

GC 530 — Research Methods in Procurement & Capture (14-week syllabus)

The discipline runs on claims: “our $pWin$ is 0.6,” “this certification is worth real money,” “this pricing posture wins.” Most of those claims have never been tested. This course teaches you how to test them — how to turn the folklore of capture into a researchable question, how to measure what you claim to measure, and how to say honestly what the evidence does and does not support. The doctorate tier builds directly on this course.

Course number: GC 530 · **Credits:** 3 · **Format:** 14 weeks, one 75-minute session per week (plus reading and a weekly research artifact). **Audience:** Graduate students in the MS in Capture Management & Government Business Development; required before the culminating capstone or thesis. **Prerequisites:** None beyond the program’s foundations. **Recommended:** GB 510 (analytical foundations) for students who need a statistics refresher — the course teaches statistics from the ground up but moves quickly. **Texts:** the doctrine and literacy folders of this repository; the course reader (research-design and statistics materials, all rendered at concept altitude). A spreadsheet is sufficient for computation; no statistical software required. The course is stack-agnostic by design (doctrine/08).

Learning outcomes

By the end of this course, a student can:

- Formulate a researchable question about procurement or capture and turn it into a testable hypothesis.
- Distinguish descriptive, causal, and predictive research designs — and know which question demands which design.
- Define a concept (win probability, capture readiness, price competitiveness) and operationalize it into a measurable variable with defensible validity and reliability.
- Identify the public data sources available for procurement research (award records, forecasts, registries, published debriefs) and their strengths and limitations.
- Read and produce descriptive statistics; explain what a sample can and cannot tell you about a population.
- Test a hypothesis with appropriate methods — and state the limits of the inference.
- Interpret a correlation or a simple regression without overstating what it proves.
- Design and execute a small qualitative study (case study, document analysis) with disciplined, transparent methods.

- Apply research ethics — especially the ethics of working with competitor and agency data in a procurement context.
- Write a research proposal worthy of the thesis or capstone: question, design, data, analysis, ethics, limitations.

Weekly schedule

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
1	The re-search-practice loop	Why capture professionals need research. The folklore of the discipline vs. what can be tested. How research feeds the learning loop.	doctrine/03; doctrine/07	Write three folklore claims from the discipline and turn each into a researchable question.
2	Research design	Descriptive, causal, predictive. The difference between “what happened,” “what caused it,” and “what will happen.” Confounds and the counterfactual.	the course reader on research design; doctrine/05	Design memo: for one folklore claim, state the design that would test it and what would count as evidence.

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
3	Measurement	Concepts → variables → measures. Validity (are we measuring the thing?) and reliability (is the measure consistent?). Operationalizing pWin, capture readiness, price competitiveness.	the course reader on measurement; doctrine/05	Operationalization exercise: define a measure for “capture readiness” and state its validity threats.
4	The public data substrate	What the public record makes possible: award data, contract forecasts, registries, published debriefs, bid-protest decisions. Strengths, gaps, and biases of each.	literacy/where-the-money-flows; the course reader on procurement data	Data memo: for your research question, identify the public data that would answer it, and what it cannot tell you.

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
5	Descriptive statistics	Distributions, central tendency, spread. Reading the shape of a market or a price band. The discipline of describing before explaining.	the course reader on statistics	Descriptive analysis: describe the distribution of award values in a chosen market segment; state what is typical and what is exceptional.
6	Sampling and inference	Samples, populations, and the leap of inference. Sampling bias in procurement data. Confidence and what it actually means.	the course reader on inference	Sampling memo: for your question, what is the population, what is a defensible sample, and what biases lurk in it?
7	Hypothesis testing	The logic of a statistical test: null, alternative, significance, and the difference between statistical and practical significance.	the course reader on hypothesis testing	Exercise: state and test a simple hypothesis about a public award dataset (e.g., do HUBZone set-asides differ in average award size?).

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
8	Correlation and regression	Association vs. causation. A simple regression, read honestly. What a coefficient does and does not claim.	the course reader on regression	Exercise: estimate a simple relationship in public data and state three confounds your analysis cannot rule out.
9	Midterm	In-class: critique a published procurement study — its design, measurement, and inference — and redesign the weak link.	(review weeks 1–8)	Midterm submission.
10	Qualitative methods	Case study, document analysis, interviews. When the numbers cannot carry the question, and how to do qualitative work with discipline.	the course reader on qualitative methods	Qualitative memo: design a small case study (e.g., of an incumbent displacement play) with a transparent evidence protocol.

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
11	Mixed methods	Combining the public record with interviews and cases. Triangulation and the value of more than one lens.	the course reader on mixed methods	Mixed-design sketch: combine quantitative award data with two qualitative cases to answer your research question.
12	Research ethics	The ethics of procurement research: public data, non-public employer data, competitor information, and the researcher's obligation to the truth. The wall between research and espionage.	doctrine/04; the course reader on research ethics	Ethics memo: state the ethical boundaries of your proposed study — what data you will use, what you will not, and why.
13	Writing the research proposal	The thesis/capstone proposal: question, design, data, analysis, ethics, limitations. Writing an argument a skeptical reviewer will fund.	the course reader on proposal writing	Draft the full research proposal for your capstone or thesis.

Week	Theme	In-session (75 min)	Reading / material	Assignment due next week
14	The proposal defense	Present and defend your research proposal before a faculty panel. Peer review of drafts.	(course synthesis)	Final research proposal, revised after defense.

Assessment summary

- **Weekly research artifacts — 40%.** A cumulative research journal: question, design, measurement, data, analysis, ethics.
- **Midterm — 20%.** Critique-and-redesign of a published study.
- **Research proposal — 30%.** The full proposal for the capstone or thesis, defended before a panel in Week 14.
- **Participation and peer review — 10%.**

The graduate rubric

Criterion	Excellent	Proficient	Developing
Design	The design answers the question; confounds are identified	Design mostly fits	Question and design disconnected
Measurement	Validity and reliability threats are named and managed	Threats partially addressed	Measured without justification
Inference discipline	Claims are precisely matched to what the evidence supports	Mostly disciplined	Overclaims causation
Ethics	Data boundaries are explicit and defensible	Boundaries implied	Unclear or unsafe
Communication	A skeptical reader can act on it	Readable	Unusable

Policies

- **Honesty is the method.** This course grades the discipline of saying what the evidence supports. Fabricated data, invented findings, or overstated conclusions fail the relevant assessment.
- **Public data, safe exercises.** All course data is public record or the student's own work product where ethics allow. No non-public competitor or agency information.
- **Late work.** An honest early warning beats a silent late submission.

The discipline has folklore and it has evidence. This course moves claims from the first column to the second.