

Ventura College Sabbatical Leave Proposal
Curriculum Development and Enhancement Project for Fall 2024-Spring 2025
Submitted by Jenchi Wu
Department of Art
October 2023

Sabbatical Leave Status

Full-time hire date: August 2010

Part-time district hire date: 2005

Previous Sabbatical Leave: 0

Sabbatical Project Background

Three-Dimensional (3D) printing is a transformative technology with applications spanning various fields, from engineering and medicine to art and design. It has quickly become popular for developing prototypes in art, animation, fabrication, toy design, product design, and modeling. While technical applications have long been understood, artistic applications are just now beginning to be fully explored, with four-year institutions slowly adding courses in this area to their arts curriculum. Because of a lack of focused instruction in the arts-based use of 3D printing, associated skills are often self-taught or developed on the job. In such cases, the use of the technology is often only partial as the user is often not aware of all the technology has to offer. Thus, there is great demand for 3D printing due to its applicability in a range of disciplines; however, it is a developing area within the field of art with few available offerings.

Ventura College offers excellent foundation courses in two-dimensional and three-dimensional art. Our students receive a competitive art education and many transfer to higher education programs in a variety of art-related disciplines. However, like many other campuses, we do not yet offer courses that leverage 3D printing technologies in artistic contexts. I am responsible for the 3D area and have taught full-time studio art (ceramics and sculpture) courses at Ventura College since 2010 and part-time studio art (ceramics) courses since 2005 at Moorpark College and Oxnard College. My expertise is in the studio practice of ceramics and sculpture; I have less experience with computer-aided art and techniques for 3D printing and so cannot currently develop a curriculum in this growth area.

Purpose of Sabbatical Project

This sabbatical leave is for the 2024-2025 academic year. The purpose of the sabbatical is to use professional development to improve my knowledge of and skills in 3D printing technologies as applied to ceramics and sculpture. While the foundational concepts in art remain consistent, the application of computer software in art represents a completely

new and distinct skillset. Thus, I will use this professional development opportunity to explore 3D printing of artistic designs. In doing so, I hope to concentrate particularly on the relationship between 3D printing and concept art, prototype design, toy design, and modeling as related to commercial/industrial art practice. This will keep me current in the field and will also allow me to add cutting-edge technologies to the classroom.

Experience in this area would also allow me to revise curriculum affecting multiple courses and programs. Classes that may benefit from this technology include Three-Dimensional Design, Sculpture, and Ceramics courses (see below for a full list). In addition to revising the existing curriculum, I also plan to develop a new curriculum for 3D printing in art, which will likely involve updating and revising Ventura College's current 3D Art programs.

As there are several major components of my sabbatical plan, I will take a multipronged approach, beginning with directed and independent study of the technology. Once I have established this new knowledge base, I will then revise and add to Ventura College 3D Art curriculum and programs. These revisions will be at two levels: at a formal level, I will modify and augment course content, update programs, and create new courses/programs, which will involve seeing the course outlines and programs through the local curriculum committee process. At a second level, I will also revise my teaching materials, create handouts, develop new and modify existing assignments, etc. Lastly, as the final stage of my sabbatical project, I will work to advertise the existence of the new curriculum by further strengthening existing community relationships and providing public demonstrations.

Sabbatical Project Components

Proposed Research:

Because more and more colleges and universities are developing 3D printing art programs for their institutions, I will research 3D printing programs at all the public four-year institutions in the state. I will also research 3D printing programs at two-year institutions in our commuter area. In doing so, I hope to gain insight both into the developing standards for 3D printing programs and also into the current strengths and undeveloped aspects of this curriculum in our commuter zone.

Having conducted a comprehensive search of these programs I hope to gain hands-on experience in 3D printing by enrolling in remote and in-person classes at both the local and international levels. While this opportunity allows me to learn about 3D printing itself, it also exposes me to various strategies used to structure 3D printing art programs and allows me to survey the studio setup for 3D printing. I will continue to develop these skills independently through practice, independent study, and individual project development.

Professional Development:

I intend to take in-person or remote courses that are related to 3D printing/art. I will also survey successful 3D printing programs at local and international institutions. My proposed sabbatical educational plan for 3D printing for art includes:

- Introduction to CAD (Computer-Aided Design)/CAM (Computer-Aided Manufacture)
- Drafting Fundamentals
- Introduction to Industrial Design Graphics
- Design Drafting and 3D Modeling
- Rapid Design and Prototyping
- Design Animation and Modeling

After taking such classes, I will update VC Art curriculum so that it includes various aspects of 3D printing that reflect up-to-date technologies. While 3D printing at Ventura College currently focuses on hands-on practice and materials in support of the fields of Drafting and Architecture, adding a 3D printing in the arts program will broaden students' academic horizons, prepare students for transfer, and provide additional career development opportunities connected with commercial and industrial art. A 3D printing in the arts program would explore related contemporary applications like 3D modeling, 3D concept design, and prototype development, for example.

Curriculum Work:

Once I have attained the requisite knowledge, I will revise and update the following 3D courses:

- ART V19 *Three-Dimensional Design*
- ART V25A *Beginning Sculpture I*
- ART V25B *Beginning Sculpture II*
- ART V26A *Intermediate Sculpture I*
- ART V26B *Intermediate Sculpture II*
- ART V50A *Handbuilding I*
- ART V50B *Handbuilding II*
- ART V50C *Handbuilding III*
- ART V50D *Handbuilding IV*
- ART V51A *Beginning Ceramics I*
- ART V51B *Beginning Ceramics II*
- ART V52A *Ceramic Design I*
- ART V52B *Ceramic Design II*
- ART V58A *Figure Sculpture I*

- ART V58B *Figure Sculpture II*
- ART V58C *Figure Sculpture III*
- ART V58D *Figure Sculpture IV*

Revisions will involve updating the course descriptions to mention 3D printing technology, adding instruction in 3D printing to the course content, and revising and updating course lectures and assignments. Each of these classes can be updated using fabrication or 3D printing, modeling, and ceramic mold printing. Revisions to course materials, handouts, etc., will also occur, as a compliment to the formal curricular process.

I will work to update existing programs containing the revised classes as needed. I also intend to revise the programs involving 3D studio courses to include the new course(s) I'll be adding. Finally, I hope to explore the possibility of creating a new CTE COA focused primarily on 3D printing in commercial/industrial art.

Value of Sabbatical Project to Ventura College Students:

This sabbatical project will benefit our students by providing them with cutting-edge curriculum, developing their skills, encouraging interdisciplinary learning, fostering innovation and creativity, and helping them pursue their educational goals and diverse career opportunities. Classes will allow students to develop proficiency in 3D modeling and printing, making them more competitive applicants in many fields in addition to 3D art studio. Ultimately, my newly gained ability to provide instruction in 3D printing for art will keep Ventura College students more informed about their discipline, excited by the new opportunities it offers, and prepared to accomplish their education goals. It will not only do this for art students with an emphasis in 3D design, but it will also support students exploring related fields like Drafting and Architecture, Commercial Design, Archaeology, etc.

The curricular revisions, updates, and additions I intend to complete will enhance Ventura College's academic offerings and attract students interested in technology-infused art education. This would give Ventura College a competitive edge compared to other area institutions lacking such curricular offerings. If I can develop a CTE program focused on 3D printing in the arts, this would also give Ventura College students another significant pathway to employment in the arts.

Students would benefit from directed instruction within an art-based curriculum. They can then take this skillset with them and apply it to their own future artistic projects. Of course, this particular skillset is important for a variety of non-arts-based careers as well,

so students could use it to support career development in diverse ways that include, but also expand past, the arts.

Introducing this cutting-edge technology into traditional artistic studio practice offers a great opportunity to empower students, drive artistic innovation, and integrate new technologies into creative practice. The outcome not only keeps the college relevant in academia but also establishes it as a leading institution in the field. More specifically, this sabbatical proposal will not only benefit the artistic community within our college but also play a crucial role in preparing students for the evolving landscape of commercial and contemporary art. Ensuring that our department/college maintains currency in the art field, the proposed 3D printing art class and updated curriculum are necessary additions that meet both the demand for such courses and contribute to the academic success of students in other programs as well.

Value of Sabbatical Project to the Art Department, Ventura College, and the District:

My work adding 3D printing to the arts curriculum in the 3D area will keep Art Department curriculum not just current but cutting edge as this new technology is slowly being adopted within the discipline. Currently, neither Oxnard College nor Moorpark College's art department offers 3D printing art courses, thereby providing Ventura College's Art Department with a competitive edge.

What is more, my sabbatical project offers many opportunities for college and community engagement. It can encourage collaborative relationships with the local arts institutions and vendors, for example, through exhibition, workshops, and potentially through CTE relationships encouraging community members and local businesses to engage with 3D printing in art. Indeed, following the completion of my project, I plan to provide public demonstrations both on-campus and at Ventura-area events (like ArtWalk) that will highlight the new curricula and emphasize its contributions. This will serve to solidify community relationships while also advertising the new program and new course(s) which will benefit students, the department, the college, and the district as a whole.

In short, I hope and expect my sabbatical work to give the Art Department and our college and district a competitive edge among other academic institutions. I also expect to be able to promote further community engagement. Ultimately, through program development, I plan to encourage collaborative opportunities with local businesses and industries that are involved with 3D printing for Art.

Value of Sabbatical Project to Ventura College Instructor:

This research and course development will allow me to stay up to date in my field. In turn, this will keep me excited about my discipline while also helping me keep the 3D program at Ventura College relevant. I will be able to create classes tailored to student interests in 3D printing for the studio major and will directly experience the reward of an even more engaged and enthusiastic student population. As the foregoing likely shows, I value collaborative relationships outside the classroom as well, and being able to share my research with other faculty, as I help them expand their skill sets and expertise, would also be a direct benefit. Ultimately, increasing my innovation in teaching and connecting that with industry demand and trends will also be intensely rewarding as I see it help connect students with jobs.

Thank you to the committee for your time and consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jenchi Wu', with a long horizontal flourish extending to the right.

Jenchi Wu
Professor of Art