

**Cardiovascular Disease Epidemiology Program**  
**Department of Epidemiology**

**Program Learning Objectives**

**Introduction**

The goal of the Cardiovascular Disease (CVD) Epidemiology program is to train public health scientists and innovative investigators in this field of chronic diseases. The career and educational objectives of the program seek to provide the competencies needed for the successful practice of modern epidemiology in the field of cardiovascular diseases, and to enable its graduates to meet the challenges of this rapidly changing field. The programmatic orientation reflects a dual training path: methodologic – established by the Department’s core methods curriculum – and an interdisciplinary perspective of the epidemiology of cardiovascular diseases. The latter is a rapidly evolving synthesis of chemistry, biology, mathematics, and behavioral sciences, requiring an increasing emphasis on interdisciplinary training and the need for a fluid curriculum reflective of innovations in the field. To meet its training objectives the program emphasizes two areas of integration, both at the convergence of diverse disciplines: etiologic investigation and translational, public health oriented research.

**Learning Objectives**

Upon satisfactory completion of Cardiovascular Disease epidemiology program the student will:

- Be familiar with the epidemiology of the various manifestations of cardiovascular disease;
- Be knowledgeable of the literature in the field of cardiovascular disease epidemiology and its sources, and be able to review it critically;
- Apply demographic, social, and epidemiologic measurement and analysis techniques to characterize the distribution and community burden of CVD health issues;
- Critically analyze the conceptual and historical frameworks used to formulate CVD study hypotheses and intervention strategies;
- Identify and characterize the major national and international CVD health issues, have an understanding of the historical evolution of cardiovascular disease in human societies, and their current, and predicted impact on public health;
- Understand the key biologic, behavioral, cultural, and economic determinants of the main CVD health issues in the U.S.;
- Identify key public health issues and policies associated with population groups at increased risk of cardiovascular diseases;
- Understand the interplay of the social and physical environment with genetic susceptibility in the origin, distribution, and control of selected CVD health issues;
- Participate with faculty and fellow students in the development of a research proposal on a CVD health issue;
- Acquire practical experience in the design and implementation of epidemiologic studies of CVD health issues, including data collection, quality assurance, and study management;
- Participate with faculty and fellow students in the oral and written communication of research findings, and their critical assessment;
- Be familiar with the key concepts and competencies required for the ethical conduct of research

## Methods for Meeting Learning Objectives

The CVD epidemiology program learning objectives are implemented through formal courses, a weekly seminar series, research practicum opportunities, mentored research, attendance at regional and national scientific meetings, and individual advising by one or more program faculty. To facilitate communications and a participatory management of the program, students, staff, and faculty of the CVD epidemiology program meet twice-monthly as a group (alternating with twice-monthly meetings of the CVD program faculty and staff).

### Curricular Activities Required of Students in the CVD Program Area

- Various-	All degree program course requirements
EPID735	Cardiovascular Disease Epidemiology – First level
EPID737	Cardiovascular Disease Epidemiology – Second level
EPID897	Cardiovascular Epidemiology Seminar

### Curricular Activities Recommended to Students in the CVD Program Area

EPID733	Clinical Trials
EPID743	Genetic Epidemiology
EPID745	Molecular Techniques in Public Health Research
BIOS680	Introduction to Survival Analysis
BIOS665	Categorical Data Analysis
BIOS764	Advanced Survey Sampling Methods
NUTR814	Obesity Epidemiology
SOCI830	Demographic Techniques I
-Varies-	Physiology/Pathophysiology of Chronic Diseases
Practicum	A practical research experience to include study conduct, data analysis, and publication activities

## Goal Setting

Each trainee and his/her advisor identify (and record) a set of yearly goals at the beginning of the fall semester, and consult these as reference points at periodic intervals. A written evaluation of the training experience is conducted during the spring semester, which serves as the basis for feed-back to the trainee, for adjustment of the goals or various corrective actions, and provides the basis for a review of the progress by the advisor.

## Participatory Learning and Professionalizing Activities

Emphasis is placed on providing trainees with opportunities for active involvement and participation in research at levels of field work, data collection, analysis, and publication. It is our goal to maintain a range of such opportunities in CVD epidemiology to make the Department's research *practicum* requirement an integral part of this program.

Weekly seminars in cardiovascular disease epidemiology take place on a regular schedule, and serve as a forum for presentations by students, faculty, and guest speakers. The Program expects students to deliver at least one scientific presentation per year as part of the CVD Epidemiology seminar series, or at a national scientific or professional meeting. To enhance the learning opportunity associated with such

presentations, the speakers who choose to do so are recorded on videotape (by a staff person of the program), and provided with guidelines from the UNC Center for Teaching and Learning to evaluate their delivery. Consultation with education experts is available to the trainees who wish to improve on their communication and presentation skills.

### **Documentation of Achievement of Learning Objectives**

Frequent meetings of the student and the advisor serve as the principal mechanism to gauge the progress of individual students, and to provide appropriate feedback. Students also receive feedback from peers, faculty, and research staff in the course of their seminar presentations, their participation in research teams, and from course-related class projects. The program adheres to twice-monthly meetings of the faculty, staff, and trainees (alternating with meetings that include only staff and faculty).