Laboratory Methods in Sensory Evaluation of Food

FOOD 529

University of British Columbia
Syllabus / Laboratory Manual
Winter Semester 2016 (2016W)
(Jan-April 2017)

INSTRUCTOR: ***Dr. Margaret Cliff***
Adjunct Professor – Sensory Evaluation
Food, Nutrition and Health (Rm 323)
323-2205 East Mall
Vancouver, BC
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LECTURE TIME:	Tuesday	12:30 pm - 1:30 pm	FNH 30
TUTORIAL:	Tuesday	1:30 pm - 2:30 pm	FNH 30
LABORATORY:	Wednesday	12:30 pm - 3:30 pm	FNH 140

TEACHING ASSISTANT:

Jay Martiniuk and Kaiwen Mu
Food, Nutrition and Health
2205 East Mall

Food, Nutrition and Health
LABORATORY METHODS IN SENSORY EVALUATION
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COURSE DESCRIPTION:

This course is designed to equip students with the skills necessary to conduct objective assessment of foods. It will provide students with the skills necessary to conduct scientifically sound, statistically valid evaluations for the food and beverages industries. Students will get hands-on experience with the data collection, data analysis and interpretation of experimental results during eight laboratory sessions. Emphasis is placed on experimental design and the application and use of statistics. Students will improve their oral and written communication skills. Students will prepare executive summaries that describe: 'what was done', 'how it was done', 'what was found' and 'what was concluded'. This course is intended for students interested in sensory evaluation of food and beverages. However, it is beneficial to all students desiring hands-on experience with statistical analyses and interpretation of experimental data.

TEXTBOOKS:

> Meilgaard, M., Civille, G.V. and B.T. Carr. 2007. *Sensory Evaluation Techniques*. CRC Press Boca Raton, FL. *Full on-line text available at UBC library.*
> http://www.crcnetbase.com.ezproxy.library.ubc.ca/ISBN/978-0-8493-0276-3

> Poste, L. M., Mackie, D. A., Butler, B. and Larmond, E. 1991. *Laboratory Methods for Sensory Analysis of Foods,* Agriculture Canada Publication 1864/E (FOOD 529 posted on CONNECT).

COURSE OBJECTIVES:
1. to develop an understanding of sensory psychology and physiology
2. to select and implement appropriate sensory methodology for a specified objective
3. to understand the capabilities and limitations of sensory tests
4. to gain experience in data collection, data analysis and interpretation of sensory data
5. to gain hands-on experience with conducting statistical analyses
6. to develop written and oral communication skills
7. to gain experience with the preparation of executive summaries, describing: 'what was done'; 'how it was done'; 'what was found'; and 'what was concluded'.

PREREQUISITE:
Students should have had one introductory statistics course.
STATISTICAL SOFTWARE:
> MS Excel Add-in: Analysis ToolPak
> MS Excel downloads: XY Chart Labeller
> Minitab Software: 30 day free trial

http://www.minitab.com/en-us/products/minitab/features/?WT.srch=1&WT.mc_id=SE021810

.Food, Nutrition and Health
LABORATORY METHODS IN SENSORY EVALUATION
Dr. Margaret Cliff

Permanent Work Location (April-December)
Research Scientist –Sensory Evaluation
Agriculture and Agri-Food Canada
Pacific Agri-Food Research Centre, Summerland, BC
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Temporary Work Location (January-March)
Food Nutrition and Health - Rm 323
University of British Columbia, Vancouver, BC
mcliff@mail.ubc.ca

LECTURE TOPICS:

Week No.	Lecture Topics
1	Introduction & Orientation
2	Scope of Sensory Evaluation. Physiology of Aroma and Taste **CBC Video: Nature of Things** "Science of the Senses"
3	Difference Testing (paired comparison, duo-trio, triangle, R-index)
4	Determination of Sensory Thresholds
5	Ranking , Rating and Magnitude Estimation Methodology
6	Lab 4 Group Oral Presentations
7	Statistical Analysis (MS Excel)
8	Statistical Analysis (MINITAB)
	READING BREAK
9	Descriptive Analysis: Multivariate Statistics: Principal Component Analysis
10	Lab 7 Group Oral Presentations
11	Consumer Research – Affective Tests, Advanced Statistics **TED Video Lecture Series: Malcolm Gladwell – Consumer Market Segmentation** **http://www.ted.com/talks/malcolm_gladwell_on_spaghetti_sauce.html** Use of Human Subjects Research Ethics Board Approval
12	Preference Mapping – Understanding consumer preference and drivers-of-liking
13	Guest Speaker: TBD Other Topics: Time Intensity Evaluation, Panel Selection and Training of Judges Quality Evaluations, Designing a Sensory Laboratory