

Professor: Edward B. Walker, Ph.D, SL503M, 626-6162
 Email: ewalker@weber.edu
 Web Site: <http://faculty.weber.edu/ewalker>

Objectives: 1. Be familiar with the Windows operating system.
 2. Enhance word processing skills.
 3. Become an expert in the chemistry applications of spreadsheet software.
 4. Understand the fundamentals of computer-assisted data acquisition.
 5. Become proficient in preparing, formatting, & submitting electronic reports.
 6. Develop skills in importing and exporting data into/from various platforms.

Week	Date	Lecture Topic:	Assignments:
1	26-Aug	Overview, facilities, Windows environment, Email, and networks; Word Processing: Creating, saving, editing and importing documents; tables, figures, equations	Using WSU Email, send your name, major, expertise level, & interests (<i>by Friday</i>);
2	2-Sep	<i>Labor Day Holiday</i>	Create WP document including table, equation, & header
3	9-Sep	Spreadsheets: data entry, sorting, & functions	WEB Sheets # 1, 2, 3
4	16-Sep	Spreadsheets: Evaluation of equations & graphing data	WEB Sheets # 4, 5, 6
5	23-Sep	Spreadsheets: Linear and non-linear trend lines	WEB Sheets # 7, 8, 9
6	30-Sep	Spreadsheets: Regression analysis; instrument calibration plots	WEB Sheets # 10,11,12
7	7-Oct	Spreadsheets: Advanced plotting techniques, evaluation of intercepts, and reiterative calculations	WEB Sheets # 13,14,15
8	14-Oct	Spreadsheets: Determination and comparison of endpoints of acid-base titrations	WEB Sheets # 16,17,18
9	21-Oct	Spreadsheets: Writing, executing and debugging macros	WEB Sheets # 19, 20
10	28-Oct	Spreadsheets: Matrix operations- Solutions to multiple linear equations	WEB Sheets # 21, 22
11	4-Nov	Database Functions in Excel	Web Sheet # 23
12	11-Nov	Drawing Programs: Molecular drawing software, importing and exporting graphical images	Draw Molecular Structures (Handout)
13	18-Nov	Guest Lecture: Object-oriented Programming	Report: traditional programming vs. object-oriented methods.
14	25-Nov	Review; Overview and Conclusions; The future of computing in modern chemistry laboratories	Receive Take-home Final Exam
15	2-Dec	Overview and Conclusions; The future of computing in modern chemistry laboratories	Final Exam Due: Electronic pdf version due TODAY.