A. **Academic Division:** Health Sciences

B. **Discipline:** Agriculture Management

C. **Course Number and Title:** AGRI1010 Agriculture Production, Processing, & Nutrition

D. **Course Coordinator:** Adam Bode
   **Assistant Dean:** Melinda Roepke, MSN, RN

**Instructor Information:**
- **Name:** Click here to enter text.
- **Office Location:** Click here to enter text.
- **Office Hours:** Click here to enter text.
- **Phone Number:** Click here to enter text.
- **E-Mail Address:** Click here to enter text.

E. **Credit Hours:** 4

F. **Prerequisites:** None

G. **Syllabus Effective Date:** Fall 2017

H. **Textbook(s) Title:**

*Introduction to Food Science*
- **Author:** Rick Parker
- **Copyright:** 2001
- **Edition:** 1st
- **ISBN:** 9780766813144

I. **Workbooks and/or Lab Manual:** None

J. **Course Description:** An introductory course of how American Agriculturists produces the food we use in our daily lives. This course examines production food from farm, the processes that are required to make it to table and influences of consumer choice. This course will include units on food nutrition, quality of food, milk industry, meat industry, poultry production, aquaculture, grain production, vegetable and fruit production, beverage industry, food packaging and preservation.

K. **College-Wide Learning Outcomes:**

<table>
<thead>
<tr>
<th>College-Wide Learning Outcome</th>
<th>Assessments - - How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication – Written</td>
<td></td>
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<tr>
<td>Communication – Speech</td>
<td></td>
</tr>
<tr>
<td>Intercultural Knowledge and Competence</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Analytical report of Agricultural Food Production topic by end of term</td>
</tr>
<tr>
<td>College-Wide Learning Outcome</td>
<td>Assessments - - How it is met &amp; When it is met</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td>Information Literacy</td>
<td>Analytical report of Agricultural Food Production topic by end of term</td>
</tr>
<tr>
<td>Quantitative Literacy</td>
<td></td>
</tr>
</tbody>
</table>

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Assessments – How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compare spending for food in the United States to that in other countries.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>2. Interpret the USDA Food Pyramid, and evaluate a typical American meal.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>3. Identify quality control during the production of milk, and milk products.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>4. Determine meat yield grades and quality grades of carcasses, and how it affects price for consumer.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>5. Identify factors affecting egg quality.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>6. Compare and Contrast aquaculture to “main-stream” agriculture.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>7. Describe the general composition of grains, legumes, and oilseeds.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>8. Determine factors to consider during harvest, handling and storage of fruits and vegetables.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>9. Evaluate factors that cause food deterioration, and how spoilage can be reduced.</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Mid-term and final exam</td>
</tr>
<tr>
<td>10. Synthesize a report on Agricultural Food Production from farm to table, that includes production, handling, processing, marketing of the product</td>
<td>Quizzes throughout semester</td>
</tr>
<tr>
<td></td>
<td>Written Report</td>
</tr>
</tbody>
</table>

M. Topical Timeline (Subject to Change):

<table>
<thead>
<tr>
<th>Week</th>
<th>Content</th>
</tr>
</thead>
</table>
| 1    | Chapter 1: Overview of Food Science  
      | - Food industry by major product lines  
      | - The spending for food in the United States compared to that in other countries  
      | - Trends in production and consumer purchases |
| 2    | Chapter 4: Nutrition & Digestion & Chapter 5: Food Composition  
      | - Provide caloric content of food  
      | - Protein-deficiency diseases  
      | - Process of Digestion  
      | - Understanding the USDA Food Pyramid |
| 3    | Chapter 6: Quality Factors in Foods & Chapter 7: Unit Operations in Food Processing  
      | - The influence of color, texture, size, and shape on consumer acceptance  
      | - Factors that can affect food flavor  
      | - Material Handling in the food industry  
      | - Importance of temperature control  
<pre><code>  | - Purpose of Concentrations |
</code></pre>
<table>
<thead>
<tr>
<th>Quiz #1</th>
</tr>
</thead>
</table>
| 4 | Chapter 16: Milk  
  - Dairy Industry and Production  
  - Quality control during the production of Milk  
  - Dairy Products |
| 5 | Chapter 16: Milk  
  - Dairy Products & Processing  
  - Pasteurization, Homogenization and Fermentation |
| 6 | Chapter 17: Meat, Poultry, and Eggs  
  - Raising Cattle, Sheep, Goats and other “Red Meats”  
  - Production of “Red Meats” and Meat grades  
  - Wholesale and Retail Meat cuts  
  - Preparation and Cooking “Red Meats” |
| 7 | Chapter 17: Meat, Poultry, and Eggs  
  - Raising Swine  
  - Production of pork and Pork grades  
  - Wholesale and Retail Meat cuts  
  - Preparation and Cooking pork |
| Quiz #2 |
| 8 | Chapter 17: Meat, Poultry, and Eggs  
  - Raising Poultry  
  - Production of meat and eggs  
  - Wholesale and Retail Meat cuts and egg grades  
  - Preparation and Cooking poultry and eggs |
| 9 | Chapter 18: Fish & Shellfish  
  - Fish and Shellfish used for food  
  - Aquaculture and processing  
  - Products and by-products |
| Mid-term Exam |
| 10 | Chapter 19: Cereal Grains, Legumes, and Oilseeds  
  - Grain Operations and Production  
  - Types of American Grain production  
  - World Grain Production  
  - Grain Handling |
| 11 | Chapter 19: Cereal Grains, Legumes, and Oilseeds  
  - Grain Use and Processing  
  - Corn  
  - Soybean  
  - Wheat  
  - Rice |
| 12 | Chapter 20: Fruits and Vegetables  
  - Parts of a Plant considered vegetable or a fruit  
  - Growing fruits and vegetables  
  - Harvest of fruits and vegetables  
  - Factors affecting the texture of fruits and vegetables  
  - Storage of fruits and vegetables |
| Quiz #3 |
| 13 | Chapter 21: Fats and Oils & Chapter 23: Beverages  
  - Oil Production, extraction, and processing  
  - Saturated and Unsaturated oils  
  - Monoglycerides, Diglycerides, and Triglycerides  
  - Beverage industry  
  - Fermentations role in beverages |
14  Chapter 8: Food Deterioration & Chapter 15: Packaging
   • After Harvest, What occurs?
   • Factors that cause food deterioration
   • Shelf life of Food
   • Types of Food Packaging
   • Packaging with Special Features

Quiz #4

15  Chapter 9: Heat, Chapter 10: Cold & Chapter 11: Drying & Dehydration
   • Preservation achieved by heating
   • Time-Temperature control
   • Cooling, refrigeration, and freezing
   • Changes in food quality that may occur during refrigeration or freezing
   • Reasons for dehydrating foods

16  Final Exam

N.  Course Assignments:

Reading Assignments,
Attendance & Participation
Written Report
Quizzes
Mid-term Exam
Final Exam

O.  Recommended Grading Scale:

<table>
<thead>
<tr>
<th>NUMERIC</th>
<th>GRADE</th>
<th>POINTS</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>93–100</td>
<td>A</td>
<td>4.00</td>
<td>Superior</td>
</tr>
<tr>
<td>90–92</td>
<td>A-</td>
<td>3.67</td>
<td>Superior</td>
</tr>
<tr>
<td>87–89</td>
<td>B+</td>
<td>3.33</td>
<td>Above Average</td>
</tr>
<tr>
<td>83–86</td>
<td>B</td>
<td>3.00</td>
<td>Above Average</td>
</tr>
<tr>
<td>80–82</td>
<td>B-</td>
<td>2.67</td>
<td>Above Average</td>
</tr>
<tr>
<td>77–79</td>
<td>C+</td>
<td>2.33</td>
<td>Average</td>
</tr>
<tr>
<td>73–76</td>
<td>C</td>
<td>2.00</td>
<td>Average</td>
</tr>
<tr>
<td>70–72</td>
<td>C-</td>
<td>1.67</td>
<td>Below Average</td>
</tr>
<tr>
<td>67–69</td>
<td>D+</td>
<td>1.33</td>
<td>Below Average</td>
</tr>
<tr>
<td>63–66</td>
<td>D</td>
<td>1.00</td>
<td>Below Average</td>
</tr>
<tr>
<td>60–62</td>
<td>D-</td>
<td>0.67</td>
<td>Poor</td>
</tr>
<tr>
<td>00–59</td>
<td>F</td>
<td>0.00</td>
<td>Failure</td>
</tr>
</tbody>
</table>

P.  Grading and Testing Guidelines:

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Q.  Examination Policy:

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R.  Class Attendance and Homework Make-Up Policy:

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S. **Classroom Expectations:**

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T. **College Procedures/Policies:**

**Attendance Requirements:** All students are required to attend all scheduled classes and examinations. Each faculty member has the right to establish regulations regarding attendance that he/she considers necessary for successful study.

Students who do not attend classes may be administratively withdrawn from those classes. However, failure to attend classes does not constitute withdrawal, and students are expected to process a formal withdrawal through the Student Records Office in Kee Hall.

**Student engagement requirements:**
Student engagement is based on the “active pursuit” of learning which can be measured by class attendance, class participation (in class or online), taking required quizzes/examinations, and submission of work assignments or papers. Student engagement consists of a student attending at least 60% of the class sessions (there should be attendance throughout the term) and/or completing 75% of the assignments listed on the syllabus at the midpoint in the term. Exceptions can be made when there is on-going communication between the student and faculty member. The communication must be documented and the faculty member and student must be in agreement regarding the exception. Students not meeting the expectation will be administratively withdrawn from class. If a student believes he/she was administratively withdrawn in error, he/she may file an appeal. Being administratively withdrawn may have program and financial aid implications.

**Academic Misconduct** is any activity that tends to compromise the academic integrity of the college, or subvert the educational process. Examples of academic misconduct include, but are not limited to:

1. **Violation of course or program rules** as contained in the course syllabus or other information provided to the student; violation of program requirements as established by departments and made available to students.

2. **Plagiarism** including, but not limited to, submitting, without appropriate acknowledgment, any written, visual or oral material that has been copied in whole or in part from the work of others (whether such source is published or not) even if the material is completely paraphrased in one’s own words. This includes another individual’s academic composition, compilation, or other product, or a commercially prepared paper. Plagiarism also includes submitting work in which portions were substantially produced by someone acting as a tutor or editor.

   Such practices constitute plagiarism regardless of motive. Those who deny deceitful intent, claim not to have known that the act constituted plagiarism, or maintain that what they did was inadvertent are nevertheless subject to penalties when plagiarism has been confirmed.

3. **Cheating** and dishonest practices in connection with examinations, papers and projects, including but not limited to using unauthorized notes, study aids or information on an examination; taking an exam or doing work for another student; providing one’s own work for another student to copy and submit as his/her own; or allowing another student to do one’s work and then submitting the work as one’s own. Also included would be altering a graded work after it has been returned, then submitting the work for re-grading; or submitting identical or similar papers for credit in more than one course without prior permission from the course instructors.

4. **Fabrication** including but not limited to falsifying or inventing any information, data or citation; presenting data that were not gathered in accordance with defined appropriate guidelines, and failing to include an accurate account of the method by which data were collected.
5. **Obtaining an Unfair Advantage** including, but not limited to stealing, reproducing, circulating, or otherwise gaining access to examination materials prior to the time authorized by the instructor; unauthorized collaborating on an academic assignment; taking, hiding or altering resource material; or undertaking any activity with the purpose of creating or obtaining an unfair advantage over another student’s academic work.

6. **Aiding and Abetting Academic Dishonesty** including, but not limited to providing material, information or other assistance to another person with the knowledge that such aid could be used in any of the violations stated above, or providing false information in connection with any inquiry regarding academic integrity.

7. **Alteration of Grades or Marks** including but not limited to, action by the student in an effort to change the earned credit or grade.

In addition, cases of academic dishonesty may involve photocopied materials. Materials used may fall under the Copyright Act. Violations of said Act may subject the user and/or the College to sanctions.

**Statement on Disabilities:** Any student who requires reasonable accommodations related to a disability should inform the course instructor and the Coordinator of Specialized Services (Room 138 in Kee Hall; phone 419-755-4727).

Students who encounter difficulty in any of their courses are encouraged to visit the Tutoring Resource Center (Room 119 in Fallerius Technical Education Center) for tutoring assistance, and the Student Success Center (Room 136 in Kee Hall) for academic assistance, advising services, referrals for personal counseling and Learning Disability (LD) Testing.

**Statement on Withdrawals:** As a student, you are expected to attend class. If you are unable or choose not to attend class, or if for whatever reason you are unable to keep up with the requirements of a course, you need to officially drop the class at the Student Records Office. Refund dates and withdrawal dates will vary slightly from term to term. Contact the Student Records Office for applicable dates. Additionally these dates are posted on the academic calendar available on the college’s website, [www.ncstatecollege.edu](http://www.ncstatecollege.edu), under the Academics heading on the home page and are available at the Student Records Office in Kee Hall. Students should go to the Student Records Office (Room 142 in Kee Hall) to process their withdrawal from any class.

If you choose to walk away from your class without officially withdrawing from it, the faculty member teaching the class must grade your classroom performance on the material available to him or her. This normally results in an "F" grade. An "F" grade can lower your grade point average considerably depending on the total credits accumulated.