Primary Competency That Best Embraces This Project	Secondary Competency (if any) That Best Embraces This Project	Name	Best Way to Contact You	Teaching Institution	Teaching Context (kind of class)	Project Purpose and General Description of What You Have Your Students Do
1. Enter and edit music using notation software	7. Demonstrate an understanding of MIDI and its applications	Jennifer Amaya	951-312-8213 Pacific	California State Polytechnic University, Pomona	Orchestration & Arranging	In my arranging course, I require students to use Sibelius for all of their projects, but also to use it CORRECTLY. There are still students in my upper division arranging course that do not know the difference between a tie and a slur - they simply think of them as equally beautiful "lines" that appear on the page, without regard to what they mean. This is just one example of how forcing them to use technology can actually teach them something about music. It is very easy to catch this mistake in a notation program. I can explain this multiple times, and still have students weeks into the quarter who are confusing ties with slurs. Eventually, they get it, but I am not sure if they would ever get it if it weren't for me forcing them to use the technology, which provides them with immediate feedback. Additionally, I am preparing them for the real world. Many of them, although they do not know it yet, will end up having to arrange something, and the expectation nowadays is for music to be printed and looking publish-ready. Not only is that an expectation, but it is really a necessity, should the student expect to have their music sound good during the first rehearsal - it simply must look and be notated correctly. So, most of my orchestration and arranging "grading" has to do with how well the student can actually notate a piece of music, using a software notation application.
1. Enter and edit music using notation software		Charles Menoche	MenocheC@mail.ccsu.edu	Central Conneticut State	Music Tech class	Perhaps the most unique (though I am not alone on this) is including "performance" exams for many of my music technology classes/instruction. Not very unique as it is obviously lifted from the approach to many/most methods classes in music education programs. In addition to a written exam, I include is a "performance" exam where they come in for class the day of the exam, I hand them a selected piece of music, and they have to enter, proof, print, and then submit the file by the end of class. So facility with the skill, in addition to familiarity/concepts, is key. I explain to the students that being able to do something well, producing a good product, with efficiency is key for the chances of my students using the skills after class. I use the comparison to having to write in all of the names of notes or fingerings in a piece of music gets in the way of making music/learning music.
1. Enter and edit music using notation software		Kim McCord	kamccor@ilstu.edu	Illinois State University	Elementary General Music Methods required for all undergraduate music education majors	At ISU all students in this class teach their own class each week at our lab school. I want students to begin shifting from thinking about themselves and how it feels for them to teach little kids to being able to see the students and think about how the students are responding to them as a teacher. One of the assignments they complete is a composition based on a rhythmic chant. They develop a chant that is developmentally appropriate for the age group of children they teach. They notate it in some sort of software and save the file as a PDF so their peers can open the file even if they don't own the music software. They teach their peers their chant and get feedback and make changes if necessary before teaching it to their students at the lab school. The teaching episodes are videotaped and preservice teachers are graded based on their ability to design a lesson and teach that is age appropriate for the grade level. Then a month later they take their chant and turn it into a pentatonic melody and create a very simple Orff accompaniment. Again what I am looking for is how well they understand the developmental level of their students and how to implement their composition so most students are successful. An added challenge is most classes include students who are either deaf or blind.
2. Understand the basics of digital audio and how to edit digital audio files	4. Demonstrate an understanding of copyright and fair use	Alex Ruthmann	alex.ruthmann@gmail.com	New York University	Various music classes and settings (MOCC)	Multitrak Balancing and Mixing- Peter Gabriel mixes; several projects within the Playwithyourmusic environment (http://www.playwithyourmusic.org/)

1. Enter and edit music using notation software		Kevin Austin	kevin.austin@videotron.ca	Department of Music, Concodia University, Montreal	Introductory music theory [from note names to chords] Basic music theory [from chords to harmony]	All work was done with a basic music notation program. Work was submitted in pdf and mp3 formats as email attachments. It required students to always hear what they were writing.
2. Understand the basics of digital audio and how to edit digital audio files		Gena Greher	Gena_Greher@uml.edu	University of Mass at Lowell	Tech in Music Ed class; Computational Thinking in Sound	AUDIO-ETHNOGRAPHY: THE SOUNDTRACK OF YOUR LIFE. Autoethnography is a personal narrative tht explores the writer's experience of life. Focuses on the writer's subjective experience, rather than the beliefs and practices of others. Instead of a written narrative, you will be creating an audio narrative of who you are. Your materials will be a collection of music that descsribes you, reflects your interests, represents the type of music you enjoy, or anything else that will give us an idea of who you are and what makes you tick. You may also include other non-musical sound sources to enhance your presenetation. One piece of music played from start to finish will not cut it. You will need to work with at least a half dozen musical sources that you will edit, process, and layer into a conhesive musical narrative of exactuly 300 seconds ... not a second more or a second less.
3. Record and mix a performance with production with digital audio software		Richard Dammers	Dammers@rowan.edu	Rowan University	Technology Class	In my Educational Technology course, my students use apps on their phones and on the school's iPads to form several iBands (trios and quartets). The students are asked to either cover a song or come up with their own original work. After spending a class period (plus any voluntary additional rehearsals before the next class), each iBand plugs into the JamHub Mixer and perform for the class. All of this is a prelude to the discussion about the affordances and limitations of iPads and smartphones as instruments, as well as sharing reflections on their experience in an informal music learning setting. These discussion usually lead to a class conclusion that iBands and informal musical learning can broaden our approaches to music learning and may be effective for students that are not as well served by traditional music instruction.
3. Record and mix a performance with production with digital audio software	11. Use and manage a variety of social music sharing tools (e.g. iTunes, Spotify, Pandora)	Sandra Stauffer	Sandra.Stauffer@asu.edu	Arizona State University	Art of Teaching Music to Children	We've asked students to create hybrid ensembles of acoustic and digital "instruments"…(iPads, phones, laptops and various apps or software) to create new arrangements of familiar tunes, and in the near future they will be composing original pieces for kid-friendly hybrid ensembles. They will record one of their arrangements, put it on SoundCloud, and then give comments to each other.
3. Record and mix a performance with production with digital audio software	7. Demonstrare an understanding of MIDI and its applications	Timothy Nord	nord@ithaca.edu	Ithaca Collete	Music Tech Class	One of the projects I do with my freshman introductory students that has produced very good results and the students get very interested in is a recording project I do with Garageband. The requirement is to record a short story or poem and then via MIDI recording and Apple Loops, creating a sound track to accompany the recording. As we prep for this, we listen to examples, talk about dramatic elements and consider how a sound track really effects the story line. This semester, I got everything from "The Raven" to "Snoopy and the Red Baron".
4. Demonstrate an understanding of copyright and fair use	7. Demonstrare an understanding of MIDI and its applications	Ray Riley	rileyr@alma.edu	Alma College, Michigan	Piano Class	In my piano studio, I have on occasion looked to technology for reinforcing some aspect of instrumental pedagogy or even research. For instance we established a policy some years back that we would no longer photocopy any scores for students, even single pages from an edition. Students needed to either purchase printed editions of their music or look to the Web for a digital version. It has led to some very interesting explorations of copyright, public domain, as well as comparisons of various editions found at the Petrucci Music Library. Another sometimes ad hoc experiment has been to have my students record passages from their repertoire in a MIDI application (GarageBand or Logic) and look at MIDI performance data (duration, velocity contours, sustain pedal maps, etc.) to better understand musical elements such as rhythmic evenness, voicing and balance, legato, expression, and harmonic rhythm. It helps to have a first-rate 88-note MIDI performance keyboard with good sampled pianos.

4. Demonstrate an understanding of copyright and fair use	2. Understand the basics of digital audio and how to edit digital audio files	Alex Ruthmann			Various music classes and settings (MOCC)	Multitrak Balancing and Mixing- Peter Gabriel mixes; several projects within the Playwithyourmusic environment (http://www.playwithyourmusic.org/)
4. Demonstrate an understanding of copyright and fair use	5. Create a music presentation with production software and appropriate hardware	Jane Kuehne	kuehnjm@auburn.edu	Auburn University	Music Education Methods - Elementary General, Secondary General, Choral	COPYRIGHT LAWS Using the link to the website that contains the full copyright law, choose ONE chapter and ONE appendix and post summaries of each here. RESPOND to one other person's posts with a question. RESPOND to anyone's questions about your post. These will be discussed in class (lab time). FAIR USE and COPYRIGHT PSA Outline and record a 3-5 minute video Public Service Announcement (PSA) targeted at educators who may or may not realize they are violating copyright law. Be sure to write your text/outline your main points BEFORE recording. Main points to include: What is Fair Use? What is legal and what is not legal specifically for music educators? Provide solutions for difficult situation (i.e. low budgets). Include at the end (or in your comments section) a list of references (you should have at least 5).
5. Create a music presentation with production software and appropriate hardware	2. Understand the basics of digital audio and how to edit digital audio files	Ray Riley	rileyr@alma.edu	Alma College, Michigan	Various classes	AUDIO DOCUMENTARY PROJECT One my my favorite projects that has been done in various course titles has been what I call the audio documentary. Students choose a musical topic that can easily accommodate the inclusion of several music examples. The idea is to create an NPR-like documentary which weaves in and out of voice narration and music. Attached is a screenshot with the basic outline of the project from Moodle. I don't know if this is necessarily that creative or innovative but this project is always one that students seem to enjoy the most.
5. Create a music presentation with production software and appropriate hardware	7. Demonstrare an understanding of MIDI and its applications	Jay Dorfman	jdorfman@bu.edu	Boston University	Music Technology class	For the last several semesters I've been having my students independently create cover versions of popular songs. They are allowed to download MIDI files to use as "scratch" tracks, then they edit and delete MIDI parts and replace them with real instruments. They document the steps they take to make the project, and present these to the class by explaining what they did. It pushes them out of their comfort zone because they usually sing some parts and play instruments on other parts; not all of the students play instruments for this project in which they specialize. They also call on each other to collaborate when there is a part they would rather not play themselves.

5. Create a music presentation with production software and appropriate hardware	2. Understand the basics of digital audio and how to edit digital audio files	Jennifer Amaya	(951) 312-8213)	California State Polytechnic University, Pomona	Service-Learning	I teach a music service-learning course that is a requirement for all of our undergraduate music students. The course requires our students to go out into the community, to complete large group service projects. We often work with elementary schools or after school programs, to teach younger students about music. Over the past year I have encouraged my service-learning students to incorporate technology into their projects. We have done this in a variety of ways. For example, at an elementary school, we have one day (about an hour) to spend with all of the 4th graders, to encourage them to join the orchestra in 5th grade. We set up 4-5 "stations" that offer a variety of musical lessons, from making craft instruments to recording themselves singing. Specifically with the technology component, our college students have brought small DAWs with them and prepared files in Pro Tools that encourage the students to want to participate - either by singing, stomping, rapping, or clapping along. We choose songs and materials that speak to the 4th grade age group. We let them see the entire process - they get to watch the computer screen - and we briefly explain what they are seeing, and how audio is recorded, how it shows up on the screen, and how we can play it back and edit it. We teach them a bit about how to speak or sing into a microphone, as well.
6. Create a streaming audio file (sharing recordings)	10. Create and edit a simple music video	Francesca Arnone	francesca_arnone@baylor.edu	Baylor University	Applied, Methods, Chamber Music	Record rehearsals, practice sessions, performances, teaching demonstrations Lately most of my students use Tonal Energy for just about everything - from recording on smart phones to practicing with a reference tone (multi-layered), metronome, intonation work; imaging vibrato speed and amplitude, plotting accuracy in recordings with metronome/intonation tracking.
10. Create and edit a simple music video		Richard Dammers	Dammers@rowan.edu	Rowan University	Instrumental Methods Class	In my Instrumental Methods course, I take videos of the students as they take turns rehearsing the in-class concert band formed by their peers playing secondary instruments. I then deliver the videos to my students via dropbox. The students load their videos into GarageBand and overdub an audio track of their own reflective commentary, discussing their own rehearsal, before returning the video to me via dropbox. I've found this approach gives students a helpful frame for examining their work and is particularly effective in assisting students in focusing on their pacing in rehearsal. Watching rehearsal videos is not always easy for young teachers, and is sometimes avoided. These approach ensures that the students actually do watch and reflect on their teaching.
10. Create and edit a simple music video		Stella Sick	ssick01@hamline.edu	Hamline University	Piano Class	PROJECT PRACTICE I had my students create short, unedited videos of their practicing, so that I can take a glimpse of how they do when I am not hovering over their shoulders. Directions: You will create a short 2-5 minute video in which you practice a tough passage or a small section of a piece. Keep the passage short (maybe 2 - 8 measures?) so that we can check out your practice strategies. Upload your video to the group on Facebook. Watch each of the videos in this group, and in the comment section of each video (including your own, if you would like). Also add other positive and constructive comments
11. Use and manage a variety of social music sharing tools (e.g. iTunes, Spotify, Pandora)		Sarah Sanuelson	sesamuelson@pugetsound.edu	University of Puget Sound	Elemenatary Methods class	Most of my students have been familiar with iTunes and Pandora, so I have introduced them to Naxos music library. I created playlists of music for my students to analyze and become familiar with American folksongs and other well-known folksongs from other countries since there were so many which were unfamiliar to the students. My playlists are: Songs Every Child Should Know (based on a NAfME list), Songs for Primary, Classical Kids-Educational Music Stories, and Music Listening Playlist. For one assignment I will have students listen to the "Songs Every Child Should Know" as part of their final assignment to design a year-long curriculum calendar. They will decide when during the calendar year they would plan to incorporate the song and for which grade level it would be appropriate. Another part of the assignment encourages students to analyze the ensemble, the arrangement or the particular song, and using Naxos find an arrangement of 1-2 songs which could contrast to the ones I've selected. I also have developed playlists based on the pieces highlighted in the book Shaping Sound Musicians by Patricia O'Toole — music for beginning, Band, Choir and Orchestra — as part of an assignment for developing a literature library. In addition to iTunes and Naxos, I have introduced students to a subscription based music downloading source that I've used for many years, www.emusic.com. I have been able to purchase and download music from a variety of genres, styles, and countries at 1/2 the price of iTunes. I have quite a library of digital downloaded music now.

11. Use and manage a variety of social music sharing tools (e.g. iTunes, Spotify, Pandora)		Richard Webb	rickwebbmusic@gmail.com		Introduction to music education	The purpose of this assignment is to familiarize you with some digital technology tools available for use in the music education classroom. In this case, you will arrange a"warm-up" chorale for an instrumental or vocal ensemble. Part of this project is "messing around" with the apps, to figure out how they work, and how they can work for you and your future students. You are encouraged to try them out, and ask your friends (and instructor) for help, if needed. 1) Select 6-8 measures from a chorale by J. S. Bach 2) Using Noteflight in the Inside Music app, arrange your chorale for an ensemble of your choice, for four separate parts & staves. I would suggest using your own content area (example a horn player might score a brass quartet; strings, a string quartet; percussion, perhaps a marimba quartet; vocalists, four voices on a "la" syllable or simply four single piano lines, etc.. Winds and brass: be careful regarding transcriptions - I would suggest doing your score in C. 3) Print out a copy of your score, or you may use your screen as "sheet music." 4) Open Soundation4education, and using the multi-track recorder, create a recording of your 6-8 measure chorale, with any live (must be live) instruments you would like (you could play all parts on your instrument, have friends on different instruments play a part, etc.).
11. Use and manage a variety of social music sharing tools (e.g. iTunes, Spotify, Pandora)	10. Create and edit a simple music video	Michele Kaschub	kaschub@usm.maine.edu	University of Southern Maine	Composers Workshop	In our Composer's Workshop, all MUEs are responsible for analyzing several pop songs (current Top 40 charts), identifying commonalities, and using those commonalities to compose a pop song using loops and self-recorded tracks in GarageBand. These must be "sprinkled with magic production dust" and then synced with a video that they film and edit in iMovie. The students may work alone, with partners, or in small groups - their choice. The intended product goal is "should be like what a YouTube pop star wannabe would post in trying to formulate a fan base". The students post their videos on YouTube sharing only within our class. With the college students' knowledge/permission, I have their projects assessed by a small group of 5 or 6 high school students. The HS students set the assessment criteria based on how they view YouTube videos. Their comments and feedback is then shared with the whole college class as a way of getting to know how high school students think about YouTube music culture. This is a two-week project. We do not "super-polish" the product.

Prerequisite Technology Skills That May Be Required	Technology Skills That You Feel They Need to Learn in the Process of Completing the Project	Time Frame	End Product(s) That Are Likely Created and How They Are Evaluated	Any Other Comments That You Would Like to Share
Computer skills and basic knowledge of a music notation software application.	Basic computer skills and basic knowledge of a music notation software application. (A lot of what they need to know is MUSICAL, which can actually be taught by the software.)	in this particular case, it took nearly an entire quarter for all of the students to figure out how to use the software "tool" effectively.	Arrangements, beautifully notated. They are graded on how they use the instruments they choose, and how well they combine instruments, based on what they have learned about them; however, they are also graded on the presentation of the materials.	
Previously in music theory classes Sibelius was taught to all students and it is available in our tech labs. Now students seem to use a variety of notation software so as long as they can convert it into a PDF I encourage them to use whatever notation program they like best.	Notation programs, including how to enter lyrics. How to create a PDF. Some end up taking pictures of a print out of their music or scan.	Two weeks.	Notated rhythmic chant with body percussion and lesson plan for teaching it. All of these are shared with their peers via my DropBox so the students go away with about 25 chants that range for K-5 grade levels. I do the same thing with the melody they develop later in the semester. They usually do not teach the melody to their class because it is turned in during the last week of classes. I see these assignments with the videotape of the teaching as sort of a final exam but in a performance-based context. I am attaching the assignment description and the rubric I use. We work together as a class to develop descriptors for the rubric during the week I teach assessment.	I have presented this at the AOSA Conference with my lab school general music teacher, Donna Zawatski. We refine it a bit each year but it is pretty much the same each semester now. My students love doing this and many say it is the first time they have ever composed!

None. Students read a basic description and figured out the rest.	This was done 6 - 10 years ago. Few students had laptops, most worked at home. Today, at the age of 18, these are post-internet brain students. While high schools might still have used paper, paper and writing are like doing a thesis with a type-writer.	They learned the basics in a matter of minutes.	The tools use wasn't evaluated. Almost no one had problems with the software after the first week.	Most of the skills listed, apart from number 1, are used in the core first-year courses in the Electroacoustic Studies program. Students in the music program previously showed limited interest in "sound as sound", but rather 'sound as the realization of symbols / documentation of performance'. The introduction of 'Digital Music' programs, largely populated by song-writers, pop / rock composers and band members often want: 1, 2, 3, 6, 10, 11. These are very 'practical', while in terms of life-long educational necessities, IMV, 4 and 9 are more important. New software [eg film score packages, and gaming audio file creation] are accessing meta-data and data mining techniques that, for a general population, will return more useful sound materials than a [s]lightly trained musician who wants to write songs. As was somewhat in the 1970s, the machine-age technologies have democratized and broadened the base of music making, both important and good [IMV]. A result is 1,500,000 new songs every year, most available on Youtube, many created in GarageBand, Abletone Live kinds of home studios, with auto tune. Thirty years ago, the question / issue was the technology. IMV, this is no longer the case, now it is about musicing. The technology is [simply] tools. The educated musician needs to be able to hear - both the outer and the inner ear.
	Using an audio editing program like Audacity to come up with a meaningful project			
none, Freshman class	While the generator for this project is learning how to use the tools, the underlying element is dealing with affect, how music and/or sound effects influence us.			

		http://www.playwithyourmusic.org/		
For these, they only need to be able to use a word processor/discussion board. But, the focus is copyright and ethics of computer use with kids and informing kids about targeted marketing. For the PSA (see below), they need simple video editing tools. We use free editors either online or that are available natively on Windows and Apple computers. Our Learning Resources Center also has digital video cameras for check out.	Video and Audio editing (see note above)	These are completed over a period of 3 classes (3 semesters) 1st class: Copyright Law, Fair Use 2nd class: Copyright Organizations 3rd class: Ethics, youth, and the internet	**COPYRIGHT LAWS** Using the link to the website that contains the full copyright law, choose ONE chapter and ONE appendix and post summaries of each here. RESPOND to one other person's posts with a question. RESPOND to anyone's questions about your post. These will be discussed in class (lab time). EVALUATION: Rated on a scale of 1 to 4 (low to high) in these areas (4=A, 3=B, 2=C, 1=D, 0=F): 1. Completion (this is 4 - complete or 0 - not complete) 2. Accuracy (4 - accurate, 3 - missing some info, 2 - missing vital info, 1- not accurate) 3. Grammar (4 - no mistakes, 3 - minor mistakes, 2 - noticeable mistakes, 1 - many mistakes) **FAIR USE and COPYRIGHT PSA** Outline and record a 3-5 minute video Public Service Announcement (PSA) targeted at educators who may or may not realize they are violating copyright law. Be sure to write your text/outline your main points BEFORE recording. Main points to include: What is Fair Use? What is legal and what is not legal specifically for music educators? Provide solutions for difficult situation (i.e. low budgets). Include at the end (or in your comments section) a list of references (you should have at least 5). EVALUATION - Rated on a scale of 1 to 4 (low to high) in these areas (4=A, 3=B, 2=C, 1=D, 0=F): 1. Completion (this is 4 - complete or 0 - not complete) 2. Accuracy (4 - accurate, 3 - missing some info, 2 - missing vital info, 1- not accurate) 3. Grammar (4 - no mistakes, 3 - minor mistakes, 2 - noticeable mistakes, 1 - many mistakes) 4. References (4 - all 5 there, 3 - only four, 2 - only three, 1 - only one or two, 0 - no references) 5. Audio/Video Presentation (4 - smooth transition(s), clear imaging, good sound, etc. 3 - some transition issues or image issues or sound issues, etc. 2 - multiple issues with the video presentation including transitions, sound, images, etc. 1 - video is incomplete, messy, lacks transitions, image correction, audio correction, etc. i.e. "raw" video)	The previous info is ONE segment of technology (copyright/ethics). I was not sure if I should do another of these to submit additional work my students complete. We integrate technology throughout 6 courses (2 labs and 4 methods). We strive to integrate web design, which includes dissemination of media/multimedia projects throughout the curriculum. We try to do this in TWO ways -- native design (like Dreamweaver, or MUSE, or Microsoft Sharepoint - or whatever it's called now) and internet integrated design (like Wix, Weebly, etc.). Most end up choosing internet integrated.

For our college students, they need to have a solid understanding of a DAW, and decent recording skills.	The college students need to learn how to work with a large group of rambunctious young students - how to corral them, how to speak to them, etc. It forces our college students to think differently about technology, and to have to explain it in very simple terms. They also have to think ahead when they are setting up their sessions, preparing for a time constraint, knowing where to	This sort of project is done within 15-20 minutes with the young children; however, the college students spend several hours preparing for those 15-20 minutes.	The college students end up editing together a track (sometimes several tracks, separately), that they eventually provide back to the students' teachers. The tracks contain the students' voices, sometimes something recorded by their teacher, and often some pre-recorded materials. For a service-learning class, the college students are graded on the project as a whole, not necessarily on the resulting quality of the tracks they produce. But what they learn from the experience is incredibly invaluable.	
Using a smart phone (with internal or external mics), camcorder, H3, or other device; using Tonal Energy or other apps for recording and assessing progress	Basic	Use from semester to semester (throughout degree program)	personal websites for private use or job applications, competition submission, rubrics for self and class assessment	Lately most of my students use Tonal Energy for just about everything - from recording on smart phones to practicing with a reference tone (multi-layered), metronome, intonation work; imaging vibrato speed and amplitude, plotting accuracy in recordings with metronome/intonation tracking. We also use online polls (doodle), sign up sheets (google docs), and my entire class is now on a password protected area on my website rather than using Canvas or Blackboard

Exemplars for Music Teaching and Technology Competencies

Peter Webster
David Williams

Available from:
www.peterrwebster.com