Life Skills Workshop:
Research and Academic Integrity

Brenton McLaury
Associate Dean of Research and Graduate Studies
Professor of Mechanical Engineering
Research Ethics and Integrity Result in Responsible Research

“You can’t have a high standard of scholarship without having a high standard of integrity because the essence of scholarship is truth.”

John Hope Franklin
Workshop Purpose:
Provide an overview of responsibilities of researchers and scholars in conducting research, with a special emphasis on plagiarism.
How is Research Integrity Defined

- First World Conference on Research Integrity (WCRI): Fostering Responsible Research was held in Lisbon, Portugal in September 2007

- Sponsored by the European Science Foundation and the Office of Research Integrity, US Dept of Health and Human Service

- “There is no common definition world-wide for research misconduct, conflict of interest, plagiarism or other key terms that describe acceptable and unacceptable research practices”
2010 WCRI released Singapore Statement on Research Integrity

“The value and benefits of research are vitally dependent on the integrity of research. While there can be and are national and disciplinary differences in the way research is organized and conducted, there are also principles and professional responsibilities that are fundamental to the integrity of research wherever it is undertaken.”

This implies that we need to be aware of global and national perspectives and knowledgeable of local rules and expectations

Principles: honesty, accountability, professional courtesy and fairness, and good stewardship
University Research Environment

- Professional Scholars and Aspiring Scholars
- Community’s Purpose:
  Learn, create new knowledge, develop new insights or interpretations of existing knowledge, disseminate information or ideas for the benefit of peers and the general public.
- New and innovative ideas may produce
  - Extensive professional interest
  - Recognition or credit in the scholar’s discipline
  - Potential for producing commercial interest and financial gain
- These outcomes may be the motive for some scholars to violate acceptable standards in the responsible conduct of research.
Ethical Conduct in Academic Research and Scholarship Policy for TU

Misconduct in research and scholarship is inappropriate behavior by members of the University community. Allegations of research misconduct will be handled according to procedures outlined in the policy.

Go to https://utulsa.edu/research/office-research/research-compliance/ and download “Ethical Conduct in Academic Research and Scholarship” to review the policy.
Research Integrity Categories

- Core Research Misconduct
  Fabrication, Falsification and Plagiarism
- Data Collection and Management
- Human Subjects
- Conflict of Interest
- Intellectual Property – Who owns it?
- Authorship and Publication Practices
  Should I be an author? Should you?
- Collaboration (WRCI Montreal Statement)
- Good Research Practices
- Compliance with Regulations
Core Research Misconduct

- Fabrication
  - Making up data or results

- Falsification
  - Manipulating manner in which results were obtained
  - Omitting data

  *Fabrication/falsification of data is not tolerated. It may result in the University losing federal funding. Faculty or students may face sanction or dismissal.*

- Plagiarism
Data Collection and Management

- The University is accountable for the maintenance and availability of primary research data (lab notebooks, electronic files, instrument printouts, etc.) created or collected by University researchers or scholars.

- Hence, both the University and researcher have responsibilities and rights concerning access, use, and maintenance of original research data.

- Some data may be subject to confidentiality requirements.
Data Collection and Management

Why?

- External sponsors of the research, federal or state agencies, or journals or colleagues in the field may legally be entitled to review the data after publication or dissemination of results.

- Individual researchers within a team have a right to access data gathered by all members of the team.

- If there are allegations of research misconduct, the University may need to review the integrity of the data.

- The University may need to respond to questions about accuracy and authenticity of data to comply with laws and regulations related to the conduct of research.
Data Collection and Management

- Accurate and appropriate research records are critical.
- Data must be archived for at least three years after the submission of the final project report or publication, whichever occurred last.
Data Management: When Leaving the University

- When students leave the University, they may take copies of the research data on which they worked, but the original data must reside with the faculty member.

- When faculty members leave the University, they are entitled to retain copies of the original data they generated; however, the original data remains the property of the University and is retained by the Vice Provost of Research or designee.
Human Subjects Research

- Psychology
- Speech Pathology
- Biology
- History
- Business
- Anthropology
- Education
- English Language & Literature

Contact Carmen Schaar-Walden or Debbie Newton in the Office of Research and Sponsored Programs: 631-2714

Institutional Review Board (IRB)

For policy, go to https://utulsa.edu/research/office-research/research-compliance/irb-protection-human-subjects/
Conflict of Interest

- Financial or other personal considerations could influence professional judgement
- Discuss any issues with your advisor
- Contact the Graduate School
Intellectual Property

- The University claims all intellectual property generated by students, faculty, and staff with University resources.

- For policy, go to [http://utulsa.edu/research/office-research/intellectual-property/](http://utulsa.edu/research/office-research/intellectual-property/)

- The University incurs expenses associated with intellectual property for patenting, such as legal fees, marketing and licensing costs, etc.

- After TU recovers its costs, the inventors may share in the revenue.
Intellectual Property

- Disclose to the University of Tulsa Intellectual Property Committee any ideas that may be patentable prior to any public disclosure, such as a presentation at a professional meeting or submission of a manuscript for publication.

- If public disclosure occurs prior to submission of a patent application, all international patent rights are lost. Only the U.S. has a one-year window after public disclosure that is still available for submission of a patent application.

- Discuss with your advisor if you think you have a patentable idea, and contact Janet Haggerty, Chair of the Intellectual Property Committee.
Authorship

The prestige of scholars is often tied to their publications

- Typical criteria for determining authorship:
  - Substantial participation in conception and design of the study or analysis and interpretation of data
  - Substantial participation in the drafting of the manuscript or in the substantive editing of the manuscript
  - Final approval of the version of the manuscript to be published

- Acknowledgements:
  - Contributions that do not justify authorship

- Senior Author:
  - Leads a study and makes a major contribution to the work
Authorship

- At the onset of a project, there should be open discussion about authorship. Expectations of the faculty should be clearly expressed to the student. It is not unusual that as projects proceed the authorship order may need to be adjusted.

- Accountability:
  - Every author is responsible for the integrity of the research being reported.
Publication Requirements

NIH

- Authors who publish research funded by NIH are required to submit electronic versions of final, peer-reviewed manuscripts to the National Library of Medicine's PubMed Central upon acceptance of the manuscript for publication.

- Link to the NIH policy regarding public access to publications that result from NIH funded research is [http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html)
Useful References

- Michigan State University’s Research Integrity website: http://grad.msu.edu/researchintegrity/

For other information related to research integrity visit http://ori.hhs.gov, and in particular see the publication “ORI Introduction to RCR” at: https://ori.hhs.gov/ori-intro
Plagiarism and How to Avoid It
“Sheriff David Clarke plagiarized portions of his master’s thesis on homeland security”

“Clarke, …, earned a master’s degree in security studies at the Naval Postgraduate School in Monterey, California. In his thesis, ‘Making U.S. security and privacy rights compatible,’ Clarke failed to properly attribute his sources at least 47 times.”

“In all instances reviewed by CNN’s Kfile, Clarke lifts language from sources and credits them with a footnote, but does not indicate with quotation marks that he is taking the words verbatim.”
Bad Press

- Clarke wrote his thesis in 2013.

- At the time of the report in 2017, Clarke was being considered for a high ranking position in the Department of Homeland Security.

- The Naval Postgraduate School investigated and determined that there was not intentional deception but told him that he had to revise the thesis or his degree could be revoked.
Bad Press

- Another case was reported in the *New York Times* by Jonathan Martin in 2014.

- It was reported that Senator John Walsh of Montana plagiarized large sections of a paper in 2007 that was necessary for his master’s degree at the Army War College.

- He dropped his election bid.

- His degree was revoked.
Definitions of Plagiarism

PLAGIARISM - To use someone else's words or ideas and claim them as your own.
(International Student Services Dictionary of Academic Terms)

PLAGIARISM - To take and use another person's ideas, concepts, language, statistics, graphs, or drawings without giving proper credit.
(Thompson and Williams, 1995)
The Graduate School may dismiss a student for “failure to maintain the standards of academic, ethical, or professional integrity expected in a particular discipline or program.”

(2017-2018 Graduate Bulletin)

TU uses software available through our course management system, Blackboard, to help detect plagiarism.

The internet can be a great resource, but anything that you copy from it to include in your own work MUST be attributed to its source and include quotation marks.
Avoiding Plagiarism

**Exact copying** is to be enclosed in **quotation marks** with appropriate citations indicating the origin of the quotation.

**Paraphrasing** should capture the spirit and intent of another author’s language in your own words with appropriate citations.
Consequences of Plagiarism

- Plagiarism discovered while the student is still in school may result in a failing grade for an assignment or a course and may lead to dismissal from the University.

- Even when plagiarism is discovered after a student graduates, it can have far-reaching consequences, possibly leading to public embarrassment, loss of degrees, or loss of professional licenses, credentials, and privileges.

- The negative consequences resulting from an act of plagiarism can be invoked at any time after the actual act (no statute of limitations).
Obvious Acts of Plagiarism

(Wilhoit, 1994; Love and Simmons, 1998)

- Deliberate deception: intentional misrepresentation.
- Submitting a paper purchased from some source.
- Submitting another student’s work either with or without the student’s knowledge.
- Submitting a paper with parts copied from a source text without proper acknowledgment of the copied parts.
- Submission of a paper to more than one class or academic journal (self-plagiarism or misconduct).
- Collaboration when explicitly not allowed.
Non - Obvious Acts of Plagiarism

( Wilhoit, 1994; Love and Simmons, 1998 )

- Submitting a paper with parts copied from a source, acknowledging the source by reference, but lacking the use of quotation marks.

- Submitting a paper that has material paraphrased from a source, but lacking reference to the source.

- Careless documentation, often resulting from hasty or careless proofreading.
You are Susceptible to Plagiarize IF

( Wilhoit, 1994; Love and Simmons, 1998 )

- Do not have time to properly finish a task (poor time management and planning)
- Not prepared for a course
- Don’t know the style or citation rules for your discipline
- Past training did not discourage plagiarism
- Susceptible to peer pressure
**Aids to Preventing Plagiarism**

(Wilhoit, 1994; Love and Simmons, 1998)

- Be respectful of your intellectual community
- Adequate time to research and write a paper
- Good pre-writing and writing skills (from notes to final draft)
- Sound understanding of your sources
- Practice in application of the rules of quotation, paraphrasing, and referencing
- Ask faculty when you have questions
Quotation and Citation

*(Standler 2000)*

When using someone else’s words, you must

1. Enclose their words in quotation marks (or possibly indent the text)

   **AND**

2. Provide a citation (usually a reference in the text AND a bibliographic entry).
If you use someone else’s ideas, graphs, data, programs etc. then proper reference must be given.

Avoiding plagiarism is really about giving credit for ideas. Sometimes ideas are expressed in words (then we use quotes when we use them). But often ideas are expressed formulas, data, charts etc. All of these instances must be clearly referenced.
Paraphrasing

Paraphrasing is an attempt to capture the spirit and intent of another author’s language **in your own words.**

- It is not sufficient to just replace a few words.
- It is not appropriate to state ideas in the same order.
- It is not sufficient to reorder the words.
Paraphrasing

1. To paraphrase, one must internalize what you have read (you must understand it).
2. Then you must restate it in your own words.
3. Even then, you will need a citation.

The first two steps are difficult.

The first step is difficult unless you are well trained and give yourself enough time.

The second step is difficult unless you are good with language.
Helpful Hints

- Avoid using “copy and paste” to write papers and documents. This can quickly lead to poor paraphrasing, unintended quotation without proper reference, and confusion.

- Keep good notes on where ideas, text, etc. come from, including relevant conversations with students and faculty.

- Manage your time.

- Let the faculty help you!
Helpful Hints

- Know or ask about the “common knowledge” in your discipline.

- When you use a citation, make sure that it is clear which words or ideas are being cited. (Keep your citations as near to the referenced material as possible.)

**Good writing includes both quotation and paraphrase and an understanding of when it is best to use each.**
Scenarios and Example

The first example is from

Social Sciences Research and Instructional Council
Teaching Resources Depository: Other Teaching Tools
Plagiarism by Earl Babbie

Originally from
http://www.csub.edu/ssric-trd/howto/plagiarism.htm

A presentation can now be found at
http://www1.chapman.edu/~babbie/plag00.html
Absolute Objectivity

Original text
It has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable or, even if attainable, is undesirable.

Modified text
I feel it has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable.
Original text
It has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable or, even if attainable, is undesirable.

Modified text
Many people today have rejected the idea that there is such a thing as absolute objectivity since they do not believe that it can be achieved.
Original text
It has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable or, even if attainable, is undesirable.

Modified text
Lisa Staffen (1996:154) begins her review of Porter’s book by suggesting “It has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable or, even if attainable, is undesirable.”

It has become fashionable to reject the notion of absolute objectivity on the grounds that objectivity is simply unattainable or, even if attainable, is undesirable.

In her review of Porter’s book, Lisa Staffen (1996:154) says the ideas of absolute objectivity is now commonly rejected as “simply unattainable or, even if attainable, [as] undesirable.”

Original text
The association between humans and dogs began as a hunting relationship before organized agriculture had been developed. This Paleolithic cave painting dates back to about ten thousand years ago and shows a Stone Age hunter who has successfully killed an eland with the assistance of his dogs.

Modified text
Dogs have been "man's best friend" since long before recorded history. The association between humans and dogs began as a hunting relationship before organized agriculture had been developed. One Paleolithic cave painting dates back to about ten thousand years ago and shows a Stone Age hunter who has successfully killed an eland with the assistance of his dogs.
The association between humans and dogs began as a hunting relationship before organized agriculture had been developed. This Paleolithic cave painting dates back to about ten thousand years ago and shows a Stone Age hunter who has successfully killed an eland with the assistance of his dogs.

Dogs have been "man's best friend" since long before recorded history. The relationship between dogs and humans started as a hunting relationship before people developed organized agriculture. One cave painting that dates back about ten thousand years shows a Paleolithic hunter who has killed an eland with the help of his dogs.
The association between humans and dogs began as a hunting relationship before organized agriculture had been developed. This Paleolithic cave painting dates back to about ten thousand years ago and shows a Stone Age hunter who has successfully killed an eland with the assistance of his dogs.

Dogs have been "man's best friend" since long before recorded history. Dogs and humans first got together as hunters. Cave paintings provide some evidence for this early teamwork. One 10,000-year-old painting shows a Paleolithic hunter and his two dogs after they have killed an eland.
Some experts think that dogs have been companions for humans at least since our earliest records. According to University of British Columbia Professor of Psychology Stanley Coren, dogs and humans first teamed up as hunters. In his book *The Intelligence of Dogs: Canine Consciousness and Capabilities*, Coren includes one cave painting that dates back about ten thousand years and shows "a Stone Age hunter who has successfully killed an eland with the assistance of his dogs" (Plate 2).
Table, Graphs and Charts

- If you copy a table, graph or chart you must give a reference to the object that you copied. You may also have copyright issues to deal with.

- If you use the data from a table, graph or chart, you should reference the use of that data.
Computer Programs & Spreadsheets

- Copying a program or spreadsheet and presenting it as your own.

- Copying a program or spreadsheet, modifying it and then presenting the work as your own.

- Suppose that you take a copy of a program and then extract the main idea. From this you write a new program.

- Suppose that you have a copy of a spreadsheet and you see how it was put together and then use this to make your own spreadsheet.
Homework Scenarios

1. Alice completes her homework and Bob has not done his. He borrows Alice’s homework right before class and copies the solutions and hands it in with his name on it.

2. Alice completes her homework earlier and loans it to Bob the night before the assignment is due. After studying her solutions, Bob writes up his homework.

3. Catherine and John work together on their homework. John solves one of the problems and Catherine copies it onto her homework sheet to hand in.
Homework Scenarios

4. Catherine and John work together on their homework. After solving one of the problems they both make a copy of it to hand in.

5. Catherine and John work together on their homework. After figuring out how to solve a problem, they independently write up their solutions in their own words. Catherine notes on her homework that she worked with John on that problem.
Scenario

Students are assigned as part of a team to write an ethical code of conduct. A student immediately begins researching corporate codes of conduct online. The student finds that most codes are similar, and copies and pastes one from the website of a local, well-known company.

Is this acceptable? Why?
Scenario

A student is writing a thesis after completing all coursework and research. The student realizes that the notes taken from background references have an accurate listing of the sources, but the student cannot distinguish which notes are quoted from the sources, which are paraphrased, and which are ideas or insights obtained about the student’s research from having read that source.

What should the student do?