## Forest Biomaterials (PhD)

### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
<td>12</td>
</tr>
<tr>
<td>FB 701</td>
<td>PhD Research Methods in Forest Biomaterials</td>
<td></td>
</tr>
<tr>
<td>FB 801</td>
<td>Doctoral Seminar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select three of the following courses:</td>
<td></td>
</tr>
<tr>
<td>FB 516</td>
<td>Forest Products Colloids &amp; Surfaces</td>
<td></td>
</tr>
<tr>
<td>FB 565</td>
<td>Forest Biomaterials Physics</td>
<td></td>
</tr>
<tr>
<td>FB 723</td>
<td>Forest Biomaterials Chemistry</td>
<td></td>
</tr>
<tr>
<td>FB 760</td>
<td>Engineering Unit Operations for Biomass Conversion</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Elective Courses</strong></td>
<td>15</td>
</tr>
<tr>
<td>FB 510</td>
<td>Strategic Business Processes for the Forest Products Industry</td>
<td></td>
</tr>
<tr>
<td>FB 522</td>
<td>Chemical Principles for the Papermaking Process Engineer</td>
<td></td>
</tr>
<tr>
<td>FB 527</td>
<td>Wet-End and Colloidal Chemistry</td>
<td></td>
</tr>
<tr>
<td>FB 576</td>
<td>Environmental Life Cycle Analysis</td>
<td></td>
</tr>
<tr>
<td>FB 580</td>
<td>The Sustainable Bioeconomy</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Additional Courses</strong></td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>&quot;Additional Courses&quot; are approved in conjunction with the academic committee to meet 72 total hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td>82</td>
</tr>
</tbody>
</table>

### Faculty

#### Full Professors
- Dimitris S. Argyropoulos
- Marko Hakovirta
- Martin A. Hubbe
- Hasan Jameel
- Stephen S. Kelley
- Melissa Pasquinelli
- David C. Tilotta
- Richard A. Venditti

#### Associate Professors
- Lucian A. Lucia
- Philip H. Mitchell
- Lokendra Pal
- Sunkyu Park
- Joel Justin Pawlak
- Perry N. Peralta
- Ilona Maria Peszlen
- Daniel Erique Saloni

### Assistant Professors
- Ronalds Wilfredo Gonzalez
- Paul Frederik Laleicke
- Nathalie Marie Lavoine
- Yuan Yao

### Practice/Research/Teaching Professors
- Medwick V. Byrd

### Emeritus Faculty
- Hou-Min Chang
- Ellis B. Cowling
- Earl L. Deal
- Eric L. Ellwood
- Edward T. Funkhouser
- Irving S. Goldstein
- John A. Heitmann Jr.
- Larry G. Jahn
- Magret Joyce
- Adrianna G. Kirkman
- Michael J. Kocurek
- Ronald G. Pearson
- Richard J. Thomas
- Elisabeth A. Wheeler

### Adjunct Faculty
- Sujit Banerjee
- Jesse Daystar
- Richard Phillips