COURSE DESCRIPTION
The Department of Biostatistics in the School of Medicine will present a short course in biostatistics that is designed especially for health care researchers in the health sciences. This course will consist of three sessions. Sessions I and II will cover basic principles, design of medical research studies, standard statistical tests and data analyses, and data management. Session III will focus on more advanced topics, including multiple linear and logistic regression, survival analysis, longitudinal data and genetic analysis. Registrants may choose to attend Sessions I and II, II and III or I, II and III.

COURSE OBJECTIVES
At the conclusion of this program, participants should be able to:

- Recognize common study designs and statistical methods used in medical research;
- Discuss complex study design and analysis with a statistician;
- Describe basic concepts of data management;
- Identify appropriate use of statistical procedures when given a common study design; and
- Implement simple statistical analyses under the guidance of a statistician.

ACCREDITATION STATEMENT
The Indiana University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

DESIGNATION STATEMENT
The Indiana University School of Medicine designates this live activity for a maximum of 10.75 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

NOTE
While it offers CME credits, this activity is not intended to provide extensive training or certification activity.

FACULTY DISCLOSURE STATEMENT
In accordance with the Accreditation Council for Continuing Medical Education (ACCME) Standards for Commercial Support, educational programs sponsored by Indiana University School of Medicine (IUSM) must demonstrate balance, independence, objectivity, and scientific rigor. All faculty, authors, editors, and planning committee members participating in an IUSM-sponsored activity are required to disclose any relevant financial interest or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services that are discussed in an educational activity.

COMMERCIAL SUPPORT
This CME activity does not have any commercial support.

LOCATION
The short course will be held at the Health Information and Translational Science Building (HITS), 410 West 10th Street, HS 1110 on the Indiana University Purdue University Indianapolis campus. It is recommended that you park at an IUPUI parking lot and walk or take the People Mover (exit at the IU Health Canal Station) to get to the building. A campus map with the location of the building can be found at http://www.iupui.edu/maps/campusmap_full.pdf. The closest IUPUI parking lots are next to the ETC Building on 10th street (labeled TK on campus map) and at the Gethsemane Church on Martin Luther King Blvd., just south of 10th Street.

FURTHER INFORMATION
Indiana University School of Medicine
Department of Biostatistics
410 W. Tenth Street, Suite 3000
Indianapolis, IN 46202-3002
Ph: (317) 274-2685 • Fax: (317) 274-2678
http://www.biostat.iupui.edu

For other CME offerings, please visit the CME website at http://cme.medicine.iu.edu.

Biostatistics for Health Care Researchers:
A Short Course

Tuesday, Wednesday, and Thursday
May 12, 13, 14, 2015
1PM-5PM
Health Information and Translational Science Building
410 W. 10th Street, HS 1110
### AGENDA for May 12, 13, 14, 2015

#### SESSION I  Tuesday, May 12, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Welcome and Introduction</td>
<td>Hai Liu, Ph.D.</td>
</tr>
<tr>
<td>1:10 p.m.</td>
<td>Study Design</td>
<td>Susan M. Perkins, Ph.D.</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>Hypothesis Testing &amp; Confidence Interval Estimation</td>
<td>Shanshan Li, Ph.D.</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>Comparisons of Means</td>
<td>Hai Liu Ph.D.</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>Analysis of Categorical Data</td>
<td>Hai Liu, Ph.D.</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Adjournment</td>
<td></td>
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#### SESSION II  Wednesday, May 13, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Basics of Data Management</td>
<td>Robert L. Davis, B.S.</td>
</tr>
<tr>
<td>1:55 p.m.</td>
<td>Issues in Clinical Trials</td>
<td>Susan M. Perkins, Ph.D.</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>Correlation and Simple Linear Regression</td>
<td>Joanne K. Daggy, Ph.D.</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>Evaluation of Diagnostic Tests</td>
<td>Shanshan Li, Ph.D.</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Adjournment</td>
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#### SESSION III  Thursday, May 14, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Multiple Linear &amp; Logistic Regression</td>
<td>Joanne K. Daggy, Ph.D.</td>
</tr>
<tr>
<td>1:55 p.m.</td>
<td>Analysis of Longitudinal Studies</td>
<td>Ying Zhang, Ph.D.</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>Survival Analysis</td>
<td>Ying Zhang, Ph.D.</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>Design of Genetic Studies</td>
<td>Daniel L. Koller, Ph.D.</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Adjournment</td>
<td></td>
</tr>
</tbody>
</table>

#### SUGGESTED INSTRUCTIONAL BOOK


### FACULTY AND STAFF

Indiana University School of Medicine
Indiana, Indiana

#### DEPARTMENT OF BIOSTATISTICS

- Jooan K. Daggy, Ph.D.  
  Assistant Professor of Biostatistics
- Robert L. Davis, B.S.  
  Associate Professor of Biostatistics
- Ying Zhang, Ph.D.  
  Professor of Biostatistics
- Shanshan Li, Ph.D.  
  Professor of Biostatistics

### DEPARTMENT OF MEDICAL & MOLECULAR GENETICS

- Daniel L. Koller, Ph.D.  
  Research Assistant Professor of Medical & Molecular Genetics

### FEE

<table>
<thead>
<tr>
<th>Attendance</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Sessions I and II</td>
<td>$125</td>
</tr>
<tr>
<td>Sessions II and III</td>
<td>$125</td>
</tr>
<tr>
<td>Sessions I, II, and III</td>
<td>$150</td>
</tr>
</tbody>
</table>

### REQUIREMENTS FOR CME CERTIFICATE

- Completion of all sessions
- Attendance for at least 20 hours of didactic instruction
- Participation in the 20-minute review of activities at the end of the sessions
- Submission of registration and payment form
- Two signed evaluations

### ENROLLMENT

Enrollment is limited to 30 attendees.

### FEE

- $150 for Indiana University Account Number
- $125 for all others

### METHOD OF PAYMENT

- Check enclosed (made payable to Indiana University)
- Indiana University Account Number

### REGISTRATION AND PAYMENT

Send registration and payment to:
Indiana University School of Medicine, Department of Biostatistics, 410 W. Tenth Street, Suite 3000, Indianapolis, IN 46202-3002, or fax to: (317) 274-2678. Please send to the attention of Ann Lyon.