June 9, 2015

## To Whom This May Concern,

The School of Music is submitting for your review a new program entitled Bachelor of Science in Music. This program will have three tracks in Computer Sciences, Media and Enterprise, and Sonic Arts. We are excited about this interdisciplinary program as the courses within it take the School on an exciting trajectory. The program's curriculum encompasses eight departments across campus and those departments have responded enthusiastically to this new partnership and are fully invested in its success.

The program began as a result of asking the question - "If anything were possible, what would a $21^{\text {stt }}$ century music degree look like?" Further discussions revealed a certain level of student interest in such a program, that a number of faculty are concerned that the School's curricula is dated, that similar programs have existed in top-ranked departments, schools, and conservatories for years and that we, too, have resources at our disposal to construct and implement a strong program. Programs at Dartmouth College, the University of Michigan, Oberlin, and the California Institute of the Arts were reviewed as their programs are considered to be among the best in the field of music technology or among programs that blend music and other technologies.

In the case of the Computer Sciences and Sonic Arts tracks, we are attempting to engage students in an era when virtually everything - whether it is art, entertainment or commerce - is consumed, created, or carried out on a computing device. Future musicians will need to create tools to assist with music creation and performance or will need to develop the knowledge and skills to use those tools effectively. It is our hope that these two tracks will help young musicians to engage with the computing world in ways that our current students do not.

In the case of the Media and Enterprise track, its inclusion in this program is a logical next step for the successful Minor in Music, Media, and Enterprise (MME). This 'next step' was part of the original plan for the MME upon its creation in the middle of the last decade. The field of music entrepreneurship is relatively new and we did not actively review the curricula of similar programs at other universities. While programs in music business have been in existence for a number of years, the School's program is, instead, a unique blend of courses in business, communications, music, and other arts fields. It is not a music business program and will not be advertised as such.

Upon approval by the university and by our accreditation agency, the National Association of Schools of Music (NASM), we intend to begin advertising the program in the autumn of 2016 for student matriculation in the autumn of 2017.

Sincerely,


Timothy Leasure
Associate Director and Chair of Undergraduate Studies

# OSU School of Music Proposal for Bachelor of Science in Music August 2015 

## 1. General Information

A. Major: Music with an emphasis in either Computer Sciences, Sonic Arts, and Media and Enterprise
B. Program: Bachelor Science in Music
C. Proposed Implementation Date: Autumn 2017
D. Administering Academic Unit: School of Music

## 2. Rationale

The impetus for this program comes from several sources: (1) student interest and inquiry, (2) the awareness on the part of the faculty that music is always evolving, and that our curriculum likewise needs to evolve, and (3) the understanding of both faculty and students that similar programs have existed at other universities for many years. OSU is uniquely positioned to offer a program of this nature due to the strengths among the many institutional players in this program's courses.

The School often receives inquiries related to how the subject of music relates to other fields, and what degree offerings support the pursuit of music coupled with a non-music field. The School of Music currently has a successful Bachelor of Arts (BA) program with approximately ten elective credits for non-music course work. However, the music core of the BA is very similar to the other tagged programs in the School, and thus is still somewhat rigid in its curricular requirements. In the case of the new Bachelor of Science (BS), the music core has been restructured with modified theory, musicology, keyboard, and performance requirements to allow credit room for a more comprehensive experience in one of its three tracks.

The BS will comprise 37 credits in its music and non-music core. 57 credits minimum will be expected in the program's General Education (GE) requirements. The remaining 27 35 credits will exist within one of the program's three tracks: Computer Sciences, Media and Enterprise, and Sonic Arts.

The role of digital technology in the music field has blossomed over the last decade. Musicians have created music on computers since the 1950s, but the ubiquity and diversity of digital technologies in the 21st century have brought about profound changes not only in the tools that we use to create and perform music, but also in the way we experience and disseminate music. The three tracks of the BS degree will allow students to explore the various aspects of the relationship between technology and music.

The Computer Sciences track will create a direct link between the fields of computer science and music. This track will provide students with the conceptual understanding needed to create software and hardware musical tools (such as musical notation software, a program that accompanies live performers, or digital musical instruments).

The Sonic Arts track will allow students to gain an understanding of the ways in which technology influences the creation, production, and reproduction of music. The field of sonic arts has traditionally been the study of sound in media (such as computer music, film, games, and installations), but the field has expanded to include "the idea of sound
as a medium in its own right." The Sonic Arts track will contain courses in recording technology, computer science, multimedia, sound installation, and music synthesis, which together explore the science and art of sound creation and manipulation. Although the Sonic Arts capstone project could include an academic paper, it most likely will be creative in nature (such as a multimedia performance, a performance using a digital instrument that the student has developed, or a film or game soundtrack).

The presence and success of the School's Minor in Music, Media and Enterprise was an impetus for the Media and Enterprise track. Like the minor, the Media and Enterprise track effectively combines courses in music, business, communications, and other arts fields to focus on the economic, social, cultural, and technological factors that shape musical experience in the 21st century.

Although the three tracks listed above are distinct entities, there is a deeper relationship among them. The Computer Science track seeks an understanding of how to build tools; the Sonic Arts track seeks an understanding of the way in which these tools are used; the Media and Enterprise seeks an understanding of the relationship between music technology and society.

Graduates of this program have a myriad of options available to them. They will be able to pursue graduate work in a number of fields, including but not limited to, computer science, business, communication, and music technology. Graduates may also opt to work as programmers, entrepreneurs, and in various professions within the recording industry.

## 3. Goals, Objectives, and Evaluation of Program

Music (M)

1. The ability to hear, identify, and work conceptually with the elements of music such as rhythm, melody, harmony, structure, timbre, texture.
2. An understanding of and the ability to read and realize musical notation.
3. An understanding of compositional processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces.
4. An acquaintance with a wide selection of musical literature, the principal eras, genres, and cultural sources.
5. The ability to develop and defend musical judgments.
6. Ability in performing areas at levels consistent with the goals and objectives of the specific liberal arts degree program being followed.
7. Understanding of procedures for realizing a variety of musical styles.
8. Knowledge and/or skills in one or more areas of music beyond basic musicianship appropriate to the individual's needs and interests.

Computer Sciences (CS)

1. Develops a basic understanding of the role of computer science in music.
2. Ability to design, implement, and evaluate a software system or component to solve problems either in computing or in music.
3. Ability to function on multi-disciplinary teams.
4. Ability to analyze the local and global impact of computing on individuals,
organizations, and society.

## Media and Enterprise (ME)

1. Develops a basic understanding of cultural, economic, and media theories as they pertain to music.
2. Develops an understanding of historical and contemporary practices and patterns in the music and entertainment industries.
3. Develops a capacity for critical analysis of opportunities that arise from the intersections of music, technology, society, and commerce.
4. Develops a basic understanding of entrepreneurship.

Sonic Arts (SA)

1. Develops a basic understanding of entrepreneurship.
2. Gains an understanding of music synthesis and its application to composition and performance.
3. Develops a basic understanding in audio recording technologies and in audio recording concepts.
4. Develops a basic understanding of multimedia technologies.

Assessment within the School of Music is completed as a matter of course on a yearly basis. Due to the large number of expected learning outcomes for the School's programs, only a few learning outcomes are targeted for assessment each year. However, for the new Bachelor of Science, is the School's intention to assess the BS over the span of three years, on the following schedule: Year 1 - Sonic Arts; Year 2 - Media and Enterprise; and Year 3 - Computer Science. Assessment will use both direct and indirect methods to address the learning outcomes, but due to the complexity of the program assessment will also address how the courses align with each other in the schedule.

Direct methods will be in the form of embedded questions within tests and projects, writing assignments, portfolio evaluations, senior thesis (Senior Project), and performances, as appropriate to the student's track.

Indirect methods will be in the form of a yearly survey of students within the total BS program, with questions related to the foundational courses and courses specific to each student's track. Grades in the program's courses will also be reviewed. In later years, graduates of this program will be consulted as a means of assessing the success of each track.

It is the School's intention to use the data from the assessment process to make improvements to the total curriculum of the program and/or to individual courses, as needed. The Associate Director will coordinate the assessment methods yearly and make a report to the Director and Administrative Committee of the School of Music.

## 4. Relationship to Other Programs/Benchmarking

The School of Music has twelve undergraduate programs that encompass not only music-specific programs such as performance and composition, but also programs inherently interdisciplinary in nature such as musicology and music education. In addition, the School's Minor in Music, Media, and Enterprise is an interdisciplinary program that includes courses from the Fisher College of Business and The School of Communication.

The School of Music would like to broaden its interdisciplinary offerings by offering its first ever Bachelor of Science in Music with concentrations in Computer Sciences, Sonic Arts, and Media and Enterprise. This program will include courses from other colleges, schools, and departments such as Computer Science and Engineering, Speech and Hearing Sciences, the Fisher College of Business, The School of Communication, Art Education, Film Studies, Theatre, and ACCAD. The program is in many ways a departure from other programs within the School. A modified music core (referenced in part 2) is one point of departure. The other points of departure are the three tracks that combine elements of musical study with non-music fields. Lastly, for the first time in the School's history, applicants to this program need not qualify with a performance audition. Many students who might be interested in this program could have a substantial musical background, but one not grounded in the traditional mediums of bands, orchestras, and choirs. Instead, the students will have the option to apply by means of a portfolio of musical work, the definition of which may be quite broad. Furthermore, it is the intention of the School at this time to limit enrollments in this program to no more than five students per year shared among all three tracks.

Letters of concurrence from the relevant departments are attached at the end of this document.

This program was developed primarily by Associate Professor of Music and Associate Director Timothy Leasure, Associate Professor of Music Dr. Marc Ainger, and Associate Professor and Director of the MME Program, Dr. David Bruenger.

## 5. Student Enrollment

Students will be recruited for the program from outside of the School, College, and University primarily. The School will initially keep enrollment in this program and its tracks low, perhaps as few as five students shared among all tracks each year. This approach allows the School to maintain control over total enrollments in the music core courses school wide, while also honoring the School's obligations to its partners in other departments. To accommodate the courses within the music core and the music courses within the tracks, the School will not request additional resources from the college. All courses, with the exception of the Senior Project (Music 4679.06) and the Sonic Arts Ensemble (Music 2208.80), already exist and are actively being taught. Current average enrollments of NFYS in the School of Music programs average around 70 students, but the School's undergraduate curricular plan can account for 80 - 96 new students every year.


|  | A | B | C | D | E | F | G | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Core Courses All | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 |  |  |
| 27 | Tracks |  |  |  |  |  |  |  |  |  |  |
| 28 | Music Theory |  |  |  |  |  |  |  |  |  |  |
| 29 | 2221 | beginning | beginning | beginning |  |  |  | beginning |  |  |  |
| 30 | 2222 | beginning | beginning | beginning |  |  |  | beginning |  |  |  |
| 31 | 3421 | intermediate | intermediate | intermediate |  |  |  | beginning |  |  |  |
| 32 | Senior Project |  |  |  |  |  |  |  |  |  |  |
| 33 | 4679.06 | advanced | advanced | advanced | advanced | advanced | advanced | advanced | advanced |  |  |
| 34 | Music Electives |  |  |  |  |  |  |  |  |  |  |
| 35 | 2000+ | intermediate | intermediate | intermediate | intermediate |  | intermediate | intermediate |  |  |  |
| 36 | Music Technology |  |  |  |  |  |  |  |  |  |  |
| 37 | 5636.01 |  |  | advanced |  |  |  |  | advanced |  |  |
| 38 | 5636.02 |  |  | advanced |  |  |  |  | advanced |  |  |
| 39 | Acoustics |  |  |  |  |  |  |  |  |  |  |
| 40 | SHS 3340 |  |  |  |  |  |  |  | Intermediate |  |  |
| 41 | Data Analysis |  |  |  |  |  |  |  |  |  |  |
| 42 | Statistics |  |  |  |  |  |  |  | Intermediate |  |  |
| 43 |  |  |  |  |  |  |  |  |  |  |  |
| 44 | Computer <br> Science Track | CS1 | CS2 | CS3 | CS4 |  |  |  |  |  |  |
| 45 | CSE 2221 | beginning | beginning | beginning | beginning |  |  |  |  |  |  |
| 46 | CSE 2222 | beginning | beginning | beginning | beginning |  |  |  |  |  |  |
| 47 | CSE 2321 | beginning | beginning | beginning | beginning |  |  |  |  |  |  |
| 48 | CSE 2421 | beginning | beginning | intermediate | intermediate |  |  |  |  |  |  |
| 49 | CSE 3902 | intermediate | intermediate | intermediate | intermediate |  |  |  |  |  |  |
| 50 | CSE 3541 | intermediate | intermediate | intermediate | intermediate |  |  |  |  |  |  |
| 51 | CSE 5236 | advanced | advanced | advanced | advanced |  |  |  |  |  |  |
| 52 | CSE 5539 | advanced | advanced | advanced | advanced |  |  |  |  |  |  |
| 53 |  |  |  |  |  |  |  |  |  |  |  |
| 54 | Media and <br> Enterprise Track | ME1 | ME2 | ME3 | ME4 |  |  |  |  |  |  |
| 55 | Music 2271 | Beginning |  |  | Beginning |  |  |  |  |  |  |
| 56 | Music 3330 |  |  | Advanced |  |  |  |  |  |  |  |
| 57 | Bus Mhr 2500 | Beginning |  |  |  |  |  |  |  |  |  |
| 58 | Com 3440 |  | Beginning |  |  |  |  |  |  |  |  |
| 59 | Mus 3431 |  |  | Intermediate |  |  |  |  |  |  |  |
| 60 | Mus 3432 |  |  | Advanced |  |  |  |  |  |  |  |
| 61 | Music 3348 |  | Intermediate |  |  |  |  |  |  |  |  |
| 62 | COM 3413 |  |  | Intermediate |  |  |  |  |  |  |  |
| 63 | COM 3466 |  | Intermediate |  |  |  |  |  |  |  |  |
| 64 | COM 3554 |  | Advanced |  |  |  |  |  |  |  |  |
| 65 | Bus Mhr 3510 |  | Intermediate |  |  |  |  |  |  |  |  |
| 66 | Bus Mhr 3665 |  |  | Advanced |  |  |  |  |  |  |  |


|  | A | B | C | D | E | F | G | H | I | J | K |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 67 | ArtEduc 3680 |  | Intermediate |  |  |  |  |  |  |  |  |
| 68 | COM 2540 |  | Beginning |  |  |  |  |  |  |  |  |
| 69 | Theatre 5321 | Beginning |  |  |  |  |  |  |  |  |  |
| 70 | Mus 5638 |  | Beginning |  |  |  |  |  |  |  |  |
| 71 | Interdisciplinary Elective | Advanced | Advanced | Advanced |  |  |  |  |  |  |  |
| 72 | Sonic Arts Track | SA1 | SA2 | SA3 | SA4 |  |  |  |  |  |  |
| 73 | Music 2271 | beginning |  |  |  |  |  |  |  |  |  |
| 74 | Music 5636.01 |  | beginning |  | beginning |  |  |  |  |  |  |
| 75 | Music 5636.02 |  | intermediate |  | intermediate |  |  |  |  |  |  |
| 76 | Music 5638.00 |  |  | beginning |  |  |  |  |  |  |  |
| 77 | Music 5677.01 |  | advanced |  | beginning |  |  |  |  |  |  |
| 78 | Music 5677.02 |  | advanced |  | intermediate |  |  |  |  |  |  |
| 79 | ACCAD 4101 |  | advanced |  | advanced |  |  |  |  |  |  |
| 80 | Music 5639 |  |  | intermediate |  |  |  |  |  |  |  |
| 81 | Theatre 5321 |  | advanced | intermediate | advanced |  |  |  |  |  |  |
| 82 | CSE 2221 |  |  |  | beginning |  |  |  |  |  |  |
| 83 | CSE 2231 |  |  |  | beginning |  |  |  |  |  |  |
| 84 |  |  |  |  |  |  |  |  |  |  |  |
| 85 |  |  |  |  |  |  |  |  |  |  |  |
| 86 | Music (M) |  |  |  |  |  |  |  |  |  |  |
| 87 |  |  |  |  |  |  |  |  |  |  |  |
| 88 | 1. The | e ability to h | r, identify, and | work concep | ally with the |  | a | , | 促 |  |  |
| 89 | 2. An | understand | g of and the a | ility to read a | realize mus |  |  |  |  |  |  |
| 90 | 3. An | understand | g of compositio | nal processe | aesthetic prop |  |  | a | rti | ur |  |
| 91 | 4. An | acquaintanc | with a wide | lection of mu | cal literature, | ci |  | urc |  |  |  |
| 92 | 5. The | e ability to d | elop and def | nd musical jud | ments. |  |  |  |  |  |  |
| 93 | 6. Abil | ility in perfor | ing areas at l | vels consisten | with the goa |  | sp | de | f |  |  |
| 94 | 7. Und | derstanding | procedures | r realizing a | riety of music |  |  |  |  |  |  |
| 95 | 8. Kno | owledge and | r skills in one | or more areas | of music beyo |  | ap | ind | in |  |  |
| 96 |  |  |  |  |  |  |  |  |  |  |  |
| 97 |  |  |  |  |  |  |  |  |  |  |  |
| 98 | Computer Scien | nces (CS) |  |  |  |  |  |  |  |  |  |
| 99 |  |  |  |  |  |  |  |  |  |  |  |
| 100 | 1. Devel | velops a bas | understandi | of the role o | computer sci |  |  |  |  |  |  |
| 101 | 2. Abilit | ility to design | implement, | d evaluate a | ftware system | mp | ve | C |  |  |  |
| 102 | 3. Abilit | ility to functio | on multi-discip | plinary teams |  |  |  |  |  |  |  |
| 103 | 4. Abil | ility to analyz | the local and | global impact | computing | du | atio |  |  |  |  |
| 104 |  |  |  |  |  |  |  |  |  |  |  |
| 105 |  |  |  |  |  |  |  |  |  |  |  |
| 106 |  |  |  |  |  |  |  |  |  |  |  |
| 107 | Media and Enterprise (ME) |  |  |  |  |  |  |  |  |  |  |
| 108 |  |  |  |  |  |  |  |  |  |  |  |
| 109 | 1. Develops a basic understanding of cultural, economic, and media theories as they pertain to music. |  |  |  |  |  |  |  |  |  |  |

## Bachelor of Science in Music



## Music BS Sample 4-Year Plan (CS Track):

Your individual needs may vary according to interest, track, availability, placement, or honor's requirements In order to graduate you need to meet the specific requirements of the GE, major, and all other university requirements.

| Autumn Semester | $\mathbf{C r}$ | Spring Semester | $\mathbf{C r}$ | $\mathbf{1}^{\text {st }}$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Music 2224 (aural) | 2 | Music 2225 (aural) | 2 |  |  |
| Music 2221 (theory) | 2 | Music 2222 (theory) | 2 | $\mathbf{Y}$ |  |
| Engineering Calculus I | 5 | Open Option |  |  |  |
| ASC 1100.11 | 1 | CSE 2231 (Software II) | 4 | $\mathbf{E}$ | A |
| CSE 2221 (Software I) | 4 | Applied Study 2201.XX | 2 |  |  |
| Applied Study 2201.XX | 2 | Music 2240 (history I) |  |  |  |
| Music 2261.01 (keyboard skills I) | 1 | Music 2262.01 (keyboard skills II) | 1 |  |  |
| Total Hours | $\mathbf{1 7}$ |  | $\mathbf{1 7}$ | $\mathbf{3 4}$ |  |


| Autumn Semester | $\mathbf{C r}$ | Spring Semester | $\mathbf{C r}$ | $\mathbf{2}^{\text {nd }}$ |
| :--- | :--- | :--- | :--- | :--- |
| Open Option ${ }^{2}$ | 3 | GE 1 ${ }^{\text {st }}$ Science | $3+$ |  |
| Music 3421 (theory) | 2 | GE 2 $^{\text {nd }}$ Science w/lab | 4 | $\mathbf{Y}$ |
| Music 3424 (aural) | 2 | CSE 2421 (Systems I) | 4 | $\mathbf{E}$ |
| CSE 2321 (Foundations I) | 3 | Music Elective | 2 | $\mathbf{A}$ |
| SHS 3340 (acoustics) | 3 | GE Historical Study | 3 |  |
| English 1110 | 3 |  |  |  |
| Total Hours | $\mathbf{1 6}$ |  | $\mathbf{1 6 +}$ | $\mathbf{3 2 +}$ |


| Autumn Semester | $\mathbf{C r}$ | Spring Semester | $\mathbf{C r}$ | $\mathbf{3}^{\text {RD }}$ |
| :--- | :--- | :--- | :--- | :--- |
| GE 2 $^{\text {nd }}$ level writing | 3 | GE 1 ${ }^{\text {st }}$ Social Science | $3+$ | $\mathbf{Y}$ |
| GE Language 1101 | 4 | Statistics 2450 | 3 | $\mathbf{Y}$ |
| CSE 3902 (Interactive Systems) | 4 | GE Language 1102 | 4 | $\mathbf{E}$ |
| Music 5636.01 - (Intro to Electronic <br> Music Synth) | 3 | CSE 3541 - (Computer Gam.) |  |  |


| Autumn Semester | Cr | Spring Semester | $\mathbf{C r}$ | $\mathbf{4}^{\text {TH }}$ |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
| GE Literature | 3 | GE 2 $^{\text {nd }}$ Social Science | 3 |  |  |
| GE Language 1103 | 4 | GE 3 $^{\text {rd }}$ Science w/lab | 4 |  |  |
| GE Cultures and Ideas or Historical <br> Study | 3 | GE Visual and Performing Arts | 3 | E <br> $\mathbf{A}$ <br> $\mathbf{R}$ | Degree <br> Total |
| Music 4679.06 (senior project) | 2 | Music 4679.06 (senior project) | 2 |  |  |
| Music 3351 (world music) | 3 | Music Elective | 2 |  |  |
| Total Hours | $\mathbf{1 5}$ |  | $\mathbf{1 4}$ | $\mathbf{2 9}$ | $\mathbf{1 2 8 +}$ |

${ }^{1}$ Choose from: 2240 or 2241 or 2242
${ }^{2}$ Calculus II and III recommended for CS Track
${ }^{3}$ Take CSE 3541, or CSE 5236, or CSE 5539
*121 hours are the minimum total hours to graduate for students entering summer 2012 and thereafter.

Name:
Survey Course - 1 unit Units Sem ASC 1100.11

General Education Courses: 57 Units

| General Education Courses: 57 Units Writing: 6 units |  |  |
| :---: | :---: | :---: |
| English 1110 | 3 |  |
| Second Level Writing Course | 3 |  |
| Literature: 3 units |  |  |
| Literature | 3 |  |
| Visual and Performing Arts: 3 units |  |  |
| Visual and Performing Arts | 3 |  |
| Math and Data Analysis: 5 units |  |  |
| Math 1151 or equivalent (1151 recommended for CS Track) | 5 |  |
| Typically 3 courses with at least one course in the Biological Sciences with a lab and at least one course in the Physical Sciences with a lab. |  |  |
| Biological science |  |  |
| Physical science |  |  |
| Biological or Physical Science |  |  |
| Culture \& Ideas/Historical Study: 6 units |  |  |
| Historical Study | 3 |  |
| Cultures \& Ideas OR Historical Study | 3 |  |

Social Sciences: 6 units
At least three hours from two of the three sections.

| Social Science |
| :--- |
| Social Science |

## Open Options: 6 units ${ }^{2}$

## Open Option

Foreign Languages: 12 units
Foreign Language, levels 1 - 3
12
Social Diversity in U.S. ${ }^{1}$
${ }^{1}$ Typically embedded in other requirements. If no overlap with another GE category, then Social Diversity in U.S. will correspond to one course and Global Studies will correspond to two courses
Engineering Calculus II and III recommended for CS Track.
Req'd Overall GPA.
... .3 .0
. .3 .0
Req'd CPHR Required
................................. 3.
Major course work must be $C$ - or better on the BS
Open option courses can be selected from any of the following

- Another GE approved course (except Mathematics 1151 or below)
- GE Cross Disciplinary Seminar
- Course approved for GE education abroad

| NASM Guidelines | minimum | target |
| :--- | :---: | :---: |
| Musicianship | $19 \%$ | $(20 \%-25 \%)$ |
| Performance and music electives | $7 \%$ | $(10 \%-20 \%)$ |
| General studies and general <br> electives | $47 \%$ | $(55 \%-70 \%)$ |
| Musicianship, performance, and <br> music electives | $25 \%$ | $(30 \%-45 \%)$ |

## Bachelor of Science in Music School of Music

| Music Major: 37-38 units <br> Music Theory: 6 units | Units | Sem |
| :---: | :---: | :---: |
| Mus 2221 - Music Theory $1^{*}$ | 2 | Au |
| Mus 2222 - Music Theory 2 | 2 | Sp |
| Mus 3421 - Music Theory 3 | 2 | Au |
| Aural Training: 6 units |  |  |
| Mus 2224 - Aural Training 1 | 2 | Au |
| Mus 2225 - Aural Training 2 | 2 | Sp |
| Mus 3424 - Aural Training 3 | 2 | Au |

Musicology: 9 units

| Mus 2251 - World of Classical Music | 3 | Sp |
| :--- | :---: | :---: |
| Mus 3351 - The World of Music | 3 | Au |
| Elective: Music 2240 or 2241 or 2242 | 3 | $\mathrm{Au} / \mathrm{Sp}$ |

Keyboard Skills: 2 units
PIA Principals: 2 units

| PIA Principals: 2 units |  |  |
| :---: | :---: | :---: |
| 2264.01 - Keyboard Skill IV | 1 | Sp |
| 2208.01 - Small Ensemble: Piano | 1 | $\mathrm{Au} / \mathrm{Sp}$ |
| Other principals: 2 hrs |  |  |
| $2261.01-$ Keyboard Skill s I | 1 | Au |
| $2262.01-$ Keyboard Skills II | 1 | Sp |

Ensemble or Applied Study: 4 units

| Music 2208, 2215, 2203, 2204, 2208.80, 2206, 3312, 2201.xx | 4 | $\mathrm{Au} / \mathrm{Sp}$ |
| :--- | :--- | :--- |

Acoustics: 3 units

| SHS 3340 - Intro to the Art and Science of Sound | 3 |  |
| :--- | :--- | :--- |

Music Electives: 4 units
Music Electives (2000-level and above)

|  | 4 | All |
| :--- | :--- | :--- |

Data Analysis: 3-4 units
CS Track: Statistics 2450 or higher
SA Track (Choose one): Statistics 1350, 1430, 1450, 2450

## Tracks in CS, or ME or SA (Choose one):

Computer Sciences: 31-32 units

| CSE 2221 - Software I* | 4 | Au |
| :--- | :---: | :---: |
| CSE 2231 - Software II | 4 | Sp |
| CSE 2321 - Foundations I | 3 |  |
| CSE 2421 - Systems I | 4 |  |
| CSE 3902 - Project: Interactive Systems | 4 |  |
| CSE 3541 - Computer Game and Animation Tech. |  |  |
| OR <br> CSE 5236 - Mobile Application Development <br> OR <br> CSE 5539 - Intermediate Studies in Artificial Intelligence* | $2-3$ |  |
| Music 5636.01 - Introduction to Electronic Music <br> Synthesis | 3 |  |
| Music 5636.02 - Electronic Music Synthesis | 3 |  |
| Music 4679.06 - Senior Project | 4 |  |

Students will need to take the section of CSE 5539 entitled "Computational Audition". Prereq: Permission of instructor.

| Media and Enterprise: $\mathbf{2 7 - 2 9}$ units | Units | Sem |
| :---: | :---: | :---: |
| Music 2271 - Intro to Music Enterprise | 3 |  |
| Music 3330 - Music Production and Reception | 3 |  |
| Bus Mhr 2500 - Innovation and Entrepreneurship in Modern Business | 3 |  |
| Com 3440 - Mass Communication and Society | 3 |  |
| Music, Communication, and Culture (Choose 1) |  |  |
| Mus 3431 - Protest in American Music | 3 |  |
| Mus 3432 - Spectacle: Music and Public Amusements in America | 3 |  |
| Music 3348 - Music on the Move in a Globalized World | 3 |  |
| COM 3413 - Media Entertainment | 3 |  |
| COM 3466 - Communication and Popular Culture | 3 |  |
| COM 3554 - Social Implications of Communications Technology | 3 |  |
| Business and Entrepreneurship (Choose 1) | 3 |  |
| Bus Mhr 3510.01 - New Venture Creation | 3 |  |
| Bus Mhr 3665 - Personal Creativity and Innovation | 3 |  |
| ArtEduc 3680 - Exploring the Creative Sector: Art Issues in the $21^{\text {st }}$ Century | 3 |  |
| Media Production and Analysis (Choose 1) |  |  |
| COM 2540 - Introduction to Communication | 3 |  |
| Theatre 5321 - Video Production I | 3 |  |
| Mus 5638 - Audio Recording | 3 |  |
| Interdisciplinary Elective (Choose one (1) course from either CSMT or MT tracks) | 2-4 |  |
| Music 4679.06 - Senior Project | 4 |  |

Sonic Arts: 33-35 units

| Music 3422 - Music Theory 4 | 2 | Sp |
| :--- | :---: | :---: |
| Music 3425 - Aural Training 4 | 2 | Sp |
| Music 2271 - Intro to Music Enterprise | 3 |  |
| Music 5636.01 - Introduction to Electronic Music <br> Synthesis | 3 |  |
| Music 5636.02 - Electronic Music Synthesis | 3 |  |
| Music 5638 - Audio Recording | 3 |  |
| Music 5677.01 - Multimedia for Musicians I | 2 |  |
| Music 5677.02 - Multimedia for Musicians II | 2 |  |
| ACCAD 4101: Performance and Installation Technologies | 3 |  |
| Music 4679.06 - Senior Project | 4 |  |
| Choose 2 courses (6 credits minimum) from the <br> following: | $6-8$ |  |
| Music 5639 - Audio Recording Laboratory | 3 |  |
| Theatre 5321 - Video Production 1 | 3 |  |
| CSE 2221 - Software I | 4 |  |
| CSE 2231 - Software II | 4 |  |


| Major | $37-38$ units |
| :--- | :---: |
| GE | 57 units |
| Survey | 1 unit |
| Minimum Total Units to Graduate CS Track | 126 units |
| Minimum Total Units to Graduate ME Track | 122 units |
| Minimum Total Units to Graduate SA Track | 128 units |
| Requires placement exam by department |  |

Dr. Randy Smith
Vice Provost for Academic Programs
203 Bricker Hall
190 N Oval Mall
Columbus, OH 43210

Dear Randy,
The School of Music requests that the concentrations in the proposed Bachelor of Science in Music be transcriptable. Those concentrations are: Computer Sciences, Media and Enterprise, and Sonic Arts.

Thank you.

Sincerely,
Tim Hecosue
Timothy Leasure
Associate Director
School of Music


July 27, 2015

From: Carmen Taleghani-Nikazm, Chair-for-the-day of ASCC Arts and Humanities Panel

Dear Meg,

On November 7, 2014 the Arts and Humanities Panel reconsidered the proposal for a new program entitled Bachelor of Science in Music. The proposed program has three tracks in Computer Sciences, Media and Enterprise, and Sonic Arts. The program's curriculum includes eight departments across campus that have expressed their strong support for this new interdisciplinary program. Emerging from the current established minor in Music, Media, and Enterprise, the new program will allow Ohio State students to pursue a curriculum similar to what they might pursue at many peer institutions in the field of music technology. The faculty in the School of Music expects this new BS to be accredited by the National Association for Schools of Music.

The Panel found that the revised proposal addressed the majority of the issues that were raised in the first review on February 7, 2014 and unanimously approved the new major with three contingencies to: (1) proofread and correct mistakes with course numbers, course titles, or credit hours on the submitted advising sheet, (2) proofread and correct the submitted sample 4-year plan (the sample 4-year plan contained similar errors on the advising sheet), and (3) proofread the whole proposal for all credit hours totals and make sure that all numbers on the "Pacer table" correspond to the ones on the actual proposal.

Please note that the Arts and Humanities Panel first reviewed the proposal for the new Music BS on February 7, 2014. During this first review, the Panel did not take a vote, since there were a substantial number of documents and information missing in the proposal. In addition, there were some questions that members of the panel had about GE requirements in the proposed curriculum. After several months, the School of Music submitted their revisions. The revised proposal was on the agenda for the October 24, 2014 Arts and Humanities Panel meeting, however the Panel did not have enough time on that day to review the revised proposal and it was put on the agenda for the next meeting. On November 7, 2014, the Panel reviewed the revised proposal and approved the BS in Music with the three contingencies mentioned above. In June 2015, we received the proposal with the revisions and corrections requested by the Panel back in November 2014. I carefully reviewed the proposal with its latest revisions and approved the changes and corrections made to
the proposal with one minor suggestion, namely to correct the course number and title of "CSE 5539: Intermediate Studies in Artificial Intelligence" in the submitted advising sheet and 4 -year plan.

Respectfully,


Carmen Taleghani-Nikazm

January 16, 2014
W. Randy Smith

Vice Provost
Office of Academic Affairs
Campus mail

Dear Randy,
The School of Music has completed and submitted its proposal for a new program entitled Bachelor of Science in Music with three distinct tracks. This new BS program is endorsed by the College of Arts and Sciences, was approved by the Division of Arts and Humanities, and has the full support of the School of Music faculty. It also has enthusiastic concurrence from many units across the University.

The proposed BS in Music is both timely and necessary for the College. In an era when virtually everything involves informational technology, the new BS with tracks in Computer Science, Media and Enterprise, and Sonic Arts engages students where they live, consume, and learn daily. Moreover, this new plan will allow Ohio State students to pursue a curriculum similar to what they might pursue at many peer and inspirational institutions.

Conceived as a logical "next step" to the current robust minor in Music, Media, and Enterprise we fully anticipate that this BS will be accredited by the National Association for Schools of Music (NASAM) and be ready for incoming first year students in autumn 2015.

We are sending the program forward for discussion and approval in the next stage of curricular review at the Council on Academic Affairs. If you have any questions or concerns, please do not hesitate to contact either of us.

Thank you in advance for your consideration of this proposal.


Mark Shanda
Divisional Dean, Arts and
Humanities
College of Arts and Sciences


David Manderscheid, PhD
Executive Dean and Vice Provost
College of Arts and Sciences
Professor of Mathematics

November 13, 2013

Dr. Timothy Leasure
Associate Director
School of Music
110 Weigel Hall
COLUMBUS

Dear Tim,
Please accept this letter as ACCAD's formal statement of concurrence for School of Music's new Bachelor of Science in Music program. This proposal is exciting and brings a great new path to combining music and technology to OSU's undergrads

In support of this curriculum ACCAD will develop a 5000-level version of ACCAD 7101 Performance and Installation Technologies for student in the Sonic Arts track of the new B.S. program.

We look forward to working with your students and feel our course fits appropriately into the study tracks you have devised for your majors.

Sincerely,


Maria Palazzi
Director, Advanced Computing Center for the Arts and Design
Professor, Department of Design

School of Communication

October 11, 2013

Professor Timothy Leasure<br>110 Weigel Hall<br>1866 College Rd.<br>Columbus, OH 43210<br>CAMPUS

Dear Dr. Leasure:

The School of Communication concurs with and supports the inclusion of the following courses serving as either required or elective courses in the Media and Enterprise track of the School of Music's new Bachelor of Science Program.

COMM 2540 - Introduction and Communication Technology
COMM 3413 - Media Entertainment
COMM 3440 - Mass Communication and Society
COMM 3466 - Communication and Popular Culture
COMM 3554 - Social Implications of Communications Technology

Sincerely,


Dr. Carroll J. Glynn
Director and Professor

## Subject：Concurrence for CS track in proposed new Music program

Date：Thursday，September 12， 2013 1：52：28 PM Eastern Daylight Time
From：Neelam Soundarajan
To：Leasure．13＠osu．edu
CC：fosler＠cse．ohio－state．edu，neelam＠cse．ohio－state．edu

Dear Tim，

Thank you for sending us the details of the proposed new specialization in the Bachelor of Science in Music program．

I understand that one of the tracks in the program is the Computer Science track and that students in this track will take the following CSE courses：

1．CSE 2221，Software I
2．CSE 2231，Software II
3．CSE 2321，Foundations I
4．CSE 2421，Systems I
5．CSE 3902，Project：Interactive Systems
6．CSE 3541 （Computer game \＆animation tech．）or
CSE 5236 （Mobile app．development）or
CSE 5539 （Computational animation）
We have discussed the program among some members of our Undergraduate Studies Committee．As you know，one of our concerns is that our enrollments have been increasing rapidly and our courses are heavily oversubscribed．Often our own majors are closed out of important courses．We are in the process of hiring new faculty to be able to offer additional sections but resource requirements as well as finding high－quality individuals we can hire constrain us．At the same time， we fully recognize the power that computing can bring to areas such as Music．In view of that and，especially，in view of the fact that you expect no more than five to ten students shared among the three tracks that are included in this program in any given year，we believe we will be able to accomodate your students．

Hence we are happy to provide，via this email，our concurrence for your proposal．Once the program，including this track，has been approved，please let us know and we will work out a mechanism to enable students in this track to receive the same priority as our majors for enrolling in these courses．My apologies for the delay in sending you this concurrence．

Best wishes，
－－Neelam
＝ニニニニニニニニニニニニニニニニニニニニニニニニニニニニニニニニ
Neelam Soundarajan
Associate Chair
Computer Science \＆Engineering

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Ohio State University
e-mail: neelam@cse.ohio-state.edu
    soundarajan.1@osu.edu
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Leasure，Timothy writes：
Neelam， I am attaching the latest draft after consultation with you and your faculty．
The proposal is still in a very rough state．Would you rather wait until it is more fleshed out and properly proofed？ The BS will have three tracks and we are looking for very small numbers，not to exceed 5－10 students per year total（shared among ALL tracks）．We are using current resources to create this program and have no wish to build an animal that we can＇t care for properly．
Tim
Timothy Leasure
Associate Director
Associate Professor of Trumpet
The Ohio State University
School of Music
110 Weigel Hall， 1866 College Road，Columbus，OH 43210
614－292－2870 Office
leasure．13＠osu．edu＜mailto：leasure．13＠osu．edu＞｜music．osu．edu＜http：／／music．osu．edu／＞
From：Neelam Soundarajan＜neelam＠cse．ohio－state．edu＜mailto：neelam＠cse．ohio－state．edu＞＞
Date：Mon， 5 Aug 2013 17：38：13－0400
To：Tim Leasure＜leasure．13＠osu．edu＜mailto：leasure．13＠osu．edu＞＞
Cc：＜neelam＠cse．ohio－state．edu＜mailto：neelam＠cse．ohio－state．edu＞＞
Subject：Re：new Music program
Tim，
We are moving on the next step in the process which deals with the formal proposal for a new major．As part of that proposal letters of concurrence are requested from departments whose courses are an integral part of the curriculum．I am formally requesting such a letter from your department．
Yes，I should be able to provide such a letter．
Please let me know if I can provide any information to you that will assist you with this letter．
According to what I have，the required CSE courses for the program
are：
CSE 2221 Software I
CSE 2231 Software II
CSE 2321 Foundations I
CSE 2421 Systems I
CSE 3902 Project：Interactive Systems
Is that correct？
What about the electives？Will students be required to take any CSE courses as electives or is that up to them（and the availability of seats in the courses）？
Also，can you please remind me roughly how many students you are expecting will be in this major？Finally，if you have the proposal ready（or close to it），can you please send me a copy so I have all the details？
Best，

## －－Neelam

=================================<br>Neelam Soundarajan<br>Associate Chair<br>Computer Science \& Engineering<br>Ohio State University<br>e-mail: neelam@cse.ohio-state.edu[mailto:neelam@cse.ohio-state.edu](mailto:neelam@cse.ohio-state.edu)<br>tel: (614) 2921444<br>=ニニニニニニニニニニニニニニニニニニニニニニニニニニニーニニニニ

"West, Patricia M." [west.284@fisher.osu.edu](mailto:west.284@fisher.osu.edu) $\mathscr{C}^{\text {P }}$
To: "Leasure, Timothy" [Leasure.13@osu.edu](mailto:Leasure.13@osu.edu)
Re: Concurrence request

Dear Tim,

The Fisher College supports your including BUSMHR 2500 and BUSMHR 3510 in your new Bachelor of Science Media and Enterprise track. Please keep us informed as this program is progresses and let us know how many students we can expect to be taking these two classes.

Thank you,
Pat West
[http://osu.edu/assets/site/images/logos/fisher-emailsig.png]
Patricia M. West, PhD
Associate Dean of Undergraduate Programs
Associate Professor of Marketing
Fisher 544, 2100 Neil Avenue, Columbus, OH 43210
614-292-0568 Office | 614-949-7564 Mobile | 614-292-0879 Fax
west.284@fisher.osu.edu[mailto:west.284@fisher.osu.edu](mailto:west.284@fisher.osu.edu) fisher.osu.edu[http://fisher.osu.edu](http://fisher.osu.edu)
From: <Leasure>, Timothy <Leasure.13@osu.edu[mailto:Leasure.13@osu.edu](mailto:Leasure.13@osu.edu)>
Date: Wednesday, October 16, 2013 11:27 AM
To: Patricia West <west_284@fisher.osu.edu[mailto:west_284@fisher.osu.edu](mailto:west_284@fisher.osu.edu)>
Cc: "Bills, Michael" <bills_36@fisher.osu.edu[mailto:bills_36@fisher.osu.edu](mailto:bills_36@fisher.osu.edu)>
Subject: Re: Concurrence request
Pat,

We will remove 3665, per your request. Can you send us a formal note of support for the other two courses, 2500 and 3510 ? I just need something to show the college...Even an email would be fine.

Thanks.

Tim
[cid:image001.png@01CE2567.3A8643E0]
Timothy Leasure
Associate Director
Associate Professor of Trumpet
The Ohio State University
School of Music
110 Weigel Hall, 1866 College Road, Columbus, OH 43210
614-292-2870 Office

Dr. Timothy Leasure<br>Associate Director<br>Associate Professor of Trumpet<br>School of Music

Dear Tim,

The Department of Arts Administration, Education \& Policy is fully supportive of your adding our undergraduate course, ArtEduc 3680: Exploring the Creative Sector: Art in the $21^{\text {st }}$
Century, as an elective selection for the School of Music's Media and Enterprise Track. We are very excited to become a partner in helping prepare students in the arts for careers that fulfill creative purpose. Please let us know how we can serve your students better, now and in the future. We look forward to working with your students.

Sincerely,

Shari L. Savage, PhD
Assistant Professor
Undergraduate \& Licensure Chair

October 14, 2013

Timothy Leasure
Associate Director
School of Music
110 Weigel Hall
1866 College Road
CAMPUS

## Dear Professor Leasure:

I am writing in response to your request for a letter of support for the School of Music's new Bachelor of Science program. I serve as the Chair of the Undergraduate Studies Committee for the Department of Speech and Hearing Science and the faculty member responsible for SHS 3340 - The Art and Science of Sound (formerly Bio-acoustics for Speech and Hearing). We broadened the scope of the course and changed the title in hopes of attracting students from diverse backgrounds. Thus, we are quite pleased to learn that it will be required of all students planning to earn the Bachelor of Science in Music. We have had a small number of music students enrolled in the course over the past several years, and we hope that the approval of the BS in Music will lead to more music students enrolled. We would also welcome feedback from your students and faculty on our success in introducing acoustics to a wider audience. Please let me know if we can support your new degree program in any way.

Sincerely,

Lawrence L Feth

## 0 The Ohio State University

Lawrence L Feth, PhD

Professor
Speech and Hearing Science
110 Pressey Hall | 1070 Carmack Road Columbus, OH 43210-1002
614-292-1643 Office | 614-560-1452 Mobile | 614-292-7504 Fax

Timothy Leasure
Associate Director
Associate Professor of Trumpet
The Ohio State University
School of Music
110 Weigel Hall, 1866 College Road, Columbus, OH 43210
614-292-2870 Office

Dear Timothy Leasure,
I have reviewed the School of Music's new Bachelor of Science in Music proposal and I am glad to see the inclusion of Theatre 5321 Video Production I. On behalf of the Department of Theatre we are happy to give our concurrence.

Best Regards,
Janet

Janet Parrott
Associate Professor, media
Ohio State University
614.292.6171
parrott.1@osu.edu

