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## 42030 - Medienrezeptions- und Wirkungsforschung

### 42030 - Media Reception- and Effect Studies

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General information	
<b>Module Code</b>	42030
<b>Unique Identifier</b>	MedRecepEffe-01-MA-M
<b>Module Leader(s)</b>	Prof.Dr. Rupert-Kruse, Patrick (patrick.rupert-kruse@haw-kiel.de)
<b>Lecturer(s)</b>	Schulz, Lea (lea.schulz@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	No
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Pflichtmodul Semester: 2

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Nach erfolgreichem Abschluss verfügen die Studierenden über folgende Kompetenzen gemäß der zweiten Stufe des Qualifikationsrahmens für Deutsche Hochschulabschlüsse (HQR): <ul style="list-style-type: none"> <li>- für die Analyse und Konzeption von Medien relevante Kenntnisse zu den Prozessen und Komponenten der Medienrezeption und daraus resultierenden Wirkungen zu demonstrieren</li> <li>- die kognitiven Grundlagen der menschlichen Informationsverarbeitung zu erklären</li> <li>- die Rezeptions- und wirkungsästhetische Dimensionen audio-visueller Emotionen und Kognitionen zu erläutern</li> <li>- die wirkungsästhetischen Strategien unterschiedlicher Medien zu diskutieren</li> <li>- Konzepte, Theorien und Methoden der Rezeptionsforschung zu unterscheiden und analysieren zu können</li> <li>- Verfahren und Techniken, mit denen emotionale, psychosoziale und kognitive Reaktionen auf mediale Angebote überprüft werden können, zu beurteilen</li> </ul>

<b>Content information</b>	
<b>Content</b>	<p>Das Modul behandelt die physiologischen und psychologischen Grundlagen menschlicher Wahrnehmung, die kognitiven Grundlagen der menschlichen Informationsverarbeitung und diskutiert, inwiefern diese die Grundlage für die Rezeption und Wirkung von Medien bilden.</p> <p>Darüber hinaus wird thematisiert, welcher ästhetischer und technologischer Strategien sich Medien bedienen, um bestimmte Prozesse und Effekte (wie etwa Involvement, Verstehen, Behalten, Wissen) im Rezipienten hervorzurufen.</p> <p>Im Fokus der Veranstaltung stehen somit diejenigen Prozesse, die in der Medienrezeption aktiv sind und diese maßgeblich beeinflussen. Um sich diesen zu nähern, sollen Erkenntnisse, Theorien und Ansätze aus der Medienpsychologie, der Medienrezeptions- und Wirkungsforschung dargestellt, analysiert, diskutiert und angewendet werden. Hierbei gilt es zudem zu untersuchen, wie diese Theorien, Ansätze und Methoden der Medienrezeptions- und -Wirkungsforschung auf konvergente Mediensysteme und Multiscreen-Szenarien angewendet werden können.</p>
<b>Literature</b>	<p>Bente, Gary / Mangold, Rainer / Vorderer, Peter (2004): Lehrbuch der Medienpsychologie. Hogrefe.</p> <p>Bonfadelli, Heinz / Friemel, Thomas N. (2011): Medienwirkungsforschung. 4., völlig überarbeitete Auflage. UTB.</p> <p>Schweiger, Wolfgang / Fahr, Andreas (2013): Handbuch Medienwirkungsforschung. Springer VS.</p> <p>Trepte, Sabine / Reinecke, Leonard (2012): Medienpsychologie. Kohlhammer.</p> <p>Trepte, Sabine / Hasebrink, Uwe / Schramm, Holger (Hg.) (2009): Strategische Kommunikation und Mediengestaltung - Anwendung und Erkenntnisse der Rezeptions- und Wirkungsforschung. Fischer.</p> <p>Wünsch, Carsten / Schramm, Holger / Gehrau, Volker / Bilanzic, Helena (Hg.) (2014): Handbuch Medienrezeption. Nomos.</p> <p>Weitere aktuelle Literatur für das Modul wird zu Beginn des Semesters von den hauptamtlich Lehrenden bekannt gegeben.</p>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag	2
Übung	2

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>42030 - Hausarbeit</b>	<p>Method of Examination: Hausarbeit</p> <p>Weighting: 100%</p> <p>wird angerechnet gem. § 11 Satz 2 PVO: No</p> <p>Graded: Yes</p> <p>Remark: The results of the homework are presented to the class. The final version of the homework should be updated after the discussion of the presentation</p>

<b>Miscellaneous</b>	
<b>Miscellaneous</b>	Die detaillierte Beschreibung der Prüfungsleistung wird zu Beginn des Semesters bekannt gegeben.

## 60530 - Social media and information environment

### 60530 - Social media and information environment

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<b>General information</b>	
<b>Module Code</b>	60530
<b>Unique Identifier</b>	SocialMedInf-01-BM-M
<b>Module Leader(s)</b>	Dr. Bucholtz, Ianis (ianis.bucholtz@haw-kiel.de)
<b>Lecturer(s)</b>	Dr. Bucholtz, Ianis (ianis.bucholtz@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Upon completion of this module students will: <ul style="list-style-type: none"> <li>• Be familiar with the main concepts related to social media, social networks and social networking sites;</li> <li>• See social media in the historical perspective of the development of new media;</li> <li>• Have an insight into some of the areas in which social media make an impact on society;</li> <li>• Understand the main issues that surround contemporary social media in the context wider contemporary information environment</li> </ul>

- Be able to evaluate critically some of the popular claims regarding the role of social media in society
  -
- Be able to reason about how the outcomes of online media result from both their technological affordances and social context in which the technologies are being used
- Take part in a collaborative environment such as Wikipedia by learning to edit it
- Students will work in groups on a course project on how people of different generations use social media;
  - During classes, students will discuss various issues of social media
- Students will gather and analyze information, and formulate their findings in a written report;
  - They will sharpen their critical thinking and media literacy skills through evaluation of online content

### Content information

Content	
	<ol style="list-style-type: none"> <li>1. The concepts and definitions of social media</li> <li>2. The history and development trends of social media</li> <li>3.</li> </ol>
	<p>The experiences and generational differences of social media use</p> <ol style="list-style-type: none"> <li>4. The presentation of self online</li> <li>5. The basics of network science</li> <li>6. The addiction and distraction on social media</li> <li>7. Wikipedia and the collaborative generation of knowledge</li> <li>8. Social media algorithms</li> <li>9. The issues of oversight and content moderation on social media platforms</li> <li>10. Alternative social media</li> <li>11. Fake news</li> <li>12. Artificial intelligence and social media</li> <li>13. Digital surveillance &amp; privacy</li> <li>14. Influencers and social media content creators</li> </ol>

<b>Literature</b>	<p>Baym, N. K. (2015). Social Media and the Struggle for Society. <i>Social Media + Society</i>, 1(1).</p> <p>Barabási, A. L. (2011). Introduction and keynote to A networked self. In Z. Papacharissi (Ed.), <i>A networked self: Identity, community, and culture on social network sites</i>. (pp. 1–14). New York: Routledge.</p> <p>Chayka, K. (2023). Why the internet isn't fun anymore. <i>New Yorker</i>, Oct. 9, 2023. <a href="https://archive.ph/YlhvR">https://archive.ph/YlhvR</a></p> <p>Granovetter, M. S. (1973). The strength of weak ties. <i>American Journal of Sociology</i>, 78(6), 1360–1380.</p> <p>Hao, K. (2021). How Facebook got addicted to spreading misinformation. <i>MIT Review</i>. 11.03.2021.</p> <p>Holloway, J. (2018). What on Earth is the fediverse and why does it matter? <i>New Atlas</i>, 18.09.2018.</p> <p>Jasanoff, S. (2021). The dangerous appeal of technology-driven futures. <i>MIT Technology Review</i>, 30.06.2021.</p> <p>Lee-Won, R. J., Shim M., Joo, Y. K., &amp; Park, S. G. (2014). Who puts the best "face" forward on Facebook?: Positive self-presentation in online social networking and the role of self-consciousness, actual-to-total Friends ratio, and culture. <i>Computers in Human Behavior</i>, 39, 413–423.</p> <p>Leslie, I. (2016). The scientists who make apps addictive. <i>1843 Magazine</i>. 20.10.2016.</p> <p>Lewallen, J., &amp; Behm-Morawitz, E. (2016). Pinterest or Thinterest?: Social Comparison and Body Image on Social Media. <i>Social Media + Society</i>, 2(1).</p> <p>Miller, D. Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., Wang, X. (2016). <i>How the world changed social media</i>. London: University College London.</p> <p>Morozov, E. (2013). The real privacy problem. <i>MIT Technology Review</i>, Oct 22, 2013.</p> <p>Papacharissi, Z. (2009). The virtual geographies of social networks: a comparative analysis of Facebook, LinkedIn and ASmallWorld. <i>New Media &amp; Society</i>, 11(1&amp;2), 199–220.</p> <p>Ryan-Mosley, T. (2021). Beauty filters are changing the way young girls see themselves. <i>MIT Technology Review</i>. 2.04.2021.</p> <p>Royal, C., Kapila, D. (2009). What's on Wikipedia, and what's not...?: Assessing completeness of information. <i>Social Science Computer Review</i>, 27(1), 138–148.</p> <p>Wodtke, C., &amp; Govella, A. (2009). <i>Information architecture: Blueprints for the web</i>. Berkeley: New Riders.</p>
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### Teaching formats of the courses

Teaching format	SWS
Lehrvortrag + Übung	4

### Workload

Number of SWS	4 SWS
Credits	5,00 Credits
Contact hours	48 Hours
Self study	102 Hours

### Module Examination

Examination prerequisites according to exam regulations	None
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<b>60530 - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
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<b>Miscellaneous</b>	
<b>Miscellaneous</b>	A detailed description of the module examination will be announced at the beginning of the semester.

## 60750 - Creative Society (engl.)

### 60750 - Creative Society

General information	
<b>Module Code</b>	60750
<b>Unique Identifier</b>	CreaSoc-01-BM-M
<b>Module Leader(s)</b>	Prof. Dr. Kacerauskas, Tomas (tomas.kacerauskas@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Kacerauskas, Tomas (tomas.kacerauskas@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Upon completion of this module students will be able to further develop and deepen their knowledge and professional competences in one or more specific media. They have had the opportunity to review as well as compare and contrast some of the fundamental hypothesis in media and communication studies by looking into particular case studies and media applications.
By way of case studies, individual students or small groups of students will be able to identify problems, formulate research questions and apply appropriate methods.
The students can present and discuss their approaches and findings with fellow students or external partners; they can react to possible criticism professionally and can revise their own approaches accordingly.
The students are able to reflect critically upon their research by referring to good academic practices and professional standards.

<b>Content information</b>	
<b>Content</b>	The content is as follows: (1) Concepts of creativity and culture; (2) Culture industry and creative industries; (3) Managing creativity and the creative life-art; (4) Creative ecology, creative ethics and creative geography; (5) Creative regionalism and creative urbanism; (6) Politics of creativity and entertainment; (7) Sociability of creativity; (8) Technologies and creative identity; (9) The empiricism of creativity; (10) Creative phenomenology. The teaching methods are as follows: lectures, discussions, and reading of the scientific literature.
<b>Literature</b>	Florida, R. 2012. The Rise of Creative Class – revisited. New York: Basic Books. Howkins, J. 2013. The creative economy. London: Penguin. Kacerauskas, T. 2015. Creative Society: Concepts and Problems. Cultura – International Journal of Philosophy of Culture and Axiology 12 (2): 27–44.

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Seminar	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>60750 - Präsentation</b>	Method of Examination: Präsentation Duration: 10 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Miscellaneous</b>	A detailed description of the module examination will be announced at the beginning of the semester.

## 60890 - Journalism in Practice - Writing for the Online News Portal "FHEWS" (engl.)

## 60890 - Journalism in Practice - Writing for the Online News Portal "FHEWS" (engl.)

General information	
<b>Module Code</b>	60890
<b>Unique Identifier</b>	JournPractWr-01-BM-M
<b>Module Leader(s)</b>	Dr. Möller, Christian (christian.moeller@haw-kiel.de)
<b>Lecturer(s)</b>	Dr. Möller, Christian (christian.moeller@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Basic journalistic skills in writing, research, analysis, photography, social media and content management systems (Wordpress).
Creation of editorial structures and journalistic content.
Teamwork and self-organization in editorial work.
Understanding of the role of journalism in democratic society and basic knowledge of media ethics.

### Content information

<b>Content</b>	Participants will learn about different journalistic forms and writing skills for (online) media. They will produce English language online news articles for the FHEWS blog and social media (www.fhews.de). Participants will organize the editorial and newsroom structure, identify topics, do the editorial planning, research, writing and photography. Also video and other news formats –from audio slideshows to Instastories- are possible. This seminar is for journalistically interested, curious and self-starting students that like to write.
<b>Literature</b>	The Missouri Group: News Reporting and Writing. 12th Edition. Macmillan. Additional literature will be provided.

### Teaching formats of the courses

Teaching format	SWS
Seminar	4

### Workload

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

### Module Examination

<b>Examination prerequisites according to exam regulations</b>	None
<b>60890 - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

### Miscellaneous

<b>Recommended Prerequisites</b>	Good English writing skills.
<b>Miscellaneous</b>	The detailed description of the examination will be announced at the beginning of the semester.

## 60920 - Public Relations in the European Union

## 60920 - Public Relations in the European Union

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<b>General information</b>	
<b>Module Code</b>	60920
<b>Unique Identifier</b>	PubReltEurUn-01-BM-M
<b>Module Leader(s)</b>	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
<b>Lecturer(s)</b>	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Upon completion of this module students will be able to understand the basics of the functioning of the Institutions of the European Union and the challenges of communication on EU level. They have had the opportunity to review as well as compare and contrast some of the fundamental topics the European Union is working on by discussing particular case studies as well as looking into the different kind of European communication in the memberstates of the EU with a focus on the impacts on businesses and associations.
By way of case studies, individual students or small groups of students will be able to identify problems, formulate research questions and apply appropriate methods by attending dicussion rounds with experts in Brussels.
The students can present and discuss their approaches and findings regarding the European Union. They can manage to work in international teams and are aware of the need for businesses and associations to work on European topics.

The students are able to reflect critically upon their research by referring to good academic practices and professional standards and discuss that with EU-experts.

**Content information**

<b>Content</b>	In the context of discussions with external experts in Brussels, the knowledge acquired is compared and expanded with the practical work of international communication at the European level.
<b>Literature</b>	<p>European Commission (2024): The EU - what it is and what it does. Op.europa.eu. <a href="https://op.europa.eu/webpub/com/eu-what-it-is/en/">https://op.europa.eu/webpub/com/eu-what-it-is/en/</a> [access: 21.05.2025]</p> <p>Kaeding, M. (2024): Enlargement and the Future of Europe. Springer Cham</p> <p>Korkman, S. (2005): Economic Policy in the European Union. London: Palgrave Macmillan</p> <p>Nedergaard, P. (2007): European Union administration: legitimacy and efficiency. Boston: Nijhoff</p> <p>Kleine, M. (2013): Informal governance in the European Union: how governments make international organizations work. Ithaca: New York Cornell University Press</p>

**Teaching formats of the courses**

Teaching format	SWS
Seminar	4

**Workload**

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

**Module Examination**

<b>Examination prerequisites according to exam regulations</b>	None
<b>60920 - Projektbezogene Arbeiten</b>	<p>Method of Examination: Projektbezogene Arbeiten</p> <p>Weighting: 100%</p> <p>wird angerechnet gem. § 11 Satz 2 PVO: No</p> <p>Graded: Yes</p>

<b>Miscellaneous</b>	
<b>Miscellaneous</b>	<p>An excursion to Brussels during the IDW (3.11.-6.11.) is the basis of this seminar. In addition - in consultation with the students -two online-meetings will take place in order to prepare for the excursion and for the examination. Students are responsible for travelling to and from Brussels as well as for their own accommodation and meals. Only a small part of their travel expenses can be reimbursed afterwards. It is recommended to arrive in Brussels on Monday and to leave on Thursday. The appointments with experts in the EU institutions, company representatives and associations will take place during Tuesday morning and Wednesday evening. Further information will be provided after successful registration.</p> <p>A detailed description of the module examination will be announced at the beginning of the semester.</p>

## 60960 - Visual Campaign

## 60960 - Visual Campaign

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<b>General information</b>	
<b>Module Code</b>	60960
<b>Unique Identifier</b>	VisCamp-01-BM-M
<b>Module Leader(s)</b>	Prof. Lewe, Thomas (thomas.lewe@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Lewe, Thomas (thomas.lewe@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Sommersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Upon completion of this module students will be able to further develop and deepen their knowledge and professional competences in one or more specific media. They have had the opportunity to review as well as compare and contrast some of the fundamental hypothesis in media and communication studies by looking into particular case studies and media applications.
By way of case studies, individual students or small groups of students will be able to identify problems, formulate research questions and apply appropriate methods.
The students can present and discuss their approaches and findings with fellow students or external partners; they can react to possible criticism professionally and can revise their own approaches accordingly.
The students are able to reflect critically upon their research by referring to good academic practices and professional standards.

<b>Content information</b>	
<b>Content</b>	By strategic planning, the students will develop a visual campaign for a given client / task. A main focus will be on the design thinking process as a central method for developing a campaign. The final product will be a concept presentation and drafts of visualisation material.
<b>Literature</b>	A compendium (online) will be available upon the start of the course. Additional reading might be added.

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Seminar	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>60960 - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Miscellaneous</b>	A detailed description of the module examination will be announced at the beginning of the semester.

## 61140 - Radioplay – radio drama – from the Idea to the finished product

## 61140 - Radioplay – radio drama – from the Idea to the finished product

General information	
<b>Module Code</b>	61140
<b>Unique Identifier</b>	RadPlayRadio-01-BM-M
<b>Module Leader(s)</b>	B.A. Ujc, Oliver (oliver.ujc@haw-kiel.de)
<b>Lecturer(s)</b>	B.A. Ujc, Oliver (oliver.ujc@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Upon completion of this module students will be able to further develop and deepen their knowledge and professional competences in one or more specific media. They have had the opportunity to review as well as compare and contrast some of the fundamental hypothesis in media and communication studies by looking into particular case studies and media applications.
By way of case studies, individual students or small groups of students will be able to identify problems, formulate research questions and apply appropriate methods.
The students can present and discuss their approaches and findings with fellow students or external partners; they can react to possible criticism professionally and can revise their own approaches accordingly.

The students are able to reflect critically upon their research by referring to good academic practices and professional standards.

**Content information**

<b>Content</b>	<p>Radio plays are an important part of German storytelling culture. How is a radio play been created? Why do radio plays fascinate us and why does everyone still know their favorite radio plays from his or her childhood? Together we will develop and produce our own radio play in small teams: we will realize every single step of the creative and production process by ourselves: From the story idea to our own script, from recordings of voice and foley to research or composing background music to mixing and mastering. The elective module is led by Oliver Ujc. We keep switching between theory and practice units like e.g. storytelling, audio editing, speech training, recordings in the recording studio. Within a weekend seminar we will give an overview of storytelling, finding a plot, the right dramaturgy and the development of the main characters. At the end of the semester, every student holds his or her radio play in their own hands, what is designed from scratch to the finished product all by themselves.</p>
<b>Literature</b>	<p>Peter Eckhart Reichel: STUDIO-WORKSHOP: Hörspiele konzipieren und professionell produzieren: Ein Ratgeber, hoerbuchedition words and music (2013)</p>

**Teaching formats of the courses**

Teaching format	SWS
Seminar	4

**Workload**

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

**Module Examination**

<b>Examination prerequisites according to exam regulations</b>	None
<b>61140 - Projektbezogene Arbeiten</b>	<p>Method of Examination: Projektbezogene Arbeiten          Weighting: 100%          wird angerechnet gem. § 11 Satz 2 PVO: No          Graded: Yes          Remark: you will be delivering a complete radioplay at the end of the semester</p>

## 61190 - Digital projects for a better world - Young Innovations Festival in Graz (engl.)

## 61190 - Digital projects for a better world - Young Innovations Festival in Graz

<b>General information</b>	
<b>Module Code</b>	61190
<b>Unique Identifier</b>	DigProjBette-01-BM-M
<b>Module Leader(s)</b>	Prof. Dr. Uhing, Franziska (franziska.uhing@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Uhing, Franziska (franziska.uhing@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Fachwissen zu den Inhalten der Changemaker Projekte wird eigenständig angeeignet.
Anwendung von Projektmanagementwerkzeugen, von Kommunikations- und Präsentationstools.
Die Beurteilung von Projekten und die Zusammenfassung der Ergebnisse in gemeinsamen Präsentationen erfordert und schult personale Kompetenz und Sozialkompetenz.

<b>Content information</b>	
<b>Content</b>	<p>1. Besprechen und beurteilen Sie Projekte fremder Studierender, die beim Change Maker Wettbewerb eingereicht wurden. Hierbei handelt es sich um die Young Innovators des World Summit Awards (<a href="https://wsa-global.org/wsa_categories/wsa-young-innovators/">https://wsa-global.org/wsa_categories/wsa-young-innovators/</a>).</p> <p>Zur Vorbereitung auf das internationale Event Ende November in Graz werden 3-4 Online Seminare vom Veranstalter angeboten. Es gibt Information über Existenzgründung von erfahrenen Gründern und fördernden Institutionen, Information über Social Entrepreneurship und begleitende Themen. Die Teilnahme ist verpflichtend.</p> <p>2. Weitere Teilnehmer sind Studierende anderer Hochschulen im Ausland. Z.B. Spanien, Ungarn, Dänemark, Finnland, Mazedonien...</p> <p>3. Ende November Exkursion zum Startup-Festival in Graz für 3 Tage. Sie lernen die Teampartner- und die Gründer*innen live kennen und visualisieren Ihr Gruppenergebnis in einem Teampitch. Es gibt inspirierende Workshops und und eine große Abschlussfeier.</p> <p>Kommentar: In dem Seminar generieren Sie in der Regel spannende internationale Kontakte.</p>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>61190 - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: Eine Analyse des Startups, ein Onlinepitch und eine Präsentation in Graz

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	Englischkenntnisse sind für die Online-Kommunikation mit den Partnern aus anderen Nationen notwendig. Sie müssen aber nicht perfekt sein.

<b>Miscellaneous</b>	<p>Die ersten 3 gemeinsamen Sitzungen in der FH dienen dem Kennenlernen und der Vorbereitung. Sie finden auf Deutsch statt.</p> <p>In der Vorbereitungsphase gibt es 3-4 Onlineseminare durch den Veranstalter. Die Teilnahme ist verpflichtend. Die Termine werden noch bekannt gegeben.</p> <p>Ein Vernachlässigen der Teilnahme oder Teamarbeit führt zum Ausschluss (Dies traf für Medienstudierende aus Kiel noch nie zu).</p>
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## 61260 - Learn to design like a Pro: Master Visual Communication (engl.)

### 61260 - Learn to design like a Pro: Master Visual Communication

General information	
<b>Module Code</b>	61260
<b>Unique Identifier</b>	LearntDesLik-01-BM-M
<b>Module Leader(s)</b>	Prof. Dr. Reich, Stefanie (stefanie.reich@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Reich, Stefanie (stefanie.reich@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: B.A. - Artek - Architektur Module type: Wahlmodul Semester: 1, 2, 3, 4, 6, 7, 8
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 4, 5, 6
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 4, 5, 6
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 4, 5, 6
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students develop a fundamental knowledge of visual design principles, vector graphics, typography, colour theory, and layout techniques. They understand design workflows in Adobe Illustrator and similar design tools.
Students apply design concepts by creating a variety of practice-led design projects, such as business cards, posters, stickers, logos, etc. They expand their ability to translate ideas into visual communication products.

Students present and discuss their creative work in a professional context. They collaborate through peer feedback and apply constructive critique to improve their designs.

Students reflect on their design process, develop a professional attitude towards the topic of visual communication, and build a portfolio of applied design work. They understand the role of design in different media and cultural contexts.

### Content information

<b>Content</b>	<ul style="list-style-type: none"> <li>+ Introduction to vector graphic tools (mainly Adobe Illustrator)</li> <li>+ Vector drawing techniques (shapes, paths, curves)</li> <li>+ Use of color, gradients, and patterns</li> <li>+ Typography and text layout in design projects</li> <li>+ Logo creation and custom illustration techniques</li> <li>+ Preparing files for digital and print media (formats, resolution)</li> <li>+ Real-world design projects: business cards, posters, stickers, branding elements</li> <li>+ Creative project management and self-evaluation through feedback sessions</li> </ul>
<b>Literature</b>	<p>Wood, B. (2023): Adobe Illustrator Classroom in a book, Release 2023, San José: Adobe Press</p> <p>Bokhua, G. (2022): Principles of Logo Design: A Practical Guide to Creating Effective Signs, Symbols, and Icons, Massachusetts: Rockport Publishers</p> <p>Heller, S.; Anderson, G. (2016): The Graphic Design Idea Book: Inspiration from 50 Masters, London: Laurence King</p>

### Teaching formats of the courses

Teaching format	SWS
Seminar	4

### Workload

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

### Module Examination

<b>Examination prerequisites according to exam regulations</b>	None
<b>61260 - Projektbezogene Arbeiten</b>	<p>Method of Examination: Projektbezogene Arbeiten</p> <p>Weighting: 100%</p> <p>wird angerechnet gem. § 11 Satz 2 PVO: No</p> <p>Graded: Yes</p>

### Miscellaneous

<b>Recommended Prerequisites</b>	The module is suitable for beginners and intermediates who want to explore the vast potential of design tools (mainly Adobe Illustrator) and deepen their knowledge in Design. An Adobe Creative Cloud License is not mandatory as computers with installed licences can be used onsite.
<b>Miscellaneous</b>	A detailed description of the exam will be announced at the beginning of the semester.

## 61270 - Marketing Management in Competitive Gaming/Esports

## 61270 - Marketing Management in Competitive Gaming/Esports

General information	
<b>Module Code</b>	61270
<b>Unique Identifier</b>	MarkMgmtComp-01-BM-M
<b>Module Leader(s)</b>	Möglich, Jana (jana.moeglich@haw-kiel.de)
<b>Lecturer(s)</b>	Möglich, Jana (jana.moeglich@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Irregular
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.Eng. - Ming - Medieningenieur/-in (PO 2018, V1 + PO 2021, V2) Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Die Studierenden können Wissen in einem speziellen Bereich der Medien vertiefen. Dabei können sie sich neues Wissen aneignen und bereits erlernte Kompetenzen aus vorausgegangenen Semestern überprüfen und voneinander abgrenzen.
Durch die Befassung mit verschiedenen Fallbeispielen und themenspezifischen Problemen können die Studierenden alleine oder in Gruppen Probleme erkennen, Forschungsfragen formulieren und methodengeleitete Lösungswege benennen.
Diese können vor Kommilitonen oder externen Partnern vorgestellt werden. Die Studierenden können auf etwaige Kritik professionell reagieren und ihr Vorgehen ggf. anpassen.
Sie können ihr eigenes Vorgehen unter Berücksichtigung wissenschaftlicher Kriterien und etablierter berufspraktischer Herangehensweisen kritisch bewerten.

<b>Content information</b>	
<b>Content</b>	Students will acquire knowledge about and discuss the esports ecosystem, its stakeholders and target groups. They will look at forms of marketing and brand management including sponsorships via marketing theory as well as practical examples to derive actual trends.
<b>Literature</b>	Ballhaus, W. (2020). Digital trend outlook 2020: Esports. PwC. <a href="https://www.pwc.de/en/technology-media-and-telecommunication/digital-trend-outlook-esport-2020.html">https://www.pwc.de/en/technology-media-and-telecommunication/digital-trend-outlook-esport-2020.html</a> Geysler, W. (2021, June 17). 9 of the best esports marketing strategies. Influencer Marketing Hub. <a href="https://influencermarketinghub.com/esports-marketing-strategies/">https://influencermarketinghub.com/esports-marketing-strategies/</a> Leroux-Parra, M. (2020, April 24). Esports part 1–4: What are esports?; The evolving rules of esports; League of Legends, the sport that’s rivaling giants; Developer control. Harvard International Review. <a href="https://hir.harvard.edu/esports-part-1-what-are-esports/">https://hir.harvard.edu/esports-part-1-what-are-esports/</a> Ludwig, S., Lachmann, K. & Papenbrock, J. (Nov., 2022a). Let’s Play! 2022 - The European esports market. Deloitte. <a href="https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-en.pdf">https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-en.pdf</a> Ludwig, S., Lachmann, K. & Papenbrock, J. (Nov., 2022b). Let’s Play, Germany! Video gaming & esports 2022. <a href="https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-de.pdf">https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-de.pdf</a> Scholz, T. M. (2019). eSports is business: Management in the world of competitive gaming. Springer Nature.

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	Einreichung von Präsentationsfolien und einem Abstract von 500 Wörtern Umfang.
<b>61270 - Präsentation</b>	Method of Examination: Präsentation Duration: 15 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	<ul style="list-style-type: none"> <li>Marketing-Grundwissen</li> <li>Gutes Englisch</li> </ul>

## 61440 - AI-based content creation in social media communication

## 61440 - AI-based content creation in social media communication

General information	
<b>Module Code</b>	61440
<b>Unique Identifier</b>	AIBasedContC-01-BM-M
<b>Module Leader(s)</b>	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
<b>Lecturer(s)</b>	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - MMP - Multimedia Production Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: B.A. - ÖuU - Öffentlichkeitsarbeit und Unternehmenskommunikation Module type: Wahlmodul Semester: 3, 4, 5, 6, 7
Study Subject: M.A. - AK - Angewandte Kommunikationswissenschaft Module type: Wahlmodul Semester: 1, 2, 3
Study Subject: M.A. - MK - Medienkonzeption (SoSe 2018, V1) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students can acquire and deepen their knowledge in an interdisciplinary area of the application of AI in the production of media content in social media. In doing so, they can acquire new knowledge and review and differentiate any skills they may have already acquired in previous semesters.
By dealing with various case studies and the application of different AI tools in the production of media content, students can recognise opportunities and limitations of AI-based communication.
Application examples can be presented to fellow students or external partners. Students can react professionally to any criticism and adapt their approach if necessary.
The students can critically evaluate their own approach, taking into account scientific criteria and established professional approaches.

<b>Content information</b>	
<b>Content</b>	AI content tools at a glance Content production and social media Designing and generating prompts Designing new content workflows with AI Using current AI tools for writing and designing Opportunities and limitations of using AI
<b>Literature</b>	Sutherland, K. E. (2025). Artificial Intelligence for Strategic Communication. Palgrave Macmillan Singapore. Hagelstein, J., Tench, R., Zerfass, A. (2020). Artificial intelligence in communication management: a cross-national study on adoption and knowledge, impact, challenges and risks. AI in communication management, 24(4).

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Seminar	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>61440 - Präsentation</b>	Method of Examination: Präsentation Duration: 30 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Miscellaneous</b>	The detailed description of the examination will be announced at the beginning of the semester.

## MADS-AP - Application Project

## MADS-AP - Application Project

<b>General information</b>	
<b>Module Code</b>	MADS-AP
<b>Unique Identifier</b>	ApplProj-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de) Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de) Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	No
<b>Can be attended with different study programme</b>	No

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 2

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - know how to organize data science projects. - know how to perform the relevant tasks in data science projects.
Students - are able to apply their knowledge in real-world data science projects.
Students - are able to work professionally with external customers - are able to successfully organize teamwork for data science projects. - are able to report and present team solutions for practical project tasks. - are able to leverage the individual skills of all team members.
Students - are able to work professionally in the field of data science. - are able to give and accept professional feedback to different topics of data science.

<b>Content information</b>	
<b>Content</b>	<p>In general, the application project is carried out in teams and together with an external project partner. Topics are provided by the lecturers in collaboration with the external project partners. The application project requires independent and self-contained work in the teams to deepen the knowledge obtained from the data science lectures.</p> <p>The application project work typically includes:</p> <ul style="list-style-type: none"> <li>- Creation and assessment of methods according to standard research methodologies.</li> <li>- Execution of experiments and documentation.</li> <li>- Creation, implementation and documentation of tools and applications.</li> <li>- Regular progress reports and consultations with both project partners and lecturers</li> <li>- Presentation of results to project partners and participants of the study programme</li> </ul>
<b>Literature</b>	<p>Presentation slides          Information by provided by project partner</p>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Projekt	8

<b>Workload</b>	
<b>Number of SWS</b>	8 SWS
<b>Credits</b>	10,00 Credits
<b>Contact hours</b>	96 Hours
<b>Self study</b>	204 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-AP - Projektbezogene Arbeiten</b>	<p>Method of Examination: Projektbezogene Arbeiten            Weighting: 100%            wird angerechnet gem. § 11 Satz 2 PVO: No            Graded: Yes</p>

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	It is strongly recommended to have heard the modules of the first semester of the Data Science program.
<b>Miscellaneous</b>	Important: Due to the nature of this module, some planning is required before-hand (at the end of the previous semester's lectures and before the lectures start in this semester).

## MADS-BDT - Big Data Technologies

## MADS-BDT - Big Data Technologies

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General information	
<b>Module Code</b>	MADS-BDT
<b>Unique Identifier</b>	BigDataTech-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 2

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - know the fundamentals of big data technologies. - know the basics of NoSQL databases and their system architectures. - know modern big data stacks and their ecosystems. - know how to implement stream processing applications.
Students - are able to apply big data technologies in practice. - are able to use NoSQL databases for real-world problems. - are able to use Spark and Kafka for stream processing.
Students - are able to successfully organize teamwork for big data technologies projects. - are able to report and present team solutions for practical project tasks. - are able to leverage the individual skills of all team members.
Students - are able to work professionally in the field of big data technologies. - are able to give and accept professional feedback to different topics of big data technologies. - are able to select relevant scientific literature about big data technologies.

<b>Content information</b>	
<b>Content</b>	<ul style="list-style-type: none"> <li>- Introduction to Big Data Technologies</li> <li>- Big Data Architectures</li> <li>- Hadoop MapReduce and HDFS</li> <li>- Apache Hadoop Ecosystem</li> <li>- Key-Value and Columnar Databases</li> <li>- Document and Graph Databases</li> <li>- Apache SMACK Stack</li> <li>- Elastic ELK Stack</li> <li>- Data Stream Processing</li> <li>- Big Data Applications</li> <li>- Artificial Intelligence</li> <li>- Current topics in the field of Big Data Technologies</li> </ul>
<b>Literature</b>	Presentation slides

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-BDT - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-C - Colloquium

## MADS-C - Colloquium

General information	
<b>Module Code</b>	MADS-C
<b>Unique Identifier</b>	ColloqB-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de) Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de) Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de) Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de) Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
The colloquium is an oral final exam, which focuses on the subject areas of the thesis. The students should present their final thesis as well as represent and defend the results.
Students
- know how to present the results of an academic research project. - know how to discuss and defend academic research results.

Content information	
<b>Content</b>	The colloquium is an oral final exam, which focuses on the subject areas of the thesis. The students should present their final thesis as well as represent and defend the results.

Teaching formats of the courses	
<b>Teaching format</b>	<b>SWS</b>
Keine Präsenzzeit	0

Workload	
<b>Number of SWS</b>	0 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	0 Hours

<b>Self study</b>	150 Hours
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<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	For admission to the final colloquium, all examinations of the compulsory modules must have been passed and the Master thesis must have been submitted.
<b>MADS-C - Kolloquium</b>	Method of Examination: Kolloquium Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-CC - Cloud Computing

## MADS-CC - Cloud Computing

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General information	
<b>Module Code</b>	MADS-CC
<b>Unique Identifier</b>	CloudCompA-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Brede, Max (max.brede@haw-kiel.de) Krieg, Vincent (vincent.krieg@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - know the fundamentals of cloud computing. - know the basics of virtualization, containers and cluster management. - know modern cloud platforms and microservice architectures. - know how to implement web services and IT security.
Students - are able to apply cloud computing in practice. - are able to use cloud platforms and microservices for real-world problems. - are able to use Docker and Kubernetes for data science applications.
Students - are able to successfully organize teamwork for cloud computing projects. - are able to report and present team solutions for practical project tasks. - are able to leverage the individual skills of all team members.
Students - are able to work professionally in the field of cloud computing. - are able to give and accept professional feedback to different topics of cloud computing.  - are able to select relevant scientific literature about cloud computing.

<b>Content information</b>	
<b>Content</b>	<ul style="list-style-type: none"> <li>- Introduction to Cloud Computing</li> <li>- Cloud Architectures</li> <li>- Virtualization</li> <li>- Container and Cluster Management</li> <li>- Internet Technologies</li> <li>- Web Services</li> <li>- IT Security</li> <li>- Internet of Things</li> <li>- Microsoft Azure</li> <li>- Amazon Web Services</li> <li>- Google Cloud Platform</li> <li>- Current topics in the field of Cloud Computing</li> </ul>
<b>Literature</b>	Presentation slides

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-CC - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-DL - Deep Learning

## MADS-DL - Deep Learning

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General information	
<b>Module Code</b>	MADS-DL
<b>Unique Identifier</b>	DeepLearnC-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 2

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - the fundamentals of neural networks. - the most commonly used concepts of neural network based learning. - standard tools for deep learning.
Students are able to - setup deep learning experiments. - apply deep learning algorithms in practice. - use deep learning algorithms for real-world problems.
Students are able to - critically assess and compare the results of deep learning algorithms. - give and accept professional feedback to different topics of deep learning.
Students are able to - work professionally in the field of deep learning. - select relevant scientific literature about deep learning.

<b>Content information</b>	
<b>Content</b>	<p>Introduction to</p> <ul style="list-style-type: none"> <li>- Artificial Intelligence</li> <li>- Neural Networks</li> <li>- Deep Learning</li> <li>- Computer Vision</li> </ul> <p>Concepts</p> <ul style="list-style-type: none"> <li>- Perceptrons</li> <li>- Multilayer Forward Networks</li> <li>- Neural Networks for Classification and Regression</li> <li>- Computer Vision and Convolutional Layers</li> <li>- Time Series and Recurrent Neural Networks</li> <li>- Transfer Learning</li> </ul> <p>Applications</p> <ul style="list-style-type: none"> <li>- Classification</li> <li>- Regression</li> <li>- Computer Vision</li> <li>- Time Series Forecasting</li> </ul>
<b>Literature</b>	<ul style="list-style-type: none"> <li>- Lecture Slides</li> <li>- Additional literature</li> <li>- Stevens, Antiga and Viehmann: Deep Learning with PyTorch. Manning (2020).</li> </ul> <p>Available online: <a href="https://www.manning.com/books/deep-learning-with-pytorch">https://www.manning.com/books/deep-learning-with-pytorch</a></p>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	No additional requirements
<b>MADS-DL - Portfolioprüfung</b>	<p>Method of Examination: Portfolioprüfung</p> <p>Weighting: 100%</p> <p>wird angerechnet gem. § 11 Satz 2 PVO: No</p> <p>Graded: Yes</p>

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	<p>Basic Knowledge of Python</p> <p>Basic Knowledge of Machine Learning (particularly, the module MADS-ML)</p>

## MADS-DM - Data Management

## MADS-DM - Data Management

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General information	
<b>Module Code</b>	MADS-DM
<b>Unique Identifier</b>	DataMgmt-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - know the fundamentals of data management. - know the basics of relational databases and SQL. - know modern data management concepts and architectures. - know how to implement data privacy and data security.
Students - are able to apply data management and data privacy in practice. - are able to use relational databases for real-world problems. - are able to use SQL for practical database programming.
Students - are able to successfully organize teamwork for data management projects. - are able to report and present team solutions for practical project tasks. - are able to leverage the individual skills of all team members.
Students - are able to work professionally in the field of data management. - are able to give and accept professional feedback to different topics of data management. - are able to select relevant scientific literature about data management.

<b>Content information</b>	
<b>Content</b>	<ul style="list-style-type: none"> <li>- Introduction to Data Management</li> <li>- Data Modeling</li> <li>- Relational Databases</li> <li>- Database Language SQL</li> <li>- Transaction Processing with SQL</li> <li>- Complex Database Queries with SQL</li> <li>- NoSQL Databases and Data Streams</li> <li>- Data Warehouse and Data Lake</li> <li>- Metadata and Open Data</li> <li>- Data Privacy and Data Security</li> <li>- Data Strategy and Data Ethics</li> <li>- Current topics in the field of Data Management</li> </ul>
<b>Literature</b>	Presentation slides

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-DM - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-DVVA - Data Visualization and Visual Analytics

## MADS-DVVA - Data Visualization and Visual Analytics

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<b>General information</b>	
<b>Module Code</b>	MADS-DVVA
<b>Unique Identifier</b>	DataVisVisAn-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - available visualization techniques and understand for which purpose they are most suitable, - tools and best practices to closely integrate visual analysis, documentation, and presentation, - programming frameworks for data visualization
Students are able to - use visualizations as a means to detect patterns in complex data, - design and develop expressive visualizations tailored to the specific purpose and recipient using programming languages
Students are able to - concisely present their approach and results in technical and functional terms - work successfully in teams on joint projects, leveraging and integrating the skills of all team members.
Students are able to - reflect on the strengths and weaknesses of visualization techniques, - give and receive constructive critique and advice and they adhere to principles for scientific communication.

<b>Content information</b>	
<b>Content</b>	Foundations of Data Visualization <ul style="list-style-type: none"> <li>- Graphical perception and graphical design</li> <li>- Interactive Dashboards</li> <li>- Visual storytelling</li> </ul> Python for Data Visualization <ul style="list-style-type: none"> <li>- Plotly</li> <li>- Geopandas</li> <li>- Streamlit</li> </ul> Applications <ul style="list-style-type: none"> <li>- Comparing categories</li> <li>- Relationships</li> <li>- Time series</li> <li>- Geographic data</li> <li>- Interactive visualization</li> </ul>
<b>Literature</b>	<ul style="list-style-type: none"> <li>- Lecture Slides</li> <li>- Cole Nussbaumer Knaflic, <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>, 2015</li> <li>- Jonathan Schwabish, <i>Better Data Visualizations: A Guide for Scholars, Researchers, and Wonks</i>, 2021</li> <li>- Claus O. Wilke, <i>Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures</i>. O'Reilly, first edition, 2019, online available: <a href="https://serialmentor.com/dataviz">https://serialmentor.com/dataviz</a>.</li> </ul>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-DVVA - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	Basic knowledge of Python.

## MADS-EMGAI - Generative AI

## MADS-EMGAI - Generative AI

General information	
<b>Module Code</b>	MADS-EMGAI
<b>Unique Identifier</b>	GenAI-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Brede, Max (max.brede@haw-kiel.de) Klick, Alwin (alwin.klick@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	Yes

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Wahlmodul Semester: 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Module type: Wahlmodul Semester: 1, 2

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - know the fundamentals of generative AI systems. - know various modern applications of generative AI systems. - know the theoretical foundations and practical applications of generative AI systems.
Students - are able to explain and apply various open-source language models. - are able to implement and utilize agent systems and their functionalities. - are able to understand and use embeddings and vector stores for semantic search and recommendations. - are able to explain and practically apply different methods for image generation. - are able to fine-tune large language models (LLMs) and diffusion models for specific tasks.
Students - are able to successfully organize teamwork for generative AI projects. - are able to report and present team solutions for practical project tasks. - are able to interpret and communicate the approaches in technical and functional terms.
Students - are able to work professionally in the field of generative AI systems. - are able to give and accept professional feedback to different topics of generative AI systems. - are able to select relevant scientific literature about generative AI systems.

<b>Content information</b>	
<b>Content</b>	<p>Open Source Language Models</p> <ul style="list-style-type: none"> <li>- Overview of model lists</li> <li>- Ollama</li> <li>- Generation of synthetic text as training sets</li> </ul> <p>Agent Systems</p> <ul style="list-style-type: none"> <li>- Llamaindex, LangChain &amp; Haystack</li> <li>- Function calling</li> <li>- Data analysis</li> </ul> <p>Embeddings and Vector Stores</p> <ul style="list-style-type: none"> <li>- Semantic Search</li> <li>- Retrieval-augmented generation</li> <li>- Recommendations</li> </ul> <p>AI Image Generators</p> <ul style="list-style-type: none"> <li>- Generative Adversarial Networks (GANs)</li> <li>- Variational Autoencoders / Diffusion Models</li> <li>- Generative approaches for image dataset augmentation</li> </ul> <p>Fine-Tuning of LLMs and Diffusion Models</p> <ul style="list-style-type: none"> <li>- Examples: LoRA, QLoRA, MoRA</li> </ul>
<b>Literature</b>	Presentation slides

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-EMGAI - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	Basic knowledge about Deep Learning and Natural Language Processing. Basic practical experience in Python programming.

## MADS-ML - Machine Learning

## MADS-ML - Machine Learning

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General information	
<b>Module Code</b>	MADS-ML
<b>Unique Identifier</b>	MachLearnB-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Lecturer(s)</b>	Dr. Splittgerber, Maike (maike.splittgerber@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - the fundamentals of machine learning. - the most commonly used machine learning algorithms. - standard tools for machine learning.
Students are able to - apply machine learning algorithms in practice - use machine learning algorithms for real-world problems. - setup machine learning experiments.
Students are able to - successfully organize teamwork for machine learning projects. - to report and present team solutions for practical project tasks. - critically assess and compare the results of machine learning algorithms.
Students are able to - work professionally in the field of machine learning. - give and accept professional feedback to different topics of machine learning. - select relevant scientific literature about machine learning.

<b>Content information</b>	
<b>Content</b>	Introduction to: <ul style="list-style-type: none"> <li>- Machine Learning Experiments</li> <li>- Setup</li> <li>- Preparation</li> <li>- Evaluation</li> <li>- Comparisons</li> <li>- Machine Learning Approaches:               <ul style="list-style-type: none"> <li>- Regression Methods</li> <li>- K-nearest Neighbours</li> <li>- Tree-based Learning</li> <li>- Probabilistic Classification</li> <li>- Support Vector Machines</li> <li>- Ensemble Learning</li> </ul> </li> </ul>
<b>Literature</b>	Presentation slides  Additional literature: <ul style="list-style-type: none"> <li>- Raschka and Mirjalili: Python Machine Learning. Packt Publishing; second Edition (2017).</li> <li>- Harrington: Machine Learning in Action. Manning (2012). Available online: <a href="https://www.manning.com/books/machine-learning-in-action">https://www.manning.com/books/machine-learning-in-action</a></li> </ul>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	No additional requirements
<b>MADS-ML - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-MMS - Mathematics and Multivariate Statistics

### MADS-MMS - Mathematics and Multivariate Statistics

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General information	
<b>Module Code</b>	MADS-MMS
<b>Unique Identifier</b>	MathMultivar-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - fundamental statistical concepts and methods relevant for modern data science and understand for which type of tasks they are most suitable. - the connection between the covered statistical methods and algorithms and their mathematics foundations.
Students are able to - apply statistical methods to real-world problems. - reflect on advantages and limitations of algorithms in practical terms. - derive insights and build on the related scientific literature.
Students are able to - correctly interpret and communicate the approach and results both in technical and functional terms.
Students are able to - work professionally with standard data mining methodology.

Content information	
<b>Content</b>	<p>Statistics:</p> <ul style="list-style-type: none"> <li>- Clustering (partitioning, density-based, hierarchical)</li> <li>- Dimensionality Reduction</li> </ul> <p>Mathematics:</p> <ul style="list-style-type: none"> <li>- exponential functions</li> <li>- basic linear algebra and analytical geometry</li> <li>- similarity and distance measures</li> </ul>

<b>Literature</b>	<ul style="list-style-type: none"> <li>- Lecture Slides</li> <li>- Additional Literature: <ul style="list-style-type: none"> <li>- Leskovec, Rajaraman and Ullman: Mining of Massive Datasets. Cambridge University Press; third edition. Available online: <a href="http://www.mmms.org/">http://www.mmms.org/</a></li> <li>- Boyd and Vandenberghe: Introduction to Applied Linear Algebra. Cambridge University Press. Available online: <a href="https://web.stanford.edu/~boyd/vmls/vmls.pdf">https://web.stanford.edu/~boyd/vmls/vmls.pdf</a></li> <li>- Raschka and Mirjalili: Python Machine Learning. Packt (2017).</li> <li>- Ester and Sander: Knowledge Discovery in Databases. Springer-Verlag Berlin Heidelberg (2000)</li> </ul> </li> </ul>
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### Teaching formats of the courses

Teaching format	SWS
Lehrvortrag + Übung	4

### Workload

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

### Module Examination

<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-MMS - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-SMA - Social Media Analytics

## MADS-SMA - Social Media Analytics

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<b>General information</b>	
<b>Module Code</b>	MADS-SMA
<b>Unique Identifier</b>	SocialMedAna-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schwoerer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 2

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - the fundamentals of social media analytics - state-of-the-art concepts and technologies in the field of natural language processing and network analysis
Students are able - to apply state-of-the-art algorithms in the field of NLP and network analysis to solve real-world problems - to evaluate the usefulness and quality of algorithms and results - to critically assess the social implications of algorithms and applications
Students are able - to report and present solutions for practical project tasks - to leverage the individual skills of all team members
Students - to work professionally in the field of social media analytics - to give and accept professional feedback to different topics of social media analytics - to identify and process relevant scientific literature

<b>Content information</b>	
<b>Content</b>	<p>Course contents:</p> <ol style="list-style-type: none"> <li>1. Handling Social Media Data               <ol style="list-style-type: none"> <li>1.1 Data Acquisition: APIs and Web Scraping</li> <li>1.2 Data Storage: JSON, Document databases, vector stores</li> </ol> </li> <li>2. Social Network Analysis               <ol style="list-style-type: none"> <li>2.1 Network analysis and visualization</li> </ol> </li> <li>3. Natural Language Processing (NLP)               <ol style="list-style-type: none"> <li>3.1 Classical NLP                   <ol style="list-style-type: none"> <li>3.1.1 Preprocessing and feature engineering for text data</li> <li>3.1.2 Training supervised and unsupervised machine learning models for text data</li> <li>3.1.3 Topic Modelling</li> </ol> </li> <li>3.2 Transformers in NLP                   <ol style="list-style-type: none"> <li>3.2.1 Embeddings</li> <li>3.2.2 Transformers and Large Language Models</li> <li>3.2.3 Transfer learning with Encoders</li> <li>3.2.4 Generative Language Models</li> <li>3.2.5 Retrieval Augmented Generation</li> </ol> </li> </ol> </li> </ol> <p>Example Applications:</p> <ul style="list-style-type: none"> <li>- Text classification: e.g. Sentiment Prediction, Hate Speech Detection</li> <li>- Token classification: e.g. Named Entity Recognition</li> <li>- Information extraction and text summarization</li> </ul>
<b>Literature</b>	<ul style="list-style-type: none"> <li>- Lecture Slides</li> <li>- Jurafsky, D. and Martin, J.H. (2024): Speech and Language Processing. An Introduction to Natural Language Processing, Computational Linguistics, and Speech Recognition, available online: <a href="https://web.stanford.edu/~jurafsky/slp3/">https://web.stanford.edu/~jurafsky/slp3/</a></li> <li>- Sarkar, D. (2019): Text Analytics with Python</li> </ul>

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-SMA - Portfolioprüfung</b>	<p>Method of Examination: Portfolioprüfung</p> <p>Weighting: 100%</p> <p>wird angerechnet gem. § 11 Satz 2 PVO: No</p> <p>Graded: Yes</p>

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	Solid knowledge of Python Programming and Machine Learning

## MADS-T - Thesis

## MADS-T - Thesis

<b>General information</b>	
<b>Module Code</b>	MADS-T
<b>Unique Identifier</b>	
<b>Module Leader(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de) Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de) Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Doerfel, Stephan (stephan.doerfel@haw-kiel.de) Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de) Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

<b>Curricular relevance (according to examination regulations)</b>
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 3

<b>Qualification outcome</b>
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students - are able to translate a practically or academically relevant data science problem into a theoretical research framework. - can familiarize themselves with the relevant research publications and possibly identify research gaps and are capable to provide a theoretical overview summarizing the current state of research. - can identify and select the appropriate research methodology to address the chosen research question.
Students - are able to professionally prepare and execute a project on their own, either in an academic or corporate environment, delivering the results in time. - are able to apply their competencies to analyze, structure and solve complex problems, building on state of the art technologies and methods. - are able to prepare a research paper in compliance with norms for academic and scholarly expression and for publication in the public domain.

<p><b>Students</b></p> <ul style="list-style-type: none"> <li>- are capable to organize themselves individually in an effective manner to set the right priorities and manage their resources to successfully meet the requested academic requirements.</li> <li>- are capable to present and defend their research project in front of a qualified academic audience.</li> <li>- respond to criticism in an open self-reflective constructive manner.</li> </ul>
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<p><b>Students</b></p> <ul style="list-style-type: none"> <li>- can apply the academic rules of conduct expected by a researcher to achieve an objective, valid, reliable and ethically justifiable research outcome.</li> <li>- can conduct themselves in a professional and respectful manner in particular with respect to the time made available by their supervisor by being well prepared for meetings and request for appointments in writing with the questions and or issues to be addressed clearly laid out in advance.</li> </ul>
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<b>Content information</b>
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<b>Content</b>	In the Master Thesis, the candidate should demonstrate that he or she is able to independently carry out a research project in any of the disciplines offered by the Data Science Master program such as Machine Learning, Deep Learning, Data Management, Cloud Computing, Big Data Technologies, Data Visualization, Natural Language Processing, or some related field. The Master Thesis can be either an academic research project or a practical data science project in a corporate environment. The topic of the thesis is determined in consultation with the candidate and the supervising lecturer.
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<b>Teaching formats of the courses</b>
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Teaching format	SWS
Keine Präsenzzeit	0

<b>Workload</b>
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<b>Number of SWS</b>	0 SWS
<b>Credits</b>	25,00 Credits
<b>Contact hours</b>	0 Hours
<b>Self study</b>	750 Hours

<b>Module Examination</b>
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<b>Examination prerequisites according to exam regulations</b>	For admission to the final thesis, all examinations of the compulsory modules must have been passed.
<b>MADS-T - Abschlussarbeit (Thesis)</b>	Method of Examination: Abschlussarbeit (Thesis) Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

## MADS-TPDS - Tools and Programming Languages for Data Science

## MADS-TPDS - Tools and Programming Languages for Data Science

General information	
<b>Module Code</b>	MADS-TPDS
<b>Unique Identifier</b>	ToolsProgLan-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Schwörer, Tillmann (tillmann.schworer@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel jedes Semester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Pflichtmodul Semester: 1

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
Students know - the foundations of the programming language Python - standard workflow and corresponding programming processes in data science projects - tools and practices that ensure reproducibility of results and reusability of code
Students are able to - acquire, process, clean, analyse and visualize data - prepare data for downstream data science tasks - document and present their results and approach
Students are able to - communicate approach and results to technical and non-technical audiences - work in teams on programming tasks using version control systems - give and receive critique in a professional manner
Students are able to - leverage relevant literature - give and accept professional feedback

<b>Content information</b>	
<b>Content</b>	1. NumPy: Basic data handling with Numpy arrays 2. Pandas - Data cleaning - Exploratory data analysis 3. Interacting with APIs and SQL databases 4. Version Control with Git and GitHub 5. Advanced Python
<b>Literature</b>	- Lecture Materials - VanderPlas: A Whirlwind Tour of Python. O'Reilly, first edition. Available online: <a href="https://jakevdp.github.io/WhirlwindTourOfPython/">https://jakevdp.github.io/WhirlwindTourOfPython/</a> - VanderPlas: Python Data Science Handbook. O'Reilly, first edition. Available online: <a href="https://jakevdp.github.io/PythonDataScienceHandbook">https://jakevdp.github.io/PythonDataScienceHandbook</a> . - McKinney: Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython. O'Reilly, second edition.

<b>Teaching formats of the courses</b>	
<b>Teaching format</b>	<b>SWS</b>
Lehrvortrag + Übung	4

<b>Workload</b>	
<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

<b>Module Examination</b>	
<b>Examination prerequisites according to exam regulations</b>	None
<b>MADS-TPDS - Portfolioprüfung</b>	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

<b>Miscellaneous</b>	
<b>Recommended Prerequisites</b>	Basic Python programming skills are recommended. Students with little or no Python programming skills are strongly advised to participate at the Pre-Course Programming, taking place in the week prior to the start of the regular programming course.

## PR - Pattern Recognition

## PR - Pattern Recognition

General information	
<b>Module Code</b>	PR
<b>Unique Identifier</b>	PatRec-01-MA-M
<b>Module Leader(s)</b>	Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de)
<b>Lecturer(s)</b>	Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de)
<b>Offered in Semester</b>	Wintersemester 2025/26
<b>Module duration</b>	1 Semester
<b>Occurrence frequency</b>	Regular
<b>Module occurrence</b>	In der Regel im Wintersemester
<b>Language</b>	Englisch
<b>Recommended for international students</b>	Yes
<b>Can be attended with different study programme</b>	No

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - DS - Data Science Module type: Wahlmodul Semester: 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Study Focus: Artificial Intelligence Module type: Verpfl. Wahlmodul, PVO §3 Semester: 1, 2
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
<i>Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.</i>
On successful completion of this course students will have knowledge on the following contents: Basics of probability calculus, random variables, marginal distribution, conditional probability, Bayes rule, multivariate normal density, Bayesian decision theory, discriminant functions, Bayes theorem, Bayes risk, decision boundaries, maximum-likelihood parameter estimation, non-parametric techniques, density estimation, Parzen windows, nearest neighbor classification
Successful students will be able to understand and apply a wide range of available Pattern Recognition principles and tools. They can (1) identify and utilize an efficient approach for a given pattern recognition task, (2) design and implement a practical realization based on Octave, and (3) test the proposed implemented systems for validity, correction, refinement and maintenance. c1. Develop a qualitative and quantitative skills including data analysis, interpretation and extrapolation c2. Design, write and debug computer prototype and real pattern recognition systems covering all the basic concepts in PR choosing a suitable language for the Implementation.

On completing the course, students should be able to improve their presentation and team working skills by cooperating in small project teams to solve given Pattern Recognition problems. They learn to follow design requirements by understanding of written questions and describe and interpret findings in a written report using scientific language.

On completing the course, students should be able to improve their working ethics through evaluating individual efforts and strictly avoiding plagiarism.

### Content information

<b>Content</b>	The field of Pattern Recognition deals with the problem of classifying complex data into pre-specified categories to enable automatic decisions. Most state-of-the-art classification frameworks utilize large amounts of data to develop robust statistical representations of the considered patterns and enhance class discrimination by sophisticated learning algorithms. This course explains the theoretical and practical aspects of fundamental pattern recognition techniques and enables the independent development and enhancement of classification systems.
<b>Literature</b>	R. Duda et al., "Pattern classification", Wiley, 2001 C. M. Bishop, "Pattern recognition and Machine learning", Springer, 2006

### Teaching formats of the courses

Teaching format	SWS
Labor	2
Lehrvortrag	2

### Workload

<b>Number of SWS</b>	4 SWS
<b>Credits</b>	5,00 Credits
<b>Contact hours</b>	48 Hours
<b>Self study</b>	102 Hours

### Module Examination

<b>Examination prerequisites according to exam regulations</b>	None
<b>PR - Klausur</b>	Method of Examination: Klausur Duration: 120 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

### Miscellaneous

<b>Recommended Prerequisites</b>	Mathematical basics of algebra and analysis.
<b>Miscellaneous</b>	Students are encouraged to bring their own laptops to the laboratory exercises. The course is held at the CAU Kiel. Participants from FH Kiel may attend as guest students.