

BCBT 100 – The Science of Cooking

Spring 2014, TuTh 10:30-11:45am (SL104)

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Office hours:

MF 9-12, W 1-4, Th 1-3 {Office hours subject to change, check web page}

Required Material:

Harold McGee *On Food and Cooking: The Science and Lore of the Kitchen*
New York, NY: Scribner, 1997. ISBN: 9780684800011.

BCBT 100 – The Science of Cooking (3cr)

This course will look at cooking from a scientific perspective to understand the food we eat and enjoy. Cooking may be the oldest and most widespread application of science. Students will use principles of biochemistry with some chemistry and biology to analyze food and investigate how cooking works. Students will also do several edible experiments and look at the science behind how it all works. Each week a different food will be explored. Topics include, but are not limited to, what makes a good experiment, death by chocolate, cheese making, the joys of hot sauce and salsa food biochemistry, the science of spice, and what is taste? This course includes a lab component. Students are expected to conduct three food experiments independent of class time. Learn to be a better cook by understanding food at the molecular level. MnTC Goal 3.

Class Blog:

scienceofcooking100.blogspot.com/

A class blog is being used for BCBT 100.

- All class announcements will be posted to the class blog
- Any questions that I receive via email will be answered to the blog and only to the blog.
- The blog permits anonymous comments. If you have questions about a day in class or a problem that is posted, you may respond/comment without your identity being revealed.

Grading:

Grades will be based upon weekly quizzes, in-class points, 4 lab experiments/observations, and 4 exams (150pts each, Feb 6, Mar 6, Apr 8, May 12).

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|---------------------|---------------------|
| Quizzes | 10 x 10pts = 100pts |
| In-class points | 10 x 5pts = 50pts |
| Labs | 4 x 25pts = 100pts |
| Exams | 4 x 150pts = 600pts |
| <u>Total Points</u> | <u>850pts</u> |

Tentative grade assignments are: A = 90-100%, B = 80-89.999%, C = 70-79.999%, D = 60-69.999%. These cutoffs *may* be lowered at the instructor's discretion, but they will not be raised.

Quizzes are in D2L and will be posted approximately weekly. The material on the quizzes will be based upon in-class material, reading assignments and other online materials. Lab activities and assignments are a required part of the course. If all the assigned lab activities are not completed, your grade for the course will be "F" regardless of your performance on other assignments.

Academic Honesty: Cheating will not be tolerated and will be reported to the Dean of your College, the Vice President for Academic Affairs, the MSUM Judicial Affairs Officer and the Student Conduct Committee for further disciplinary action. For a full description of the MSUM Academic Honesty Policy, please see the Student Handbook. {<http://www.mnstate.edu/sthandbook/POLICY/index.htm>} The penalty for academic dishonesty will be a grade of "F" for the course and will be fully enforced.

Disability Access Statement: Students with disabilities who believe they may need an accommodation in this class are encouraged to contact Greg Toutges, Director of Disability Services at 477-4318 (Voice) or 1-800-627-3529 (MRS/TTY), Flora Frick 154 as soon as possible to ensure that accommodations are implemented in a timely fashion. Information regarding Disability Services is available at <http://web.mnstate.edu/disability/>

Tentative Class Schedule: (Check class website and blog for additional information and changes)

| Dates: | Topic: | Reading: |
|---------------|---|-----------------|
| Jan 14 | Introduction, How to Experiment | 1-5, 811-818 |
| Jan 16 | Food Molecules | 792-802 |
| Jan 21 | Food Molecules | 803-809 |
| Jan 23 | Milk and Dairy | |
| Jan 28 | | |
| Jan 30 | | |
| Feb 4 | | |
| Feb 6 | Exam 1 | |
| Feb 11 | | |
| Feb 13 | | |
| Feb 18 | | |
| Feb 20 | | |
| Feb 25 | | |
| Feb 27 | | |
| Mar 4 | | |
| Mar 6 | Exam 2 | |
| Mar 11 | | |
| Mar 13 | | |
| Mar 18 | <i>No Class – Spring Break</i> | |
| Mar 20 | <i>No Class – Spring Break</i> | |
| Mar 25 | | |
| Mar 27 | | |
| Apr 1 | | |
| Apr 3 | | |
| Apr 8 | Exam 3 | |
| Apr 10 | | |
| Apr 15 | <i>No Class – Student Academic Conf</i> | |
| Apr 17 | | |
| Apr 22 | | |
| Apr 24 | | |
| Apr 29 | | |
| May 1 | | |
| May 6 | Last Class | |
| May 12 | Exam 4 – 11:30am | |
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