Socio-Technical Information Systems Design

(Socio-Technical Information Systems Design)

Modulnummer	Workload	Credits	Häufigkeit des Angebots	Dauer
32291	300 h	10	jedes Semester	1 Semester

1 Lehrveranstaltungen

Einheit	Titel	Workload
1	Socio-Technical Information Systems Design	300 h

2 Lernergebnisse (learning outcomes) / Kompetenzen

In this module, students will acquire the following skills:

1. Students possess a fundamental knowledge of systems theory and how socio-technical information systems fit into this theoretical framework. This includes knowledge of several relevant definitions and how the social and technical system interact within a socio-technical information system to achieve mutual benefit, as well as the distinction between information technology and information systems.
2. Students understand the historical roots of the socio-technical paradigm and how it has developed since its inception at the Tavistock Institute after the Second World War.
3. Students develop a deep understanding of theoretical perspectives on socio-technical information systems, such as institutional theory, actor-network theory, and sociomateriality. They understand how these theoretical lenses relate to the socio-technical view and what aspects they address.
4. Students possess fundamental knowledge of organizations and their processes from a socio-technical perspective. They understand how business processes are identified, modeled, monitored, and improved.
5. Students understand how socio-technical thinking can improve the development of information technology and information systems. They have acquired knowledge of socio-technical development methods.
6. Students understand how individuals and their motivations, aspirations, expectations, and needs influence the design, development, and adoption of information technology and information systems.

3 Inhalte

In this module, we will explore the complex interactions between the multiple social and technical actors in a socio-technical information system.

The module consists of seven chapters and a supplemental glossary:

Chapter 1 – Introduction –

The first chapter presents the motivation for studying socio-technical information systems and illustrates why a purely technical perspective is not sufficient.

Chapter 2 – Systems Theory & Information Systems –

The second chapter covers basic terminology and defines the important terms for this module. This chapter explains why it is important to study socio-technical information systems. A deep dive into systems theory provides the theoretical framework for the following chapters.

Chapter 3 – Background and History –

The third chapter explains the origins of the socio-technical paradigm. This chapter presents the historical background of the socio-technical approach, which originated at the Tavistock Institute in Great Britain. Starting from a purely technical view with Frederick Taylor’s Scientific Management, the negative consequences of a purely technical paradigm are shown in the aftermath of the Second World War. The socio-technical approach and its development over the following years are explained.

	Chapter 4 – Theoretical Perspectives and Lenses – The fourth chapter shows how the socio-technical systems approach in information systems relates to various theories. The theories covered include institutional theory, structuration theory, actor-network theory, boundary objects, and sociomateriality. Each theory is explained and illustrated with an example research article. The fit of each theory with the socio-technical paradigm is evaluated. Chapter 5 – The Organization – The fifth chapter examines how organizations function as socio-technical systems and serve as the surrounding structure for individuals' work with socio-technical information systems. This chapter explores the importance of organizational structure and organizational processes. Chapter 6 – Information Technology – The sixth chapter describes the socio-technical design of information technology and information systems. Based on theoretically grounded design frameworks, key steps in human-centered design as well as various tools are presented. Chapter 7 – The Individual – The seventh chapter covers perspectives on the individual within socio-technical information systems. Individuals, through their motivations, attitudes, and behaviors, have a substantial impact on the successful adoption and use of socio-technical information systems. This chapter covers various psychological factors of the individual that influence the adoption and use of information systems. Glossary The supplemental glossary contains important definitions of terms from various areas of information systems.
4	**Lehrformen** Fernstudium mit Betreuung, zeitlich und räumlich flexibel, mit folgenden Elementen: – didaktisch aufbereiteter Studientext mit Übungsaufgaben und Beispielen (gedruckt sowie als pdf-Datei) – Moodle-Lernumgebung mit zusätzlichen Vorlesungs- und Übungselementen
5	**Teilnahmevoraussetzungen** Formal: Gemäß Prüfungsordnung des jeweiligen Studienganges Inhaltlich: Lehre und Prüfung erfolgen in englischer Sprache. Entsprechende Sprachkenntnisse sind zwingend notwendig. Ansonsten sind keine speziellen Voraussetzungen erforderlich.
6	**Prüfungsformen** Zweistündige Abschlussklausur, die in englischer Sprache gestellt wird und in englischer oder deutscher Sprache absolviert werden kann.
7	**Voraussetzungen für die Vergabe von Kreditpunkten** Die Leistungspunkte werden vergeben, wenn die Abschlussklausur bestanden worden ist. Voraussetzung für die Teilnahme an der Abschlusssklausur ist das Bestehen mindestens einer von zwei Einsendearbeiten. Die Einsendearbeiten werden in englischer Sprache gestellt. Sie können in englischer oder deutscher Sprache bearbeitet werden.
8	**Verwendung des Moduls** Masterstudiengang Wirtschaftswissenschaft Masterstudiengang Wirtschaftsinformatik Masterstudiengang Wirtschaftswissenschaft für Ingenieur/-innen und Naturwissenschaftler/-innen Akademiestudium

9	**Stellenwert der Note für die Endnote** Gemäß Prüfungsordnung des jeweiligen Studienganges
10	**Modulbeauftragte/r und hauptamtlich Lehrende** Univ.-Prof. Dr. Julia Krönung
11	**Sonstige Informationen** -