

## POLICY ON SCIENTIFIC INTEGRITY

College of Charleston

Department of Chemistry and Biochemistry

August 2017

*"The essence of science is the pursuit and transmission of knowledge, an endeavor that depends upon honesty, objectivity, intellectual freedom, and trust over generations, across disciplines, and across national borders. As every researcher depends on the validity of others' previous work, and because no single individual can master every dimension of any field, the practical demands of science reinforce an inherently moral social contract among researchers"— from "The Ethical Dimensions of the Biological Sciences" <sup>1</sup>*

Laboratory courses are the core of our chemistry curriculum. You will be learning specific skills while actively practicing the methods of scientific inquiry. You are encouraged to engage your peers and challenge each other's understanding as part of this learning experience. At all times, however, we expect that you will hold yourselves to the rigorous standards demanded by the aforementioned "moral social contract among researchers". You are expected to:

- Keep an open, objective mind while carrying out experiments
- Keep dated, accurate records of your experiments in pen
- Cross off errors in notebook calculations rather than erasing, whiting out, or obliterating them
- Carry out your own experiments without bias to an expected outcome
- Carry out replicate experiments when time permits
- Report your findings without embellishing, altering or ignoring data you have collected
- Make your own graphs, data tables, ChemDraw images and schemes, MestreNova spectra, and interpretations when authorized to collect data in groups (unless you are told otherwise by the instructor)
- Work independently to derive your own conclusions
- Write in your own words the interpretation of your data
- Cite appropriately any published materials such as handbook data, journal articles, web sites, or textbooks that were used to aid with your data interpretation<sup>2</sup>
- Formally acknowledge and state the identities of those who have provided ideas that have aided in your interpretations

The National Academy of Sciences' Panel on Scientific Responsibility and the Conduct of Research makes the following definition: *"Misconduct in science is defined as fabrication, falsification, or plagiarism, in proposing, performing, or reporting research. Fabrication is making up data or results, falsification is changing data or results, and plagiarism is using the ideas or words of another person without giving the appropriate credit."*<sup>3</sup>

Because scientific integrity is central to all scientific endeavors, the faculty will vigorously prosecute any student thought to be in violation of scientific ethics at the College's Honor Board. The following acts are examples of scientific misconduct that will not be tolerated:

- Modifying data to conform to an expected outcome
- Copying another student's data into your own notebook or report
- Using another student's interpretation and/or ChemDraw images/schemes or spectra and presenting it as your own
- Using or possessing previously interpreted data or graded reports from this lab course
- Providing your data or graded lab reports to another student who presents it as their own
- Presenting data collected in prior semesters for credit in the present semester

If there is any doubt as to the proper interpretation of what is allowed under this code of scientific integrity, you should consult your instructor before submitting any work for evaluation.

For a first offense, unless the instructor feels there is evidence or belief of deception, an admission of violation *prior to the scheduling of a hearing* will result in a grade of zero being assigned to that assignment. The grade of zero and the admission of violation will be reported to the Honor Board using the Class III Report and Resolution form. Conviction of a violation by the [Honor Board](#) or an admission of a violation once a hearing has been scheduled will result in a grade of "XF" being assigned for the course. In the cases with perceived deception, with or without admission of violation, the instance will be referred directly to the Honor Board.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

By my signature I acknowledge having read and understood the Policy on Scientific Integrity of the Department of Chemistry and Biochemistry of the College of Charleston.

<sup>1</sup> *The Roots of Honor and Integrity in Science. In The Ethical Dimensions of the Biological Sciences*; Cambridge University Press: Cambridge, U.K.; Bulger, R.E.; Heitman, E.; Reiser, S.J., Eds.; **1993**; p. 41.

<sup>2</sup> A good source is *The ACS Style Guide: A Manual for Authors and Editors*, Dodd, J.S., Ed.; American Chemical Society: Washington, DC

<sup>3</sup> Panel on Scientific Responsibility and the Conduct of Research, National Academy of Sciences. *Methods, definitions, and basic assumptions In The Ethical Dimensions of the Biological Sciences*; Bulger, R.E.; Heitman, E.; Reiser, S.J., Eds.; Cambridge University Press: Cambridge, U.K.; **1993**; p. 108.

<sup>2</sup> Panel on Scientific Responsibility and the Conduct of Research, National Academy of Sciences. *Methods, definitions, and basic assumptions. In The Ethical Dimensions of the Biological Sciences*; Bulger, R.E.; Heitman, E.; Reiser, S.J., Eds.; Cambridge University Press: Cambridge, U.K.; **1993**; p. 108.

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