou Chapman Scholarship for piano majors

The Flo and Bob Dobbins Music Scholarship for music majors

The John A. (Jack) Hamman Scholarship for voice majors

The Leland and Barbara Scifers Music Scholarship for voice and woodwind majors

The Kinser-Schwejda Scholarship for music majors

The Manville Barnard Memorial Scholarship for Music for Kelly Walsh High School graduates

David Brecht Music Scholarship for music majors

Pat Patton Vocal Scholarship for degree-seeking sophomore students who are involved in vocal activities at Casper College

Gene M. Christensen Music Scholarship for Casper College music majors

Thorpen Instrumental Music Scholarship for entering freshmen instrumental music majors Jean D. True Memorial Scholarship for full-time Casper College students majoring in either agriculture or music (preference being given to a vocal major)

Steve and Libby Kurtz Music Scholarship for a full-time sophomore music major

Auditions:

Activity scholarships are based on ensemble participation and enrollment in a studio lesson. Therefore, an audition to assess talent is required.

Live auditions may be scheduled with the appropriate faculty at a mutually convenient time. When a live audition is not possible, an audio recording audition may be submitted to Jennifer Cowell-DePaolo who then contacts the appropriate faculty member. Guidelines for auditions are as follows:

Keyboard: two contrasting works from different style periods — baroque, classical, romantic, and twentieth century.

Vocal: A solo selection with keyboard accompaniment. An art song or aria is recommended, either in English or in a foreign language. Instrumental: Solo(s) demonstrating two contrasting styles. Sight-reading and scale playing may also be required, check with the appropriate studio faculty member before the audition.

Percussion: Demonstrate a solo or etude on a mallet keyboard instrument and also one of the following: etude or solo on a snare drum, etude or solo on timpani, demonstration of the following feels on drum set: jazz, rock, and Latin.

Activity Scholarship Requirements

In accordance with NASM, Casper College allows students to choose without penalty among offers of admission and financial aid until May 1 of the calendar year of matriculation for undergraduate-level. Written declarations of intent become binding on this date. If a student has accepted a talent-based financial aid award from another institution, he or she must receive written permission from the music executive of that school to withdraw from the commitments, obligations, and benefits of his or her financial award before a Casper College award can be offered and processed (NASM Code of Ethics, Article III).

Music Activity Scholarship recipients must be enrolled in and actively participate in:

- The major ensemble appropriate to the declared field of study.*
- 2. A second ensemble, which may be specified by the faculty sponsor.
- 3. Private instruction, studio music, in the declared field of study.

To be eligible for award renewal each semester, all music activity award recipients must maintain at least a 2.0 grade point average, and must maintain full-time status (12 credit hours, minimum). Music majors must satisfactorily maintain the requirements of the declared degree track per the Casper College Catalog. Circumstances and requirements may vary with individual students; please consult the activity scholarship contract for specific requirements. Contracts are on file in the Music Office (MU 137) and the Casper College Financial Aid Office (GW 316).

The student's academic performance is reviewed at each midterm and at the end of each semester. Any student who fails to meet the above requirements, or is deemed at risk of failing, is notified by the department chair who also notifies the advisor.

Applications for other awards, including federal financial aid, are available in the Casper College Student Financial Aid Office, 307-268-2510.

* Chamber Orchestra, Collegiate Chorale (by audition), or Concert Band. Scholarship holders whose instrument does not fall into one of the above categories, such as piano or guitar, must consult the advisor and the program director, who will assist in identifying an appropriate, alternate ensemble.

Studio Lessons: Individual Instruction

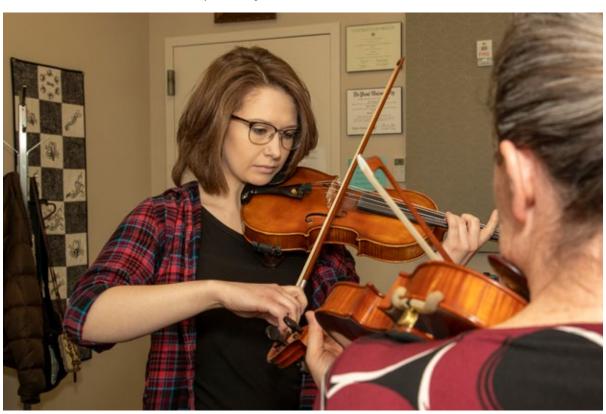
All music majors enroll for individual lessons with studio faculty in the department of music. Enrollment occurs during the regular registration time. Studio voice lesson students must perform a placement audition at the beginning of the fall semester. **Students are then assigned to a private teacher and must make arrangements with that teacher to schedule lessons.** Students who play keyboard, wind, brass, strings, or percussion instruments should see the appropriate faculty member during the first day of classes to schedule lesson times. Most faculty post important information on their office doors; look there if you have a question or need further information.

Studio classes enhance and augment the private lesson, and are scheduled for one hour approximately twice per month. The format of the class will often resemble a master class, with students performing solos

for the class while the instructor directs criticism and discussion concerning the aspects of each performance. Other activities closely related to the studio experience may include an overview of the music literature for the instrument, discography, videography, field trips to regional concerts, and other creative activities.

A fee of \$90 per credit hour will be assessed for studio lessons. Students may enroll for the one-hour lesson only by permission from the studio faculty. All music majors must attend and participate in studio classes as scheduled in addition to their studio lessons.

Students are encouraged to enroll in a secondary instrument or voice. The Music Department Activity Scholarship does not cover studio lesson fees.





Annual Music Department Events

The music department holds annual festivals and events, some of which are discussed below:

Casper College Kinser Jazz Festival: The music department attracts about 1,000 middle school and high school students from across the state to participate in this festival dedicated to jazz performance and education. Renowned guest artists give concerts, and important jazz educators serve as adjudicators for the performing ensembles. The festival includes both instrumental and vocal jazz and has evolved during its 55-year history. The event is co-directed by Joshua Mietz and Zachary Vreeman.

Tapestry Concert: This annual concert is a departmental favorite. The entire department joins forces to bring our campus and Natrona County a holiday

concert that welcomes in the holiday season and delights the senses. The audience is invited to sing along to many traditional Christmas carols and to enjoy refreshments in the lobby. Visit caspercollegearts.cc for complete information and to purchase tickets.

Music of the Masters Concert: The choir and orchestra programs have been collaborating for over a decade on this concert, which features a large, traditional work for combined choirs and orchestra. In addition to the performance of a composition for combined choirs and orchestra, this concert also features a smaller work for chamber orchestra and a faculty and/or guest soloist.



Assessment and Student Portfolios

The department has a long history of assessing the progress of students. A major aspect of assessment documentation is found in a cumulative file, a "portfolio," maintained for each music major. Students have access to their file, and may take a copy to their transfer institution. The goal is to document activity and progress applicable to the acceptance and placement in a transfer music program, most likely a baccalaureate degree program.

Juries

Juries are held at the end of each semester by each of the discipline areas. During this time, students perform for the studio faculty repertoire and technical studies that they have prepared throughout the semester. Each of the disciplines — voice, winds, piano, etc. — is responsible for setting jury criteria, scheduling, and evaluating student performers. In general, performance examinations occur during final exams each semester.

The portion of the final grade assigned by the jury also varies among the studio areas. See your studio instructor or consult the studio lesson syllabus for specific details.

The following are the standards for jury examinations based on instrumentation or voicing.

Please see Appendix A, Jury Forms.

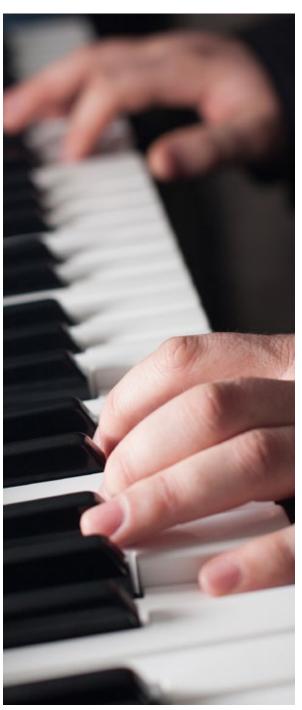
Each category is scored on a 15-point scale. Fifteen indicates an exceptional performance level, eight is the average, and 6.5 is passing. The jury form provides for critical written comments as well.

Reeds and winds will be assessed using the above point system on the following criteria: tone, intonation, articulation, tempo, rhythm, and musicality. Major and minor scales will be evaluated as well.

Percussion juries will use the above point system using the following assessments: (pitched) grip, rhythm, tempo and (unpitched) grip (right, left hand), rhythm, and tempo.



Piano Proficiency Examination



A functional piano proficiency examination is required of all majors prior to graduation. Students register for the pass/fail exam (MUSC 2395-01) in the semester that they plan to take the exam. Students achieving a "B" or better in each piano class, levels I through IV, are exempt from taking the exam.

All music majors will enroll in the class piano sequence. "Class Piano IV" culminates in the proficiency examination. Students with a background in keyboard will be placed at the appropriate level as determined by the piano instructor. Consult "Keyboard Essentials for Musicianship," which is available from Paula Flynn, piano faculty, for current and specific requirements of non piano music majors and piano performance majors.

Ensembles

Numerous performance ensembles are available to all Casper College students. Nonmusic majors and community members are encouraged to participate in department ensembles.

Auditions for select ensembles, specified in the current class schedule, normally occur during the first week of classes in the fall semester. Additional information, including prerequisites for some ensembles, can be found posted on the office doors of ensemble directors. See also the current college catalog.

Instrumental ensembles and their conductors include:

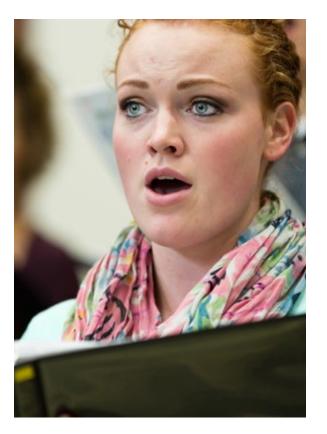
Chamber Orchestra* Jennifer Cowell-DePaolo

Concert Band* Joshua Mietz
Jazz Ensemble Joshua Mietz
Percussion Ensemble Eugenie Burkett
Wind Ensemble Joshua Mietz

Vocal ensembles and their conductor include:

Chamber Singers Zachary Vreeman
Collegiate Chorale* Zachary Vreeman
Contemporary Singers Zachary Vreeman

*All students enrolled in music degree programs are required to participate in a major ensemble in their area of emphasis each semester they are enrolled at Casper College. Major ensembles are: collegiate chorale, concert band, and chamber orchestra. If your instrument does not fall into one of the above categories, such as piano or guitar, your advisor will assist you in identifying an appropriate alternative.





Convocation and Concert Attendance

Convocation is a recital class that serves two fundamental purposes:

- To provide a performance venue for students, both soloists and small ensembles.
- To provide listening opportunities, that build knowledge of various repertoires, styles, and genres.

All music majors must enroll in and successfully complete four semesters of "Convocation" (MUSC 0200). Students are encouraged to perform on convocation with the written consent of their studio instructor. Students are required to attend all convocations, Wednesday noon recitals, less one each semester. In addition, students will document attendance for each concert they attend during the semester; a minimum of 10 is required. Students should make every effort to attend a wider range of recitals representing various genres. Recital information is available on department bulletin boards. Other approved concert events will be announced at convocations on a regular basis. Consult the course syllabus or Joshua Mietz, instructor, for further details.

Convocation Schedule — 2021-2022

Unless otherwise noted, convocations are held in the Wheeler Concert Hall, MU 105, on the following Wednesdays at noon:

FALL 2021

September 1

September 22 (Library Orientation in MU 104)

November 3

November 17

December 8

SPRING 2022

February 9(KJF training, MU 104)

March 2 (Scholarship Info., MU 104)

March 23

April 6

April 27

May 4 (Honors Convocation)





Student Recitals

Performance ability is an important component of all the music degree programs. Thus, an elective solo recital may be an important component of each student's preparation. No department-wide student recital requirement exists at Casper College, but performance majors in particular are invited and encouraged to perform a sophomore recital or shared half-recital for the public. Policies governing the student recital follow.

Recital Permission

Prior to the presentation of a recital, students must secure the permission from their principal studio instructor. The instructor shall make his or her decision based upon prior jury examinations, convocation performances, and will weigh the student's opportunity for success. The decision to present a student in recital lies solely with the studio instructor. The instructor is then responsible for submitting the event proposal form online to officially request facility reservation as well as the availability of adequate personnel and other resources. In-house programs for small recitals can be approved by the instructor.

Wheeler Concert Hall

The Wheeler Concert Hall is available for student recital use. When scheduling a recital, the studio instructor must verify date availability via the Google "Music/ Music Building Calendar" calendars and submit the event proposal form online.

Wheeler Concert Hall must be used with the proper permission. Sufficient rehearsal time must be scheduled by the studio instructor via the event proposal form.

If the concert grand piano is used, the instructor may request that it be tuned before the event.

Programs

Students should work with their studio instructor to create the content to be included in programs. Information must include: student name, instrument, instructor, works to be performed, composers, accompanists, collaborators, and principal studio instructor. No personal statements or comments are allowed on the program, as this is deemed inappropriate for an academic recital. Students should share this information via a Google Drive Doc with the studio instructor and the Casper College School of Fine Arts and Humanities Academic Assistant (kcoe@caspercollege. edu). The academic assistant will create a program using the content of the doc.

Complete program information must be submitted no less than two weeks before the recital.

Accompanists and Collaborators

The department will provide an accompanist for student recitals if the accompanist is a member of the department staff, is currently on the college payroll, and is available to play for the recital. It is the student's responsibility to ensure that the accompanist has the recital music well in advance. Accompanists hired from outside the department are the financial responsibility of the student.

Dress

Dress for recitals should exhibit professionalism.

Recording

Audio

Larry Burger facilitates the recording of recitals. The music department event proposal form also serves as a means to request a recording of the recital. This service is provided by funds from the college and is offered free of charge to the student. The student receives the master recording.

Video

The student has access to their student portfolio via their Casper College email address should they wish to download files. File upload may take between 3-5 business days. Every effort is made to provide this service. If available, the digital file(s) is stored in the student's portfolio on Google Drive.

Receptions

A reception following the recital is often scheduled as an appropriate gesture of thanks for those who attend, and to honor the performer and teacher. These receptions occur in the Jean D. and H.A. (Dave) True Jr. Atrium just outside the concert hall. Minimal kitchen facilities are available in the Music Building, Room 138, but the student is required to obtain permission to use the kitchen from the academic assistant. All preparation, food, beverage, and cleanup are the responsibility of the student. Casper College food service may cater receptions for a fee.



Policies

Instrument Checkout

Instrument Rental Policy Students are encouraged to own their own instrument. Since this is not always possible, a number of department-owned rental instruments, including harps and percussion equipment, are available for students enrolled in college ensembles and/or studio lessons. A \$100 per semester instrument rental fee is assessed to maintain the instrument in excellent playing condition, and to ensure that the next user will also have the opportunity to play a high-quality instrument.

Before the instrument is rented, the student must complete and sign the instrument rental agreement contract and pay the rental fee of \$100 at the beginning of each semester in the Casper College School of Fine Arts and Humanities administrative office. Harps are available for a usage fee of \$50 and must remain in the music building. Access to the instrument and its assigned locker will then be granted by the administrative office. The instrument must be housed in its assigned locker or room for harps and percussion. No locker fee is assessed unless the student loses the locker key. If the locker key is lost, a nonrefundable \$10 fee must be paid before a new key is supplied.

The instrument must be returned to the studio instructor on the Thursday of finals week. The rental fee is retained by the department for instrument maintenance and repair.

Students may rent instruments for the summer semester on a case by case basis, in consultation with the studio instructor. A \$100 rental fee will be charged for the approved summer rental. The same rental process will be utilized for the summer rental check-out.

If, while in the student's possession, the instrument is in need of repair, the student must inform the studio instructor immediately.

Failure to return an instrument will result in a hold on the student's account and transcript. Long-term noncompliance to return the college-owned instrument will be considered theft, which is a felony.

Rental harps, percussion, and string basses must remain in the music building at all times. If these specialized instruments need to be taken off campus for a college sponsored event, the studio and/or ensemble instructor will oversee the transport.

Instruments necessary for special ensemble instrumentation may be loaned to the student under the same procedure as above, except the ensemble director may waive the rental fee. Music education majors will be assigned instruments for methods courses at no charge.

Contact your studio instructor regarding instrument rental.

Procedures:

- Studio and ensemble directors will work together to rent instruments, including percussion and harps, and initiate the jot form. Woodwind rentals do not include mouthpieces or reeds. Students must provide their own mouthpieces and reeds. Percussion students will supply implements as requested by instructors.
- 2. Rental fee shall be paid before the student gains access to the instrument. If the student fails to pay the fee, the instrument access is denied.
- 3. Instrument return date will be the Thursday of finals week between 10 a.m. and 2 p.m. at the studio instructor's office. The instrument condition will be documented by the studio instructor with the student present. The student will submit the completed Rental Instrument Check-In form and locker key to the music office.
 - a. Brass Nathan Baker (MU 210)
 - b. Strings Jennifer Cowell (MU 211)
 - c. Winds Joshua Mietz (MU 206)

Personal Technology Usage

Students are required to eliminate distracting noises such as cell phones and other electronic devices in the classroom and at all music events. Instructors may have additional requirements concerning the use of personal technology during classes. Please consult the syllabus for specific technology requirements.

Photocopying Materials

The music department copy machine is for department business use only. Nonmusic-related photocopying by students is not permitted. Department personnel should comply with current copyright laws and not reproduce copyrighted material without the permission of the copyright holder.

Concert Grand Piano Policies

Use of this instrument for general practicing is prohibited. Permission to play the instrument for preparation of convocation or other performances is granted only by the piano faculty. The following policies are strictly enforced:

- The cover should always be on the instrument unless it is in use.
- The cover should never be placed on the floor.
- Take the cover off completely to play the instrument. Do not open the piano lid with the cover pulled back. This will damage the hinges on the piano.
- Do not use any furniture polish on the instrument.
- Do not place anything on the instrument even with the cover on.
- Avoid spiral-bound books and notebooks on the music rack. If this is not possible, use the red key cover to cushion the music on the rack.
- Avoid jewelry, like a steel watchband for example, that would mar the key cover and rack.
- Move the bench out of the way before moving the piano.

 Do not use a pencil eraser when the music is on the rack; residue should not be allowed to fall into the action.

Moving the instrument

- The piano should be moved to and from behind stage with the cover on.
- It is preferable that two people move the piano.
- The two lockable casters should be locked into position at all times when the instrument is not being moved.

Use of the instrument

- · This instrument is not for general practicing.
- Permission must be obtained from the piano faculty to use the piano.

Handling Instruments and Equipment

- Only Casper College facility, staff, or other authorized personnel should move heavy equipment or handle any hazardous materials. Music students, faculty, and staff are advised to consult with Dmitriy Nesterenko at 307-268-2050 for proper handling of any potentially hazardous materials.
- All work-study students must be trained to properly handle and move equipment including audio/recording equipment, risers, percussion instruments, etc.
- Students are expected to clean and maintain their instruments regularly. Special attention to department-owned instruments that are shared is especially important. The brass area follows the National Institutes of Health sanitation guidelines. The department of music will provide alcohol wipes and/or germicide solution for student use when sharing instruments in class. The class piano lab will be supplied with sanitary wipes to clean shared headsets.

Facilities

The department of music moved into its new building in the fall of 2013. This was an exciting time for our department and we hope you, as students, can help us maintain this building for all to enjoy for many years. The building contains classrooms, rehearsal facilities, the Richard E. and Linda S. Wheeler Concert Hall (first floor), the Ruth R. Ellbogen Family Choral and Recital Hall (first floor), the Mildred Zahradnicek Gallery (first floor lobby) and practice rooms (second floor), as well as the requisite equipment necessary to operate the department of music. In addition, multimedia stations have been installed, offering media presentations in the classrooms.

Building Hours

The Music Building is open for classes and practice according to the following schedule:

- OPEN Monday-Friday, 8 a.m.-4 p.m.
- CLOSED Evenings and holidays per the Casper College Student Handbook

Instructional Areas

- OPEN Monday-Saturday, 6 a.m.-midnight
- OPEN Sunday 9 a.m.-10 p.m.

Lockers

Lockers are available for personal instrumental storage in the first floor hallway outside of Room 112. A locker may be rented by completing a locker checkout contract in the Casper College School of Fine Arts and Humanities office. A \$10 refundable deposit is required to check out a locker. The original padlock must remain on the locker and locked at all times. Lockers are rented for the academic year. You must empty and clean your locker and return the key to the office by the date indicated on the locker checkout contract to avoid forfeiture of the locker's contents and the \$10 deposit.

Electronic Access

Your student ID card may be approved for access to specific areas within the Music Building by music faculty. New students must get their Student ID card at Enrollment Services. Returning students must renew their Student ID at Enrollment Services. Once the faculty completes the 'Key Card Approval' Google spreadsheet **then** the student must bring their Student ID card to the School of Fine Arts and Humanities office, room 137, Monday-Friday from 8 a.m.-4 p.m. for music building activation.

Practice Rooms

Practice rooms are available to registered music students on the second floor of the music building. No signup procedure is necessary; students may use any vacant room. Please refrain from taking food and beverages into the practice rooms and report any problems with the pianos to Jennifer Cowell-DePaolo at jcowell@caspercollege.edu. Report any facilities or maintenance concerns to kcoe@caspercollege.edu.

Camera Surveillance

Security cameras are in place throughout the building for everyone's safety.

Computer Facilities

The Casper College Music Department has a Macintosh Laboratory, located in the Music Building, Room 106. This computer lab is available to all currently registered music students. Music students may use the lab whenever classes are not being held in MU 106. Software includes music publishing, improvisational tools, word processing, practice in music fundamentals, and other computer-assisted instructional software. Music students can gain access to the lab with the use of their student ID (see Electronic Access).

Mac Laboratory Policies:

- No food or drink in the lab. Water bottles WITH lids are allowed.
- Cell phones and other electronic devices should be turned on silent or vibration mode prior to entering a Mac Lab. When answering or talking on a phone, students should step outside of the lab.
- Students should provide their own pair of headphones.
- Computers shall remain in the lab at all times, unless the student is under an instructor's direct supervision to utilize the computer for a specific course.



Faculty Biographies



NATHAN BAKER, music theory coordinator, music technology, and low bass instructor received the Bachelor of Music degree in music education and music composition from Utah State University, his Master of Arts degree in music theory from the University of Oregon, where his thesis

"Neo-Riemannian Perspectives on the Early Music of Arnold Schoenberg" earned him a listing in "Who's Who in America," and completed the coursework for the Doctoral degree in music theory and music history from the University of Oregon.

Baker, an active member of the Society for Music Theory, has published on topics ranging from neo-Riemannian theory and atonality to video game music. He is also interested in world musics and the history of music theory pedagogy.

Baker frequently performs on the trombone, having played with the Wyoming Symphony Orchestra, Casper Municipal Band, Dem Bones trombone quartet, the Blues Brothers, the percussion quintet Sympatico, the Yellowstone Big Band, the Casper Brass and Storm Door Company, the Powder River Symphony, the Symphony of the Mountain West, and in various musical theatre productions.



LARRY BURGER, sound design instructor, has continuing experience in sound system design, sound reinforcement operation and design, video production management, and editing. As owner of recording studios over the last 20+ years, Burger has trained audio and video engineers from oneman operations to 20-person production crews.



Eugenie Burkett,
was awarded her doctorate
in Curriculum and
Instruction-Music Education
from the University of
Wisconsin-Madison, masters
in percussion performance
from Manhattan School of
Music, and her bachelor's
degree in music education
from Baylor University.

Recent presentations have included the International Society for Music Education Conference in Kuala Lumpur ('06), the MENC National Conference ('04), WEDELMUSIC 2002 and 2003, and College Music Society ('03, '04, '05) in addition to regional and state conferences. Her research has been published by the Journal for Historical Research in Music Education, the National Association of College, Wind and Percussion Instructors, and Percussive Notes. As a timpanist and percussion, Burkett has performed with the Kansas City Philharmonic, Orchestra Sinfonica RAI (Turin, Italy), Orquesta Sinfonica de Maracaibo (Venezuela) and is a co-founder of Trinkle Brass Works, a chamber ensemble performing under the WESTAF and Arts Midwest Touring programs.



JENNIFER COWELL-DEPAOLO, orchestra director, instructor of violin and class piano, and music department chair, earned her Bachelor of Music degree in violin performance from DePaul University, Chicago; a Master of Music degree in violin performance and pedagogy from the University

of Oregon; and is a registered Suzuki instructor.

An active teacher and performer, Cowell-DePaolo maintains a small private Suzuki studio in Casper and frequently performs as a soloist and chamber musician.

Her students have successfully auditioned and regularly perform with the Wyoming Symphony Orchestra and have also transferred to various institutions in the region. She has performed for various musicals at Casper College and both local high schools. Most recently, Cowell-DePaolo performed Lou Harrison's "Violin Concerto" with the Casper College Percussion Ensemble and Bartok's "Contrasts" as part of a faculty recital. She was the musical director of the Casper College Department of Theatre and Dance's production of "CATS." She is an active member of the National Association for Music Education, the American String Teachers Association and the Music Teachers National Association.



PAULA FLYNN, instructor of piano and class piano, earned an Associate of Fine Arts degree in music education from Casper College, a Bachelor of Science degree in music from Valley City State University, and a Master of Music degree in piano pedagogy from the University

of Denver. She actively maintains her own private studio, collaborates with faculty, students, and ensembles on campus, and adjudicates local festivals. Flynn had an eight-year collaboration with Wyoming's ambassadors of music, the Casper Children's Chorale. With that association she had the distinct honor of playing Carnagie Hall while debuting a piece for Chicago composer Lee Kesselman. She has also played for several of Casper College's musical theater productions: "Joseph and the Technicolor Dream Coat," "Brigadoon," and "Cats."



JOSHUA R. MIETZ, instructor of clarinet, saxophone, jazz band, and executive director of the Kinser Jazz Festival earned his Bachelor of Music degree in clarinet performance from the University of Colorado Boulder, his Master of Music degree from the University of Montana, and his

Doctor of Musical Arts degree at the University of Nebraska-Lincoln. For his doctoral document, Mietz analyzed David Maslanka's "Desert Roads for Clarinet and Wind Ensemble" from both a clarinetist and conductor's viewpoints.

Prior to arriving at Casper College, Mietz served as the instructor of clarinet at Fort Lewis and San Juan Colleges, the instructor of saxophone at San Juan College, as well as the director of choirs at the First United Methodist Church in Durango, Colorado. He also coached and arranged music for a clarinet choir comprised of Fort Lewis college students and area clarinetists. His arrangements vary from rock/pop, church hymns for weekly worship, and re-orchestrations of larger-scale works. The clarinet choir from Fort Lewis College performed Mietz's arrangement of Beethoven's "String Quartet No. 1" at the 2014 International Clarinet Association's annual ClarinetFest®. While in Durango, Mietz was a featured artist in performances at Fort Lewis College, San Juan College, the 3rd Avenue Arts Series, the Silverton Fall Colors Chamber Music Festival, and performed with the San Juan Symphony.



KATHERINE SMITH, instructor of French horn, is assistant lecturer of horn at the University of Wyoming, fourth horn of the Cheyenne Symphony Orchestra, principal horn of the Wyoming Symphony Orchestra, former second horn of the Fort Collins Symphony, has served as

guest principal horn of the Boulder Chamber Orchestra and Pro Musica Colorado, and has been active on the sublists of numerous orchestras around the country including the Colorado and Charlotte Symphony Orchestras and the Colorado Music Festival.

During the summer of 2016, Smith had the unique opportunity to tour the country and perform at Red Rocks Amphitheater with the indie folk singer-songwriter, Gregory Alan Isakov, and has since recorded and performed with several other indie folk artists, including Elephant Revival and Natalie Tate.

A self-proclaimed teaching addict, in addition to teaching at Casper College and UW, Smith spent the 2013 spring semester as interim instructor of horn and was formerly a Doctor of Musical Arts in horn performance and pedagogy candidate at the University of Colorado at Boulder where she studied with Michael Thornton. She has served on the faculty of several music camps and workshops, including Cannon Music Camp and two years with the CU Summer Music Academy.



VERONICA TURNER, instructor of applied voice, music appreciation, and music fundamentals earned a Bachelor of Music degree in vocal performance at the University of Denver, a Master of Music degree in vocal performance at the University of Montana, and has completed the

coursework for her Doctorate of Musical Arts in vocal performance at the University of Nebraska-Lincoln.

Prior appointments include visiting instructor of voice and theory at Fort Lewis College in Durango, Colorado, and adjunct professor of voice and aural skills at Concordia College in Seward, Nebraska. Her performance credits include the Mother in "Amahl and the Night Visitors," Suor Angelica, Suor Genovieffa, and La Zelatrice in three separate performances of "Suor Angelica," Countess Almaviva in "Le Nozze di Figaro," Saphir in "Patience," and Vittoria in "The Gondoliers." Turner has been a featured soprano soloist for Schubert's "Mass in G," Vaughan William's "Dona Nobis Pacem," and W.A Mozart's "Requiem." As a recitalist, she has performed in Colorado, Montana, California, Nebraska, Wyoming, and Germany.



ZACHARY VREEMAN,

director of choral activities, earned the Bachelor or Arts and Master of Education degrees in music education from Dordt College in Sioux Center, Iowa, and the Doctor of Musical Arts degree in choral conducting from the University of Nebraska.

He conducts all four choirs at

Casper College, (Collegiate Chorale, Men's and Women's Choirs, and the Casper College Contemporary Singers), and also teaches music education and private voice. He has held previous teaching and conducting positions at the University of Wyoming, the University of Nebraska – Lincoln, the Nebraska Choral Arts Society, and Grace Christian School in his hometown of Anchorage, Alaska. In addition to his conducting, Vreeman is an active singer and has sung professionally with the Colorado Bach Ensemble; Abendmusik in Lincoln, Nebraska; and Anchorage Opera.



DONALD WILLIAMS,

instructor of trumpet, completed his master's degree in trumpet performance at the University of Colorado – Boulder and received his bachelor's degree in music from the University of Northern Colorado in Greeley.

He is currently second/

associate principal trumpet in the Wyoming, Steamboat Springs, and San Juan Symphonies, and is a member of the Colorado State University – Pueblo faculty brass guintet.

Williams has performed with the Breckenridge Music Festival Brass Ensemble, the University of Wyoming Faculty brass quintet, and has just finished his 10th year playing with the Best Brass of Farmington, an 11-piece brass ensemble based in the northern New Mexico area. He has also performed with the Colorado Symphony, the Colorado Springs Philharmonic, the Cheyenne Symphony, the Fort Collins Symphony, the Greeley Philharmonic, and the Chamber Orchestra of Colorado Springs.



Appendix A – Jury Forms

PIANO JURY FORM

PERSONAL:					
Student name:					Music major:
Semester/year:		Evaluator: _			Accept □
Date of exam:		Ass	essment score:		Deny \square
TECHNIQUE (scales	, arpeggios, etudes, abstract t	echnical exercis	es)		
5 4 3-2 1	Flawless Minor flaws Some inaccuracies Inaccurate	Comments:		J	URY GRADE
SIGHT READING					ACCECCMENT
5 	Flawless Somewhat accurate Somewhat inaccurate Inaccurate	Comments:			25-21 A 20-16 B 15-11 C
REPERTOIRE PER	FORMED (access the gen	neral level of liter	ature)		10-6 D
5 4 3 2 1	Advanced Late intermediate Intermediate Late elementary Elementary	Comments:		PER 10-9	FORMANCE RUBRIC Artistic Flawless accuracy Musical phrasing Dynamic interpretation
PERFORMANCE (b	ased on the following criteria	and using perfo	rmance rubric at right)		Somewhat artistic
Accuracy (notes and rhy			- 13.17	8-7	Minor accuracy flaws Somewhat musical Convincing interpretation
Nuances (articulation, d	ynamics, tone/balance, phras	ing, pedaling)		6-4	Average artistry Some inaccuracies Average musicality Average interpretation
Interpretation (tempo, o	character, other artist factors)			3-1	Lacks artistry Unprepared Unmusical phrasing Inappropriate interpretation

The applied teacher averages the jury score for a final grade. The final grade is calculated according to the instructor's syllabus. Use the assessment scale on this form.

Date: _

STRING JURY FORM

					Music major:
Semester/vear:		Adjudicator:			Accept
-		•			Deny
					Delly L
TECHNIQUE (scales	, arpeggios, etudes)				
5 4 3-2 1	Flawless Minor flaws Some inaccuracies Inaccurate	Comments:		J	JURY GRADE
REPERTOIRE PER	RFORMED (access the g	eneral level of literature)			
5	Advanced Late intermediate	Comments:			ASSESSMENT SCALE
3	Intermediate			_	25-21 A 20-16 B
2	Late elementary				15-11 C
1	Elementary				10-6 D
PERFORMANCE (I	based on the following criteri	ia and using performance	e rubric at right)		5-0 F
ACCURACY (notes and rh	vthm)			PER	FORMANCE RUBRIC
ioouruoj (notoo una m	<i>yy</i>				Artistic
				15 10	Flawless accuracy
				15-12	Flawless accuracy Musical phrasing
eneral technique (int	tonation, tone production, po	osture, coordination of ha	nds)	15-12	
eneral technique (int	onation, tone production, po	osture, coordination of ha	nds)	15-12	Musical phrasing
eneral technique (int	conation, tone production, po	sture, coordination of ha	nds)		Musical phrasing Dynamic interpretation
			nds)	15-12	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical
	tonation, tone production, po		nds)		Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation
			nds)		Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry
			nds)		Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies
JANCES (articulation, c	lynamics, phrasing, bowing)		nds)	11-8	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies Average musicality
JANCES (articulation, c			nds)	11-8	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies Average musicality Average interpretation
uances (articulation, c	lynamics, phrasing, bowing)		nds)	11-8	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies Average musicality Average interpretation Lacks artistry
uances (articulation, c	lynamics, phrasing, bowing)		nds)	11-8	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies Average musicality Average interpretation Lacks artistry Unprepared
Juances (articulation, c	lynamics, phrasing, bowing)		nds)	7-4	Musical phrasing Dynamic interpretation Somewhat artistic Minor accuracy flaws Somewhat musical Convincing interpretation Average artistry Some inaccuracies Average musicality Average interpretation Lacks artistry

The applied teacher averages the jury score for a final grade. The final grade is calculated according to the instructor's syllabus. Use the assessment scale on this form.

VOICE JURY FORM

PERSONAL: Student name: Music major: Semester/year: _____ Adjudicator: _____ Accept Selections: _____ Assessment score: _____ Denv **VOCAL CHARACTERISTICS** (tone quality, intonation, alignment, breath management) **JURY GRADE** Comments: Excellent quality Above average quality Acceptable quality Below average quality Minimal vocal production LYRIC DICTION (English, foreign language) ASSESSMENT **SCALE** Accurate pronunciation Comments: _____ Minor pronunciation errors 25-21 Α Several pronunciation errors 20-18 В Consistently mispronounced 17-15 С Unrecognizable 14-12 D MUSICIANSHIP (memorization, pitch and rhythmic accuracy) 11-0 Accurate and secure Comments: Few inaccuracies Several inaccuracies Quite a few inaccuracies Unprepared VOCAL ARTISTRY (phrasing, dynamics, style) Extremely musical Comments: Verv musical Somewhat musical Little musicality Unmusical **PERFORMANCE** (physical communication, appropriate attire) High quality performance Comments: ____ Above average performance Average performance List additional comments on the Below average performance reverse side. Inappropriate for performance Adjudicator signature: ______ Date: _____

CASPER COLLEGE WIND AND PERCUSSION JURY ASSESSMENT FORM

lame:		Instrument:	
Applied instructor: _		Semester: ☐ Fall	☐ Spring
REPARED SOLO):		
ïtle:		Composer:	
arranger/editor:		Publisher:	
APPLIED INSTRU	JCTOR SECTION:		
Student's entering g	rade (freshman): (1-6)	Extude or study texts:	_
			GRADI
Scales: MAJOR:		MINOR:	-
Remarks:		Instructor's Initials:	
each session is scorundergraduate, 8 ave	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments or	duate performance level 12.5 superior reverse.	
Each session is scorundergraduate, 8 ave	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments or	duate performance level 12.5 superior	
Each session is scorrindergraduate, 8 ave	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments or Comments:	duate performance level 12.5 superior reverse. PERCUSSION:	
winds: Tone: Intonation:	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments of Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED:	
winds: Tone: Intonation: Articulation:	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments or Comments: Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED: Grip: Comments:	
winds: Tone: Intonation: Tempo:	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments of Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED: Grip: Comments: Rhythm: Comments: Tempo: Comments:	
WINDS: Tone: Articulation: Tempo:	ed on a scale of 15 points with 15 being grage, 6.5 passing. Additional comments of Comments: Comments: Comments: Comments: Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED: Grip: Comments: Rhythm: Comments: Tempo: Comments: Musicality: Comments:	
WINDS: Tone: Articulation: Tempo:	ed on a scale of 15 points with 15 being grage, 6.5 passing. Additional comments of Comments: Comments: Comments: Comments: Comments: Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED: Grip: Comments: Rhythm: Comments: Tempo: Comments: Musicality: Comments: UNPITCHED: Tempo: Comments:	
WINDS: Tone: Intonation: Articulation: Tempo: Rhythm:	ed on a scale of 15 points with 15 being gr rage, 6.5 passing. Additional comments or Comments: Comments: Comments: Comments: Comments: Comments: Comments:	duate performance level 12.5 superior reverse. PERCUSSION: PITCHED: Grip: Comments: Rhythm: Comments: Tempo: Comments: Musicality: Comments:	



Appendix B — NASM Advisories on Hearing Health, Neuromusculoskeletal and Vocal Health

Protect Your Hearing Every Day

Information and Recommendations For Student Musicians

National Association of Schools of Music and the Performing Arts Medicine Association

Introduction

In working toward a degree in music, you are joining a profession with a long and honored history. Part of the role of any professional is to remain in the best condition to practice the profession.

For all of you, as aspiring musicians, this involves safeguarding your hearing health. Whatever your plans after graduation — whether they involve playing, teaching, engineering, or simply enjoying music — you owe it to yourself and your fellow musicians to do all you can to protect your hearing.

As you may know, certain behaviors and your exposure to certain sounds can, over time, damage your hearing. You may be young now, but you're never too young for the onset of hearing loss. In fact, in most cases, noise-related hearing loss doesn't develop overnight. Well, some does, but we'll address that issue later in this document. But the majority of noise-induced hearing loss happens gradually.

So the next time you find yourself blasting music through those tiny ear buds of your iPod or turning up the volume on your amp, ask yourself, — "Am I going to regret this someday?" You never know; you just might. And as a musician, you cannot afford to risk it.

The bottom line is this: If you're serious about pursuing a career in music, you need to protect your hearing. The way you hear music, the way you recognize and differentiate pitch, the way you play music; all are directly connected to your hearing. Do yourself a favor: protect it. We promise you won't regret it.

Disclaimer

The information in this document is generic and advisory in nature. It is not a substitute for professional, medical judgments. It should not be used as a basis for medical treatment. If you are concerned about your hearing or think you may have suffered hearing loss, consult a licensed medical professional.

Purpose of this Resource Document

The purpose of this document is to share with you some information on hearing health and hearing loss and let you know about the precautionary measures that all of us should practice daily.

Music and Noise

This paper addresses what is termed noise-induced hearing loss. You may be wondering why we're referring to music — this beautiful form of art and self-expression — as "noise."

Here's why: What we know about hearing health comes from medical research and practice. Both are based in science where noise is a general term for sound. Music is simply one kind of sound. Obviously, there are thousands of others. In science-based work, all types of sound, including music, are regularly categorized as different types of **noise**.

Terminology aside, it's important to remember this fundamental point: A sound that it too loud, or too loud for too long, is dangerous to hearing health, no matter what kind of sound it is or whether we call it noise, music, or something else.

Music itself is not the issue. Loudness and its duration are the issues. Music plays an important part in hearing health, but hearing health is far larger than music.

All of us, as musicians, are responsible for our art. We need to cultivate a positive relationship between music and our hearing health. Balance, as in so many things, is an important part of this relationship.

Noise-Induced Permanent Hearing Loss

Let's first turn to what specialists refer to as noiseinduced permanent hearing loss.

The ear is made up of three sections, the outer, middle, and inner ear. Sounds must pass through all three sections before signals are sent to the brain.

Here's the simple explanation of how we experience sound:

Sound, in the form of sound waves, enters the outer ear. These waves travel through the bones of the middle ear. When they arrive in the inner ear, they are converted into electrical signals that travel via neural passages to the brain. It is then that you experience hearing the sound.

Now, when a **loud** noise enters the ear, it poses a risk to the ear's inner workings.

For instance, a very loud sound, an explosion, for example, or a shotgun going off at close range, can actually dislodge the tiny bones in the middle ear, causing conductive hearing loss, which involves a reduction in the

sound level experienced by the listener and a reduction in the listener's ability to hear faint sounds. In many cases, this damage can be repaired with surgery. But loud noises like this are also likely to send excessive sound levels into the inner ear, where permanent hearing damage occurs.

The inner ear, also known as the **cochlea**, is where most hearing-loss-related ear damage tends to occur. Inside the cochlea are tiny hair cells that are responsible for transmitting sound waves to the brain. When a loud noise enters the inner ear, it can damage the hair cells, thus impairing their ability to send neural impulses to the brain.

The severity of a person's noise-induced hearing loss depends on the severity of the damage to these hair cells. The extent of the damage to these cells is normally related to the **length** and **frequency** of a person's exposure to loud sounds **over long periods of time**.

Because noise-induced hearing loss is painless, you may not realize that it's happening at first. Then suddenly one day you will realize that you're having more and more trouble hearing high frequency sounds — the ones that are the most high-pitched. If you don't start to take precautions then, your hearing loss may eventually also affect your ability to perceive both speech sounds and music.

It is very important to understand that these hair cells in your inner ear cannot regenerate. Any damage done to them is permanent. At this time, there is simply no way to repair or undo the damage.

FACT: According to the American Academy of Audiology, approximately 36 million Americans have hearing loss. One in three developed their hearing loss as a result of exposure to noise.

Noise-Induced Temporary Hearing Loss

Now it's also important to note that not all noise-induced hearing loss is necessarily permanent. Sometimes, after continuous, prolonged exposure to a loud noise, we may experience what's called noise-induced temporary hearing loss.

During temporary hearing loss, known as Temporary Threshold Shift, hearing ability is reduced. Outside noises may sound fuzzy or muted. Normally, this lasts no more than 16 to 18 hours; at which point your hearing levels will return to normal.

Often during this Temporary Threshold Shift, people will experience tinnitus, a medical condition characterized by a ringing, buzzing, or roaring in the ears. Tinnitus may last only a few minutes, but it can also span several hours, or, in extreme instances, last indefinitely.

Also, if you experience a series of temporary hearing losses, you may be well on the way to permanent damage sometime in the future.

Noise Levels and Risk

Now, how do you know when a noise or sound is too loud, when it's a threat to your hearing health? Most experts agree that prolonged exposure to any noise or sound over 85 decibels can cause hearing loss. You may have seen decibels abbreviated dB. They are the units we use to measure the intensity of a sound.

Two important things to remember:

- 1. The longer you are exposed to a loud noise, the greater the potential for hearing loss.
- 2. The closer you are to the source of a loud noise, the greater the risk that you'll experience some damage to your hearing mechanisms.

At this point, it helps to have some frame of reference. How loud are certain noises?

Consider these common sounds, their corresponding decibel levels, and the recommended maximum exposure times established by the National Institute for Occupational Safety and Health, a branch of the Centers for Disease Control and Prevention.

Sound	Intensity (dB)	Maximum Recommended Exposure (approx.)*
A Whisper	30	Safe, no maximum
Rainfall (moderate)	50	Safe, no maximum
Conversation (average)	60	Safe, no maximum
Freeway Traffic	70	Safe, no maximum
Alarm Clock	80	Safe, no maximum
	85	Potential Damage Threshold
Blender, Blow-dryer	90	2 hours
MP3 Player (full volume), Lawnmower	100	15 minutes
Rock Concerts, Power Tools	110	2 minutes
Jet Plane at Takeoff	120	Unsafe, immediate risk
Sirens, Jackhammers	130	Unsafe, immediate risk
Gunshots, Fireworks (close range)	140	Unsafe, immediate risk

*NIOSH-recommended exposure limits

You can listen to sounds under 85 dB for as long as you like. There is no risk involved, well, except for the risk of annoyance. But seriously, for sounds in this lower decibel range, listening to them for hours on end does not pose any real risk to your hearing health.

85 dB is the magic number. Sounds above the **85 dB threshold** pose a potential threat to your hearing when you exceed the maximum recommended exposure time.

MP3 players at full volume, lawnmowers, and snowblowers come in at 100 dB. The recommended maximum exposure time for these items is 15 minutes.

Now, before you get too worried and give up mowing the lawn, remember, there are ways to reduce your exposure.

For instance, turn down the volume on your MP3 player. Did you know that normally, MP3 players generate about 85 dB at one-third of their maximum volume, 94 dB at half volume, and 100 dB or more at full volume? Translated into daily exposure time, according to NIOSH standards, 85 dB equals 8 hours, 94 dB equals 1 hour, and 100 dB equals 15 minutes. Do yourself a favor, and be mindful of your volume.

Also, remember to wear a pair of earplugs or earmuffs when you mow the lawn or when you use a snowblower.

When you're dealing with sounds that produce between 120 and 140 dB, you're putting yourself at risk for almost immediate damage. At these levels, it is imperative that you utilize protective ear-coverings. Better yet, if it's appropriate, avoid your exposure to these sounds altogether.

FACT: More than 30 million Americans expose themselves to hazardous sound levels on a regular basis.

Musicians and Noise-Induced Hearing Loss

Nowadays, more and more is being written about the sound levels of certain musical groups. It's no secret that many rock concerts expose performers and audiences to dangerously high levels of noise. The ringing in your ears after a blaring rock concert can tell you that. But now professional and college music ensembles are under similar scrutiny.

It's true that musicians are exposed to elevated levels of sound when they rehearse and perform music. But that doesn't equal automatic risk for hearing loss.

Take for instance a typical practice session on the piano. When taken at close range to the instrument over a limited period of time, a sound level meter fluctuates between a reading of 60 and 70 decibels. That's similar in intensity to your average conversation (60dB). There will, of course, be moments when the music peaks and this level rises. But these moments are not sustained over several hours, at least not under normal practice conditions.

While the same is true for most instruments, it is important to understand that certain instrumental sections tend to produce higher sound levels. Sometimes these levels relate to the piece of music being performed and to notational requirements (pianissimo, fortissimo); other times, these levels are what naturally resonate from the instrument.

For example, string sections tend to produce decibel levels on the lower end of the spectrum, while brass, percussion, and woodwind sections generally produce decibel levels at the higher end of the spectrum.

What's important is that you are mindful of the overall volume of your instrument and of those around you. If you're concerned about volume levels, share your concerns with your instructor.

FACT: Approximately 50 percent of musicians have experienced some degree of hearing loss.

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Mindful Listening

Now, let's talk about how you can be proactive when it comes to music and hearing loss. It's important to think about the impact noise can have on your hearing health when you:

- 1. Attend concerts.
- 2. Play your instrument.
- 3. Adjust the volume of your car stereo.
- 4. Listen to your radio, CD player, and MP3 player.

Here are some simple ways to test if the music is too loud:

It's too loud (and too dangerous) when:

- 1. You have to raise your voice to be heard.
- 2. You can't hear someone who's 3 feet away from you.
- 3. The speech around you sounds muffled or dull after you leave a noisy area.
- 4. You experience tinnitus pain, ringing, buzzing, or roaring in your ears after you leave a noisy area.

Evaluating Your Risk for Hearing Loss

When evaluating your risk for hearing loss, ask yourself the following questions:

- 1. How frequently am I exposed to noises and sounds above 85 decibels?
- 2. What can I do to limit my exposure to such loud noises and sounds?
- 3. What personal behaviors and practices increase my risk of hearing loss?
- 4. How can I be proactive in protecting my hearing and the hearing of those around me?

Basic Protection for Musicians

As musicians, it's vital that you protect your hearing whenever possible. Here are some simple ways to reduce your risk of hearing loss:

- 1. When possible, avoid situations that put your hearing health at risk.
- 2. Refrain from behaviors that could compromise your hearing health and the health of others.
- 3. If you're planning to be in a noisy environment for any significant amount of time, try to maintain a reasonable distance from the source of the sound or noise. In other words, there's no harm in enjoying a fireworks display, so long as you're far away from the launch point.
- 4. When attending loud concerts, be mindful of the location of your seats. Try to avoid sitting or standing too close to the stage or to the speakers, and use earplugs.
- Keep the volume of your music and your listening devices at a safe level.
- 6. Remember to take breaks during a rehearsal. Your ears will appreciate this quiet time.
- 7. Use earplugs or other protective devices in noisy environments and when using noisy equipment.

Future Steps

Now that you've learned about the basics of hearing health and hearing loss prevention, we encourage you to keep learning. Do your own research. Browse through the links provided at the end of this document. There's a wealth of information out there, and it's yours to discover.

Conclusion

We hope this resource document has made you think more carefully about your own hearing health. Just remember that all the knowledge in the world is no match for personal responsibility. We've given you the knowledge and the tools; now it's your turn. You are responsible for your exposure to all sorts of sounds, including music. Your day-to-day decisions have a great impact on your hearing health, both now and years from now.

Do yourself a favor. Be smart. Protect your precious commodity. Protect your hearing ability.

Resources — Information and Research

Hearing Health Project Partners

National Association of School of Music nasm.arts-accredit.org

Performing Arts Medicine Association artsmed.org/index.html

PAMA Bibliography (search tool) artsmed.org/bibliography.html

General Information on Acoustics

Acoustical Society of America acoustical society.org

Acoustics.com acoustics.com

Acoustics for Performance, Rehearsal, and Practice Facilities Available through the NASM website

Health and Safety Standards Organizations

American National Standards Institute ansi.org

The National Institute for Occupational Safety and Health cdc.gov/niosh

Occupational Safety and Health Administration osha.gov

Medical Organizations Focused on Hearing Health

American Academy of Audiology audiology.org

American Academy of Otolaryngology — Head and Neck Surgery entnet.org

American Speech-Language-Hearing Association asha.org

Athletes and the Arts athletesandthearts.com

House Research Institute — Hearing Health hei.org

National Institute on Deafness and Other Communication Disorders — Noise-Induced Hearing Loss nidcd.nih.gov/health/hearing/noise.html

Other Organizations Focused on Hearing Health

Dangerous Decibels dangerousdecibels.org

National Hearing Conservation Association hearingconservation.org

38 Casper College

Appendix C — Protect Your Neuromusculoskeletal and Vocal Health Every Day

Information and Recommendations for Student Musicians

National Association of Schools of Music and the Performing Arts Medicine Association

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Introduction

In working toward a degree in music, you are joining a profession with a long and honored history. Part of the role of any professional is to remain in the best condition to practice the profession.

For all of you, as aspiring musicians, this involves safeguarding your neuromusculoskeletal and vocal health. Whatever your plans after graduation — whether they involve playing, teaching, producing, or simply enjoying music — you owe it to yourself and your fellow musicians to do all you can to protect yourself.

The neuromusculoskeletal system refers to the complex system of muscles, bones, tendons, ligaments, and associated nerves and tissues that support our body's physical structure and enable movement.

In this resource document, the term "neuromusculoskeletal" is used to encompass not only overt physical movements (the pressing of a key, the strumming of a string) and overall body alignment, but also the small internal movements our bodies make, for example to produce breath and modify vocal sounds.

Therefore, vocal health is referred to as a component of neuromusculoskeletal health. When the term "neuromusculoskeletal" is used, vocal health is included. A number of direct references to vocal health are interspersed throughout this guide. Special attention is devoted to issues of vocal health in the sections

"Neuromusculoskeletal Issues Affecting the Voice" and "Vocal Protection."

Good health and healthy behaviors are important to all musicians, regardless of instrument or area of specialization.

Vocal health is important, too. As current music students and future music professionals, you not only use your voice to speak, but now or sometime down the road, you may find yourself engaged with the singing voice in your role as a conductor, coach, teacher, recording engineer, researcher, therapist, or other music professional.

Of course, there are certain behaviors, especially those involving excessive physical and vocal stress and strain, which can endanger your neuromusculoskeletal and/or vocal health.

Sometimes our bodies and voices recover from strenuous behaviors rather quickly, but other times the effects linger. Our recovery time is often tied to our level of fitness and ability.

Many of you may be picturing a novice athlete who doesn't warm up properly, who plays too hard during a game or match, and who then ends up with an injury — maybe a sprained ankle or a pulled muscle.

But, as you know, athletes aren't the only ones who train and practice in order to reach the pinnacle of performance. Musicians do that, too.

The work of musicians, like that of athletes, is physically demanding. And musicians, just like athletes, need to warm up. They need to utilize proper form. They need to take breaks. They need to avoid "overdoing it." And they need to take the proper precautions to safeguard their neuromusculoskeletal and vocal health, so that they can continue to play and sing the music they love for years to come.

Some of you may have already been diagnosed with some sort of neuromusculoskeletal or vocal condition or disorder. It may be tied to your genetic makeup. It may be linked to a past injury or infection. Or it may be linked to a particular repeated behavior, your posture, or something else.

The purpose of this resource document is two-fold. First, it's intended to inform you about some of the most common neuromusculoskeletal and vocal conditions and disorders that affect musicians. And second, its contents can help to empower you to take control of your own neuromusculoskeletal and vocal health. The majority of these conditions are preventable. But you've got to be proactive and protective of your health. Avoid putting yourself at risk.

The bottom line is this: If you're serious about pursuing a career in music, you need to treat your body with respect. You need to demonstrate proper form and technique when playing and singing. And you need to recognize your physical limitations. Sometimes, the most important thing you can do is take a deep breath and take a break.

Disclaimer

The information in this presentation is generic and advisory in nature. It is not a substitute for professional medical judgments or advice. It should not be used as a basis for medical treatment. If you are concerned about your physical dexterity or your voice, or think you may be experiencing the symptoms of a particular neural, musculoskeletal, or voice disorder, consult a certified or licensed medical or healthcare professional.

Purpose of this Resource Document

The purpose of our presentation is to share with you some information on neuromusculoskeletal and vocal health, conditions, and disorders and to let you know about the precautionary measures that all of us should practice daily.

Music, the Musician, and Neuromusculoskeletal and Vocal Health

So, for most of you, practice is paramount to your success as a musician. It's likely that the days when you don't practice are few and far between. It takes a lot of time, dedication, and skill to be a successful musician. The act of practicing our music gradually takes a toll on us, especially when practice involves long hours and infrequent breaks.

We practice alone, we practice with others, we practice for concerts, we practice for juries, and we practice for competitions. In other words, we practice a lot. We practice to be the best we can be. And from time to time, we experience aches and pains.

All of us know that the life of a musician is busy and strenuous.

Decisions about when and how we practice — and for how long — have an effect on our neuromusculoskeletal and vocal health. So, too, does our behavior outside of music classrooms, rehearsal halls, and concert venues.

As musicians, we are responsible for our art. We need to cultivate a positive relationship between music and our neuromusculoskeletal and vocal health. Balance, as in so many things, is an important part of this relationship.

The Neuromusculoskeletal System

The neuromusculoskeletal system refers to the complex system of muscles, bones, tendons, ligaments, and associated nerves and tissues that allow us to move and to speak and sing. Also, this system supports our body's physical structure.

The "neuro" part of the term "neuromusculoskeletal" refers to our nervous system, which coordinates the ways in which our bodies move and operate. The nervous system consists of the brain, the spinal cord, and the hundreds of billions of nerves responsible for transmitting information from the brain to the rest of the body and back to again, in an endless cycle.

Our nervous systems allow us to move, to sense, and to act in both conscious and unconscious ways. We could not listen to, enjoy, sing, or play music without these structures.

Vocal Anatomy

Our vocal system is a part of our larger neuromusculoskeletal system. Our voice is produced by four component systems. These are often referred to as the "generator," the "vibrator," the "resonator," and the "articulator."

The "generator" is our breath that is provided to us by our lungs. The diaphragm, along with numerous other muscles within our abdomen, ribs, chest, and back, help us to move breath throughout our respiratory system.

The "vibrator" is the larynx, commonly referred to as the "voice box." Horizontally stretched across the larynx are two folds of mucous membrane. These are called the "vocal folds," or "vocal cords." And so, when breath from our lungs passes along our vocal folds, vibrations occur.

The "resonator" is the resonating cavity above the larynx that gives the voice its particular tonal quality. The resonator includes the vocal tract, much of the pharynx, or throat, the oral cavity, and the nasal passages.

The "articulator" includes our tongue, lips, cheeks, teeth, and palate. Together, these parts help us to shape our sounds into recognizable words and vocalizations; they help us to articulate.

These four component parts — the "generator," the "vibrator," the "resonator," and the "articulator" — work together to produce speech, song, and all order of vocalizations.

Disorders of the Neuromusculoskeletal System

Sometimes, within our complex physical bodies, something goes wrong, and we find ourselves victim to a neuromusculoskeletal disorder. The causes and contributing factors vary, but such disorders generally fall into one of the following three categories: 1) disorders with a genetic link; 2) disorders resulting from trauma or injury; and 3) disorders that are related to our behavior.

Some common symptoms of all neuromusculoskeletal disorders include pain, stiffness, aching, throbbing, cramping, and muscular weakness.

Some disorders may be permanent, while others may be temporary. In some cases, a simple change in behavior or some rest and relaxation can help to eliminate or reduce certain symptoms.

Other times, it's not so simple, and medical professionals may need to prescribe certain treatments, such as surgery, therapy, or medication.

Contributing Factors

The exact causes of behavior-related neuromusculoskeletal disorders are manifold. However, these causes generally fit into one of two basic categories or factors. They are: 1) musculoskeletal overuse and/or misuse and 2) genetic factors.

1. Overuse/Misuse (and Abuse)

Overuse

The human body, as we all know, has certain physical limits. In arts medicine terminology, "overuse" is defined as a practice or activity in which anatomically normal structures have been used in a so-called "normal" manner, but to a degree that has exceeded their biological limits. Overuse produces physical changes in our muscles, tendons, ligaments, etc., and that's when we experience symptoms, such as pain and discomfort.

So, how much activity is too much? What exactly constitutes overuse? Well, there's no simple answer to either of these questions. The amount of excessive activity needed to produce these results varies from person to person. Often, it's tied to a person's individual anatomy and physiology.

Musicians who are dealing with changes to their musical routine may find themselves "overdoing it." In the face of high self-expectations, musicians who are beginning at a new school or who are starting lessons with a new instructor may be more apt to overdo it, to push themselves too hard.

Similarly, musicians who are taking up a new instrument may overdo it, as they work to quickly advance their skills.

Really, any musician who rapidly increases his or her practice time or intensity is likely to overdo it and increase his or her level of risk.

When it comes to overuse, what we need to ask ourselves are the following questions: "Is my body well conditioned enough to handle this kind and amount of physical activity? Am I changing my musical routine too drastically or too quickly? Why am I making this change?" These are questions that require honest and individualized answers.

Misuse

"Misuse" is when we use our bodies to perform physical tasks in abnormal ways — and sometimes to excessive degrees. When we misuse certain bodily structures, we put them under stress. This can lead us to experience symptoms such as pain and discomfort.

In music, an example of physical misuse is improper technique. Improper technique can involve poor or "lazy" posture. For instrumentalists, it can involve playing with excessive pressure or force. It can also involve a physical mismatch between player and instrument. For singers, it can involve singing too loudly or singing out of range.

Remember, good posture and technique are important. They'll make playing and singing easier, and you'll be less likely to hurt yourself.

Abuse

Abuse is related to both overuse and misuse. We abuse our own bodies when we perform an activity not only excessively or improperly, but also in a conscious, willful manner, over a sustained period of time. A common example is "playing through the pain." Football players can be frequent perpetrators, but so are some musicians. In their quest to be the best, they let their own physical well-being take a back seat, and end up hurting themselves.

Playing or singing through the pain is not an acceptable option. If you're hurting, stop. Tell your instructor that you're not okay. Your instructor will likely have a protocol in place. This may include asking you to sit on the sidelines and make notes in your music, or you may be excused from class to seek treatment. Ultimately, if you are experiencing chronic pain, consult with a medical professional, and follow the treatment plan they provide.

Your health is too important to be playing through the pain.

Abuse can also involve the use of alcohol or other dangerous substances. Don't smoke or use any drug not prescribed by a medical professional licensed to do so.

2. Genetic Factors

There are also some genetic predispositions that can increase a person's risk of developing one or more behavior-related disorders.

One of the most common genetic factors in this category is double-jointedness. Medically known as "hypermobility," people with this condition have joints, ligaments, and tendons with an extended range of motion. Such joint instability can increase a person's risk of developing various muscle pain syndromes. It can also lead to tendinitis, an inflammation of the tendon. (Tendons, as you may know, are the tough bands of fibrous tissue that connect muscle to bone.)

Individuals with hypermobile joints tend to compensate for this instability by over-tensing their muscles. While this extra muscle tension can help them to better control their movements, it can also increase their risk of damaging or straining a muscle.

People with hypermobility are generally encouraged to monitor and actively reduce the amount of tension that they carry in their muscles in order to reduce the risk of future pain and discomfort.

Specific strengthening exercises may be recommended, or they may employ external methods of joint support, such as small ring splints or tape.

Neuromusculoskeletal Issues Affecting the Body

Below are a number of neuromusculoskeletal complications and disorders that are likely to affect the musician's body.

1. Muscle Pain

For musicians, muscle pain can be the result of overuse, misuse, poor posture, tension, technical problems, or poor conditioning.

Muscles that are fatigued are less able to contract as strongly and frequently as "normal" muscles. With

continued use, fatigued muscles are placed under greater stress, and this can lead to microscopic damage and disruption of the muscle fibers, a condition known as muscle strain.

Muscle contraction is both a physical and a chemical process. When the necessary chemical compounds are in short supply, muscles can no longer operate at optimal efficiency. When muscles contract, they produce lactic acid. When lactic acid builds up in tissues, it minimizes the muscle's ability to continue efficient contractions.

Some kinds of muscle pain may subside once an activity is stopped, but others will linger.

In the case of muscle strains, the pain may dissipate, but a regimen of rest, ice, and/or antiinflammatory medications may be necessary in order to reduce swelling and help facilitate a quicker recovery. As always, it's best to get your advice and treatment plan from a medical professional.

For musicians, muscle pain that stems from performing music is commonly felt in specific body locations. The neck and shoulders; the hands, wrists, and fingers; and the lower back are the most frequently affected areas. Some musicians are more susceptible to certain injuries than others. For example, clarinetists are at greater risk for right thumb pain. Double bass players are more likely to experience pain in the lower back.

So just remember this, when it comes to muscle pain, give your body a break and rest your weary muscles for as long as it takes. Resuming activity prematurely often exacerbates the problem and leads to more trouble in the long run.

2. Neuropathies

"Neuropathy" is a general medical term that refers to diseases or malfunctions of the nerves. Neuropathies are classified by the types or locations of the nerves they affect.

Focal neuropathies are those focused on one nerve or group of nerves within a particular area of the body. Symptoms usually appear suddenly and can include pain; sensory disturbances, such as numbness, tingling, "pins of needles" sensations, burning, or even itching; and weakness. In the case of bodily extremities, the pain may occur at the site of a nerve compression or entrapment. Nerve compressions, or entrapments, occur when a

nerve passes through a narrowed channel bounded by bone, fibrous bands, bulky muscles, or enlarged arteries on its way to or from its ultimate destination — either toward or away from the brain and spinal cord.

In other cases, the pain may be distributed anywhere along the course of the nerve. Individuals with this kind of nerve pain may later on find themselves experiencing muscle weakness and impaired dexterity.

Three of the most common entrapment neuropathies for musicians include: 1) carpal tunnel syndrome, 2) ulnar neuropathy, and 3) thoracic outlet syndrome.

Carpal Tunnel Syndrome

Often associated with people who type for a living, carpal tunnel syndrome occurs when the median nerve, which runs from the forearm into the palm of the hand, becomes pressed or squeezed at the wrist. The carpal tunnel — a narrow, rigid passageway of ligament and bones at the base of the hand — contains the median nerve and several tendons. When irritated or strained, these tendons may swell and narrow the tunnel, compressing the median nerve. The result can be pain, weakness, or numbness in the hand and wrist that radiates up the arm.

Although some experts tie carpal tunnel syndrome to repeated actions, especially those involving the hands and wrists, others cite a genetic predisposition. It is also associated with certain medical conditions, including diabetes, arthritis, and hypothyroidism. It is often very difficult to determine the precise cause of carpal tunnel syndrome.

Whatever the cause, it is a good idea to occasionally rest and to stretch the hands and wrists when performing repetitive tasks or musical exercises. For individuals diagnosed with carpal tunnel syndrome, a doctor may recommend the use of a wrist splint, especially at night.

Ulnar Neuropathy

Ulnar neuropathy is a condition in which the ulnar nerve, which runs from the neck along the inside edge of the arm into the hand, becomes inflamed due to compression of the nerve.

Symptoms include tingling, numbness, weakness, and pain, primarily along the elbow, the underside of the forearm, and along the wrist or edge of the hand on the little (pinky) finger side.

Compression of the ulnar nerve is often linked to repetitive wrist or elbow movements. Musicians of bowed instruments are at a heightened risk for developing this condition, because playing a bowed instrument involves sustained elbow flexion.

Treatment for ulnar neuropathy may involve pain medication, the use of splints to restrict motion, and various exercises.

Thoracic Outlet Syndrome

Thoracic outlet syndrome refers to a group of disorders that occur when the blood vessels or nerves in the thoracic outlet — the space between the collarbone and first rib — become compressed. It is most often the result of poor or strenuous posture, or of constant muscle tension in the neck and shoulder area. Symptoms include pain in the neck and shoulder areas and numbness in fingers.

Doctors may prescribe a variety of stretches and exercises in order to treat the symptoms of thoracic outlet syndrome.

Proper body alignment and sufficient muscle strength can both help to decrease the risk of thoracic outlet syndrome among musicians.

3. Dystonia

Dystonia involves sustained muscular contractions. These muscular contractions produce unwanted movements or abnormal postures in people. The exact cause of dystonia is unclear.

Like a focal neuropathy, focal dystonia is focused on a particular area of the body, and certain sets of muscles within that area of the body are involved.

Because men are more frequently affected than women, it is possible that genetic or hormonal factors are to blame.

Also, as is the case with carpal tunnel syndrome, repetitive movements, especially those that are painful, seem to be a trigger for dystonia.

In the instrumental musicians, these sustained muscle contractions frequently affect the upper arm. This is

especially true for keyboard, string, percussion, and woodwind players. In brass and woodwind players, the embouchure may be affected.

Neuromusculoskeletal Issues Affecting the Voice

There are also a number of neuromusculoskeletal issues that can adversely affect the musician's voice.

Some common medical conditions affecting the voice are phonatory instability, vocal strain, and vocal fold motion abnormalities.

1. Phonatory Instability

Phonation, as you may know, is the process by which air pressure, generated by the lungs, is converted into audible vibrations. One method of phonation called "voicing" occurs when air from the lungs passes along the elastic vocal folds at the base of the larynx, causing them to vibrate.

Production of a tonal, pleasant voice with smooth changes in loudness and pitch depends upon the symmetrical shape and movement of the vocal folds.

Phonatory instability occurs when there is asymmetrical or irregular motion of the vocal folds that is superimposed on the vocal fold vibration.

Short-term causes of phonatory instability include fatigue, effects of medication, drug use, and anxiety. These problems tend to resolve rapidly if the cause is removed. Fatigue is another common cause of short-term phonatory instability.

Additionally, over-the-counter allergy medications, anti-depressants, and highly caffeinated drinks, which stimulate the nervous system, can often cause vocal tremors, a form of phonatory instability.

Drug use, alcohol use, and smoking all adversely affect our control of vocal folds and should be avoided.

2. Vocal Strain

Another issue for vocal musicians is vocal strain. Overuse of the voice in any capacity — singing or speaking — can produce vocal strain.

Singers must be aware of problems associated with singing at the extremes of vocal range, especially the upper end.

Both duration and intensity of singing are as important as they are for instrumentalists. In other words, avoid overdoing it.

Singers should also avoid attempting repertoire that is beyond their individual stage of vocal maturity and development.

Improperly learning and practicing certain vocal styles is also dangerous.

3. Vocal Fold Abnormalities

Prolonged overuse can, in some cases, lead to the development of nodules on the vocal folds. The nodules appear initially as soft, swollen spots on the vocal folds, but overtime, they transform into callous-like growths. Nodules require specialized and prolonged treatment and rehabilitation and can be of grave consequence to singers.

Basic Protection for All Musicians

As musicians, it's vital that you protect your neuromusculoskeletal health whenever possible. Here are some simple steps you can take:

- 1. When possible, avoid situations that put your neuromusculoskeletal health at risk.
- 2. Refrain from behaviors that could compromise your neuromusculoskeletal health and the health of others.
- 3. Warm up before you practice and perform.
- Take regular breaks from practice and rehearsal.
 A good rule of thumb is a five-minute rest every half hour.
- 5. Limit excessive practice time.
- 6. Avoid excessive repetition of difficult music, especially if progress is slow.
- 7. Insomuch as possible, avoid playing and/ or singing music that is beyond your physical abilities or outside your natural range.
- 8. Refrain from sudden increases in practice and playing time.
- Maintain good posture in life and when you practice and perform music. Be mindful of alignment, balance, and weight distribution.
- 10. Use external support mechanisms, such as

- shoulder rests, neck straps, and flute crutches, when necessary.
- 11. Maintain good "mental hygiene." Get adequate sleep, good nutrition, and regular exercise.
- 12. Refrain from recreational drug use, excessive alcohol use, and smoking.
- 13. Do your best to limit and control stressors. Plan ahead.
- 14. Give yourself time to relax.

Vocal Protection

Here's some extra advice for safeguarding your voice:

- 1. Drink plenty of water, at least eight glasses a day.
- 2. Limit your consumption of caffeine and alcohol.
- 3. Don't smoke.
- 4. Be aware that some medications, such as allergy pills, may dry out your vocal tissues. Be aware of side effects and talk to your doctor if you have questions.
- 5. Avoid dry air environments. Consider using a humidifier.
- 6. Avoid yelling or raising your voice unnecessarily.
- 7. Avoid throat clearing and loud coughing.
- 8. Opt to use vocal amplification systems when appropriate.
- 9. Rest your voice, especially if you are sick. Your voice and your body need time to recover.

Marching Musicians

Musicians in marching bands and drum corps need to maintain a high level of physical conditioning, strength, and endurance. Their rehearsals and performances are very physical and require very precise movements, all while carrying an instrument.

Marching musicians are at an increased risk for sprained ankles, toe contusions, and knee strains, and the heavy instruments that you carry place a great amount of physical stress on the neck, torso, lower back, and legs.

In some climates, high heat, humidity, and extended sun exposure may place added strain on these musicians.

Thorough physical warm-ups, sufficient rest periods, appropriate sun protection, and adequate hydration are essential in promoting the neuromusculoskeletal health of these musicians.

Future Steps

Now that you've learned about the basics of neuromusculoskeletal and vocal health, we encourage you to keep learning. Do your own research. Browse through the links provided at the end of this document. There's a wealth of information out there, and it's yours to discover.

Conclusion

We hope this resource document has made you think more carefully about your own neuromusculoskeletal and vocal health. Just remember that all the knowledge in the world is no match for personal responsibility. We've given you the knowledge and the tools; now it's your turn. You are responsible for your behavior in and outside of the music unit. Your day-to-day decisions have a great impact on your neuromusculoskeletal and vocal health, both now and years from now.

Do yourself a favor. Be smart. Protect your body and your voice. Don't take unnecessary risks. Take care of yourself. You owe it to yourself.

Resources — Information and Research

Neuromusculoskeletal and Vocal Health Project Partners

National Association of School of Music nasm.arts-accredit.org

Performing Arts Medicine Association artsmed.org

PAMA Bibliography (search tool) artsmed.org/bibliography

Medical Organizations Focused on Neuromusculoskeletal and Vocal Health

American Academy of Neurology aan.com

American Academy of Orthopaedic Surgeons aaos.org

American Academy of Otolaryngology — Head and Neck Surgery entnet.org

American Academy of Physical Medicine and Rehabilitation aapmr.org

American Association for Hand Surgery handsurgery.org

American Laryngological Association alahns.org

The American Occupational Therapy Association, Inc. aota.org

American Psychiatric Association psych.org

American Psychological Association apa.org

American Physical Therapy Association apta.org

American Society for Surgery of the Hand assh.org

American Speech-Language-Hearing Association asha.org

National Center for Complementary and Integrative Health nccam.nih.gov

Other Resources on Neuromusculoskeletal and Vocal Health

Athletes and the Arts athletesandthearts.com

National Association of Teachers of Singing nats.org

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caspercollege.edu/music



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