

UNM Center for Gait and Motion Analysis Laboratory

Mission: Gait and Motion Analysis Laboratory located in Health Service Science Building is the only full-equipped gait analysis laboratory at University of New Mexico designed to facilitate research activities in rehabilitation sciences, especially physical therapy related science, and biomechanics. This facility serves to promote multi-disciplinary scholarly activities at Health Science Center at University of New Mexico in order to provide high-quality healthcare to our community.

Policy: Students and faculty who utilize the Gait and Motion Analysis Laboratory (GMAL) at the Division of Physical Therapy in Department of Orthopaedic and Rehabilitation must adhere to the procedures of the GMAL defined below in order to maintain a safe and effective working environment.

Procedures:

1. Safety

SAFETY IS THE PRIMARY CONCERN OF THE GMAL. All studies should be performed such that subject and researcher safety is maximized. For safety, purposes, at least two researchers must be present during all data collection. Lack of adherence of pertinent safety measures will result in the termination of the research project in the GMAL and could potentially result in the student's inability to participate in any experience in the GMAL.

If there is an emergency, immediately contact at 911. Once it is safe, contact GMAL Director: Dr. Yoshida at 505-925-1059. The GMAL director should be notified of all emergencies in the GMAL as soon as possible.

Your submission (See Point #2) to the GMAL director should include any possible safety issues for all people in the GMAL, and how safety will be insured for these individuals. If the GMAL director and the research committee at the Division of Physical Therapy are not satisfied with safety procedures, the GMAL director can require new or additional procedures. All research projects requiring Institution Review Board of Health Science Center at University of New Mexico (IRB) approval should keep a copy of their IRB submission and approval in the

2. Approval to use the lab

All activities in the GMAL should be pre-approval from the GMAL director before GMAL use is permitted. If a research project, submit your IRB approved application to the chair of Research Committee at the PT Division with a copy of IRB approval letter. If a non-research project (i.e. PT classes, educational seminar for communities etc.), submit a written document or email of procedures, materials, and methodology to the GMAL director. The GMAL director has complete authority to halt GMAL use at any time if the GMAL director determines a policy of the GMAL to be in violation. All research projects in the

GMAL *must receive written approvals from both IRB and Research Committee at the Division of Physical Therapy* (the 'Research Committee'), which needs to be on file in HSSB 168. If a pilot work is required prior to the implementation of the study, the primary investigator needs to consult with the chair of the 'Research Committee' and obtain the approval from the 'Research Committee'. The GMAL director or designated research assistants needs to be present for all pilot data collections. If a clinical gait analysis, the patient has to be received Physical Therapy evaluation in order to describe overall gait abnormality. The applicant should describe why the laboratory-based gait analysis is required in addition to the traditional PT gait analysis should be described in a written form.

3. Faculty Sponsor:

All activities in GMAL should have a faculty sponsor (e.g. data processing and analysis by using a computer in the lab). The faculty sponsor should have complete mastery in the use of intended equipment. That faculty sponsor is held responsible for overseeing the GMAL activity, ensuring safety, ensuring proper use of equipment, supplying all consumable materials needed for the activity, and submitting a GMAL use proposal (See Point#2) to the GMAL director. If the activity in GMAL is a research project with using the equipment, one of Core-Faculty should take the same responsibility as a faculty sponsor.

4. Project Personnel (Assistant and Subjects):

The submission (See Point #2) to the GMAL director should describe who will be in the GMAL and who will be using GMAL equipment. All individuals who utilize equipment in the GMAL must be competent and **display mastery** of the appropriate techniques and equipment before beginning any research in the GMAL. All subjects should be treated with respect and courtesy, with their safety of primary importance. If there is a change in personnel as described by the proposal (See Point #2), the faculty sponsor must submit an amendment to their proposal in the same way as the IRB process.

5. Equipment and Materials:

The submission form (See Point #2) to the GMAL director should describe what non-consumable equipment (e.g. Vicon motion capture system, AMTI forceplates, digital video cameras) is needed to complete your project. The project should only use consumable materials provided by the faculty sponsor. All consumable materials located in the GMAL are/were purchased for specific projects with specific funding. If you want to rent lab equipment, please reach to the GMAL director so that she can keep the record. Each rental item you rent from GMAL has a minimum rental period of one week, or specify the rental term in the application form. If a piece of equipment breaks or performs abnormally in any way, it is responsibility of the faculty sponsor to notify the GMAL director immediately.

6. Scheduling to get into the lab:

All time in the GMAL should be scheduled using online calendar.

If there is conflicts of scheduling, the priority will be set by following order:

- 1) DPT courses

- 2) Other educational events (i.e. seminars for surgeons)
- 3) Faculty externally funded research
- 4) Faculty internally funded research
- 5) Student externally funded research
- 6) Students internally funded research
- 7) Research projects without funding

This order is only effective if the contact person for the project being rescheduled is provided at least 14 days' notice.

It is the responsibility of the GMAL director to judge and disperse lab schedule equitably. The proposal (see #2) to the GMAL should be mention the amount of time predicted for lab use each week.

If you schedule a time on the lab calendar and have to cancel, you must remove it from the calendar within 48 hours so other people can use the lab if needed. Blocking out time on the calendar for possible use is not permitted.

7. Student Access to the GMAL:

Students may only gain access to the GMAL by using a key that has been stored to PT faculty office. All student projects require a faculty advisor. If the project requires to use Vicon motion capture system and electromyography system, one of GMAL core-faculty members should become the faculty advisor. The faculty advisor needs to be in the HSSB during all time while the student collecting data in the GMAL.

8. Dress Code:

Professional clinic dress code (pants and closed toe shoes) is required of all researchers during the data collection.

9. Food and Drink:

No food is allowed at the main GMAL computer (i.e. The one for using data capturing). A tight covered drink is only allowed at the main GMAL computer desk. The lab stores some water bottles and high-protein bars for an emergency supply; however, each researcher should prepare for the subjects' need.

10. Leaving the lab:

The DMAL should be left in the same manner as it appeared upon entrance, except special situations where cameras or other equipment is to be located in a specific spot for a study. If you want to maintain a GMAL setting, you must have approval from the GMAL director.

11. Amendments to GMAL policy:

The GMAL director will review this policy at least annually and make amendments as necessary. The modified policy should be approved by the Research Committee and all faculty members at the Division of Physical Therapy.

Gait and Motion Analysis Lab Use Application

-Research Projects-

○ Contact Information

Name: _____ Email: _____

Phone: _____ Position/Academic Rank: _____

Department/ Program/Center: _____

Role in Experiment (Please check all applicable items)

- PI
- Collaborator
- Experimenter (e.g. Graduate students)
- Faculty Sponsor

○ PI Information

Same as Applicant?

- Yes
- No

If no, please provide the information:

Name: _____ Email: _____

Position/Academic Rank: _____

Department/Program/Center: _____

Please list any additional P.I.s, including their school affiliation and contact information

○ Study Information

Title of your study: _____

- Will you require basic assistance from the GMAL personnel?

- No
- Yes

If yes, please describe help needed

- Please include brief description of your study

- Have you received Human Subjects Approval from IRB at HSC?

Yes

No

If yes, please report the expiration date and application number

_____ (mm/dd/yyyy) Application number: _____

- Have you received project approval from Research Committee at Division of Physical Therapy?

Yes

No

If no, please contact Dr. Yoshida, the chair of Research Committee at Division of Physical Therapy, at yyoshida@salud.unm.edu

- Equipment/Software Needs

What equipment will you need? (Please check for all item that you need)

Use or not	Equipment	Basic (2hr session)	Extra experiments	# of session/subject	# of subjects
<input type="checkbox"/>	Motion Analysis System with 10 Vicon Cameras (Lower Limb kinematics/kinetics, GRF)	\$300	Additional 1hr = \$50		
<input type="checkbox"/>	Motion Analysis System with 10 Vicon Cameras (whole body kinematics/kinetics, GRF)	\$400	Additional 1hr = \$50		
<input type="checkbox"/>	Force Plate only	\$150	Additional 1hr = \$25		
<input type="checkbox"/>	Delsys EMG system (surface) (8 channels)	\$200	Additional Electrodes=\$35/electrodes		
<input type="checkbox"/>	Delsys EMG system (wire) (2 channels)	\$200	Additional Electrodes=\$35/electrodes		
<input type="checkbox"/>	Tekscan (Pressure mapping)	\$150	Additional 1hr = \$25		
<input type="checkbox"/>	Tekscan (Insoles)	\$100	Plus soles \$40/each		
<input type="checkbox"/>	Metabolic Mobile Testing System	\$200			
<input type="checkbox"/>	Biopac System	\$200			
<input type="checkbox"/>	Handheld Dynamometer	\$50			
<input type="checkbox"/>	Digital video Cameras (not bonita)	\$5	With or without tripods		
<input type="checkbox"/>	Network Computers	\$50			
<input type="checkbox"/>	Treadmill	\$50			
				Total	
<input type="checkbox"/>	I don't need any equipment listed above or this project is a pilot study conducted by PT faculty members.				

○ Will you need programming assistance?

No

Yes

If yes, please for all items that you need:

Need or not	Software	Basic \$/hr	Total # of data collection session	Subtotal
<input type="checkbox"/>	System Preparation Personnel (Camera Calibrations)	\$50/hr/person		
<input type="checkbox"/>	Data Analysis Personnel (Vicon, Tekscan, Metabolic system)	\$70/hr/person		
<input type="checkbox"/>	Data Interpretation/Data Dissemination (Vicon, v3d)	\$70/hr/person		
<input type="checkbox"/>	Computer Programming Personnel (Labview/MatLab)	\$70/hr/person		
			Total	
<input type="checkbox"/>	I don't need any equipment listed above or this project is a pilot study conducted by PT faculty members.			

○ Has the PI and all research staff received all trainings required by Human Research Protections Office at University of New Mexico?

No

Yes

○ Acknowledgement of Responsibility

○ I have read, understand, and agree to abide by GMAL policy.

○ I understand I must check with the financial contact for my funding source before processing payment at ____?

○ I understand that each member of my research team will need to complete all trainings that required by Human Research Protections Office at University of New Mexico.

This instrument was acknowledge before me on ___/___/_____ by:

_____ (The applicant's name)

_____ (The applicant's signature)

Gait and Motion Analysis Lab Use Application
-Educational Purpose-

○ Contact Information

Name: _____ Email: _____

Phone: _____ Position/Academic Rank: _____

Department/ Program/Center: _____

○ Class Information

Date(s) Requested: _____ Course Number: _____

Time GMAL Lab Needed: From _____ to _____

Estimated # of Attendees: _____

Organization: _____

Please describe the reasons for use of the lab

Which specific equipment is needed for the class

○ Acknowledgement of Responsibility

- I have read, understand, and agree to abide by GMAL policy.
- I understand I must check with the financial contact for my funding source before processing payment at _____.

This instrument was acknowledge before me on ___/___/_____ by:

_____ (The applicant's name)

_____ (The applicant's signature)

*Gait and Motion Analysis Lab Use Application
-Rental Item (More than 1 month)-*

○ Contact Information

Name: _____ Email: _____

Phone: _____ Position/Academic Rank: _____

Department/ Program/Center: _____

○ Equipment Information

Items: _____

If the item contains several pieces, please describe them below:

Today's date: _____

Return by: _____

○ Acknowledgement of Responsibility

- I have read, understand, and agree to abide by GMAL policy.
- I understand I must check with the financial contact for my funding source before processing payment at _____.

This instrument was acknowledge before me on ___/___/_____ by:

_____ (The applicant's name)

_____ (The applicant's signature)

_____ (GMAL director's signature on returning)