Cereal Science

Department Information

- **Department Chair:**
  Richard Horsley, Ph.D.
- **Program Coordinator:**
  Frank Manthey, Ph.D.
- **Department Location:**
  Plant Sciences, Loftsgard Hall
- **Department Phone:**
  (701) 231-7971
- **Department Web Site:**
  www.ag.ndsu.edu/cerealscience/ (http://www.ag.ndsu.edu/cerealscience/)
- **Application Deadline:**
  International applications are due May 1 for Fall and October 15 for Spring. Domestic applicants should apply at least one month prior to the start of classes.
- **Credential Offered:**
  Ph.D., M.S.
- **English Proficiency Requirements:**
  TOEFL iBT 71, IELTS 6

Master of Science

The Master of Science program requires a minimum of 21 semester credits of course work with an overall GPA of 3.0 or better, as well as 10 research credits (CFS 798). With assistance from the adviser, a supervisory/advisory and examining committee is established and a plan of study developed. The student is required to prepare and defend a written research proposal. The plan of study and written research proposal must be approved within the first four and six months of study, respectively. For M.S. students, a final oral examination is required, where the student defends the thesis and is asked questions covering academic subject matter.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CFS 650</td>
<td>Cereal Technology</td>
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<tr>
<td>CFS 790</td>
<td>Graduate Seminar</td>
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<tr>
<td>PLSC 710</td>
<td>Professional Development I</td>
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<tr>
<td>CFS 798</td>
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<td>PLSC 724</td>
<td>Field Design I</td>
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<tr>
<td>STAT 662</td>
<td>Introduction to Experimental Design</td>
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<tr>
<td>STAT 725</td>
<td>Applied Statistics</td>
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<tr>
<td>CFS 630</td>
<td>Food Unit Operations</td>
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<tr>
<td>CFS 670</td>
<td>Food Processing II</td>
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</tr>
<tr>
<td>CFS 671</td>
<td>Food Processing Laboratory</td>
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<tr>
<td>CFS 758</td>
<td>Fundamentals of Flour Testing and Baking (s/b Baking)</td>
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<tr>
<td>CFS 759</td>
<td>Milling</td>
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<tr>
<td>CFS 760</td>
<td>Pasta Processing</td>
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<tr>
<td>CFS 761</td>
<td>Malting and Brewing</td>
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<tr>
<td>MICR 653</td>
<td>Food Microbiology</td>
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<td>CFS 660</td>
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<tr>
<td>CFS 662</td>
<td>Food Ingredient Technology</td>
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<tr>
<td>CFS 664</td>
<td>Food Analysis</td>
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<tr>
<td>CFS 672</td>
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</tr>
<tr>
<td>CFS 674</td>
<td>Sensory Science of Foods</td>
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Doctorate of Philosophy (Ph.D.)

The Graduate School minimum requirement is 90 credits or no fewer than 60 credits if an M.S. degree is earned prior to the Ph.D.

The Ph.D. program requires the completion of a minimum of 31 semester credits of required course work with an overall GPA of 3.0 or better, as well as 25 research credits (CFS 899). Remaining credits can be fulfilled as elective courses or as additional research credits (CFS 899). With assistance from the adviser, a supervisory/advisory and examining committee is established and a plan of study developed. The student is required to prepare and defend a written research proposal. The plan of study and written research proposal must be approved within the first six and nine months of study, respectively. Ph.D. candidates are required to take a preliminary written and oral examination covering academic subject matter and a final oral defense of a research-based dissertation.

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<tr>
<td>CFS 650</td>
<td>Cereal Technology (Students that have previously taken CFS 650 can opt to take additional CFS 899 credits or another 600/700 course worth 3 credits.)</td>
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<tr>
<td>PLSC 710</td>
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<td>PLSC 711</td>
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<td>CFS 766</td>
<td>Advanced Cereal and Food Chemistry II</td>
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Statistics (one of the following courses) | 3

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Technology Group | 9

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Science Group | 6

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<tr>
<td>CFS 764</td>
<td>Carbohydrate Chemistry</td>
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<tr>
<td>MICR 752</td>
<td>Advanced Topics in Food Safety Microbiology</td>
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</tbody>
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Additional Credits | 30

- Students entering the program with an eligible M.S. Degree (i.e. within the last ten years) may transfer in 10 credits of CFS 798 or equivalent toward the 90 credit Graduate School requirement.
- If the student has had an equivalent statistics course to the one stated above or if the student requires additional training in statistics, the appropriate statistics course will be taken as agreed upon by the Graduate Student and the Student’s Advisory Committee.
• Students entering the program with an eligible M.S. Degree (i.e. within the last ten years) may transfer 20 credits of Graduate level course work toward the 90 credit Graduate School requirement. Additional credits may include research credits or coursework.