

SIST Graduate Program - Course Details and Schedule

Tech 5010 Applied Research for Technology (3 Credits)

Schedule: Online - Spring, Live - Fall

Description:

Research investigation of a technical problem. The course will culminate in a research report. May be repeated for a maximum of 6 semester hours per degree program. An additional fee is associated with this course.

Course Specific Objectives

The student, upon completion of Tech 5010 will be able to:

- Demonstrate the ability to study a technical problem utilizing the scientific method of inquiry
- Synthesize data and complete a conclusion relating to a technical problem.
- Organize, research data into a report using the manuscript form of writing
- Prepare and present a final technical research report to a group of peers.
- Use SPSS software package in data analysis.
- Investigate the possibility of writer protection, the copyright

Topical Content Outline

- The Hypothetico-Deductive Method
- The Manager and Consultant-Researcher
- The Research Process for Applied and Basic Research
- Research ethics for managers and graduate students
- Research Design: The Research Process, Exploration Process, Descriptive Study, Hypothesis Testing, External and Internal Validity
- Measurement of Variables: Operational Definition, Scales and Measurement, Developing Scales
- Data-Collection Methods: Sources and Origins of Data, Interviewing, Questionnaires, Observational Surveys, Static/Dynamic Panels, Un-obstructive Measures
- Sampling: Population Frames and Elements, Issues of Precision, Confidence in Determining Sampling Size, Efficiency in Sampling
- Statistical Terms and Tests: Analysis of Qualitative Data, Preparing Data for Analysis, Basic Objectives in Data Analysis, SPSS software
- The Research Report: The Written report and its Purpose; the Audience, Pictorial Representation, Oral Presentation

Course Textbook

The following textbook and software is **required** in this course:

- Uma Sekaran and Roger Bougie (2019), 8th edition. Research Methods for Business: A skill building approach, Publisher: John Wiley & Sons.
- SPSS (Statistical Package for Social Science) 24.0 or the latest version for Windows Student Version. **Options:**
 - 1) **Free.** The SPSS full version is available on main campus in the laboratory/classroom at Grinstead 016 and 122.
 - 2) **A free demo version for 14-30 days**, check details at <http://www.spss.com>
 - 3) **Rent** SPSS for 6 or 12 months, more details visit www.e-academy.com