University of St.Gallen

Course and Examination Fact Sheet: Spring Semester 2025

8,012: Methods: Managing Enterprise Architecture for Digital Transformation

ECTS credits: 3

Overview examination/s

(binding regulations see below)
decentral - Written examination, Analog, Individual work individual grade (100%, 90 mins.)
Examination time: Term time

Attached courses

Timetable -- Language -- Lecturer
8,012,1.00 Methods: Managing Enterprise Architecture for Digital Transformation -- English -- Winter Robert , Haki Kazem

Course information

Course prerequisites

None.

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

Learning objectives

- Students understand the fundamental problems of enterprise wide coordination in the context of information systems.
- Students understand the conceptual principles, forms of implementation, benefits and challenges of architectural coordination.
- Students can analyze the coordinative challenges in practical application cases, assess possible solutions and make informed recommendations in the context of architectural coordination.

Course content

Generally, IT-supported business solutions are developed according to the specific requirements of an organization's units and thereby focus, for example, on specific function(s), product group(s), market(s), or geography/ies. Following the latter approach for a long period of time results in significant redundancies and / or inconsistencies, which in turn endanger the efficiency of the business processes and their underlying IT applications as well as their flexibility in dealing with ever-changing environmental conditions. In addressing this challenge, several approaches are brought to the fore such as IT architecture that only considers the IT components, business architecture that only concerns the business components, or data architecture that only interest in the data aspect. To account for a multi-aspect and comprehensive perspective, Enterprise Architecture Management (EAM) has been established as a management subdiscipline that covers the entirety of an organization's IT-supported business solutions (from all units of an organization) over their entire life cycle. EAM aims to systematically control the complexity of the whole system (i.e., the entirety of an organization's IT-supported business solutions), to eliminate inconsistencies among the system's individual constituents and to leverage synergies among them. In addition, EAM puts business innovation initiatives into a holistic perspective and integrates them appropriately into the system as a whole. In particular, for large-scale innovation or transformation initiatives such as Digital Transformation, EAM is of utmost importance to ensure that digital transformation activities are systematically executed, dependencies are considered and "the whole is more than the sum of its parts".

The course is closely informed by recent research discourses as well as by current case examples from practice.

In particular, the course will cover the following topics:

- EAM basic concepts and necessity
- EAM benefits and use
- Architecture complexity, transparency and simplification EAM processes, principles, planning and control
- EA representation, meta models
- EAM's tools for EA modelling and analysis
- EAM evolution: EAM maturity, current EAM developments in research and practice

Course structure and indications of the learning and teaching design

- Weekly sessions. 2-3 guest lecturers will be invited to present contemporary EAM practice and tool support.
- The structure of the self-study is intended as follows: 36 hours of preparation and reflection time for the lectures and 30 hours for the preparation of the final examination.
- The course is conducted in presence.
- This course counts 3 credits. Accordingly, the total estimated workload for students is 90 hours. This includes self-study, campus time and all examinations.

Course literature

The presentations of the HSG lecturers and the guest lecturers will be made available on canvas; They are the most important basis for exam preparation.
In addition, supplementary materials such as articles, book chapters, white papers, etc. will be provided in StudyNet for preparing and reflecting each session.

Additional course information

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Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination modalities

Examination type	Written examination
Responsible for organisation	decentral
Examination form	Written exam
Examination mode	Analog
Time of examination	Term time
Examination execution	Synchronous
Examination location	On Campus
Grading type	Individual work individual grade
Weighting	100%
Duration	90 mins.

Examination languages

Question language: English
Answer language: English

Remark

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Examination-aid rule
Open Book

Students are free to choose aids, apart from the following restrictions:

- pocket calculator models which are not part of the Texas Instruments TI-30 series, as well as any programmable electronic devices that are capable of communication such as electronic dictionaries, notebooks, tablets, smartphones, headsets, additional screens, etc. are not admissible;

- there is an option for faculty members to explicitly define exceptions under supplementary aids.

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

Supplementary aids
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Examination content
- In the written examination, students will have to identify and apply a certain selection of the presented concepts and techniques of architectural coordination in (hypothetical) practical settings.
- Students will have to analyze the coordinative challenges, assess possible solutions and make informed recommendations.

Examination relevant literature
All recommended materials will be available on canvas one week before classes to allow for adequately preparing for the course.

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).