

Procurement and Strategic Sourcing

35E02000, 6 ECTS

SYLLABUS

Winter 2022

| Instructors' contact information | Course information |
|---|--|
| Prof. Katri Kauppi katri.kauppi [at] aalto.fi Ekonominaukio 1, room T208 Office Hours by appointment | Status of the course 2022, Period 3 Language of Instruction: English Course Website: https://mycourses.aalto.fi/course/view.php?id=32823 |
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1. OVERVIEW

This syllabus describes the basic principles and content of the course 35E02000 Procurement and Strategic sourcing taught in the third period of academic year 2021-2022 starting in January 2022. The course is intended to master level students interested in deepening their knowledge in procurement and supply management related topics.

2. PREREQUISITES

It is recommended that students have taken 35A00310 Tuotantotalous OR 35A00210 Operations Management OR equivalent course in another institution before this course.

3. LEARNING OUTCOMES

After the course you will possess a set of skills and knowledge that qualifies you for sourcing, purchasing and supply management jobs such as buyer, sourcing specialist, and procurement analyst. You are able to compare alternative sources of supply, develop holistic purchasing processes, and build tools for daily operative management. You also understand the impact of purchasing and supply management on firm performance.

4. ASSESSMENT AND GRADING

This course is graded 100% based on assignments and in-class games. 50% is required to pass the course.

Specifically, 30% of course grade is gained by participation in three separate in-class purchasing games:

- Beat the Dice – supply risk game (10% of grade based on participation)
- Design a contract! – contracting game (10 % of grade based on participation)
- Negotiation game (10% of grade based on participation)

Students get the 10% of grade based on being actively present in class/online throughout the full game/exercise (and having conducted the required preparations), i.e., this is not performance based.

If you are unable to participate in one of the games/exercises (see dates in schedule below), please contact the instructor for an alternative assignment (worth 10% but graded, i.e., a performance-based alternative assignment and requiring substantially more effort).

35% of the course grade is gained by two graded **group-work** assignments:

- Case assignment 15 %
- Spend analysis exercise 20%

35% of the grade is gained by two **individual** assignments:

- Invoice classification via machine learning (10%), conducted either by participating in a workshop or individually at home
 - **Note: No previous experience** with machine learning is required to receive a high grade. Students with no prior experience can choose the workshop alternative where they are helped through the steps of the invoice classification task.
- Personal term essay based on the course material and submitted at the end of the course (25%)

Extra 5% to raise one's grade can be achieved through active lecture participation (4% = 0.5% per lecture from the 2nd lecture onwards, games not included) and by answering to the course feedback (1%). Does not affect passing the course (i.e., if one's total grade is below 50%).

For details and instructions of the assignments, see the appropriate sections in the MyCourses page of the course.

5. READINGS

Collection of articles, book chapters and reports (rights for changes reserved).

Lecture 1 – Purchasing theory, future and objectives

- Forder J., Robinson R., Hardy B. (2005). Theories of purchasing. In J. Figueras, R. Robinson, E. Jakubowski (Eds.) *Purchasing to Improve Health Systems Performance*. 83-101. Open University Press: Maidenhead, UK.
- Hughes J., Ertel D. (2016). The reinvention of procurement. *Supply Chain Management Review* May/June, 18-23.

Lecture 2 – Purchasing strategy, impact on performance and purchasing categorization

- Hespings, F. H., & Schiele, H. (2015). Purchasing strategy development: A multi-level review. *Journal of Purchasing and Supply Management*, 21(2), 138-150.
- Gelderman, C. and van Weele, A. (2002). Strategic Direction through Purchasing Portfolio Management: A Case Study. *Journal of Supply Chain Management* 38(2), 30–37.

Lecture 3 – Organization of purchasing activities

- Karjalainen, K. (2011). Estimating the cost effects of purchasing centralization—Empirical evidence from framework agreements in the public sector. *Journal of Purchasing and Supply Management*, 17(2), 87–97
- Kauppi, K., & Van Raaij, E. M. (2015). Opportunism and honest incompetence—seeking explanations for noncompliance in public procurement. *Journal of Public Administration Research and Theory*, 25(3), 953-979.

Lecture 4 – Global sourcing & Outsourcing and service sourcing

- Vitasek, K. (2020). A better way to OUTSOURCE. *Supply Chain Management Review*, 24(6), 28-30,32-35.
- Ellram, L., & Tate, W. L. (2015). Redefining supply management' s contribution in services sourcing. *Journal of Purchasing and Supply Management*, 21(1), 64-78.
- Taponen, S., & Kauppi, K. (2017). Forget “blind leading the seeing”—Improving public service management. *International Journal of Public Administration*, 40(13), 1114-1128.

Lecture 5 – Total cost of ownership

- Gray, J. V., Helper, S., & Osborn, B. (2020). Value first, cost later: Total value contribution as a new approach to sourcing decisions. *Journal of Operations Management*, 66(6), 735-750.
- Platts, K. W., & Song, N. (2010). Overseas sourcing decisions-the total cost of sourcing from China. *Supply Chain Management: An International Journal*, 15(4), 320-331.

Lecture 6 – Supplier selection and supply risk management + risk game

- Simchi-Levi, D., Schmidt, W. and Wei, Y. (2014), From Superstorms to Factory Fires: Managing Unpredictable Supply Disruptions. *Harvard Business Review*, 1-2, 96-101.
- Alikhani, R., Torabi, S. A., & Altay, N. (2019). Strategic supplier selection under sustainability and risk criteria. *International Journal of Production Economics*, 208, 69-82.

Lecture 7 – Analytics in procurement

- Handfield, R., Jeong, S., & Choi, T. (2019). Emerging procurement technology: data analytics and cognitive analytics. *International Journal of Physical Distribution & Logistics Management*, 49(10), 972-1002.
- Limberakis, C. (2012). Spend Analysis: Lessons from the Best-in-Class. *Supply Chain Management Review*, Vol. 16, No. 2, pp. 10-19
- Merchan, D. (2019). Mistaken beliefs blunt the effectiveness of machine learning. *Supply Chain Management Review*, 23(2), 8-10.
- Nabi J. (2018). Machine Learning – Fundamentals: Basic theory underlying the field of Machine Learning. *Towards Data Science* (online): <https://towardsdatascience.com/machine-learning-basics-part-1-a36d38c7916>

Lecture 8 – Analytics in procurement continued

- Same as above plus pre-lecture video material

Lecture 9 – Public procurement

- Jääskeläinen J, & Tukiainen J., (2019). Anatomy of public procurement. VATT Working papers.
- McCue, C. P., Prier, E., & Swanson, D. (2015). Five dilemmas in public procurement. *Journal of Public Procurement*, 15(2), 177-207.

Lecture 10 – Contracting and behavioral purchasing

- Albano G., Calzolari G., Dini F., Iossa E., Spagnolo G. (2006). Procurement contracting strategies. In N. Dimitri, G. Piga, G. Spagnolo (Eds.) *Handbook of Procurement*, 82-100. Cambridge University Press: Cambridge, UK.
- Kahneman, D., Rosenfield, A. M., Gandhi, L., & Blaser, T. (2016). NOISE: How to overcome the high, hidden cost of inconsistent decision making. *Harvard Business Review*, 94(10), 38-46.

Lecture 11 – Value-based procurement

- Töytäri, P., Keränen, J., & Rajala, R. (2017). Barriers to implementing value-based pricing in industrial markets: A micro-foundations perspective. *Journal of Business Research*, 76, 237-246.
- Deloitte (2018). *How to eat the Value-based Procurement elephant? A Deloitte point of view*

6. SCHEDULE

| N.o. | Date & location | Topic | Game participation Assignment Out / Due |
|------|---|---|--|
| 1 | Tuesday 11 th of January 13-15 | Course introduction Purchasing theory & future, Purchasing objectives | |
| 2 | Thursday 13 th of January 13-17 | Purchasing impact on performance and purchasing tools Purchase categories and portfolios | Case assignment handed out |
| 3 | Tuesday 18 th of January 13-15 | Organization of purchasing activities | |
| 4 | Thursday 20 th of January 13-17 | Global sourcing Outsourcing Service sourcing | |
| 5 | Tuesday 25 st of January 13-15 | Case discussion Total cost of ownership | Case assignment (15%) due on Monday 24 th of January at 12:00 pm (noon) |
| 6 | Thursday 27 rd of January 13-17 | Supply risk management and supplier selection Beat the dice game | Game participation (10%) |
| 7 | Tuesday 1 st of February 13-15 | Analytics in procurement: Procurement data, prescriptive analysis and forecasting | Spend analysis assignment handed out |
| 8 | Thursday 3 rd of February 13-17 | Analytics continued: Classification workshop | Invoice classification assignment (10%) due on Sunday 6 th of February at 23:59 |
| 9 | Tuesday 8 th of February 13-15 | Public procurement | |
| 10 | Thursday 10 th of February 13-17 | Contracting and behavioral purchasing Design a contract! – contracting game | Game participation (10%) |
| 11 | Tuesday 15 th of February 13-15 | Value-based procurement | Spend analysis (20%) due on Tuesday, 15 th of February, 12:00 pm (noon) |
| 12 | Thursday 17 th of February 13-17 | Spend analysis discussion Negotiation game | Game participation (10%) |
| | Monday 28 th of February | | Term essay due (20%) |

7. COURSE WORKLOAD

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| Classroom hours | 36h |
| Independent and group work (reading material + assignments) | 124h |
| Total | 160h (6 op) |

Breakdown of independent and group work (124 h):

- Lecture preparations (reading the given material + reflection): 11 x 5 h = 55 h
- Case assignment: 15 h
- Spend analysis exercise: 20 h
- Invoice classification assignment: 9 h (including pre-readings, workshop, reflection),
- Term essay: 25 h

8. ETHICAL RULES

Aalto University Code of Academic Integrity and Handling Thereof

<https://into.aalto.fi/display/ensaannot/Aalto+University+Code+of+Academic+Integrity+and+Handling+Violations+Thereof>

9. OTHER ISSUES

Registration through Sisu before start of the course.

Course material and all course-related information and announcement will be shared through MyCourses. All assignments are submitted through MyCourses.

Please, ensure that you have e-mail notifications turned on in MyCourses in order to receive all relevant course notifications.