ITM 601 SYLLABUS

ITM 601 Research Methods for Information Technology

Hours: 3 credit hours / 45 contact hours

Course Level: Graduate

Prerequisite: Admission to the Doctor of Philosophy in Information Technology program

Instructor: Ann Rangarajan

Textbook, title, author, and year: N/A

Specific course information:

Catalog description: This course prepares doctoral students to undertake independent research inquiry by providing an in-depth examination of applied research methods across a range of information technology disciplines. Students receive training in major research paradigms, principles of research design, research ethics, research theories and quantitative and qualitative methodologies as well as tools and techniques for data collection and analysis. Students will be encouraged to develop their own research agenda and design a research methodology to undertake their research.

Specific goals for the course

Course Outcomes: Each successful student will have developed critical thinking and practical skills to:

a. Critically evaluate the relevance of research in decision-making within academic and professional contexts
b. Examine research issues, methodologies, and methods used in information technology and management, as well potential ethical problems of research
c. Build critical thinking skills and analytical competences to identify a problem, translate it into a research question, and design an appropriate way to answer it
d. Constructively and critically evaluate the quality of other researcher's findings and the process used to obtain them
e. Distinguish between the main qualitative and quantitative strategies of formal research. Evaluate their advantages and disadvantages and appropriate application areas
f. Design a research project and collect data

Course Student Outcomes:

At the conclusion of this course, students will be able to:

- Synthesize extant literature and form an independent point of view
- Critically evaluate research papers
- Identify problem statements and formulate hypotheses
- Develop a research proposal to undertake research using appropriate research methodologies
- Create instruments for data collection
- Analyze findings qualitatively and quantitatively
- Effectively communicate research outcomes

Topics to be covered

a. Fundamentals of research inquiry
b. Research ethics
c. Research theories in information technology disciplines
d. Systematic reviews and meta-analysis
e. Research design
   1. Quantitative research methods
   2. Qualitative research methods
   3. Mixed methods research
   4. Designing a research project
      i. Writing research proposals
f. Research data
   1. Data collection techniques
   2. Data analysis techniques
   3. Software for data collection and analysis
g. Reflection on consequences of and challenges connected to methodological decisions and data analysis
h. Dissemination of research
   1. Publications
      i. Journals
      ii. Books
         1. Book chapters
   2. Conferences
   3. Other

Each ITM Departmental Syllabus represents a recent offering of the course. The instructor, textbook(s), course outcomes, and course student outcomes/learning objectives may vary in future semesters.

September 30, 2023