

UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee

Technology Fee Application

**FGM 105 Interactive & Multimedia
UNIV100 Research Classroom Enhancement**

Title

Jacqueline Robeck, Ph.D.

Name of Submitter
(Faculty or Staff Only)

Office of First Year Experience

Organization

Title: FGM105 Classroom Enhancement Date: 07-15-2021
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Department/College/Org: Office of First Year Experience, Student Success

ABSTRACT (250 words or less):

This proposal requests support to convert FG Mouton (FGM) classroom 105 into an interactive, multimedia research classroom that promotes a collaborative and engaging environment for up to 700 UNIV100 freshmen students in multiple colleges and majors each academic year (required 3 credit course). The enhanced classroom would support the University's values of collaboration, intellectual curiosity, and creativity and would specifically support the University's Strategic Plan to increase undergraduate student productivity and success through engagement in mentored research, innovative projects, and creative endeavors.

Furthermore, this enhanced classroom would support the University's recent (spring 2021) Diversity Plan by offering interdisciplinary and co-curricular courses that could improve cultural understanding and sensitivities and provide support to student/faculty research. The new classroom would also address the recent (May 2021) service level objectives and expectations for Student Technology Enhancement Plan grants.

The funding request is for equipment that will allow students and instructors to:

- Clearly hear and see speakers anywhere in the classroom via multiple audio components and interactive television screens,
- Interact (at a safe distance, if needed) and collaborate with fellow students at or in a "huddle pod,"
- Accommodate any disabled individual,
- Assure interactive, multimedia distance-learning.

The current classroom is outdated (more than 15 years old). A new classroom is needed for team collaboration, distance learning, and interaction among students and instructor.

The new equipment would provide a collaborative, individual, team or group-functional research classroom for effective learning on or off-campus and have substantial impact for a first semester student's classroom experience.

A. Student Contributors

This grant was written with the contributions of two ULL students to assure undergraduate and graduate balance and to improve student success:

Brooke Pelman is a senior in Kinesiology and has been a peer mentor for UNIV 100 two semesters. Her input has been invaluable with regards to current and futuristic campus classrooms and their use of technology.

Ricardo Caliman is a graduate student in Communications and has had a graduate assistantship in the Office of First Year Experience for two years. He is involved with the department's web design, social media, and technology issues.

B. Purpose of Grant and Impact to Students

The need for an interactive classroom in FGM 105 with updated technology is a necessity for University of Louisiana at Lafayette (ULL) students' learning opportunities. The new classroom would incorporate teaching strategies beyond traditional lecture and would enhance the interaction between and among instructors and students.

The goal of this classroom is to provide an environment that supports today's students in multiple learning modes. Today's students are very savvy about using technology and embracing new avenues of learning.

The post "COVID" student has already learned remote learning methods and when stepping back into the in-person classroom will quickly take those remote skills to a higher level.

The adoption of technology has transformed teaching and classroom engagement; the use of remote teaching has further transformed teaching and learning styles. FGM 105 is not being used to its full capacity because it lacks the necessary up-to-date modern equipment to fulfill ULL's objectives and expectations for a high-tech campus.

C. Current Classroom

FGM 105 is outdated. The existing equipment negatively impacts student learning, prohibits use of the room for tech-advanced learning and research, and hampers the use of the room for any special programming.

FGM 105 is 1068 square feet. Along the perimeter of three walls are tower computers, PCs, and many tangled cords. In the middle of the room are wobbly individual desks and chairs. At the front of the room there is a podium with computer and plug and play speakers. A ceiling projector is used with a pull-down screen and a whiteboard behind the screen. There is no other advanced equipment. Students come to the classroom and when Wi-Fi is sufficient may get on their laptops to do an individual assignment.



Current FGM 105: Outdated computer, plug-and-play desktop speakers, ceiling mounted projector, and manual projector screen stuck in the down position covering the whiteboard.



D. Funding Objectives

The following are specific objectives of the classroom enhancement grant:

- Upgrade technology to support traditional and non-traditional teaching methods, with specific attention given to multi-media use and sharing of information for research and research-related activities.
- Improve instructional quality and enrich student-learning experiences.
- Provide classroom accessibility for disabled students.
- Assure distance learning, remote capabilities.
- Assure physical distancing if needed.
- Improve room utilization experience during student and any extracurricular or community events.

The above objectives simultaneously and specifically address the Service Level Objectives (SLO) and Service Level Expectations (SLE) detailed by recent STEP (Student Technology Enhancement Program) guidelines. Of the seven listed SLOs listed, this grant addresses SLO1, 2, 3, and 7. This grant primarily addresses SLO3:

- SLO 3 by providing a learning environment that facilitates multiple instruction and learning styles.
 - SLE 3.1 by providing interactive, multimedia instruction.
 - SLE 3.3 by providing adequate seating and fixtures for optimal learning.

The proposed classroom will allow the instructor to teach in any fashion known at this time. Students can work independently or in groups and can be interactive with other students in the classroom, the teacher or an out-of-the-classroom entity.

- SLO 2 by expanding and enhancing internet access.
 - SLE 2.1 by providing sufficient band width to accommodate students.

The proposed classroom will embrace internet technology. Each student station as well as the instructor station will use the internet.
- SLO 1 by creating a stable and consistent software environment.
 - SLE 1.3 by providing virtual desktops in a virtual lab that connect to the campus community.

The proposed classroom will allow all students, instructor, and outside entities to access the same stable software.
- SLO 7 by ensuring the laboratory/smart classroom and its infrastructure is maintained and continues to provide satisfactory service to students.
 - SLE 7.1 – The Office of STEP Support will maintain and support the proposed classroom.
 - SLE 7.3 – STEP will ensure that the integrity of the classroom assets are maintained.

The principal investigator has communicated the needs of the UNIV 100 students to STEP and has worked with STEP to consider hardware, connectivity, instruction and maintenance of the proposed classroom.

E. Student Learning Objectives and Widespread Impact

FGM105 is a dedicated classroom for UNIV 100, which is a required General Education three credit course that all entering freshmen take-regardless their major. UNIV 100 is administered through The Office of First Year Experience (OFYE) which is dedicated to first year students providing the necessary resources to provide a strong foundation for personal growth and college success. UNIV 100 is problem/project-based and engages students in meaningful inquiry and activities that develop core cognitive skills of critical thinking, problem-solving, information literacy, oral and written communication skills.

UNIV 100 is a benchmark for other classes students take on campus. This is the only class on campus that has an upper-class student mentor (not enrolled in the class) that attends every class and helps students transition from a previous high school learning style to a ULL high tech learning style. The classroom upgrade would create a positive lasting impression on a wide array of students.

The requested technology enhancements for this classroom would allow instructors to teach using all possible aids that are currently known (Zoom, Teams, Voice Thread, Panopto, graphs, PowerPoint slides, videos, simulations, problem-solving, case scenarios, really any visual or audio learning style). The classroom would further allow verbal and visual interaction between students, groups of students, the instructor(s), and multiple students/groups at the discretion of

the instructor. All lectures and classroom activities would be recorded and available on the cloud for students to review and would be especially useful for students who, for whatever reason, could not attend class. There should be no restraints on learning.

Seven hundred freshmen each academic year could be taught in FGM 105 and this high-tech classroom could improve their college and life successes. Nineteen sections or 475 students (25 students per section) could be taught in the fall semester (when all entering freshmen enroll in UNIV 100) and nine sections or 225 students, could be taught in the spring semester.

Student referral to others regarding the “classrooms” at ULL could have a substantial impact on student enrollment. The students and instructors are from every major/college on campus and would have widespread visibility. FGM105 could also be utilized for special purposes outside of scheduled classes for extracurricular or community events.

The need for technology in classrooms has increased over the years as instructors seek to engage students and provide a learning experience that will help them to thrive in their careers. The current generation of students has been exposed to teaching using technology since grade school; 2020 necessitated various uses of technology to teach and learn in non-traditional, off-campus environments. ULL’s “back to campus” classes should not be technologically inferior. Teaching with technology is a necessity and engages students in the classroom. Technology in the classroom makes it possible for students to collaborate with one another, with their instructors, and improves the teaching/earning process.

The classroom enhancement will have an impact on incoming freshmen’s initial perception of the ULL campus. The funding of this grant helps fulfill the University’s vision of advanced technology available to undergraduate students.

F. Projected FGM 105 Classroom

The enhanced classroom features state-of-the-art multi-media and interactive components. All equipment in the classroom will be linked for instruction and shared learning. The classroom would be virtual and can be shared with those not seated in the classroom. Students could work independently as well as in groups (which is an integral component emphasized in UNIV 100). Students could move their chairs anywhere in the room. Students could hear and see via TV monitors anywhere in the room.



*SIMILAR
LOOK
ELSEWHERE.
What a huddle
station room
looks like (r);
huddle
worktable with
TV monitor
and center
plug in
station.*

- Student Stations: Six huddle pods (4'wide x 8'long) seating 5 students per activity table; electric accessibility at each station; Wi-Fi connectivity for each student; TV monitor at each pod; sharing ability at worktable and with instructor; chairs with collapsible tablets and under chair storage; ADA compliant capabilities.



- Instructor Station: Single SMART podium at front of room with tall chair; speaker system; connectivity to each huddle pod; ability to share and project to the entire class multiple students' work.
- Multimedia Capabilities: Big touch screen TV monitor in front of room by instructor podium. Glass boards on either side of TV for writing purposes; control of TV projection from instructor podium.
- Audio-visual recording device ceiling mounted; storage in cloud; additional speaker and extended Wi-Fi capabilities.
- Printer Station: Black/white printer, scanner/copier on tables in corner of room.

G. Projected Lifetime of Enhancement

- Technology: Expected to have a ten-year life span.

H. Person(s) responsible for:

1. Implementation (Dr. Robeck, PI)
2. Installation (STEP office)
3. Maintenance (OFYE and STEP office)
 - STEP Sustainability Plan ensures laboratories, smart classrooms, and infrastructure funded by STEP can be maintained by STEP and continue to provide satisfactory service to students.
4. Operation (Dr. Robeck, PI)
5. Training (initially STEP office, then instructors in classroom trained by OFYE and Dr. Robeck)

I. Timeline

- Spring 2022 – Commence project. UNIV100 sections usually scheduled in the classroom will be reassigned elsewhere on campus.
 - i. January - Place orders for equipment and other project items.
 - ii. February – Remove unnecessary items from FGM 105.
 - iii. March – Wall, ceiling, floor improvements.
 - iv. April – Installation of new equipment and wiring.
 - v. May – Training by STEP for Robeck and other OFYE personnel.
 - vi. June – First time teaching in classroom to address any obstacles.
 - vii. July – Training to FGM105 instructors.
- Fall/August 2022 – Full time classroom instruction to freshmen.

J. Previously Funded STEP Projects

- Computer Lab in Hamilton Hall for School of Human Resources, Robeck, et.al., 2003.

K. Evaluation Plan

- Summer 2022 – Assess understanding of classroom by OFYE personnel and post-training evaluations by trained instructors.
- Fall 2022 – Evaluations by instructors having used FGM 105 during the semester and usage of multimedia and interactive equipment and systems. Evaluations by instructors and students at the end of semester regarding ease of use and obstacles faced.

L. Funding Requirements

1. Equipment	\$77,374
2. Software	\$0
3. Supplies	\$1000 (match by OFYE)
4. Maintenance	\$0
5. Personnel	\$0
6. Other	\$27,150 (technology installation/labor)
7. In-kind	printer, scanner, tables, chairs (unknown value)

TOTAL: \$104,489 (less 10% discount = \$94,040)

M. Budget Overview by Student [Hard] Items, Instructor [Hard] Items, Connectivity and Printer Approximations:

Item	\$ Cost Each	\$ Line Cost Requested	\$ Match or in-Kind by OFYE**	In-kind by OFYE
Students				
6 Huddle tables	2400	14440		
6 Huddle TV monitors	1153	6920		
6 Teamwork systems	3290	19740		
6 Wall mounts	268	1600		
6 Amplifiers	278	1670		
6 High speed cables	257	1540		
30 roller chairs	100	3000	3000**	Substitute with currently owned chairs
Students Total		\$47,470		
Instructor				
Instructor Podium		2000		
Large Screen TV (front of class)		5100		
Camera System		4400		
Microphone		600		
Instructor Chair			500**	Substitute with currently owned chair
Instructor Total		\$12,100		
Connectivity Total		\$44,919		
Printer Area				
BW Printer				Already owned
Paper (one year supply)			500	
Ink cartridges (one year supply)			500	
Scanner/copier				Already owned
Printer tables				Already owned
Printer Total			\$1000	
Total Requested		\$104,489	(less 10% discount) =	\$94,040

**** Current freeze on all expenditures. When lifted, OFYE can fund; if not lifted, substitutions will be made (use existing chairs and tables).**

N. Equipment Itemization by GoMedia – Supplier – As Follows:

Quote Name	UL FGM 105 May2021 sv R 1
Company:	ULL
Contact:	
Address	
City, St Zip	
Date	06/25/21

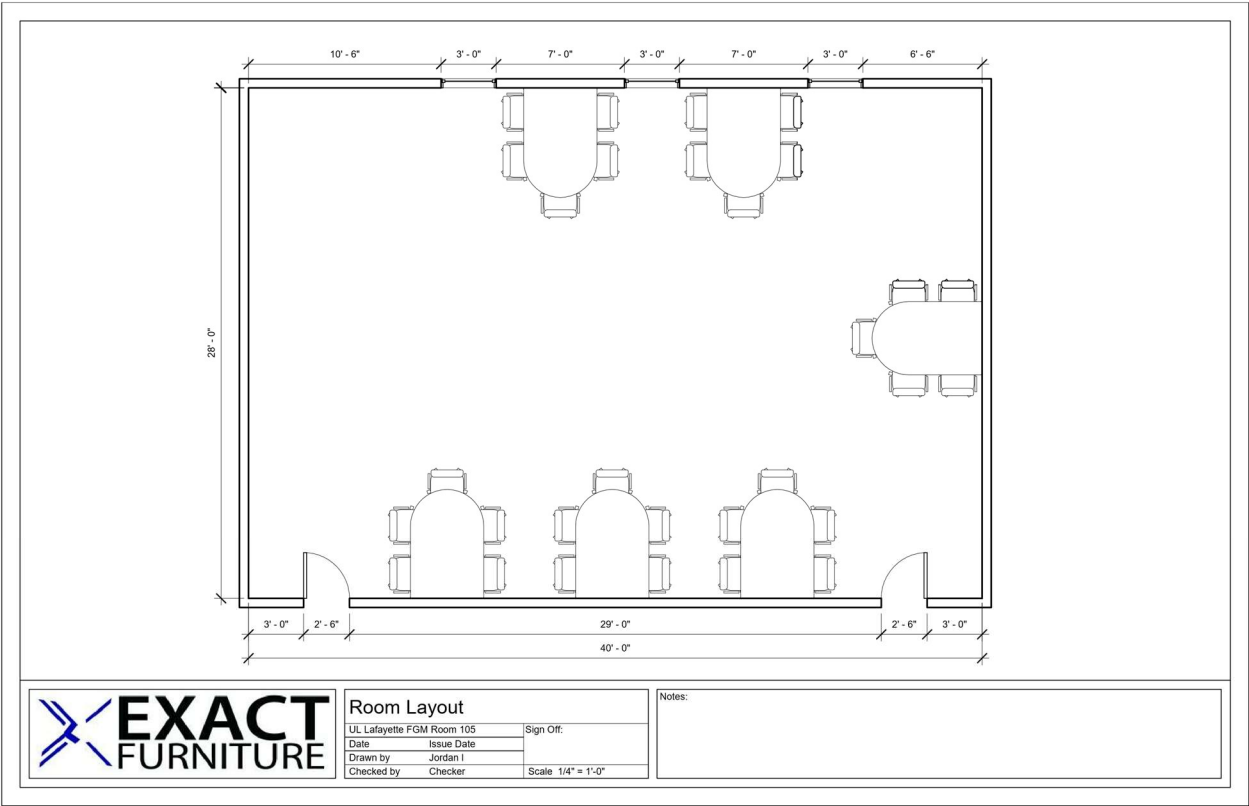
Notes:

Qty.	Part #	Line Items	Description	Price Each	Extension
6	65US340C	1	65" 4K HDR LED Television	\$1,152.78	\$6,916.68
1	86TR3BF-B	2	86" 4K HDR Touch Screen LED Display	\$5,104.17	\$5,104.17
1	NET-GS108LP-100NAS	3	8 Port PoE Gigabit Network Switch	\$147.04	\$147.04
1	45-486-026	4	MXV Articulating Monitor Arm	\$211.26	\$211.26
1	STA-USB2001EXT2PNA	5	USB 2.0 + Audio Extender Kit w/Isochronous Audio	\$544.61	\$544.61
		6			
1	XTM1U	7	X-Large Fusion Tilt Wall TV Mount	\$316.67	\$316.67
6	LTM1U	8	Large Fusion Micro-Adjustable Tilt Wall Mount	\$267.50	\$1,605.00
1	999-99010-000	9	RoboSHOT 12E Qmini Camera System	\$4,435.97	\$4,435.97
1	535-2000-296	10	Offset Drop Down Camera Ceiling Mount	\$325.93	\$325.93
1	PD-915R-SP	11	9 Outlet Rack Mount Power Bar w/Serial Surge Protection	\$500.00	\$500.00
2	VT1	12	1RU Vent Panel	\$14.58	\$29.16
2	VT2	13	2RU Vent Panel	\$18.75	\$37.50
1	TW12	14	Cable Management Straps	\$13.19	\$13.19
1	LBP-1R	15	Lace Bar (10 Pack)	\$54.86	\$54.86
		16			
6	HD-DA2-4KZ-E	17	1x2 HDMI Distribution Amplifier	\$277.78	\$1,666.68
4	HD-TXC-101-C-E	18	DM Lite HDMI over Catx Transmitter w/RS232	\$277.78	\$1,111.12
4	HD-RXC-101-C-E	19	DM Lite HDMI over Catx Receiver w/RS232	\$277.78	\$1,111.12
		20			
1	60-1562-02	21	TLP Pro 725T Tabletop TouchLink Touchpanel	\$1,520.83	\$1,520.83
1	60-1913-01	22	IPCP Pro 550 xi Control Processor	\$2,631.94	\$2,631.94
1	60-1615-01	23	IN1808 4K 60 Presentation Switcher	\$3,812.50	\$3,812.50
6	42-226-012205	24	Teamwork Collaboration System	\$3,290.28	\$19,741.68
1	60-1449-01	25	MPA 601 70V 60W Amp	\$347.22	\$347.22
3	42-141-03	26	FF220T Ceiling Speakers (Pair)	\$354.17	\$1,062.51
2	60-1271-12	27	DTP HDMI 4K 230 TX Transmitter	\$333.33	\$666.66
1	60-1271-13	28	DTP HDMI 4K 230 RX Receiver	\$333.33	\$333.33
16	26-663-03	29	3' HDMI Ultra Series Cable	\$36.11	\$577.76
2	26-663-06	30	6' HDMI Ultra Series Cable	\$51.39	\$102.78

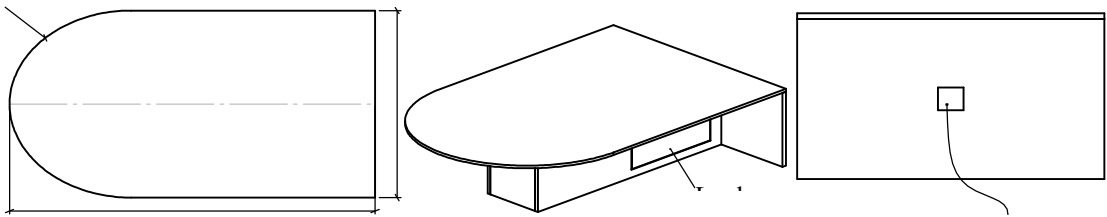
3	26-663-12	31	12' HDMI Ultra Series Cable	\$65.28	\$195.84
6	26-726-25	32	25' HDMI High Speed Pro Plenum Cable	\$256.94	\$1,541.64
2	60-604-02	33	RSB129 Rack shelf	\$48.61	\$97.22
1	70-1045-02	34	Cable Cubby 500	\$208.33	\$208.33
1	60-1782-01	35	AC+USB Power Module	\$312.50	\$312.50
1	26-712-01	36	Display Port to HDMI Adapter	\$65.28	\$65.28
		37			
1	MX418S/C	38	18" Gooseneck Microphone	\$229.17	\$229.17
1	GLXD14R/93	39	Digital Wireless Lavalier Microphone System	\$605.56	\$605.56
1	SB902A	40	Spare Rechargeable Lithium Ion Battery	\$27.78	\$27.78
1	TesiraFORTÉ AVB VT4	41	Fixed IO DSP w/2-Channel Dialer, AVB, AEC, & USB	\$1,943.06	\$1,943.06
		42			
6	CT-720-8	43	8' Huddle Table w/CC 1402 Cutout	\$2,399.31	\$14,395.86
1	PM-300	44	26" Podium w/ Cable Cubby 500 Cutout	\$1,837.50	\$1,837.50
		45			
800	254246AFBK1000	46	HDBaseT Certified Cat 6A Plenum Cable, 1ft	\$1.06	\$848.00
200	25225BBK1000	47	Plenum 16g Stranded, Unshielded Speaker Cable, 1 ft	\$0.25	\$50.00
200	D25430GY1000	48	Plenum 2p 22g, Individually Shielded Mic/Control Cable	\$0.44	\$88.00

Parts	\$77,373.91	
Labor	\$27,115.00	
Shipping	\$0.00	
Project Subtotal	\$104,488.91	
Discount	-10%	-\$10,448.89
Sales Tax	\$0.00	
Project Total	\$94,040.02	

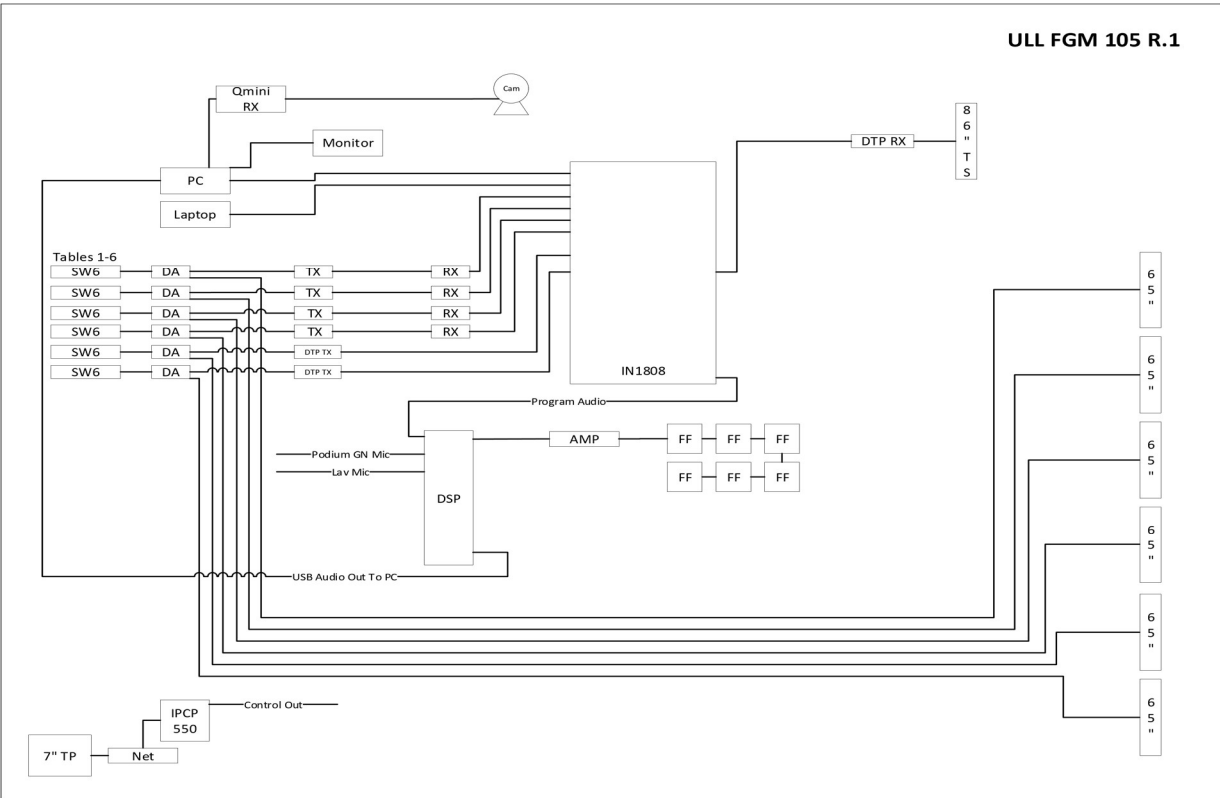
O. Additional Visuals



FGM 105: Intended Room Layout



Collaborative Work Table Schematic



Line/wire Schematic for Connectivity in FGM 105

End.