

PET Home Science: Research Methodology

Key Notions about Research 15%
<ul style="list-style-type: none">• Steps in the research process• Research hypotheses, research objectives, and research questions• Drafting a research proposal• Variables, constants, levels of measurement
Quantitative Sampling Techniques & Research Designs 25%
<ul style="list-style-type: none">• Probability and nonprobability sampling techniques• Experimental, quasi-experimental, and pre-experimental research designs; internal and external validity• Survey research design; longitudinal research design; correlational research design
Quantitative Data Analysis: Statistics 25%
<ul style="list-style-type: none">• Descriptive statistics: numerical and graphical• Elementary concepts in probability, normal distribution, sampling distribution, null and alternative hypotheses, one-tailed and two-tailed hypotheses, Type I and Type II errors, standard error, parametric vs. nonparametric methods• Basic knowledge about advanced statistics: univariate and bivariate chi square, t-test and z-test of independent groups, paired t-test, ANOVA, and correlation coefficient• Basic knowledge about data management and data analyses software
Qualitative Research Methods 15%
<ul style="list-style-type: none">• Worldview/ideology/paradigms of qualitative research• Research designs, sampling and data collection methods, data analysis in qualitative methods
Ethics in Research 20%
<ul style="list-style-type: none">• Ethics in academia; ethics in research in general; avoiding plagiarism• Ethics in research with human participants; ethics in research with animal subjects