Graduate Module — Advanced Finance: FAR Cost Principles, DCAA, CAS, TINA (GC 540)

The session-by-session teaching plan for GC 540. Follows the module contract in `modules/module-template.md`, extended to the 14-week graduate arc. The pricing and cost canon is always at concept altitude (doctrine/08); no assignment requires a specific product. A spreadsheet is the only tool a student needs.

Audience: graduate students in the MS program. **Prerequisites:** GC 501 or concurrent. **Readings:** the doctrine and literacy folders, the course reader of FAR/standards excerpts. **Case object:** Ravonics and real, published-and-closed contracts.

Session 1 — The anatomy of contract money

Learning objectives. By the end of this session, students can: (1) decompose a contract's money into cost, fee, and price; (2) explain which number is contested; (3) state why price is built last.

Session plan (75 min). - Open (5 min): "You won a $1M contract. Is $1M the number that matters?" - Teach (25 min): doctrine/05 + the pricing canon at concept altitude. Cost, fee, price; the building order; where the contest happens. - Apply (25 min): decompose a real (published, closed) award into cost, fee, and price as best the public record shows. - Discuss (15 min): "Why does the industry obsess over the award value when the contested number is underneath it?" - Close (5 min): assignment.

Discussion prompts. 1. What does the public award value hide? 2. When is price the easiest number to change and the most consequential?

Homework / reading. Read doctrine/05. Deliverable: an anatomy memo of a real award.

Comprehension check. What are cost, fee, and price? Why is the price built last?

Session 2 — Direct vs. indirect cost

Learning objectives. By the end of this session, students can: (1) define direct and indirect cost; (2) classify expense items; (3) explain why the classification matters.

Session plan (75 min). - Open (5 min): "Is your CEO's salary a cost of this contract?" - Teach (25 min): the course reader on cost accounting. Direct costs (labor, ODCs, travel, subs) vs. indirect costs (fringe, overhead, G&A); the classification decision. - Apply (25 min): classify twenty expense items as direct or indirect with reasoning. - Discuss (15 min): "Who decides the classification, and why does it matter to the price?" - Close (5 min): assignment.

Discussion prompts. 1. When is an expense genuinely direct? 2. What happens when a cost is misclassified?

Homework / reading. Read the course reader. Deliverable: a classification exercise with reasoning.

Comprehension check. What is the difference between direct and indirect cost? Why does classification matter?

Session 3 — The burden chain

Learning objectives. By the end of this session, students can: (1) build a fully-burdened billing rate; (2) show each burden layer; (3) explain the burden multiplier.

Session plan (75 min). - Open (5 min): "Your developer costs $50/hour. What do you bill?" - Teach (25 min): the burden-chain canon at concept altitude (the rate-composer concept). Fringe on direct labor, overhead on the accumulated base, G&A, fee at the end. - Apply (25 min): build a fully-burdened billing rate from a direct rate and four burden percentages, layer by layer. - Discuss (15 min): "What does the burden multiplier hide from a customer — and what should it show?" - Close (5 min): assignment.

Discussion prompts. 1. Why does the order of the burden layers matter? 2. What makes a burden rate defensible to an auditor?

Homework / reading. Read the burden-chain canon. Deliverable: a worked burden-chain problem.

Comprehension check. What is the burden chain? What is a burden multiplier?

Session 4 — FAR Part 31 cost principles

Learning objectives. By the end of this session, students can: (1) state the three tests — allowability, allocability, reasonableness; (2) apply them to a cost; (3) identify unallowable costs.

Session plan (75 min). - Open (5 min): "The government will not pay for your company picnic. Where is that written?" - Teach (25 min): the course reader on FAR Part 31 + doctrine/04. The three tests; the judgment each requires; unallowable costs. - Apply (25 min): apply the three tests to three real (sanitized) costs. - Discuss (15 min): "Which test is the hardest to defend — allowability, allocability, or reasonableness?" - Close (5 min): assignment.

Discussion prompts. 1. What is a reasonable cost, and who decides? 2. How does the unallowable-cost trap set itself?

Homework / reading. Read the course reader. Deliverable: a case memo applying the three tests.

Comprehension check. What are the three tests of a cost? What makes a cost unallowable?

Session 5 — Cost Accounting Standards

Learning objectives. By the end of this session, students can: (1) explain what CAS standardizes; (2) state when CAS applies; (3) describe a disclosure statement.

Session plan (75 min). - Open (5 min): "What does it mean for a firm's accounting to be 'compliant'?" - Teach (25 min): the course reader on CAS. Consistency, cost accounting, allocation bases; the disclosure statement; non-compliance. - Apply (25 min): compare CAS discipline with good-enough bookkeeping, and trace where CAS binds pricing flexibility. - Discuss (15 min): "Why does the government care how a firm accounts for its own costs?" - Close (5 min): assignment.

Discussion prompts. 1. What does consistency actually protect? 2. When is CAS a competitive burden, and when is it a quality signal?

Homework / reading. Read the course reader. Deliverable: a comparison memo on CAS discipline.

Comprehension check. What does CAS standardize? What is a disclosure statement?

Session 6 — DCAA and the audit life

Learning objectives. By the end of this session, students can: (1) explain the audit agency's role across the contract life; (2) prepare a firm for an audit; (3) build a DCAA-readiness checklist.

Session plan (75 min). - Open (5 min): "An auditor is coming. What do you show them first?" - Teach (25 min): the course reader on DCAA. Pre-award, forward pricing, incurred-cost audits; what auditors look for. - Apply (25 min): build a DCAA-readiness checklist for a firm that prices cost-type work — provisional rates to the audit. - Discuss (15 min): "Is an audit a threat or a discipline? Both — explain." - Close (5 min): assignment.

Discussion prompts. 1. What is the difference between a pre-award and an incurred-cost audit? 2. What makes a firm audit-ready as a habit, not a scramble?

Homework / reading. Read the course reader. Deliverable: a DCAA-readiness checklist.

Comprehension check. What is the audit life? What does an auditor look for?

Session 7 — TINA: the truth-in-negotiation rule

Learning objectives. By the end of this session, students can: (1) state when TINA requires certified cost or pricing data; (2) explain what the certificate attests; (3) state the defective-pricing consequence.

Session plan (75 min). - Open (5 min): "You disclosed your cost estimate. You left out your best rate. What happens?" - Teach (25 min): the course reader on TINA. Certified cost or pricing data; the certificate; defective pricing; the difference between cost data and cost judgment. - Apply (25 min): a fact pattern — determine whether TINA applies, what must be disclosed, and what a defective disclosure would cost. - Discuss (15 min): "Why is an honest cost disclosure a strategic asset, not a vulnerability?" - Close (5 min): assignment.

Discussion prompts. 1. What is the difference between cost data and judgment? 2. Why does the government require the certificate above the threshold?

Homework / reading. Read the course reader. Deliverable: a TINA scenario memo.

Comprehension check. When does TINA apply? What is defective pricing?

Session 8 — Contract type as financial risk

Learning objectives. By the end of this session, students can: (1) map cost risk across contract types; (2) explain the fee mechanism of each; (3) connect contract type to the margin floor.

Session plan (75 min). - Open (5 min): "Same work. FFP or CPFF — which is the better business?" - Teach (25 min): doctrine/05 + the contract-type and margin-floor canon at concept altitude. FFP, T&M, FFP-LoE, CPFF, CPAF, CPIF; who bears risk; the floor. - Apply (25 min): build the contract-type risk/fee/floor matrix. - Discuss (15 min): "Why does the margin floor differ by contract type?" - Close (5 min): assignment.

Discussion prompts. 1. Which contract type best aligns the firm's incentive with the customer's? 2. When does a higher floor make you less competitive — and why keep it?

Homework / reading. Read doctrine/05. Deliverable: the contract-type risk/fee/floor matrix.

Comprehension check. How does contract type allocate financial risk? Why do floors differ by type?

Session 9 — Midterm

Learning objectives. By the end of this session, students demonstrate: (1) cost classification; (2) burden-chain skill; (3) principles and TINA posture.

Session plan (75 min). - Open (5 min): exam logistics. - Exam (65 min): a case cost structure is distributed. Students classify, build the burden chain, apply the principles, and state the TINA posture. - Close (5 min): what to review for the second half.

Discussion prompts. n/a (examination).

Homework / reading. Review weeks 1–8. Deliverable: midterm submission.

Comprehension check. n/a.

Session 10 — Building the cost volume

Learning objectives. By the end of this session, students can: (1) structure a cost volume at the CLIN level; (2) extend labor, ODC, travel, and sub lines; (3) justify every line.

Session plan (75 min). - Open (5 min): "A cost volume is a contract with the customer about what the price means." - Teach (25 min): the cost-volume canon at concept altitude. CLIN/sub-CLIN structure; labor, ODCs, travel, subcontracts; line extensions and justifications. - Apply (25 min): build a cost volume for a case pursuit — every line with a justification. - Discuss (15 min): "Which line is the first an auditor attacks?" - Close (5 min): assignment.

Discussion prompts. 1. Why must every ODC and travel line carry a justification? 2. How does the CLIN structure serve the customer's budget review?

Homework / reading. Read the cost-volume canon. Deliverable: a cost volume for a case pursuit.

Comprehension check. What is a CLIN? Why must every line be justified?

Session 11 — The basis of estimate

Learning objectives. By the end of this session, students can: (1) write a BOE for a cost element; (2) state the rate basis, hours basis, and escalation basis; (3) make a BOE credible to an auditor.

Session plan (75 min). - Open (5 min): "'Trust me' is not a basis of estimate. What is?" - Teach (25 min): the BOE canon at concept altitude. The rate basis, the hours basis, the escalation basis, the vendor quote; what makes a BOE credible. - Apply (25 min): write full BOEs for the three largest cost elements in your cost volume. - Discuss (15 min): "What separates a defensible BOE from a guess with a title?" - Close (5 min): assignment.

Discussion prompts. 1. When is a historical rate a defensible basis? 2. What does a BOE need to survive an auditor's question?

Homework / reading. Read the BOE canon. Deliverable: full BOEs for three cost elements.

Comprehension check. What is a BOE? What are the bases a BOE must document?

Session 12 — Price-to-win, with the floor

Learning objectives. By the end of this session, students can: (1) set the three pricing anchors; (2) compute the margin at target; (3) apply the escalation ladder when the floor fails.

Session plan (75 min). - Open (5 min): "The competitor band, the affordability ceiling, and the cost floor. Which one wins?" - Teach (25 min): doctrine/05 + the price-to-win and floor-discipline canon at concept altitude. The three anchors; strategy selection; the margin at target; the escalation ladder. - Apply (25 min): set the price-to-win for a case pursuit; show the anchors, the margin, and the escalation if the floor fails. - Discuss (15 min): "When the floor cannot be honored at any price below the ceiling, what is the move?" - Close (5 min): assignment.

Discussion prompts. 1. Which anchor dominates in an LPTA, and which in best-value? 2. Why does a floor breach require a human escalation, not a silent override?

Homework / reading. Read doctrine/05. Deliverable: the price-to-win memo with anchors, margin, and escalation.

Comprehension check. What are the three pricing anchors? What is the escalation ladder?

Session 13 — Cost-technical reconciliation

Learning objectives. By the end of this session, students can: (1) prove the price is the technical proposal in money; (2) write a reconciliation memo; (3) identify mismatches.

Session plan (75 min). - Open (5 min): "Your technical volume promises a 20-person team. Your cost volume shows ten. Which one is the proposal?" - Teach (25 min): the reconciliation canon at concept altitude + doctrine/05. The cost-technical link; the reconciliation memo as the auditable record. - Apply (25 min): reconcile a case cost volume with its technical volume; state every mismatch. - Discuss (15 min): "Where do cost and technical volumes most commonly drift apart?" - Close (5 min): assignment.

Discussion prompts. 1. Why is the reconciliation memo signed before submission? 2. What does a mismatch reveal about the strategy?

Homework / reading. Read doctrine/05. Deliverable: a reconciliation memo for a case pursuit.

Comprehension check. What is cost-technical reconciliation? Why must the memo be signed?

Session 14 — The financial life of a pursuit

Learning objectives. By the end of this session, students can: (1) govern B&P budgets; (2) manage the financial life of a pursuit; (3) defend a complete pricing volume.

Session plan (75 min). - Open (5 min): "The price is submitted. The financial life of the pursuit continues. What changes?" - Teach (15 min): course synthesis — B&P budgets, cash flow, margin discipline, the record that outlasts the contract. - Apply (35 min): panel defense of the final pricing volumes; the panel includes a pricing practitioner. - Discuss (15 min): "Which finance concept will you use first in your own work?" - Close (5 min): bridge to GE 610 and the capstone.

Discussion prompts. 1. How does B&P budgeting govern which pursuits a firm can afford to run? 2. What is the record a firm must keep after the contract ends?

Homework / reading. Course synthesis. Deliverable: final pricing volume for a case pursuit, defended.

Comprehension check. How does finance govern the pursuit life? What is the one idea you will carry forward?