# Forest Biomaterials (PhD)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>FB 701</td>
<td>PhD Research Methods in Forest Biomaterials</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>FB 801</td>
<td>Doctoral Seminar (students must take the seminar course twice)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select three of the following courses: 1

- FB 516 Forest Products Colloids & Surfaces
- FB 565 Forest Biomaterials Physics
- FB 723 Forest Biomaterials Chemistry
- FB 760 Engineering Unit Operations for Biomass Conversion

### Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FB 510</td>
<td>Strategic Business Processes for the Forest Products Industry</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>FB 522</td>
<td>Chemical Principles for the Papermaking Process Engineer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB 527</td>
<td>Wet-End and Colloidal Chemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB 576</td>
<td>Environmental Life Cycle Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB 580</td>
<td>The Sustainable Bioeconomy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Courses

"Additional Courses" are approved in conjunction with the academic committee to meet 72 total hours

### Total Hours

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Elective Courses</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Additional Courses</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>72</td>
<td></td>
</tr>
</tbody>
</table>

1 Students may choose two courses from the elective list and another graduate level class approved by the students advisory committee

## Faculty

### Professor

**Jingxin Wang**

### Assistant Professor

**Kai Lan**

- Dimitris S. Argyropoulos
- Marko Hakovirta
- Martin A. Hubbe
- Hasan Jameel
- Stephen S. Kelley
- Melissa Pasquinelli
- David C. Tilotta
- Richard A. Venditti
- Lucian A. Lucia
- Philip H. Mitchell
- Lokendra Pal
- Sunkyu Park
- Joel Justin Pawlak
- Perry N. Peralta
- Ilona Maria Peszlen
- Daniel Erique Saloni
- Ronalds Wilfredo Gonzalez
- Paul Frederik Laleicke
- Nathalie Marie Lavoine
- Yuan Yao
- Medwick V. Byrd
- Melissa Anne Pasquinelli
- Rico Ruffino
- Hou-Min Chang
- Adrianna G. Kirkman
- Kai Lan
Elisabeth A. Wheeler
Jesse Daystar
Richard Phillips