Continuous Professional Development Online Courses: by area of concentration

**BIOMEDICAL INFORMATICS**
- An Introduction to Biomedical Informatics
- An Introduction to the Sequence Read Archive and Conversion of SRA Format to FASTQ Format
- Analysis of Genome-wide Methylation Pattern Using Galaxy (part 2)
- Chip-seq Analysis with Galaxy (part 1)
- Essentials of Microarray Technology
- Essentials of Microarray Technology: Affymetrix and Illumina platforms
- Gene Pathways Analysis with MetaCore Software
- Introduction to Cytoscape
- Introduction to Galaxy Software
- Introduction to Integrative Genomics Viewer (IGV)
- Loading Data into Galaxy Software
- Methylation analysis of promoter regions using Galaxy software (part 3)
- Obtaining Data and Gene Expression Profiles from Gene Expression Omnibus Microarray Database and File Decompression
- Preparation of Bioinformatics Tools
- Preparation of FASTQ Files for RNA-seq Analysis using Galaxy Software (part 1)
- RNA-seq Analysis using Galaxy Software (part 2)
- Interpretation of the Results of RNA-seq Analysis using Galaxy Software (part 3)
- Using Ingenuity Pathway Analysis Software for Gene Pathways Analysis
- Using Partek Genomics Suite for Microarray Data Analysis (the basics)
- Using UCSC Genome Browser for Data Visualization and Analysis

**COMMUNITY-ENGAGED & HEALTH DISPARITIES RESEARCH**
- Are You Ready? Measuring Readiness & Preparing to Engage (CER)
- Community Engaged Research (CER)-An Overview
- Community Engagement in Clinical Research -- An Introduction
- Creating a Standardized Cost Data Warehouse: The Story of OCHEUD
- Developing Community-Institutional Partnerships
- DIY Standardized Costing using Medicare Reimbursement
- Foundations of Community Engagement in Research (CER)
- Opportunities in Research to Eliminate Health Disparities: Implications for Clinical Research – Practicality
- Opportunities in Research to Eliminate Health Disparities: Implications for Clinical Research -- Rationale and Basic Concepts
- Overcoming Barriers in Community Engagement in Research (CER)
- So, What is Community-Based Participatory Research (CBPR)?
- Social Responsibility in Science
- The Art of Community Outreach: A Targeted Approach
- Understanding Billing Data for Utilization and Cost Studies
- Using Billing Data for Utilization and Cost Studies

**HEALTH SERVICES & COMPARATIVE EFFECTIVENESS RESEARCH**
- An Introduction to Health Care Systems Engineering
- Common Rochester Epidemiology Project (REP) Myths & Starting a REP Study
- Overview of the Rochester Epidemiology Project (REP)
- Application of Evidence-Based Medicine to Patient Care
- Introduction to Evidence-Based Medicine
- Searching the Literature
- Systematic Review Critical Appraisal
- Classical Reliability Theory in Psychological Measurement
- Classical Validity Theory in Psychological Measurement

**CLINICAL EPIDEMIOLOGY**
- Overview of Study Designs
- Study Design and the Hierarchy of Scientific Evidence
- Subject Selection

**CLINICAL TRIALS**
- Conducting Research Responsibly
- Developing a Research Question
- Understanding the NIH Review Process
- Writing a Research Proposal

As of 09/15/2015
Continuous Professional Development Online Courses: by area of concentration

**QUANTITATIVE & QUALITATIVE METHODS**
- Qualitative Research Methods
- Research Protocols - Guide to Success
- A Brief Introduction of Systematic Review and Meta-analysis
- Assessing Diagnostic Accuracy
- Avoiding Statistical Pitfalls
- Beyond bar and line graphs: Time for a new data presentation paradigm
- Clinical Data Management
- Common Statistics to Compare Two Proportions
- Correlations and Partial Correlations
- Data Basics: Understanding and Illustrating Research Data
- Designing Effective Pilot Studies
- Estimating Sample Size for T-Tests and One-way ANOVA Models
- Improve Statistical Reporting by Avoiding Common Mistakes
- Longitudinal Summary Statistics
- Mechanics of Statistical Monitoring
- Role of Nonparametric Statistics in Medical Research
- Sample Size and Power Considerations: Precision and Hypothesis Testing
- The Basics of Statistics
- T-Tests and one-way ANOVA models
- Using Propensity Scores for the Analysis of Observational Studies
- Working with the Statistician
- Agreement Analysis Using JMP
- Analysis of Means Using JMP
- Analysis of Proportions Using JMP
- Computation of Descriptive Statistics and How to Save Results in JMP
- Creating New Variables in JMP Datasets Using Formulas
- JMP Dataset Creation
- JMP Dataset Manipulations
- Linear Regression and Correlation Using JMP
- Logistic Regression and ROC Curves Using JMP
- Survival (Time to Event) Analysis Using JMP
- Data Monitoring Committees
- Study Designs Commonly Used in Clinical Research

**TRANSLATION**
- The Promise of Epigenomics in Medical Research and Future Practice
- PubMed & MyNCBI
- Web of Science and Scopus: Impact Factor, h-index, & Citation Alert
- EndNote
- Mayo Clinic Libraries: Navigating Our Website and Finding the Full Text of Journal Articles
- Invention Development Programs & Resources
- Mayo Clinic Ventures Employee Entrepreneurship Program
- Overview of the Intellectual Property Process by Mayo Clinic Ventures
- Importance of Clinical Research

**KEY:** These modules are located on the CCaTS CPD Online Modules webpage in the following categories: Advanced Research Methods, Author & Researcher Tools, Commercializing Research, Evidence-Based Medicine, Research and the Community, Research Proposal Process, Statistical Concepts, Statistics and Informatics Software, and Study Design.

As of 09/15/2015