SIG UNIVERSITY
CERTIFYING SOURCING AND RISK LEADERS

COURSE SYLLABUS

Game Theory in Negotiations (GTIN)

SIG University's Game Theory in Negotiations (GTIN) program equips procurement professionals with the tools and strategies to apply game theory in their supplier negotiations, enabling them to maximize their savings and achieve their ideal commercial outcomes.

The following guide will provide you with all the necessary information about this program offered by SIG University.

About SIG University

SIG University was founded on the ideals of elevating sourcing and risk professionals to deliver strategic value to the corporation. It is an inclusive, internationally recognized university with a mission of advancing the sourcing and risk management industries and transforming careers.

SIG University was created at the request of SIG members, who saw an educational training gap for today's workforce. It uses an adult learning model to transfer the knowledge and skills to its students. The learning model is focused on the self-directed learner, who has the basic knowledge and skills of the material, is motivated, has good time management skills, and has the ability to self-evaluate.

The SIG University learning model is supported by a practitioner faculty who currently hold senior leadership positions in sourcing and risk management, allowing them to guide students to a better learning outcome.

Classroom Format

This program is offered online in a self-paced model, allowing for ultimate flexibility for you or your organization's needs.

Our state of the art learning management system can be accessed from any device and saves the student's progress from where they left off. This allows students to balance their busy schedules and pause, replay, or pick back up when is most convenient for them.

In this delivery model, there are no essay requirements.

*For this program, students must complete all graduation requirements within 3 months of starting. Graduation requirements include completing all lessons, completing all quizzes and reviewing all supplemental resources.

What is Game Theory in Procurement?

Game theory is a powerful branch of economics that focuses on understanding and shaping strategic interactions to optimize outcomes. In procurement, it enables buyers to design competitive negotiations that compel suppliers to deliver their best solutions and prices, enabling procurement to maximize savings and achieve their negotiation objectives.

When designed correctly, competitive negotiations with game theory will outperform traditional bilateral negotiations. However, since no two negotiations are alike, procurement teams face the critical challenge of creating the “game” best suited to their specific objectives and constraints in each negotiation. This training equips participants to make informed decisions about tradeoffs in negotiation design, empowering them to achieve the best outcomes in any scenario.

What will I learn in this course?

This 7-week course blends theoretical knowledge with practical application to cover:

- **Core Principles of Game Theory:** Understand the fundamentals of game theory and how they are relevant and can be applied to procurement negotiations.
- **Auction Design and Execution:** Master the different procurement auction formats and design decisions, understand the tradeoffs of each decision, and determine under what circumstances each format is the strongest.
- **Total Cost of Ownership (TCO):** Quantify non-cost factors between suppliers to create an apple-to-apple comparison and enable competition in more complex categories.
- **Stakeholder Engagement:** Learn to secure buy-in for new competitive negotiation methods and overcome subjective stakeholder bias.
- **Supplier Communication Strategies:** Understand how to explain the new negotiation process to suppliers effectively and how to handle concerns, questions, or resistance.
- **Case Studies:** Understand how to put theory into practice through case studies from real negotiations in different procurement categories.

Who should take this course?

This program is ideal for:

- Professionals directly involved in procurement negotiations with suppliers (e.g., category managers, procurement engineers, supplier account managers)
- Cross-functional colleagues who have supplier contact and contribute to negotiations

Whether you're a seasoned professional or new to procurement, this training should provide you with additional expertise to drive better negotiation outcomes.

How is the course structured?

The GTIN Program is a seven-week learning journey that takes approximately **1-2 hours per week** to complete.

Each week you will:

Learn

Dive into the content through modules and interactive case studies.

Discuss

Engage in a faculty-led asynchronous discussion forum.

Assess

Complete quizzes to assess your retention and track progress.

What can I expect after completing the course?

In addition to the knowledge, skills, and tools gained, those who have completed the GTIN program have loved the learning experience provided and can immediately apply what they learned. All graduates of the GTIN program are issued a digital badge to include on their CVs and LinkedIn profiles.

Graduates of the GTIN program are invited to join the SIG University Alumni and Faculty private LinkedIn group to stay connected with peers and faculty.

Additionally, SIG University graduates receive 10% off additional certifications!

Who is the Subject Matter Expert?

Zoe Pangalos

Principal

NERA Economic Consulting

Zoe Pangalos works within NERA's market design practice where she helps her clients optimize the outcomes of their supplier negotiations through the application of game theory and behavioral economics.

She has extensive experience in negotiation strategy and tactics across a wide range of direct and indirect procurement categories and has advised on procurement negotiations for companies and governmental bodies throughout the Americas, Europe, and Asia-Pacific. She has also designed and delivered global negotiation trainings in game theory, auction design, and behavioral economics and their application in procurement.

Course Outline

The program is self-paced with e-learning modules. Below is a listing of the modules of the program and what topics they cover.

Each module includes:

- Engaging video lectures
- Compelling slides and visual aides

Week 1 : Game Theory 101

This week introduces the fundamentals of game theory, focusing on defining games and their key aspects. Students will learn to identify problems that can be addressed using game theory and explore solutions to simultaneous games by finding the equilibrium. The week also includes an in-depth examination of the Prisoner's Dilemma.

Week 2: Game Theory in Procurement

Students will apply game theory to procurement by solving the Suppliers' Dilemma and understanding how incomplete information impacts decision-making. The concept of mechanism design will also be introduced to provide a framework for structuring procurement strategies.

Week 3: Auction Theory and Formats

This week focuses on auction theory, emphasizing when and why auctions should be used. Students will define and differentiate between various auction formats, gaining a deeper understanding of their strategic applications.

Week 4: Procurement Auctions

Students will learn to select the appropriate auction format for different procurement scenarios. Key auction types will be defined and examined in detail, including multi-round auctions, English/Japanese auctions, and Dutch auctions.

Week 5: Total Cost of Ownership

This week explores the concept of Total Cost of Ownership (TCO), highlighting its benefits and importance in procurement. Students will identify and evaluate three TCO supplier evaluation criteria categories to enhance decision-making processes.

Week 6: Stakeholder and Supplier Communication

Students will focus on effective communication strategies with stakeholders and suppliers. Topics include determining when and how to involve stakeholders, the types of information to share with suppliers, hosting supplier communication sessions, and establishing effective auction rules. The week concludes with an overview of key features of eAuction tools.

Week 7: Case Studies

The final week applies theoretical knowledge to real-world scenarios, examining how auctions are implemented across various procurement categories. Students will analyze case studies to understand the practical applications of procurement strategies.

What are the enrollment fees?

Non-SIG Member Price: **$1,995**

SIG Member Price: **$1,395**

What are my next steps?

Enroll today at:

https://go.sig.org/game-theory-in-negotiations-request-to-enroll

View our other courses and certifications and learn more about SIG U at:

https://sig.org/sig-university