

# Course Introduction

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PSYC 203

# Outline for Today

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- **Introductions and Course Overview**
- Review of Fundamental Terms and Concepts
- Classes of Statistical Techniques
- Tools of the Trade

# Basic Information

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- Who am I?
- Who are you?
- Why are we here?
- Course Information — Blackboard

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# Key Terms & Concepts

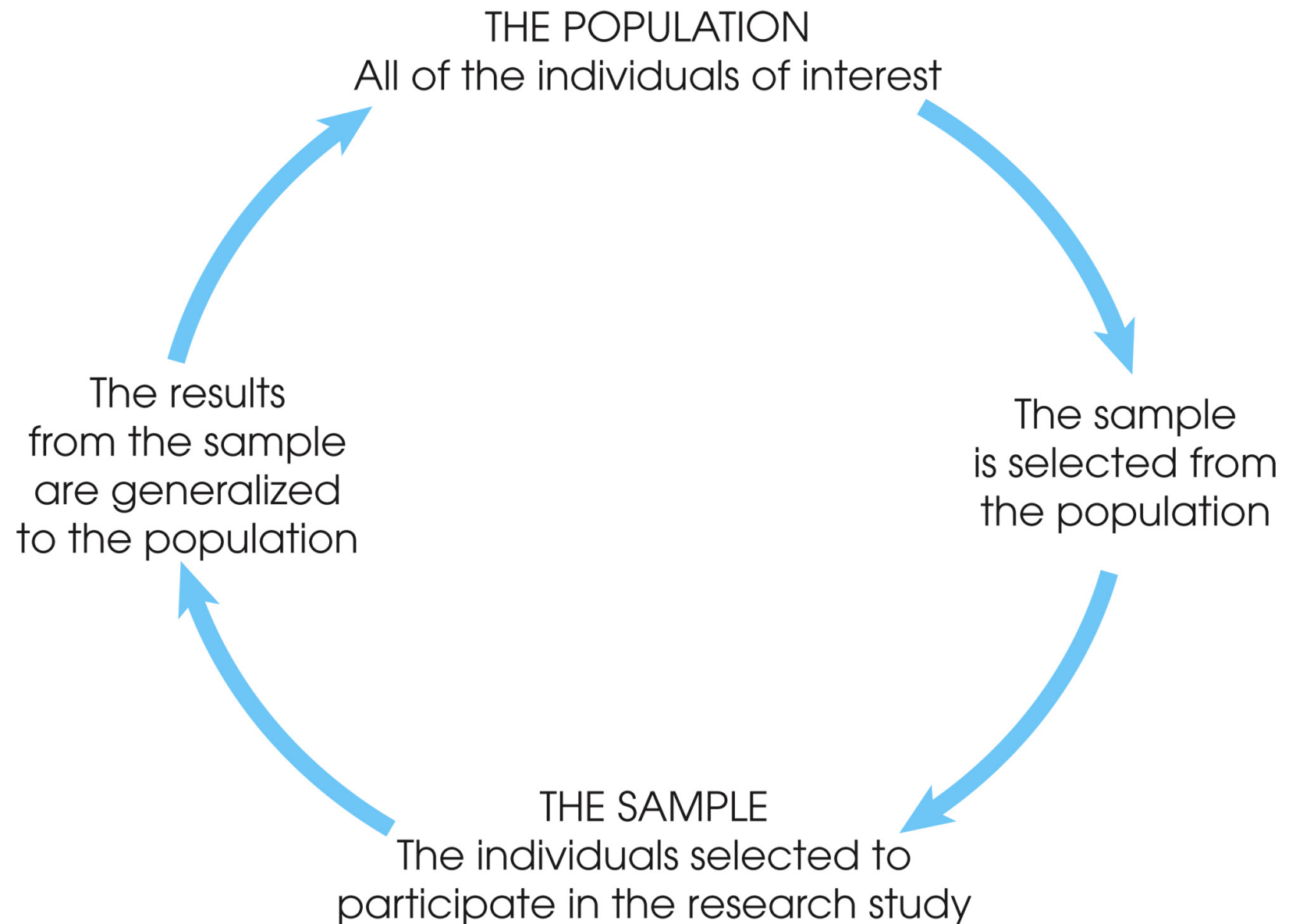
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- What is science?
- What is research?
  - experiments, observations, archival
  - *How do the political attitudes of women and men differ?*

# Key Terms & Concepts

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- Populations & Samples
- Random selection and assignment



# Key Terms & Concepts

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- Variables
  - Characteristic or condition that changes or has different values for different individuals
- Quantitative & Qualitative Data

# Key Terms & Concepts

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- Parameters
  - numerical value, describes ***population***
- Statistics
  - numerical value, describes ***sample***



# Key Terms & Concepts

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- Descriptive
  - summarize, organize, simplify data
  - examples: tables, graphs, averages
- Inferential Statistics
  - techniques that allow us to study samples and make generalizations about the population from which they were selected
  - Common terminology: “margin of error, statistically significant”

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# Classes of Statistical Techniques

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- Univariate Statistics
  - single variable
  - mean, variance, standard deviation
- Bivariate Statistics
  - single IV (predictor) & single DV (criterion)
  - t-test, correlation
- Multivariate Statistics
  - any number of IVs and/or DVs
  - multiple regression, MANOVA

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# Tools of the Trade

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- Computer Software
  - R, SPSS, SAS, STATA, MPLUS, etc.
  - Excel, Numbers, etc.
- Scientific Calculator
- Paper & Pencil