Statistics (MR): Statistical Genetics Concentration

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 501</td>
<td>Fundamentals of Statistical Inference I</td>
<td>3</td>
<td>Core Courses</td>
</tr>
<tr>
<td>ST 502</td>
<td>Fundamentals of Statistical Inference II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ST 503</td>
<td>Fundamentals of Linear Models and Regression</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ST 542</td>
<td>Statistical Practice</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ST 555</td>
<td>Statistical Programming I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ST 517 &amp; ST 518</td>
<td>Applied Statistical Methods I and Applied Statistical Methods II</td>
<td>6</td>
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</tbody>
</table>

## Core Courses

- ST 501: Fundamentals of Statistical Inference I
- ST 502: Fundamentals of Statistical Inference II
- ST 503: Fundamentals of Linear Models and Regression
- ST 542: Statistical Practice
- ST 555: Statistical Programming I

## Concentration Requirements

### Required Courses

Select one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>ST 520</td>
<td>Statistical Principles of Clinical Trials</td>
<td>3</td>
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<tr>
<td>ST 540</td>
<td>Applied Bayesian Analysis</td>
<td>3</td>
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<tr>
<td>ST 711</td>
<td>Design Of Experiments</td>
<td>3</td>
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<td>ST 744</td>
<td>Categorical Data Analysis</td>
<td>3</td>
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<tr>
<td>ST 745</td>
<td>Analysis of Survival Data</td>
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</table>

Select six credit hours of the following:

<table>
<thead>
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<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>ST 721</td>
<td>Genetic Data Analysis</td>
<td>3</td>
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<tr>
<td>ST 590</td>
<td>Special Topics (Introduction to Bioinformatics)</td>
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<tr>
<td>ST 590</td>
<td>Special Topics (Bioinformatics II)</td>
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<tr>
<td>GN 703</td>
<td>Population and Quantitative Genetics</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Required Courses for Concentration

- ST/GN 756: Computational Molecular Evolution
- ST/GN 757: Quantitative Genetics Theory and Methods

**Total Hours:** 30

## Faculty

- Dennis D. Boos
- Marie Davidian
- Sujit K. Ghosh
- Subhashis Ghosal
- Kevin Gross
- Marcia Lynn Gumpertz
- Jacqueline M. Hughes-Oliver
- Eric Benjamin Laber
- Wenbin Lu
- Ryan G. Martin
- Spencer V. Muse
- Jason A. Osborne
- Brian J. Reich
- Erin Mary Schliep
- Kimberly Sellers
- Rui Song
- Ana-Maria Staicu
- Leonard A. Stefanski
- Jeffrey L. Thorne
- Jung-Ying Tzeng
- Alyson Gabbard Wilson
- Fred Andrew Wright
- Daowen Zhang
- Xinge Jessie Jeng
- Arnab Maity
- Donald Eugene Kemp Martin
- Thomas W. Reiland
- Charles Eugene Smith
- Eric C. Chi
- Emily Hector
Karl Timothy LeRoy Pazdernik
Srijan Sengupta
Jonathan W. Stallrich
Minh Tang
Jonathan Paul Williams
Luo Xiao
Shu Yang
Jonathan W. Duggins
Emily H. Griffith
Herle M. McGowan
Logan J. Opperman
Justin B. Post
Paul R. Savariappan
Shuting Wang
William Reid Atchley
Peter Bloomfield
Cavell Brownie
David Alan Dickey
Thomas Michael Gerig
Harvey J. Gold
Thomas Johnson
John F. Monahan
Kenneth Hugh Pollock
Charles P. Quesenberry
John Oren Rawlings
Don L. Ridgeway
Moon Won Suh
William H. Swallow
Anastasios A. Tsiatis
John L. Wasik
Howard D. Bondell
Soumendra Nath Lahiri
Alison Anne Motsinger-Reif
Eric A. Stone
Yichao Wu

Assistant Professors
Annie Booth
Nathaniel Josephs