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Music in the Digital Age: How Technology Shapes the Future of Sound
Dr. Lula Romero

Email Address:	info@fubest.fu-berlin.de
Time Slot:	Wednesdays, 1:30 p.m.
Language of Instruction:	English
Contact Hours:	45
ECTS Credits:	6

Course Description
Digitalization has significantly transformed and affected musical practices and aesthetics. New means of recording, processing, analysis and reproduction have profoundly changed the ways in which music is composed, produced, performed, disseminated and consumed. Sound synthesis and computational methods of structure generation have opened up new compositional possibilities. In this course, we will examine the development of electronic and computer music and sound art as well as more general shifts in the consumption and production of music. Through specific case studies, we will tackle the following questions: How have digital technologies enabled unprecedented modes of making, using and perceiving music? In what ways has digital mediatization shaped our experiences with musical content and style? How have technological developments influenced and challenged musical aesthetics and ideas of sound? And how do we reconcile the long-established connections between music, performance and liveness in an era when the paradigm of reproduction seems to be omnipresent?

In the first five sessions, we will consider the impact of digital technologies on the composition and production of music. After examining how analog and digital technologies have influenced musical practices, we will look at concrete examples and aesthetic developments in order to understand the influence of digital technologies both on the creative process of music-making and on its aesthetic reflection.

The second half of the course will focus on a number of broader implications of digitalization related to listening and performance practices, as well as music-related genres such as sound art, artificial intelligence, and virtual reality audio.

At the end of the semester, we will extend the scope and consider cultural issues that arise by digital possibilities of sharing, disseminating and consuming music. In particular, we will discuss the intertwining of digitization and commodification.

Learning Objectives
By the end of this course, students should be able to:
- identify main aesthetic tendencies in contemporary music employing (digital) technology
- describe the impact of digital technology and digitalization on music listening, publication, performing and composing
- understand the fundamentals of digital audio processing, recording and synthesis
- demonstrate their understanding of principal music historical developments in the late 20th and early 21st century
- critically listen to and discuss examples of contemporary classical music and sound art

Student Profile
Should be in their fourth semester of college/university education or beyond.

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Assignments and Grading
Midterm Exam: 250 Points
Term-Paper: 250 Points
Term-Paper oral presentation: 100 Points
Class participation: 250 Points
Independent Project report: 150 Points

Completion of the Midterm Exam as well as the Term Paper is needed for a grade.

FU Grade	Points of 1,000
1.0	980-1,000
1.3	950-979
1.7	900-949
2.0	850-899
2.3	800-849
2.7	750-799
3.0	700-749
3.3	650-699
3.7	600-649
4.0	500-599
5.0	< 500

Attendance
Attendance in class is mandatory. We also expect you to be punctual out of respect to both your instructor and your fellow students. If you cannot attend class because you are ill, please report sick to the FU-BEST office (info@fubest.fu-berlin.de) and to your instructor by e-mail before class.

Absences are **excused** in case of **illness**; however, for the fifth sick day and every other sick day after that (consecutive or cumulative, counted not per individual course but for the program overall), you will need to turn in a doctor's notice ("Attest" in German) to the FU-BEST office in order for them to count as excused, too.

If you miss an exam due to an excused absence, your instructor and the FU-BEST team will arrange a make-up exam for you; you may also be entitled to a term paper deadline extension. If you, however, do not fulfill all course requirements needed for a grade by the (later) date determined by the program, passing the course is no longer possible.

Please also note that if you miss more than half of a course's sessions (even if due to excused absence), passing the course is no longer possible.

Personal travel and visits by relatives or friends are **not** accepted as reasons for absence (i.e., absences for these reasons always count as unexcused).

Regarding **unexcused** absences, please note the following:
- Any unexcused absence has consequences for at least the participation portion of the grade.
- Two unexcused absences lead to a formal warning and a lowering of the course grade by a fraction.
- Three unexcused absences will result in an "F" (5.0) on the transcript.

An absence for more than half of a particular day's session will be considered an absence for that day.

Literature
Readings posted on the online learning platform Blackboard.

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Course Schedule

Calendar	Topics, Reading, etc.
Session 1	**Topic: Introduction: Overview of the Course.** **Transformations of Musicianship in the Digital Age**
Session 2	**Topic: Electronic Music and Computer Music** **Readings** • Chapter 11 from Joseph Auner, *Music in the Twentieth and Twenty-First Centuries* (2013) • Douglas Keislar "A historical view of computer music technology" from *The Oxford Handbook of Computer Music* (2009)
Session 3	**Topic: Digital Signatures in Popular Music** **Readings** • Chapters 7 and 8 from Ragnhild Brøvig-Hanssen/Anne Danielsen, *Digital Signatures* (2016)
Session 4	**Topic: Glitch and Noise** **Readings** • Kim Cascone, "The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Computer Music", from *Computer Music Journal (2000)*, Vol. 24/4 • John Latartara, "Laptop Composition at the Turn of the Millennium: Repetition and Noise in the Music of Oval, Merzbow, and Kid606", from *twentieth-century music*, Vol. 7/1 (2010)
Session 5	**Topic: Sound and Space** **Readings** • Peter Lennox, "Spatialization and Computer Music" from *The Oxford Handbook of Computer Music* (2009) • Jonathan Gillmurray, "Ecological Sound Art: Steps towards a new field" (2017) from *Organised Sound 22(1)*
Session 6	**MIDTERM EXAM**
Session 7	**Topic: Impacts of Digitalization I: Listening** **Readings** • Michael Chion, "The Three Listening Modes", from Jonathan Sterne, *The Sound Studies Reader* (2012) • Tobias Pontara and Ulrik Volgsten, "Domestic space, music technology and the emergence of solitary listening", from *STM–SJM* vol. 99 (2017)
Session 8	**Topic: Impacts of Digitalization II: Liveness and Instrumentality** **Readings** • Suk-Young Kim, "Liveness, Performance of Ideology and Technology in the Changing Media Environment", from *Oxford Online Encyclopedia of Literature* (2017)

	• Chapter 2 from Thor Magnusson, *Sonic Writing: Technologies of Material, Symbolic, and Signal Inscriptions* (2019)
Session 9	**Excursion or Guest Lecturer** TBD
Session 10	**Topic: Impacts of Digitalization III: Artificial Intelligence and Virtual Reality** **Readings** • Chapter 7 from Meredith Broussard, *Artificial Unintelligence* (2018) • Chapter 3 from Tom Garner, *Echoes of Other Worlds: Sound In Virtual Reality* (2018)
Session 11	**Topic: Impacts of Digitalization IV: Identities and Communities / Term-Paper presentations** **Readings** • Michael Waugh, "'My laptop is an extension of my memory and self': Post-Internet identity, virtual intimacy and digital queering in online popular music," *Popular Music* (2017) • Janice L. Waldron, "Online Music Communities and Social Media," *The Oxford Handbook of Community Music* (2018)
Session 12	**Topic: Impacts of Digitalization V: Consumption and Term-Paper Presentations** **Readings** • David Arditi, "Digital Subscriptions: The Unending Consumption of Music in the Digital Era", from *Popular Music and Society*, January 2017
Session 13	**Topic: Impacts of Digitalization V: Consumption and Term-Papers Presentations** **Readings** • Chapter 1 and chapter 2 from Raphaël Nowak, Consuming Music in the Digital Age (2016)