**HO3: Guidance for mentees-knowing the ethics**

**Authenticity:**

* Research that is reported must actually have been done. In other words, it cannot be fabricated.
* Fabrication is a very serious offence and is likely to end the perpetrator’s scientific career.

**Accuracy:**

* Researchers must accurately report findings - falsification must be avoided.
* Some aspects include: providing complete data (not only those supporting one’s hypothesis), avoiding inappropriate manipulation of images and using appropriate statistical procedures (as using unsuitable ones can yield the wrong conclusions)
* Mentees can be encouraged to consult statisticians early in the research planning process, to ensure that they have appropriate data for analysis.

**Originality:**

* A research article in a journal must report new, original findings.
* Not republishing the same findings (except under special circumstances, with permission and original source cited)
* Not submitting the same manuscript to two or more journals at once
* Not dividing one small research project into many tiny papers (“salami science” or “cucumber science”)
* Normally acceptable to publish findings that have been presented orally and is a common and useful practice.
* Findings may be republished if in translation. However, permission from the source must be obtained, and the version in the new language clearly labelled a translation.
* A researcher should not try to get as many papers as possible out of a large research project. Splitting up findings into many papers does not serve readers well. Also, those assessing researchers do not merely count papers, and often would rather see one substantial paper in a major journal than two or more small papers in minor journals.

**Credit:**

* Citing sources of information and ideas increases credibility and helps readers who want to find out more.
* Avoid excessive use of others’ words – the mentee can avoid this by becoming very familiar with their source material, and then writing a first draft without looking at it. Before revising the draft, the mentee can check it against the source material for accuracy.
* Researchers must observe copyright, and they typically must obtain permission if they want to reprint figures or quote extensive amounts of text.
* In some fields, quoting is common. However, in the sciences, it is not common for papers to include quotations.

**Ethical treatment of humans and animals (and documentation thereof):**

* Many journals won’t publish papers on human and animal research without evidence of this permission - researchers should obtain such permission before doing the research.
* Such permission commonly is noted in the methods section of a journal article. It’s worth recommending that the mentee reads one or more articles’ statements in this regard.

**Disclosure of conflicts of interest:**

* + Some possible examples to mention are: doing research on a product made by a company in which one has stock, doing research on a product made by a company to which one is a consultant, and serving as a peer reviewer of a paper by a friend.
  + Some journals require authors to report conflicts of interest when they submit their papers. Also, some of these journals publish this information with the paper (if the paper is accepted) and others just keep the information for their own use.
  + The existence of a conflict of interest does not preclude publication of a paper but it may result in the paper being examined carefully for possible bias.