SPRING2018 ART3613C - DIGITAL MULTIMEDIA
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course site: http://newtraditionalists.net/fa18/dmm

Instructor's Office Hours and Contact

Office hours for the current semester are posted on the instructor's office door, on the web page for the course, and in the main office. Consultations are offered first come, first serve or a student may email or an appointment. Preferred contact outside class and office hours is by email. The instructor will normally respond to email during office hours and within 2 days. Response outside these hours, through weekends, or on holidays will be rare.

Required Text

None, materials will be distributed electronically throughout the semester.

Other Required Materials and Tools

- UWF Gmail account & ArgoNet account Students must have an ArgoNet account to login to the lab computers. Students must also maintain a UWF Gmail account to receive important class materials updates. It is recommended that students check their UWF email at least daily.

- Other Accounts: instructor may direct students to use other online services, these services will be free of charge

- Removable storage device. You must invest in a USB 'travel' drive to save your work. The recommended minimum is a 1Tb, USB 3.0 example: http://amzn.to/2m0HIzH, but if it is possible 2Tb are very competitively priced example: http://amzn.to/2m3EmMa

- Materials for projects. Some materials may be provided per any Material Fee assessed for the course. The materials provide will vary for each course and the students should consult the instructor for a list of the materials available.

- In addition to some tools, **you will need to make additional purchases of parts and components this semester.** The department provides some common components for the labs and kits. The shop has a good general selection of electronic components. We cannot guarantee that the lab will have the specific parts needed for your design. This is a shared resource for all students; if you only need large quantity, please order your parts. Please ask instructor or mentors if you are unsure.

UWF Course Description(s)

ART3613C Digital Multimedia 3.0 sh Prerequisite: Art2600C
Issues and applications of digital technology and critical thinking in art. Conceptual utilization of both theoretical thinking and contemporary digital studio art practice, with possible emphasis on video art, video streaming technology, emerging technology, installation, programming and / or robotics to be determined by instructor. Students work both individually and collaborate on projects that can involve video, space, time, objects, film, robotics, programming, or any other appropriate media. Material and Supply Fee will be assessed.

Description of Topics Covered

Digital Fabrication, Computational 3D Modeling, Computer Aided Design (CAD), Computer Aided Machining (CAM), Computer Numerical Control (CNC), 3D Printing, Fused Deposition Modeling (FDM), Art and Technology, New Media, Algorithmic Art, Robotic Art, Interactive Art, etc.

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The class will focus multiple computer aided design (CAD) environments as well as digital fabrication technologies. The lessons will use solid and surface modeling software in order to create 3D designs and experience in using additive and subtractive fabrication technologies to build physical representations of the CAD models.

The course will include lessons in three dimensional design and sculptural process in Computer Aided Design and Digital Fabrication. The coursework facilitates an understanding of the terminologies, techniques, and materials in the field. This course is a Visual Art course; the course will approach media from a fine art perspective. The course emphasizes creative, critical thinking as well as methodologies and computational literacy.

Grading Procedures & Assignment/Project Weighting

The anticipated coursework and evaluations are as follows:

- Participation (attendance, homework, assignments, critique participation, etc.) – 15 pt.
- Reading Responses – 15 pt.
- Blog – 10 pt.
- Critique Projects - 60 pt.

Evaluative Process	Letter Grades
Projects are evaluated for Conceptual Approach, Technical skill/proficiency, Organizational Approach, Documentation and completion by deadline. Students may contact the instructor at any point during the semester to receive a grade to date and projection for the semester.	A ≥ 92% Superior A- ≥ 89% B+ ≥ 86% B ≥ 83% Above Average B- ≥ 80% C+ ≥ 77% C ≥ 74% Average/Competent C- ≥ 71% D ≥ 63% Below Average/Needs Work F > 63% Incompetent

- Coursework will include both interim and ongoing Assignments and Critique Projects. See value weighting of each category above. It is critical for student to complete all work; failure to do so can severely lower the final grade for the course.

- Assignments must be received before the deadline per assignment guidelines in order to receive credit. Assignments not received by the time the instructor evaluates work will not receive credit. Incomplete and late assignments will not be discussed in public discussions or in-progress critiques.

- Critique Projects are due at the scheduled time and must be received per project guidelines. Project requirements and dates may be announced in class and/or posted by electronic media such as email or class website.

- **Formal Project Critique attendance is mandatory**. Student who fail to attend and participate in formal community reviews/critiques will receive a zero grade for the project.

- Incomplete and late Critique Projects will not be discussed in class or during the public critique. Students may apply for an exception for qualified absences (see Excused Absences in Attendance section below)The grades for a late Formal Project will fall by one letter grade for each business day it is late. After the fifth business day, the grade will be zero.

Competencies (aka SLO's)

- demonstrate the proper safe use and procedural techniques in the shop "environment"
- identify and utilize common procedural methods and emulation in various 3D modeling software
- recall key terminology in 3D fabrication technologies & modeling software
- demonstrate the use of additive and subtractive 3D fabrication technologies
- distinguish and identify materials and processes in additive and subtractive digitally enabled 3D fabrication technologies
- critically discuss the impacts of Computer Aided Design and Digital Fabrication as a contemporary art practice
- articulate theories of hybrid art & science practices
- identify contemporary artists/designers who work in hybrid art & science
- develop a critical design solution to a system or client based need
- articulate critical design solutions to a system or client based need
- evaluate peer design solutions and provide feedback

Attendance Policies

Financial Aid Policies on Attendance

The Financial Aid Office tracks attendance for the first week. Failure to attend can result in financial aid disbursements being withheld.
https://confluence.uwf.edu/display/public/Attendance+Confirmation

General Attendance Policies

The University expects students to take full responsibility for their academic work and academic progress. To progress satisfactorily, students must meet the requirements of each course for which they are registered. Successful work depends to a large extent on regular class attendance.

Students are held accountable for all assignments in each course, whether or not the assignments were announced during an absence. Students are expected to attend class and participate during lectures, activities, and in studio time during scheduled hours.

Critique attendance is mandatory. Students who fail to attend and participate in formal community reviews/critiques will receive a zero grade for the project. If you are seeking an emergency exception, please consult Excused Absences section in this syllabus.

Absence Obligations (What to expect if you are absent) If a student misses a general (non-critique) course session, it is their responsibility to ask colleagues for notes, lecture materials and any other information distributed in class. The instructor will make reasonable arrangements to deliver the content or schedule lab time, but the instructor can not entirely redeliver the missed lecture and activities.

Late Arrivals or Departures —Being regularly late to the course is disruptive and not-collegial.

It is the student's responsibility to arrive be ready to start promptly at the beginning of the session. The instructor reserves the right to close the classroom after the class session has begun. Alternatively leaving early as a habit can be disruptive and will also negatively affect your grade.

Excused Absences, Deadline Exceptions

UWF Policies on Excused Absences Students must inform their instructor(s) of absences from classes prior to or as soon as possible after the absence. Instructors have the right to request verification for all excused absences. Faculty members must allow each student who is absent due to a reason recognized or accepted as an "excused absence," as set forth below, the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence. The use of attendance records in grading and handling of any excuses for absences is left to the discretion of the faculty member responsible for the course, subject to the guidelines given below:
- Students will be excused from class to observe religious holidays of their faith. No major test, major class event, or major University activity will be scheduled on a major religious holiday.
- Absences for imposed legal responsibilities (e.g., jury duty, court appearance) and military obligations will be recognized as excused absences.
- Absences resulting from participation in extracurricular activities in which students are official representatives of the University will be recognized as excused absences.
- Absences for serious illness, death or serious illness within the student's immediate family or other sound reasons offered by the student may be accepted as excused absences.

If you are participating in school sponsored events or have an emergency please contact the instructor as soon as possible. Granted exceptions are unusually rare and given at the discretion of the instructor.
- Any student seeking an excused absence for a professional affiliation/University-sponsored event must make arrangements with the instructor prior to the absence. Students who fail to give advanced notice will not receive an exception.
- Official documentation is required in all cases. This document must identify the student, the dates missed, the events around the absence, be printed on official stationary or form, and include signature and contact information for the professor, coach, physician, court officer, etc.

Academic Conduct and Plagiarism

The [Student Code of Conduct](#) (PDF) sets forth the rules, regulations, and expected behavior of students enrolled at the University of West Florida. Violations of any rules, regulations, or behavioral expectations may result in a charge of violating the Student Code of Conduct. It is the student's responsibility to read the Student Code of Conduct and comply with these expectations. The [Academic Misconduct Policy](#) (2009) defines various forms of academic misconduct and describes the procedures an instructor should follow when he or she suspects that a student has violated the Academic Misconduct Policy.

General Classroom Responsibilities Policy

- **Spirited**, but **Collegial** participation is appreciated and encouraged. However, disruptive behavior will not be tolerated. The Student Code of Conduct (http://uwf.edu/osrr/) sets forth the rules, regulations, and expected behavior of students enrolled at the University of West Florida.

- **Focus** is maybe the most direct way to describe the expectation for the classroom, if anything distracts you from the class purpose or goal, it should not surprise you that you will be asked to re-focus or leave. If you are confused about the goal for the session, please ask for help.

Other Important Responsibilities & Classroom Expectations

- **Alarms:** In the case of a fire alarm, please immediately proceed to entrance of Parking Lot M at Campus Drive on the north side of the art wing. Meet the instructor until we get an all clear. The instructor will lock the room so all personal items will be secure.

- **Course Subjects**: During the discourse of this discipline we may talk about matters which are at the fringes of our society. If at any time you find the subject or content of this course objectionable you are encouraged to discuss it. If however you find a presentation offensive you are permitted to quietly, without disrupting the class, excuse yourself. It is then your responsibility to contact the instructor for make-up work.

- **Overall Personal Responsibility**: Students are responsible for their own well being within the University system. If you need help, it is your responsibility to ask for it. The expectations at the University are high; you do not receive a grade, you will earn a grade.

- **Class Specific**: If the course has Health and Safety or other requirements/responsibilities, an addendum will be issued as part of the syllabus file.

- **NOTE!! CLOSED TOE SHOES ARE REQUIRED TO USE THE FABLAB. YOU WILL BE DIRECTED TO OBTAIN PROPER FOOTWEAR BEFORE YOU CAN USE THE FACILITIES.**

Universal Campus Resources for Students

Student Disability Resource Center (SDRC) The University of West Florida supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with the Student Disability Resource

Center. Appropriate academic accommodations will be determined based on the documented needs of the student. For information regarding the registration process, email sdrc@uwf.edu or call 850.474.2387.

Tutoring Services Tutoring services are available to all UWF students through the Learning Center in bldg. 52 Room 151. They provide free face-to-face and online tutorial assistance and academic support services to all currently enrolled students. In addition to the Learning Center, tutoring is also available at Mathematics and Statistics Tutoring Lab located in building 4, room 302 and the Writing Lab located in the Writing Center in Bldg 51 Room 157.

Counseling and Wellness Services offers health, counseling, and therapy to help students address how to manage, cope and grow with the stress associated with school and life. The primary goal of counseling is to help students develop the personal awareness and skills necessary to overcome problems and to develop in ways that will allow them to take advantage of the educational opportunities at the university.

Veterans Resources

The UWF Military & Veterans Resource Center (MVRC) serves as a leading campus advocate for military and veterans students, working to ensure the needs of these individuals are met through coordinating with multiple university offices and services. The center provides assistance with the following: GI Bill ® education benefits, active duty tuition assistance, out of state fee waiver, tutoring, paper reading, counseling, disability accommodations, coordinating academic advising and referral to state /federal resources and services. The MVRC is located in bldg. 38. For more information on MVRC service, call 474-2550 or visit http://uwf.edu/militaryveterans

UWF Department of Art Computing Lab Policies

Students found in violation of these rules may have their access limited to the labs.

- No Food and Drink in the lab. Stow your food or use the white cabinet at the entrance to hold the container until you can take a break.
- Tools and resources are primarily reserved for the students enrolled in the Digital Media Art courses. Please consult an instructor or Lab Technician before you begin.
- Do not interrupt classes. The labs have open hours for homework and projects. These will be posted on the doors of the labs.
- Use of the computers during Open Lab Hours is usually acceptable for students of the Department of Art if it doesn't impede the work of a student enrolled in digital courses.
- Access to the adjacent Fabrication Lab may require additional training. Please consult the area manager or a FabLab Technician for information on the equipment and requirements.
- Follow any directions that Instructors or Lab Technicians give to you regarding the lab and equipment.
- Students must save their files on a removable media such as a USB thumb drive or an external hard drive. The lab machines may be wiped clean and reformatted at any time. There is no backup.
- Students are advised to develop a disciplined backup schedule. It is suggested to subscribe to an online backup service such as Mediafire, Carbonite or Dropbox in the case of drive loss.
- Never install any software on any machine. Please consult your instructor for assistance and permission should you find other resources necessary to complete your projects.
- You may not use the resources to print for classes other than Digital Media/Graphic Design. The printer equipment and materials are funded by these classes fees. Please consult a lab monitor or your instructor about when and how to print for class work.
- Print resources are available in class or Open Lab Hours with the assistance of Lab Technician. All printing outside of class should be done during open lab hours.
- Please remember that we share these computers and other tools among several classes; please treat them in a manner that will ensure their cleanliness, longevity, and usefulness for all users.

Advanced Digital & Fabrication Laboratories Facilities and Policies

The Advanced Digital and Fabrication Laboratories (aka Adv. Lab and FabLab), located in Building 82, rooms 264 and 264A, is a research studio devoted to the advanced practices in Digital Media such as Videography, Programming, Computer-Aided Design (CAD), Computer-Aided Manufacturing (CAM), Computer Numerical Control (CNC) technologies, Physical Computing (PhysiComp), and Electronics as critical methods for contemporary art practice. The two lab area has both wired and wireless Argonet access. These facilities serve students and faculty at the UWF Art Department and allied University programs.

Equipment

CAD/CAM/CNC Equipment

The FabLab has equipment that allows students to mechanically fabricate their computer generated designs in wood, plastics, foam, etc. The Lab is equipped with a TechnoCNC LC4896 with a 3 horsepower router and 5 by 8 foot vacuum table which can be used to cut 2D shapes and 3D surfaces. In addition, the Lab has two CubeX Trio FDM 3D printers that build physical models additively in plastics. These machines have been used to create furniture, sculpture, molds for ceramic casts, etchings, panels for electronics, and circuit boards.

Electronics Workshop

These labs also serve as the primary space for research and development of Physical Computing and electronics in the UWF Art Department. The facility is equipped with ventilation hoods, workbenches, bench power, exposure unit, PCB etching materials, reflow oven, and electronics components. The lab maintains a small selection of basic electronics tools(see below) and warehouses Printed Circuit Board and component materials for classes in these practices. Students should contact the professor for a list of the available materials for their section.

Small Tools

A small selection of hand tools for basic fabrication are available for research projects, such as a cutting tools, measuring tools, screwdrivers, socket sets, small drill press, etc. In addition, the shop maintains a small variety of small tools for electronics: soldering tools, wire strippers, third hand tools, etc. A full list of tools available can be obtained by contacting the Lab Monitor or an instructor.

All tools are for use in the FabLab and Advanced Digital Lab only, if you need a hand tool to use in another studio please contact the studio coordinator for that area.

Lab Monitors/Technicians on Duty

The Adv. Lab and FabLab holds staffed open studio hours (please consult the door for times). The primary duties of Lab Techs are to maintain a safe, clean learning environment and to insure the responsible use of equipment and tools for student primarily enrolled in Digital courses.Students can

contact Techs for questions concerning use, scheduling, and operation of any equipment or materials.

Techs assist students in the preparing their files and fabrication with the CNC and FDM equipment. Students must comply with the training and safety policies of the lab. CNC and FDM operation require a Lab Technician to assist. Lab Techs are on staff to help facilitate the work; they are not on duty as contractors to complete the job. Students are required attend the work being done, monitor the process, and assist the lab monitor with material handling, cleanup, or any other task that the job requires.

Student Status & Access

The Adv. Lab and FabLab is primarily available for students enrolled in relevant art courses and those approved by the lab manager. Lab access is available during class time and posted "open hours". Students and users not in these courses should consult the on staff Techs or lab supervisor about services available general use.

All enrolled students and approved users must complete a mandatory Health and Safety Orientation for working in the Fabrication Laboratory (FabLaB). The Health and Safety Orientations take place during class, and will cover all of the important rules, practices and protocol as established by UWF, OSHA, the Department of Art faculty, and the Sculpture Lab Supervisor. The Health and Safety Orientation also covers fire safety, what to do in emergency situations, OSHA codes and policies.

The training programs for authorization are managed by the lab supervisor and administered by the lab technicians. Additional training opportunities take place as needed and only during Open Studio Session hours, when a lab technician is on duty. Students are to refer to the schedule posted for Open Studio Session hours. Students are responsible for seeking out the lab technician on duty to arrange the times and dates for the training program(s) for authorization for the wood shop and/or metal shop. Students should be aware that the training program(s) may take up to 3 or 4 different sessions.

Any unauthorized persons found using the Lab, along with those who aided their access, will be reported and action will be taken – including the confiscation of work and cancellation of lab privileges. The facilities may be electronically monitored for policy conformity, safety, and security.

Shop Condition and Cleanliness:

Students are not permitted to not leave the labs without cleaning up after themselves. Sloppiness is disrespectful, and in this setting, dangerous. Allow at least 10 to 15 minutes of time for a full clean up: sweeping, vacuuming dust from power tools, and putting hand tools back in their appropriate place. Dispose (in the appropriate receptacle) debris from any print, cutting or layout. Do not forget to remove memory storage devices from the Lab computers. Jump Drives and Hard Drives will be taken to the Lost and Found in the Department of Art Office.

These facilities are a shared studio area, not only with other members of their class, but also with students in other classes and the faculty. These policies contribute to the safety and respect for the Art Department community; it is required that all students adhere to these policies:

Use of Tools and Equipment:

- Put away any and all tools that are used.
- Students cannot operate any tool/equipment before instruction for appropriate use and safety procedures.
- Any student who feels unsure, nervous or confused about the use of a tool after training, must consult with the instructor or FabLab technician before proceeding.
- Instructor or FabLab technician must be on duty to use of the CNC and 3D Printers
- Tools may not be taken out of the lab (Adv Lab/FabLab).
- Broken tools must be reported to the instructor or lab technician. This is not an issue of fault, it's one of safety.
- The use of spray paint/adhesives or any other aerosols in the building is not permitted at any time. See Materials section below for more information.

Storage of Works-In-Progress and Personal Materials:

- Students MUST clear their materials off of the worktables, throw away any debris, and sweep excess into the trash bin.
- Students must store their work-in-progress in the designated area for the class. Work may not interfere with the use of equipment and is out of walkways. Students who are having difficulty storing their work in the designated areas should see the instructor to address the issue.
- Students must take care not to disturb other students' works-in-progress. Note that the studio is a public area; students store materials at their own risk. but the lab will not assume liability for materials
- Students may not store work after it has been presented for critique.
- Materials and supplies must be on shelving provided. Please see the instructor for direction. Note that storage is extremely limited and needs will be accommodated as possible.

General Shop Rules for Advanced Lab & FabLab:

- **Supervision:** The instructor or lab technician/monitor has the final call on use of the lab. A user will be asked to leave, if the instructor or tech on duty determines that a user is not complying with safety or use policies. Anyone who is asked to leave should do so immediately and respectfully leave and contact the lab supervisor as soon as possible to discuss remedies.
- **No Food:** Do not eat or drink in Lab. Please leave your food stowed away or put containers on white cabinet in the Adv. Lab.
- **Appropriate Clothing:** Avoid loose clothing or hanging jewelry while around any power tools. Loose clothing, long hair or hanging jewelry can become caught in tools. Clothing should fit the body snugly and long hair should be tied back at all times shop. Removing all jewelry prior to using woodworking tools is also advised.
- **Wear safety glasses**. Almost everything in the Fab Lab requires protective eyewear; get used to wearing them all the time. Corrective glasses are a valid alternative for impact, but splash goggles are always required for working with wet chemistry.
- **Protect your hearing**. Semi-reusable earplugs are provided by lab. Hearing protection is always required in the FabLab when the CNC is in operation.
- **CELL PHONE** use in the FabLab is strictly limited to work purposes. Acceptable work practices include: documenting work progress, consulting a chart for figures, using calculator function to determine the decimal of a fraction, etc. Taking calls, texting, gaming, posting/reading social

media, etc. is <u>unacceptable</u> and will not be tolerated. Students who are expecting an important phone call from a doctor or family member may inform the instructor before class, and excuse themselves quietly when they receive their call. Otherwise, cell phones are to remain stowed.

- **HEADPHONES AND EARBUDS** are not allowed in the FabLab. While it is appropriate to wear headphones in the Advanced Lab to work on video and audio, it is dangerous to wear such devices in the fabrication shop.
- **Intoxication is prohibited.** Alcohol is never allowed in any of the lab areas. Anyone found under the influence of any substance will result in immediate and permanent removal from class.

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Materials for Lab/Studio

Depending on your course materials may need to be supplied by the student. Cutting (as opposed to engraving) capacity varies with materials, thus it is recommended that you consult with a lab monitor about cutting thickness limits and materials. All material brought into the FabLab must conform to MSDS and departmental guidelines regarding allowable, safe substances. Unlisted materials are subject to approval (see box below).

FDM (3D Printer) ABS PLA	CNC Foam (Extruded Polystyrene) Plastics(Acrylic, Polycarbonate, ABS, PTFE, HDPE) Wood Plywoods (MDF, Particle, etc.) Light Gauge Soft Metals (Copper, Aluminum)

Solvents, Cleaners, Finishes, Adhesives

Only approved materials can be used inside the lab. These materials will be provided by the lab, no outside materials are to be brought in to the lab. No Aerosols are to be used in the lab at anytime. Please set up a work area outside and at least 20 feet from the Lab door.

A binder with all approved material's MSDS is located in the top cabinets next to the software and policy manuals. These are available to any student, faculty, or inspector upon request at any time. An additional copy can be found in the Art Department office. Please consult area faculty members if you would like to request use of other materials. Only faculty members or the Departmental Coordinator can approve new materials for lab use.

Scheduling of CNC and FDM Printers

Cutting and fabrication time can be scheduled by contacting a Lab Monitor or Instructor. Instructors may set limitations or blackout periods on certain processes during the semester. You are advised to check the schedule early to avoid conflicts.

Blocks of time will be scheduled in one hour increments up to 3 hours in a single shift. Users can schedule up to 3 distinct shifts per week. Students requiring more time will be able to use the services per the Standby and No-Show Policy (see below). The operator has the right to refuse any jobs that will extend past 15 minutes before closing of the shift. Please arrive early.

Lab Monitors may be available to assist students in the formatting of CAD files, if they are not occupied with a fabrication job. CAD files must be formatted properly prior to their being sent to the machines. It is NOT the responsibility of the lab monitors to "fix" problematic files. The lab monitor will notify the student if he or she needs to modify the submitted CAD file.

SCHEDULE EARLY! Pre-scheduled appointments must be made at least 12 hours in advance of appointment time. Clients needing access with less than 12 hours notice will comply to the Standby and No Show Policy

Standby and No Show Policy

Please arrive promptly for your scheduled appointment and prepared to begin. Clients must start a job within 10 minutes of the beginning of the scheduled appointment. The client must have files ready for final CAM processing by technician, approved materials prepared for machining, and any other preparations to begin immediate use of machining. Users should meet with instructors and technicians to go over any specifics of their work and to pre-process their files before their scheduled appointment.

If no job is running after 10 minutes, standby users who are prepared to start as noted above may bump the unprepared or late user for the remaining period of the scheduled time slot if the job does not extend into the next pre-scheduled users appointment.

Standby users may use extra time left from signed up users who are finished early, as long as the job will not extend into the next scheduled appointment. When users finish early, they are encouraged to let as many other users as possible know that there is free machine time.