University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2025

7,049 | 8,049: Digital Platforms: Foundations, Management, Governance and Regulation

ECTS credits: 6

Overview examination/s

(binding regulations see below)
central - Written examination, Analog, Individual work individual grade (100%, 120 mins.)
Examination time: Lecture-free period

Attached courses

Timetable -- Language -- Lecturer
8,049,1.00 Digital Platforms: Foundations, Management, Governance and Regulation -- English -- Hein Andreas

Course information

Course prerequisites

This course is associated of the MBI profile «Transforming and Managing Digital Business» and the «Business Development» profile, but may be also attended by students from other MBI profiles or other Master programmes.

Learning objectives

In today's rapidly evolving digital landscape, digital platforms play a crucial role across industries, from established tech giants and startups to traditional incumbents and non-profits. These platforms facilitate the creation and capture of immense value through network effects, user engagement, and data monetization, making the understanding of their dynamics essential for modern business professionals.

The lecture *"Digital Platforms: Foundations, Management, Governance and Regulation"* is designed to equip future leaders with the knowledge and skills necessary to navigate the complex ecosystem of digital platforms. This course emphasizes the strategic, economic, and technological foundations of digital platforms, focusing on their value-creation mechanisms and the regulatory challenges they present.

By enrolling in this lecture, students will learn to analyze the value of digital platform ecosystems and understand the economic principles that underpin the platform economy. They will gain insights into the technological infrastructure that supports these platforms and explore how these technologies enable platforms to operate and innovate. Additionally, the course will explore the regulatory landscape, teaching students to balance the benefits and drawbacks of different regulatory approaches and to formulate effective governance strategies for platform ecosystems.

Ultimately, this lecture will empower students to become adept at managing and governing digital platforms, preparing them for roles such as platform strategists, managers, engineers, and regulatory officers. As the demand for talent in platform-based companies continues to rise, with established companies like Microsoft and Apple, as well as startups, seeking professionals who can sustain and grow their platform ecosystems, this course provides a critical foundation for those looking to excel in this dynamic field.

1. Strategic Understanding of Digital Platforms

- **Learning Goal:** Develop a comprehensive understanding of digital platforms as a transformative force in modern industries.
    - Analyze the value of digital platform ecosystems and their mechanisms for value creation.
    - Understand and apply the economic principles underpinning the platform economy.

- Explain the importance of digital platforms as a digital transformation strategy and illustrate their industry-transforming potential with examples.
- Evaluate strategies for launching and scaling digital platform ecosystems, tailoring approaches to different contexts.

2. Technological Foundations of Digital Platforms

- **Learning Goal:** Grasp the technological infrastructure enabling digital platforms and assess its role in innovation and scalability.
  - Explain the technological foundations of digital platforms and their role in ecosystem value creation.
  - Apply the concept of modularity and evaluate architectural patterns, including trade-offs, to manage platform complexity.
  - Understand how specific technologies contributed to the emergence of digital platform ecosystems.

3. Economic and Competitive Dynamics

- **Learning Goal:** Understand the economic mechanisms driving platform ecosystems and their competitive dynamics.
  - Explain pricing mechanisms in transaction platforms and compare them to traditional firms.
  - Analyze transaction platforms using concepts like multi-homing and platform envelopment.
  - Understand the sources of monopoly power in digital platforms and evaluate their externalities and regulatory implications.

4. Governance and Regulation

- **Learning Goal:** Develop the ability to design and evaluate governance and regulatory strategies for digital platforms.
  - Explain how digital platforms navigate regulatory trade-offs and manage tensions in ecosystem governance.
  - Analyze and evaluate governance mechanisms employed by platform owners and their impact on ecosystem actors.
  - Understand the concept of digital sovereignty, including key regulations and their effects on platform ecosystems.

Course content

This course is structured into five comprehensive parts, comprising 12 on-site lectures. The goal is to impart state-of-the-art knowledge from academia, illustrated through real-life platform examples, combining theoretical insights with practical applications. Each session will be accompanied by mandatory readings to help students better understand the relevance of the topics discussed.

Part 1: Introduction to Digital Transformation and Digital Platforms as a Strategy

Lectures 1-2: This part provides an overview of digital transformation and positions digital platforms as a digital transformation strategy within this context. Students will learn about the key characteristics of digital platforms and their role in driving digital transformation across various industries.

Part 2: Economic Foundations

Lectures 3-5: This section covers the economic principles underlying digital platforms. Topics include transaction and innovation platforms, network effects, pricing mechanisms, competition, and the quality of complementary products or services. Students will explore how these economic concepts are applied in real-life platforms to create and sustain value.

Part 3: Technological Foundation

Lecture 6-7: Focusing on the technological aspects, this part covers the architectural principles and patterns that ensure scalable innovation and efficient transactions. Students will learn about the technological infrastructure that supports digital platforms and how it enables continuous innovation.

Part 4: Management of Digital Platforms

Lectures 8-10: This section focuses on the management of digital platforms. It includes strategies for launching digital platforms, co-creating value in an ecosystem of autonomous actors, and governance mechanisms to manage this value co-creation. Students will learn about the challenges and best practices in managing platform ecosystems effectively.

Part 5 Regulation

Lectures 11-12: This section addresses the regulatory landscape of digital platforms. Topics include platform dominance, sources of (monopoly) power, and platform regulation strategies, along with the tradeoffs involved. Students will examine real-world regulatory cases and discuss the implications of different regulatory approaches.

Through these five parts, students will gain a comprehensive understanding of digital platforms, from their economic and technological foundations to their regulatory and managerial aspects. This course prepares students to analyze, manage, and innovate within the dynamic landscape of digital platforms, equipping them with the skills needed to excel in roles such as platform strategists, managers, engineers, and regulatory officers.

Course structure and indications of the learning and teaching design

This course employs interactive learning methods, combining state-of-the-art knowledge with real-life cases to illustrate key concepts. Lectures are designed to engage students by incorporating contemporary topics on digital platforms. The final exam is a 120-minute written assessment covering the topics discussed during lectures and mandatory readings.

The course is structured to account for a total of 6 credits, equating to 180 hours of student workload. This includes self-study, campus time, and examinations. The breakdown of this workload ensures comprehensive learning and application of course material.

Contact Study:

Lectures: The course comprises 18 hours of lectures, where foundational concepts of digital platforms are presented. These sessions will blend theoretical insights with practical examples to enhance understanding and engagement.

Final Examination: At the end of the course, students will take a 90-minute written exam assessing their grasp of the material covered in lectures and readings.

Self-Study:

Preparation for Lectures: Students are expected to spend 48 hours preparing for lectures, ensuring they have the necessary background knowledge and are ready to engage in interactive sessions.

Weekly Readings: 48 hours are allocated for reading and comprehending mandatory materials that complement lecture topics and deepen students' understanding.

Exam Preparation: Students should allocate 66 hours to prepare for the final written exam, consolidating their knowledge and practicing applying concepts.

Location:

The course will be conducted in person in St. Gallen, providing students with the opportunity to engage directly with instructors and peers. This setting facilitates a collaborative and immersive learning environment, enhancing the overall educational experience.

Course literature

Literature (mandatory readings):

Anderson Jr, E. G., Parker, G. G., & Tan, B. (2023). Strategic investments for platform launch and ecosystem growth: A dynamic analysis. *Journal of Management Information Systems*, *40*(3), 807-839. https://doi.org/https://doi.org/10.1080/07421222.2023.2229125

Eisenmann, T., Parker, G., & Van Alstyne, M. W. (2006). Strategies for two-sided markets. *Harvard Business Review*, *84*(10), 92.

Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, *43*(7), 1239-1249. https://doi.org/10.1016/j.respol.2014.03.006

Hein, A., Schreieck, M., Riasanow, T., Soto Setzke, D., Wiesche, M., Böhm, M., & Krcmar, H. (2020). Digital platform ecosystems. *Electronic Markets*, *30*(1), 87–98. https://doi.org/10.1007/s12525-019-00377-4

Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, *39*(8), 2255-2276. https://doi.org/10.1002/smj.2904

Jacobides, M. G., Cennamo, C., & Gawer, A. (2024). Externalities and complementarities in platforms and ecosystems: From structural solutions to endogenous failures. *Research Policy*, *53*(1), 104906. https://doi.org/10.1016/j.respol.2023.104906

Jullien, B., Pavan, A., & Rysman, M. (2021). Two-sided markets, pricing, and network effects. In *Handbook of industrial organization* (Vol. 4, pp. 485-592). Elsevier. https://doi.org/https://doi.org/10.1016/bs.hesind.2021.11.007

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, *57*, 339-343. https://doi.org/https://doi.org/10.1007/s12599-015-0401-5

McIntyre, D. P., & Srinivasan, A. (2017). Networks, platforms, and strategy: Emerging views and next steps. *Strategic Management Journal*, *38*(1), 141-160. https://doi.org/10.1002/smj.2596

Möhlmann, M., Zalmanson, L., Henfridsson, O., & Gregory, R. (2021). Algorithmic Management of Work on Online Labor Platforms: When Matching Meets Control. *MIS Quarterly*, *45*(4), 1999-2022.

Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, *4*(2), 155-169. https://doi.org/ttps://doi.org/10.1007/BF01405730

Roberts, H., Cowls, J., Casolari, F., Morley, J., Taddeo, M., & Floridi, L. (2021). Safeguarding European values with digital sovereignty: an analysis of statements and policies. *Internet Policy Review, Forthcoming*. https://doi.org/https://doi.org/10.14763/2021.3.1575

Tiwana, A., Konsynski, B., & Bush, A. A. (2010). Research commentary - Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. *Information Systems Research*, *21*(4), 675-687. https://doi.org/10.1287/isre.1100.0323

Wareham, J., Fox, P. B., & Cano Giner, J. L. (2014). Technology ecosystem governance. *Organization Science*, *25*(4), 1195-1215. https://doi.org/10.1287/orsc.2014.0895

Additional course information

--

Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination modalities

Examination type	Written examination
Responsible for organisation	central
Examination form	Written exam
Examination mode	Analog
Time of examination	Lecture-free period
Examination execution	Synchronous
Examination location	On Campus

University of St.Gallen

Grading type	Individual work individual grade
Weighting	100%
Duration	120 mins.

Examination languages
Question language: English
Answer language: English

Remark
--

Examination-aid rule
Closed Book

The use of aids is prohibited as a matter of principle, with the exception of pocket calculator models of the Texas Instruments TI-30 series and, in case of non-language exams, bilingual dictionaries without any handwritten notes. Any other aids that are admissible must be explicitly listed by faculty members in the paragraph entitled “Supplementary aids” of the course and examination fact sheet; this list is exhaustive.

Procuring any aids, as well as ensuring their working order, is the exclusive responsibility of students.

Supplementary aids

There are no examination aids allowed.

Examination content

The exam will evaluate students' understanding of the strategic role of digital platforms. Students will be expected to explain the core concepts of digital transformation, differentiating between digitization, digitalization, and digital transformation, and applying these concepts to real-world scenarios. They will also need to illustrate the impact of digital platforms on industries, clarifying how platforms drive innovation and scale through mechanisms such as decoupling and network effects.

Furthermore, the examination will cover the economic foundations of digital platforms, including the dynamics of two-sided and multi-sided markets, pricing mechanisms, and network effects. Students should be able to analyze transaction platforms based on their economic models, including the influence of multi-homing and platform envelopment. Additionally, the exam will assess students' ability to understand and apply concepts related to the technological and regulatory aspects of digital platforms, such as addressing innovation failures, managing complexity through modularity, and navigating the regulatory landscape.

The exam will also cover the management and governance of digital platform ecosystems. Students will need to demonstrate their understanding of monopoly power, digital sovereignty, and the strategic and regulatory challenges platforms face. They should be prepared to discuss launch and growth strategies for platform ecosystems, the roles of various actors within these ecosystems, and the mechanisms of value co-creation. Finally, the examination will test students' knowledge of organizational control strategies and the governance mechanisms employed by platform owners to manage ecosystem dynamics and tensions.

Examination relevant literature

Literature (mandatory readings):

- Anderson Jr, E. G., Parker, G. G., & Tan, B. (2023). Strategic investments for platform launch and ecosystem growth: A dynamic analysis. Journal of Management Information Systems, 40(3), 807-839. https://doi.org/https://doi.org/10.1080/07421222.2023.2229125
- Eisenmann, T., Parker, G., & Van Alstyne, M. W. (2006). Strategies for two-sided markets. Harvard Business Review, 84(10), 92.
- Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. Research Policy, 43(7), 1239-1249. https://doi.org/10.1016/j.respol.2014.03.006

- Hein, A., Schreieck, M., Riasanow, T., Soto Setzke, D., Wiesche, M., Böhm, M., & Krcmar, H. (2020). Digital platform ecosystems. Electronic Markets, 30(1), 87–98. https://doi.org/10.1007/s12525-019-00377-4
- Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. Strategic Management Journal, 39(8), 2255-2276. https://doi.org/10.1002/smj.2904
- Jacobides, M. G., Cennamo, C., & Gawer, A. (2024). Externalities and complementarities in platforms and ecosystems: From structural solutions to endogenous failures. Research Policy, 53(1), 104906. https://doi.org/10.1016/j.respol.2023.104906
- Jullien, B., Pavan, A., & Rysman, M. (2021). Two-sided markets, pricing, and network effects. In Handbook of industrial organization (Vol. 4, pp. 485-592). Elsevier. https://doi.org/https://doi.org/10.1016/bs.hesind.2021.11.007
- Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. Business & Information Systems Engineering, 57, 339-343. https://doi.org/https://doi.org/10.1007/s12599-015-0401-5
- McIntyre, D. P., & Srinivasan, A. (2017). Networks, platforms, and strategy: Emerging views and next steps. Strategic Management Journal, 38(1), 141-160. https://doi.org/10.1002/smj.2596
- Möhlmann, M., Zalmanson, L., Henfridsson, O., & Gregory, R. (2021). Algorithmic Management of Work on Online Labor Platforms: When Matching Meets Control. MIS Quarterly, 45(4), 1999-2022.
- Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. Policy sciences, 4(2), 155-169. https://doi.org/ttps://doi.org/10.1007/BF01405730
- Roberts, H., Cowls, J., Casolari, F., Morley, J., Taddeo, M., & Floridi, L. (2021). Safeguarding European values with digital sovereignty: an analysis of statements and policies. Internet Policy Review, Forthcoming. https://doi.org/https://doi.org/10.14763/2021.3.1575
- Tiwana, A., Konsynski, B., & Bush, A. A. (2010). Research commentary - Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. Information Systems Research, 21(4), 675-687. https://doi.org/10.1287/isre.1100.0323
- Wareham, J., Fox, P. B., & Cano Giner, J. L. (2014). Technology ecosystem governance. Organization Science, 25(4), 1195-1215. https://doi.org/10.1287/orsc.2014.0895

Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.
Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW21) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 13 (Monday, 25 March 2025) are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 04 (Thursday, 23 January 2025);
- Examination information (supplementary aids, examination contents, examination literature) for decentralised examinations: in CW 12 (Monday, 17 March 2025);
- Examination information (supplementary aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 14 (Monday, 31 March 2025);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before ending with de-registration period in CW 15 (Monday, 07 April 2025).