GANGAROSA DEPARTMENT OF ENVIRONMENTAL HEALTH

Rollins School of Public Health
OUTLINE

- Department Overview
- Faculty & Research
- Degrees Programs
- Academic Overview
- Student Life
- Employment
- Applying to EH
- Resources
DEPARTMENTAL OVERVIEW
ACADEMIC BUILDINGS

Claudia Nance Rollins (CNR)

- Environmental Health
- Epidemiology
- EH Labs
- Global Health

Grace Crum Rollins (GCR)

- Biostatistics
- Behavioral Science and Health Education
- Health Policy & Management

The R. Randall Rollins Building is currently under construction!
DEPARTMENTAL OVERVIEW

· **Goal:** To promote a healthy environment for all people

· **Research**
  · Undertake rigorous research across multiple disciplines: epidemiology, exposure science, toxicology, implementation science, etc.
  · Employ traditional and cutting edge methods: clinical trials, modeling, exposomics, environmental bioinformatics, high-throughput analyses, remote sensing, machine learning

· **Teaching**
  · Prepare public health professionals to address the major environmental health challenges
  · Environmental determinants of emerging infectious diseases, including zoonoses
  · Climate change
  · Evidence-based environmental policy
  · Provide opportunities to gain experience, develop relationships, secure meaningful work
DEGREES OFFERED

- Environmental Health (MPH)
- Global Environmental Health (MPH)
- Environmental Health-Epidemiology (MSPH)
- 5-year program for BS Environmental Science and Environmental Health (MPH)
- Dual-degrees with MPH include: MD, MBA, JD, MSN, and MMSC (PA)
- PhD in Environmental Health Sciences
GAIN CRITICAL SKILLS IN...

- Exposure Science
- Risk Assessment
- Hazard Recognition
- Toxicology
- Biomarkers
- Environmental Policy
- Epidemiology
- Disease Ecology
- Implementation Science
- Program Evaluation
FACULTY OVERVIEW

- 22 primary faculty
- EH faculty have doctorates in:
  - Environmental Health
  - Environmental Science
  - Environmental Engineering
  - Epidemiology
  - Biology
  - Chemistry
  - Medicine (MD)
  - Law (JD)
- Most have joint appointments across campus
...many more joint faculty and adjunct faculty as additional resources
RESEARCH & INTEREST AREAS

- Air and Water Pollution
- Infectious Disease Ecology
- Pesticides
- Water, Sanitation, and Hygiene
- Environmental Justice
- Oceans and Human Health
- Neurologic Outcomes
- Endocrine Disruptors
- Gene-Environment Interactions
- Food
- Climate Change & Policy
- Children’s Environmental Health
AIR POLLUTION AND HEALTH

Southeastern Center for Air Pollution & Epidemiology (SCAPE)
Household Air Pollution Intervention Network (HAPIN)
STUDIES OF THE EXPOSOME AND GENE-ENVIRONMENT INTERACTIONS
TOXICOLOGY AND MECHANISMS OF DISEASE PATHOGENESIS

Control  Parkinson’s

Dopamine levels in a normal and a Parkinson’s affected neuron.

- Normal Neuron
- Parkinson’s affected Neuron
- Dopamine
- Receptors
- Movement disorders

Normal movement

Movement disorders
CHILDREN’S ENVIRONMENTAL HEALTH
WATER, SANITATION, AND HYGIENE (WASH)

Center for Global Safe WASH
IMPACTS OF CLIMATE CHANGE

New Climate and Health Certificate! New Climate and Health Research Incubator, Georgia Climate Project, Climate@Emory

Teaching
- new Climate & Health certificate!
- UN climate delegations

Research
- new climate & health incubator

Real World Impact
- Georgia Climate Project
In the past 10 years, GDEH has been central in establishing:

- **SCAPE** (Southeastern Center for Air Pollution & Epidemiology)
  - Umbrella center for air pollution and health studies
- **CGSW** (Center for Global Safe WASH)
  - Convener for multiple studies of common interest
- **GeoHealth Hub** (Peru)
  - EH training and research; research focused on indoor air - cardiovascular health; outdoor air pollution in Lima, climate change in Peru
- **HERCULES** (Health and Exposome Research Center: Understanding Lifetime Exposures)
- **C-CHEM²** (Center for Children's Health, the Environment, the Microbiome and Metabolomics)
- **CHEAR** (Children's Health Exposure Analysis Resource)
- **HAPIN** (Household Air Pollutant Intervention Network)
ACADEMIC OVERVIEW
OUTLINE

- Your Networks/Support
- Academic Overview
- Employment
- Student Life
- Student Panel
SUPPORT & ADVISING

• All incoming students are assigned
  • EH Faculty Advisor
  • Associate Director of Academic Programs (ADAP)

• Second Year Student Mentor

• Optional professional mentor through career services
PREREQUISITES

• Course Work:

  • **Required**: chemistry, biology

  • **Recommended**: calculus, statistics, organic chemistry, physiology
CURRICULUM

- Course Work:
  - MPH: 42 hours
  - MSPH: 48 hours
  - Dual-Degrees: 32 hours in RSPH; 10 shared from other program

- EH Courses and Sample Syllabi:
  [www.sph.emory.edu/academics/courses/eh-courses/index.html](http://www.sph.emory.edu/academics/courses/eh-courses/index.html)
CLASSES

· 500 – Level Foundation Courses
  · EPI, BIOS, BSHE, HPM, GH

· Required EH Courses
  · Toxicology
  · Exposure Science
  · Risk Assessment
  · Policy

· GEH MPH
  · GH 501 – evidence based global health policies, programs and research
  · Methods Option

· EH-EPI MSPH
  · Advanced BIOS and EPI
  · Programming in SAS
  · Application of EPI Concepts
  · EPI Modeling

· Programs have room for about 8-11 credits of electives (varies depending on program)
PROFESSIONAL DEVELOPMENT

PUBH 500 – Introduction to Public Health

• Online, self-paced module (approximately 1 hour)
• Complete before Fall semester classes start (1\textsuperscript{st} year)

PUBH 501 – Interprofessional Team Training

• Online, self-paced module (approximately 1 hour)
• One time event coordinated by RSPH and with other partner schools (Medicine, Nursing, Physician Assistant)
• Complete in Fall semester (1\textsuperscript{st} year)

PUBH 502 – Public Health Professional Development

• Online, self-paced modules (approximately 3 hours)
• Sign up for a one time, 2.5 hour on-campus workshop
• Complete in Spring semester (1\textsuperscript{st} year)
APPLIED PRACTICE EXPERIENCE (APE)

- 200 hours
- Paid or unpaid
- Wide-range of opportunities
- Resources
  - RSPH Career Services
  - Rollins Opportunity Link
  - Public Health Employment Connection
  - Listservs
  - Faculty
  - Practicum Fairs
  - Networking
APE EXAMPLES

- Center for Global Safe WASH
  - Community mapping to establish the size, population, and percent coverage for types of sanitation in 6 communities

- National Center for Environmental Health
  - Public health consequences of disasters

- Youth for Unity and Voluntary Action
  - Air quality in India

- Environment and Population Research Center
  - Pesticides and safe practices among farmers in rural Bangladesh

- Environmental Protection Agency, Region IV
  - Climate change information clearinghouse
CULMINATING EXPERIENCE

- Thesis or Capstone
  - Thesis required for MSPH
- Culmination of what you have learned in the classroom
- Often part of practicum experience
- Rollins faculty serve as advisors
- Capstone mentors are from the community
APPLYING TO EH
DIVERSE BACKGROUNDS & MAJORS

- Biology
- Chemistry
- Envt. Studies
- English
- Global Studies
- Public Health
- Theater
- Neuroscience
- Toxicology
- Bioengineering
- Psychology
- Spanish
- Anthropology
- Engineering
WHAT WE LOOK FOR

- Course work:
  - Required: chemistry, biology
  - Recommended: calculus, statistics, organic chemistry, physiology
- Personal Statement
- Experience/Resume
  - GEH – international experience
  - EH-EPI – strong quantitative skills
  - Address inconsistencies or weaknesses
- Letters of Recommendation
APPLICATION REQUIREMENTS

- Completed & Verified Application with SOPHAS
- Transcripts
- Recommendations
- Standardized Test Scores
- Personal Essay
- Research/Work/Volunteer/Honors
- International Applicants:
  - TOEFL/IELTS scores
  - Financial certificate
- WES Evaluation for Transcripts from non-US Universities
COMPLETE & VERIFIED APPLICATION

- RSPH will only receive applications that have been completed and verified by SOPHAS

- SOPHAS requests 2-6 weeks for verification

- January 5 for Merit Scholarship consideration

- EH will continue to review applications beyond this date
FUNDING OPPORTUNITIES

- Merit Scholarship
- PH Mission Driven Scholarships
- Financial Aid Award
- Rollins Earn & Learn (REAL) Award
- Global Field Experience (GFE) Award
- Global Health Institute (GHI) Award
- Environmental Health Specific Opportunities via EH-related organizations like EPA, National Science Foundation, U.S. Dept. of Energy
Employment Status of EH Department Graduating Class 2018
of 41 students within 12 months of graduation

80.5%
Employed / Continuing Ed.
Employment By Sector - EH Department Graduating Class 2018

Of the 30 reporting graduates that secured employment within 12-months post-graduation, 39% reported being employed with a government (state, local, federal) agency.

- 36.46% Government (State, Local, Federal)
- 7.69% Other
- 7.69% Proprietary Organization
- 23.08% University or Research Institute (Academic)
- 11.54% Nonprofit/NGO
- 11.54% Hospital or Health Care facility

View the full report: https://www.sph.emory.edu/careers/employment-status/index.html
STUDENT LIFE
EH RELATED CAMPUS ORGANIZATIONS

· Climate@Emory
· Rollins Environmental Health Action Committee (REHAC)
· Rollins Student Government Association
· Emory Global Health Organization (EGHO)
· Center for Global Safe WASH
· Graduate Sustainability Group
· Rollins Outdoor Club
· Educational Garden Project
· Global Growers
· Emory’s Office of Sustainability Initiatives
· Bike Emory & Spokes Council
· Start you own club!
WELCOME TO ATLANTA!

Beltline & Ponce City Market

North Georgia Mountains

Piedmont Park

Fox Theater

Savannah & the Georgia Coast

Georgia Aquarium
CONNECT WITH US

- Visit our Webpage:
  - http://sph.emory.edu/eh

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- Facebook – @EmoryEnvironmentalHealthRollins
- Instagram – @rollinsenvironmentalhealth