FCS3200 Exam I Review Notes

For all the concepts and procedures, you should

(1) know the meaning of the concepts and procedures,
(2) be able to judge what was done and whether it was a good job or not when given specific scenarios of research projects, and
(3) be able to apply the concepts and procedures when given specific research questions.

Exam I.

Chapter 1. Native human inquiry
*How we learn things: agreement reality, experiential reality
*Characteristics of native human inquiry: probabilistic causal model
*Common errors: inaccurate observation, overgeneralization, selective observation, etc.
*Two pillars of science: logic/rationality, observation
*Three major aspects of science: theory, research methods, statistics
*A variable language: attributes, variables, independent and dependent variables
*Some dialectics of social research: ideographic/nomothetic, inductive/deductive, qualitative/quantitative (most of these are covered in more detail in later chapters)

Chapter 2. Theory and research
*Some social science paradigms, especially macro vs. micro approaches
*Two logical systems: deduction, induction
*Deductive models - hypothesis testing – the traditional model of science
*Inductive models - grounded theory
*The interaction between deduction and induction

Chapter 3. The Ethics and politics of social research
*Voluntary participation
*No harm to the participants
*Anonymity and confidentiality
*Institutional Review Boards (IRBs)

Chapter 4. Research design
*Type of research: exploration, description, explanation
*Models of explanation: ideographic, nomothetic
*Three criteria for causality: time order, empirical correlation, no spurious relationship
*Necessary and sufficient causes
*False criteria for nomothetic causality: complete causation, exceptional cases, majority of cases
*Units of analysis: individuals, groups, formal social organizations, social artifacts
*Mistakes related to units of analysis: ecological fallacy, reductionism
*Time dimension: cross-sectional, longitudinal (trend, cohort, panel) and their relationships

Chapter 5. Conceptualization, operationalization, and measurement
*What is conceptualization
Chapter 6. Composite measures
* Why use composite measures: complexity of some concepts, refined measure, efficiency
* Three kinds of composite measures: index, scale, typology
* Constructing composite measures: item selection, examination of relationships among items, index scoring, handling missing data, index validation
* Common format for indexes and scales: Bogardus social distance scale, Thurstone scale, Likert scale, Semantic differential

Chapter 7. Sampling
* Probability sampling and non-probability sampling
* Concepts related to sampling: population, sample, element, study population, sampling unit, sampling frame, observation unit, variable, parameter, statistic, sampling error, confidence level, confidence interval
* Probability sampling theory and sampling distribution: random selection, sample size and sampling error, homogeneous population and sampling error, interpreting sampling error and confidence interval, normal distribution
* Methods of probability sampling: simple random sampling, systematic sampling, stratified sampling, multistage cluster sampling (PPS)
* Nonprobability sampling: judgmental sampling, quota sampling, reliance on available subjects (convenience sampling), snowball sampling

Chapter 8. Experiments
* Topics appropriate for experimental research
* The classical experimental design - procedure (random assignment, pretest, experimental stimulus, posttest)
* Pre-experimental designs: one-shot case study, one-group pre-test and post-test design, static-group comparison
* Internal validity: definition, causes of internal invalidity and remedies, double-blind experiment
* External validity: definition, causes of external invalidity and remedies, Solomon four-group design
* Strengths and weaknesses of the experimental method compared to other modes of observations
Chapter 9. Survey Research
* Topics appropriate to survey research
* Types of survey research: Self-administered surveys, Face-to-face interview surveys, Telephone surveys, Internet surveys
* Important issues related to each type and advantages and disadvantages of each
* The art of asking questions in survey research: stay neutral
* Strengths and weaknesses of survey research method compared to other modes of observations
* Guidelines for asking questions: open-ended vs. closed-ended, double-barreled, negative items, biased items, etc.

Chapter 10. Field Research
* Topics appropriate to field research
* The various roles of the researcher: complete participant, participant-as-observer, observer-as-participant, complete observer
* Important issues related to each role and advantages and disadvantages of each
* Reactivity and its impact on validity of field research
* Major field research paradigms: naturalism, ethnography, ethnomethodology, grounded theory, case study, the extended case method, institutional ethnography, participatory action research
* The process of field research: preparing for the field, sampling in field research, qualitative interviewing, recording observations -field journal
* Focus groups: advantages and disadvantages
* Strengths and weaknesses of field research method compared to other modes of observations
* Ethical issues in field research

Chapter 11. Unobtrusive Research
* Types of unobtrusive research: content analysis, analysis of existing statistics, historical/comparative analysis
* Content analysis: topics appropriate to content research, procedure of content analysis (units of analysis and units of observation, sampling, manifest coding and latent coding, conceptualization and the creation of code categories, counting and record keeping, statistical tests), strengths and weaknesses of content research
* Analyzing existing data: topics appropriate to using existing statistics, sources of existing statistics (The Statistical Abstract of the United States, ICPSR), strengths and weaknesses of analyzing existing data
* Historical/comparative research: topics appropriate to historical/comparative research, analytical techniques (verstehen, hermeneutics, ideal types)

Chapter 12. Evaluation Research
* Topics appropriate for evaluation research
* Procedure of evaluation research: identify the social intervention and the intended outcome, measurement of outcome, context and other control variables, mode of observation (classical experiment design, quasi-experimental designs: time series design, multiple time-series design, and non-equivalent control group design; evaluating success/failure: cost-benefit, agreement)
Common Problems with Evaluation Research: logistical problem, ethical issues, use of research results
Social Indicator research