

Appendix 1.6. h. Laboratory Space

COPH Room Number	Function	Square Feet	Description	Key Equipment of Materials
2035	Chemistry, Biology and Industrial Hygiene Teaching Laboratory	676	Departmental teaching laboratory shared by all programs	Human skeleton, human torso model, Lasair particulate measuring system, Spirometrics spirometer, Blue M dry type incubator, respirator fit testing system, personal sampling pumps, aerosol generator, noise dosimeters, sound pressure level meters, octave band analyzers, Buck calibrator, wet and dry gas meters, pH meters, balances, microscopes, swinging vane anemometer, thermoanemometer, Beckman DU64 and DU40 spectrophotometers, BGI Dust Feeder Speed Selector
1221, 1221A, 1221B, 1221C	Electron Microscopy Suite	374	Electron microscope and auxiliary equipment, space for sample preparation, photographic film developing area with photo enlarging equipment.	Hitachi H-7000 Electron Microscope with H-7110 Scanning system, Ladd Research 3000 Spattering device, Omega Variable Condenser Enlarger, LKB2218 Histrange microtome, Leica Reichert UltraCut E Ultramicrotome, Leica Histo Embedder, Omega Arkay Developer, Durst Laboratories S-45 EM Enlarger, Water chiller, fume hood
1213, 1213A	Atomic Absorption Spectrophotometer laboratory	368	Trace metal analysis teaching laboratory.	Buck Scientific 205 Atomic Absorption Spectrophotometer with various hollow cathode lamps, Buck Scientific 410 Dedicated Atomic Absorption Cold Vapor Mercury Analyzer, Miran 1B portable ambient air analyzers, Orbeco-Hellige Aqua Analyzer 2, Palintest SA-5000 scanning analyzer for lead, BAS 100 Electrochemical analyzer, LabComp SCT Electrolytic conductivity meter, Gow-Mac 350 Gas Chromatograph, Parker 9090 hydrogen gas generator, Photovac 10S70 Portable Gas Chromatograph, SSI 300 HPLC with UV/vis detector, Fisher 152 Electrolytic Conductivity meter, Holaday HI-3624 ELF/Power field meters, Jerome 431-X mercury vapor analyzer, Bacharach MV-2 mercury vapor sniffer, ozone, radon and radiation meters, flow meters, various pH and ion meters and electrodes, fume hood

1202	Balance room	103	A room with stabilized temperature and humidity to assure precise and accurate measurement of mass.	Mettler balances
1218, 2220, NEC309, 309A, 314	Industrial Hygiene	2,017	Provides training to protect workers' health through workplace interventions. Development of skills to anticipate, recognize evaluate, and control hazards in the workplace including evaluation of exposure to airborne gases, vapors, aerosols, ionizing and non-ionizing radiation, noise, heat, ergonomics, respirator fit testing and evaluation of exhaust ventilation systems	Drycal DC-Lite primary flow calibrators, RESTEK electronic leak detection device, TSI PortaCount Plus, American Panel Environmental Chamber (walk-in), Datex 53 airway gas monitor, Burdick Electrocardiograph 320, Beckman Oxygen analyzer E2, VacuMed Vista Mini-CPX, Beckman coulter counter, TSI Wind Tunnel, Pacific Scientific 4100 LFE Low Temperature Asher, various custom built plexiglass environmental chambers, microscopes, balances, pH meters, biological safety cabinet, fume hoods
1214, NEC303, NEC303A, NEC303B	Toxicology and risk assessment	1,314	Research/teaching laboratories involved in projects related to the effects of chemical agents on respiratory, reproductive, and biochemical functions.	Norlake Environmental Chamber (walk-in), Vibra Cell sonicator, Tecan plate washer and Infinite M200 ELISA plate reader, World Precision 10000R Manipulator, incubator, biological safety cabinet, fume hoods, Genesys 2 spectrophotometer, microscopes, 12 Isometric Transducers, centrifuges, balances
1216B, 2217, 2213, 2213A, 2213B	Tissue Culture Rooms	640	For culture of fungal and cell lines.	Biological safety cabinets, microscopes
NEC323	Human Respiratory Research Laboratory	648	Studying lung injury from occupational and environmental agents utilizing non-invasive techniques and human inhalation chamber.	Sievers 280I Nitric Oxide analyzer, Leitz Labovert FS microscope with monitor, Dyna Map Pro 1000, Varian Cary Eclipse fluorescence spectrophotometer, Genesys 2 UV/Vis spectrophotometer, Varian ProStar HPLC with autosampler, ThermoHaake EK70 and Jaeger ECo Screen, Thermo 49C ozone analyzer, RP 1400a ambient particulate control unit, CM QCM cascade impactor control unit, BioTek ELx50 auto strip washer, BioTek uQuant UV/Vis spectrophotometer, centrifuges, ultro low temperature freezer, balances, incubators, fume hood

2214, 2215	Environmental Chemistry	800	Dr. Jaward's research interests include: sources, fate and behavior of persistent organic pollutants (POPs) in the environment and the effects on human health and the development and use of passive samplers for air sampling of POPs. His previous research focused on measuring the spatial and temporal trends/variations in ambient concentrations of POPs and the processes controlling their global cycling in source regions and in remote areas across Europe, Asia, along mountain ranges and along the Atlantic Ocean using active high volume air samplers, and two types of passive air samplers – polyurethane foam disks and semi-permeable membrane devices.	Varian Cary Eclipse fluorescence spectrophotometer, Varian CP3800 gas chromatograph, Varian Saturn2200 GC/MS with autosampler, Carbolite furnace, Buchi Rotavapor R-114, OA-SYS Multivap Nitrogen Evaporator, Electrothermal 6-place heating mantle, balances
2216	Environmental Chemistry	398	Dr. Stuart's specialties include atmospheric chemistry, air quality, environmental computational modeling, biological and chemical terrorism response	Varian Cary 50 Probe UV/Vis spectrophotometer, Varian ProStar HPLC, Rayonet photochemical reactor, balances, fume hood
1201, 2204, 2210, 2221	Environmental and Occupational Health Laboratories	890	Laboratories for use by departmental faculty for special projects and/or teaching purposes.	Thermo TN3000 Total nitrogen analyzer, Accumet XL60 pH/ion/conductivity/DO meter with various probes and electrodes, pH meters, analytical balances, fume hoods
2222	Radiation Teaching Laboratory	281	Shielded room containing various radiation measuring instruments.	Portable Geiger-Muller Counter radiation survey meter, Oxford GM Counter, Oxford scintillation counter, Sargent-Welch GM, Nucleus 2010 nuclear amplification analyzer, Honeywell radon detectors, radon daughter-element detector, fume hood

1205, 2212	Glassware washing and autoclave rooms	415	Common use for all departments for sterilizing materials and washing glassware.	Amsco 2322 autoclaves, Amsco 470 glassware washers, Amsco 1024 glassware dryers, Thermo Sterimax tabletop steam sterilizer, Isotemp and Blue M drying ovens, muffle furnace
1209, 2218	Walk-in refrigerators	130	4° C walk-in type refrigerators for storage of materials and supplies and to provide a cold working area for research if applicable.	
2219	Walk-in incubator	42	35° C walk-in type incubator to provide an area for projects requiring a larger than normal incubating space.	
1210, 1215, 2201, 2207	Storage and common use equipment	471	Common use equipment and storage space for all departments, including dedicated storage for compressed gas cylinders.	Ultra Low Temperature freezers, Sorvall Ultra centrifuge, Beckman J2-21 and GS-6R centrifuges, Beckman LS3801 scintillation counter, Shaved Ice Maker, Labconco freeze dryers, refrigerator/freezers
1200B	Vivarium facilities	831	Under the Division of Comparative Medicine, this area is available to house animal models for research.	Steris Basil 3700 cage and bottle washer, animal cage isolation hood
1212	COPH BSL-2 Lab: Waterborne diseases, hygiene and sanitation	190	Current research in the Izurieta lab focuses on sustainable development issues in developing countries as they pertain to waterborne diseases and sanitation, vectorborne and parasitic diseases.	Biological Safety cabinet, Mettler balance, incubators, microscopes, pH meters, Lab refrigerator

1216A	COPH BSL-2 Lab: Ecological interfaces of environment, behavior and biology in the tropics	413	Research in the Nisbett lab involves disease-ecology projects including studies of rodent-borne hantaviruses & arenaviruses and anthropod-borne viruses. In addition to disease ecology studies in Liberia, Dr. Nisbett has focused on the socio-cultural environment as well. He is currently working with Liberian colleagues on reproductive health, rural community health, workforce capacity building, and HIV/AIDS risk-reduction among urban commercial sex workers and adolescents.	Fume hood
1217	COPH BSL-2 Lab: Infectious Disease Exposure Prevention	390	Dr. Haiduven's research interests are in the prevention of sharps injuries in healthcare workers, with a focus on evaluating sharps devices designed for safety.	Basic glove box, Hemco ductless hood enclosures, IV training arm and hand, fume hood

1219, 1220, 1206	COPH BSL-2 Lab: Medical Microbiology and Immunopathogenesis	695	Dr. Azizan's research training is in the area of Medical Microbiology, and Molecular Biology. In research, Dr. Azizan is interested in studying the immunopathogenesis of dengue hemorrhagic fever. The specific research areas of her interest is to study the effect of dengue virus and cytokines on endothelial cell cellular expression, and to establish cytokine profiles for infections associated with the different dengue serotypes and genotypes.	Biological Safety cabinet, Clean Spot PCR workstation, QiaCube DNA/RNA/protein purification, Stratagene Mx3005P QPCR system, BioTek Synergy HT plate reader, AB 2720 Thermal cycler, Beckman Coulter DU730 UV/Vis spectrophotometer, ultra low temperature freezer, microscopes, balances, microcentrifuges, Beckman GS-6R centrifuge, fume hood
2206	COPH BSL-2 Lab: Sustainability and parasitic diseases	398	Current research in the Kwa lab focuses on sustainable development issues in developing countries as they pertain to vectorborne and parasitic diseases.	Biological Safety Cabinet, microscopes, balances, fume hood
TOTAL		12,484		

Interdisciplinary Research Building

Room Number	Function	Square Feet	Description	Key Equipment of Materials
0422	Global Health Infectious Disease Research BSL-3 Lab: Eastern Equine Encephalitis	3,907	The laboratory of Dr. Thomas R. Unnasch concentrates upon the study of onchocerciasis and human filarial infections. The laboratory concentrates upon research areas that have a direct impact upon disease control and elimination programs targeting vector-borne pathogens worldwide.	EpMotion automated pipetting system, 2 QIAcube sample prep systems, QIAxcel DNA/RNA analysis system, 6 thermal cyclers, orbital shaker, Ultracam digital imaging, incubators, 2 biological safety cabinets, fume hood, freezers, balances

4222	Global Health Infectious Disease Research BSL-2 Lab: Filiariasis and onchocerciasis	2,728	<p>In the field of arboviral infections, the Unnasch BSL-3 suite is studying the ecology of Eastern Equine Encephalitis virus (EEEV) in the Southeastern USA, concentrating on elucidating the dynamic processes in the host-vector relationship that are drivers in the development of EEEV enzootics and epidemics. The ultimate goal of these studies is to develop a predictive model for habitats that are most likely to represent EEEV enzootic foci. Such a model could be used to most efficiently target the surveillance and vector control efforts of the mosquito control programs throughout Florida and the Southeastern USA.</p>	5 biological safety cabinets, refrigerators, centrifuges, Nanopure water system, environmental chambers, 2 autoclaves, freezers, ULT Freezers, incubators, microscope, balances
0425B	Global Health Infectious Disease Research BSL-2 Lab: Malaria vaccine research and anti-malarial therapies	2,001	<p>The research in this lab focuses on the biology of malaria parasites and its remarkable ability to infect human populations. <i>Plasmodium falciparum</i> and <i>P. vivax</i> cause the majority of human malarial cases and are the primary species that my laboratory studies. This research studies the function of these parasite ligands in the blood and mosquito stages and how they can be used for anti-malarial therapies.</p>	AKTA Prime Plus and AKTA Explorer protein purification, Hitachi LaChrom Elite HPLC, Teledyne fraction collector, Sorvall RC6 centrifuge, BioRad gel imaging, Nanodrop spectrophotometer, ULT freezer, upright freezer, lab refrigerator, balances, centrifuges

0425D	Global Health Infectious Disease Research BSL-2 Lab: Malaria, leishmaniasis, and primary amoebic meningoencephalitis (PAM)	1,709	The research in the Kyle lab focuses on the discovery and development of new drugs to prevent or treat important parasitic diseases of man. New drugs are urgently needed to combat malaria, primarily due to the emergence of drug resistance to one or more drugs - a phenomenon known as multidrug resistance. The overarching objectives of our research is to develop new tools to prevent disease, to train a new generation of global health research scientists, to foster multidisciplinary research on tropical diseases, and to implement our findings to reduce the burden of disease in endemic countries.	Biomek 3000 automation workstation, 3 biological safety cabinets, incubators, centrifuges, microscopes, refrigerators
0435	Global Health Infectious Disease Research BSL-2 Lab: Virology and Biodefense	1,094	Current activities of Dr. van Olphen's virology core include the development of new molecular and immunological diagnostics, drug screening and characterization of drug resistance for viral agents with bioterrorist potential and emerging viral diseases.	Jouan centrifuge and rotors, Sorvall RC6 centrifuge and various rotors, incubators, Nikon Eclipse TS100 microscope, BioTek plate reader, Microson ultrasonic cell disrupter, QiaCube, BioRad BioPlex 200 & BioPlex HTF, Forte BIO Octet QK, BeckmanCoulter BioMek 3000 and BioMek NXP, BigNeat Robotics Biosafety enclosure, BioRad thermal cyclers, refrigerators, freezers, 2 biological safety cabinets
409	Global Health Infectious Disease Research Insectary and Vivarium: Vector Borne Diseases	1,359	This state-of-the-art facility houses an insectary, arthropod containment laboratory-2, and a BSL-1 and BSL-2 vivarium. This suite supports the vector borne diseases with a significant global public health impact.	Minus 20 and 80 freezers, 3 walk in environmental chambers, 5 portable environmental chambers, 2 Tecniplast animal racks, 4 glass front refrigerators, 5 4' biosafety cabinets, one sterilizer
407	Radioisotope	428	The radioisotope lab supports all activities of the Global Health Infectious Disease Research Program.	PerkinElmer Topcount detector and Unifilter 96-well Harvester, freezers and ultra-low temperature freezers, biological safety cabinet

425C	Global Health Infectious Disease Research BSL-2 Lab: Malariology	368	The lab supports the malaria research activities of the Global Health Infectious Disease Research Program.	Zeiss Observer A1 AX10 microscope with digital imaging, QIAgen system, Accuri C6 flow cytometer, Biomek 3000 automation workstation, Perkin Elmer PCR GeneAmp9600, BioRad Gene Pulser xcell, 3 thermal cyclers, 2 plate readers, 4 biological safety cabinets, Sorvall centrifuge, freezer, refrigerator, microscope, incubators
425F	Global Health Infectious Disease Research BSL-2 Lab: Microscopy	186	The lab supports the microscopy research activities of the Global Health Infectious Disease Research Program.	Olympus BX51 microscope and IX71 inverted microscope with Photometrics CoolSnap HQ2 camera
425J	Global Health Infectious Disease Research BSL-2 Lab: Support	195	The lab supports the research activities of the Global Health Infectious Disease Research Program.	Fisher GB135 electrophoresis system, Bioflow Celligen bioreactor, sonicator, orbital shaker, incubators, centrifuges
438, 439, 440	Global Health Infectious Disease Research common use equipment areas	339	The common equipment area supports all activities of the Global Health Infectious Disease Research Program.	2 Consolidated steam sterilizers, MilliQ water purification system, ice machine, Lancer lab glassware washer, washer/dryer, refrigerators, freezers, ultra-low temperature freezers, ThermoSavant DNA120 speed vac concentrator, Sorvall SE90 and RC6 centrifuges and rotors, Konika Minolta SRX-101A film developer, BioRad myCycler, Stratagene Mx3000P, Turner TD-700 fluorometer, Clean Spot PCR workstation
TOTAL		13,226		

Other Laboratory Facilities

Room Number	Function	Square Feet	Description	Key Equipment of Materials
	Center for Biological Defense Sample Preparation Laboratory	850	Production of a culture collection in excess of 300 strains of potential bioterrorism agents. Developing procedures for preparation of samples for molecular detection and typing of bioterrorism agents from clinical, environmental, food and water samples. Developing tools to rapidly determine the antimicrobial susceptibility of bioterrorism agents. evaluating a spectrophotometric technique for rapid identification of bioterrorism agents.	Magnapure DNA Extraction Robot, Sensititer Antimicrobial Analyzer, Biolog/Omnilog Bacterial Identification System, Phase contrast and fluorescence microscopes, 100% exhaust and 70% recirculating biological safety cabinets, 3 dedicated ultra low temperature freezers for the culture collection.
	Center for Biological Defense Detection Laboratory	850	Molecular detection and typing of bioterrorism agents from clinical, environmental, food and water samples. Evaluation and validation of kits developed to detect bioterrorism agents. Testing of various decontamination devices, including microbiocidal agents, electrofiltration systems and ionization technology. Evaluating infrared spectrometry for chemical and biological identification.	ABI 7700 Sequence Detector System, Beckman CEQ 8000 DNA Sequencer, Roche Dupont RiboPrinter, BioRad Chef Mapper PFGE System, BioRad Gel Doc system, 70% recirculating biological safety cabinets, IR Illuminator Microscope Thermal cyclers.
	Dr. Donald L Price Center for Parasite Repository and Education	1,288	Education and consultation regarding parasites and parasitic infections. Individuals and group instruction and training. Specimens and samples available from the repository.	American Optics 5 Place Teaching microscope, various student microscopes, Hitachi video, Nikon CoolPix 4300, projectors; a vast array of specimens collected and fixed for further studies; photographic slides and photomicrographs of parasites from around the world.
TOTAL		2,988		