



University of California, Santa Barbara  
Program Learning Outcomes

**MS in Media Arts and Technology**

***Upon graduation with a MS in Media Arts and Technology:***

*Core Knowledge*

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- Students will be able to demonstrate a combined general knowledge of the interdisciplinary field of Media Arts and Technology, particularly in the areas of electronic music and sound design, visual and spatial arts, and multimedia engineering, including history, foundations, theory, criticism, systems and applications.
- Students will be able to demonstrate parallel awareness of the landmark developments and state of the art of the Media Arts and Technology field (including but not limited to music, arts, architecture, media arts, multimedia engineering, computer science), and will have working knowledge of the state of the art in at least of one of the areas.
- Students will be able to demonstrate specialized knowledge in one or more areas, sufficient enough to plan and carry out independent engineering and arts research.

*Research Methods and Analysis*

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- Students will be able to understand and demonstrate qualitative and quantitative methodologies typically used in all of the Media Arts and Technology program research areas.
- Students will be able to understand and employ generalized methodologies of digital media and human-computer interaction that apply across the conventional modalities of sound, image, moving image, space, form, fabrication and performance.
- Students will be able to understand and employ generalized methodologies of computational and algorithmic composition in ways that apply across the conventional modalities of sound, image, moving image, space, form, fabrication and performance.
- Students will be able to understand and employ methodologies that are used in electronic music and sound design practice and scholarship, analyze musical structures, compose electronic music and plan and execute sound design research projects and/or students will be able to understand and employ methodologies that are used in visual and spatial arts practice and scholarship. They will be also capable of planning, executing, and researching rigorous visual and spatial arts projects with significant engineering and aesthetic complexity and/or students will be able to understand and employ methodologies of media processing, including image and audio analysis and human-computer interaction, and to plan and execute projects of significant complexity.

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**University of California, Santa Barbara**  
**Program Learning Outcomes, continued**

- Students will be able to rigorously reflect and analyze their work and process within the context of the interdisciplinary field of Media Arts and Technology.

*Scholarly Communication*

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- Students will be able to review and cogently synthesize relevant literature and scholarship in the field.
- Students will be able to reflect upon their work and research and write appropriately in adherence to academic standards of the field.
- Students will be able to deliver a conference presentation effectively.
- Students will be able to engage in a critical dialogue about the technological and aesthetic structure, merits, and context of their work.

*Professionalism*

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- Students will demonstrate a commitment to creativity, innovation and transdisciplinarity.
- Students will be able to present a work of art and/or stage a performance of their work or present a conference paper.
- Students will be familiar with the relevant presentation venues, festivals, professional conferences and events in the respective research areas such as but not limited to (ACM SIGGRAPH, Ars Electronica, ACM Multimedia, ISEA, NIME, ICMC, IEEE, Transmediale, Sonar, documenta, Venice Biennale, LACMA, ACADIA, eCAADe, MOCA, MOMA, SF MOMA, the Getty Center, Centre Georges Pompidou...).
- Students will understand the necessity of keeping current with both the technical and aesthetic state of the art and advances in their field.
- Students will be able to identify their career options post-graduation, both as independent artists and in the industry and academia.
- Students will demonstrate a commitment to the fundamental principles of ethical academic and professional conduct.
- Students will balance their technological and scientific competence by also being culturally and critically conversant with the social, political and economic determinants of the Media Arts and Technology field.