

FOS 4722C
QUALITY CONTROL IN FOOD SYSTEMS

Catalog Statement

FOS 4722C; Quality Control in Food Systems; 3 credits; Measurement and control of the major quality parameters of foods, including sensory, color and texture.

Instructors

Charles A. Sims

Office: Room 130, Building 120

Office phone: 352-294-3592

E-mail: csims@ufl.edu

Office Hours -- Monday, Wednesday, Friday 8:30 - 10:00 or any other time when available

Topics Covered

- *Overview of Quality Control
- *Statistics in Quality Control
- *Sampling
- *Control Charts
- *Government Regulations
- *Sensory Analysis
- *Texture Analysis
- *Viscosity Analysis
- *Color Analysis

Learning Outcomes

- *To understand the role and importance of Quality Control in the food industry

- *To be able to choose the appropriate statistical tool for typical data analysis in food science research and food industry applications; to be able to analyze data using the proper statistical tool and make conclusions.

- *To be able to choose the correct statistical control chart, and be able to construct and interpret typical control charts.

- *To be able to choose and apply the appropriate statistical sampling plan in quality control.

- *To understand the basic government regulations impacting quality control.

- *To be able to choose the appropriate sensory test in food science applications; to be able to organize and conduct a standard sensory test, analyze the data, and make conclusions.

- *To be able to choose the appropriate test for food texture evaluation; to be able to conduct a standard texture analysis, analyze the data, and make conclusions.

- *To be able to choose the appropriate test for food viscosity evaluation; to be able to conduct a standard viscosity analysis, analyze the data, and make conclusions.

*To be able to choose the appropriate test for food color evaluation; to be able to conduct a standard color analysis, analyze the data, and make conclusions.

Course Format

*Two lectures and a laboratory each week

*4 unit exams

*Laboratory reports and homework assignments, which are due within 2 weeks

Grading System

*400 points (79% of total) -- 4 unit exams (100 points each)

*105 points (21% of total) -- 7 laboratory reports or homework @ 15 points each

Attendance

Regular attendance is expected and role will be taken. Anyone missing more than 2 lectures (including lectures given in laboratory periods) without a legitimate excuse will lose 10 points from their final point total. Students missing laboratory exercises without a legitimate excuse will not be allowed to make up the lab, and will not be allowed to turn in a lab report.

Texts and Handouts

No required text, but numerous handouts and reference material will be supplied. In addition, several texts will be on reserve in the instructor's office. A list of supplemental and related texts follows.

FOS 4722C LABORATORY

<u>Date</u>	<u>Title</u>
8/27	Lecture
9/3	Lecture
9/10	Lecture
9/17	No Lab
9/24	Exam 1
10/1	Lecture
10/8	Lecture
10/15	Exam 2
10/22	Sensory Analysis: Difference Testing
10/29	Sensory Analysis: Ranking and Rating
11/5	Sensory Analysis: Descriptive Analysis
11/12	Exam 3
11/19	Texture Analysis
12/3	Viscosity Measurements

Recommended Texts

Bourne, M.C. 1982. Food Texture and Viscosity: Concept and Measurement. Academic Press, New York.

Francis, F.J. and F.M. Clydesdale. 1975. Food Colorimetry: Theory and Applications. AVI Publishing, Westport, CN.

Grant, E.L. and R.S. Leavenworth. 1988. Statistical Quality Control, 6th Edition. McGraw-Hill Publishing Co., New York, NY.

Hubbard, M.R. 2003. Statistical Quality Control for the Food Industry, 3rd Edition. Kluwer Academic/Plenum Publishers, New York.

Meilgaard, M., G.V. Civille, and B.T. Carr. 2007. Sensory Evaluation Techniques, 4th Edition. CRC Press, Boca Raton, FL.

Information for All Students

Policy on In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

A statement related to class attendance and options for making up exams and other work. A standard statement is provided below.

Attendance and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Online Course Evaluation Process

“Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.”

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to

the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu Counseling Services Groups and Workshops Outreach and Consultation Self-Help Library Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/.
- Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>.

Student Complaints

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>.