Exported Modules

HAW Kiel
Hochschule für Angewandte Wissenschaften Kiel
Kiel University of Applied Sciences

60530 - Social media and information environment

60530 - Social media and information environment

General information	
Module Code	60530
Unique Identifier	SocialMedInf-01-BM-M
Module Leader(s)	Dr. Bucholtz, Ianis (ianis.bucholtz@haw-kiel.de)
Lecturer(s)	Dr. Bucholtz, Ianis (ianis.bucholtz@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Upon completion of this module students will: • Be familiar with the main concepts related to social media, social networks and social networking sites; • See social media in the historical perspective of the development of new media; • Have an insight into some of the areas in which social media make an impact on society; • Understand the main issues that surround contemporary social media in the context wider contemporary information environment

• 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	1. The concepts and definitions of social media 2. The history and development trends of social media 3. The experiences and generational differences of social media use 4. The presentation of self online 5. The basics of network science 6. The addiction and distraction on social media 7. Wikipedia and the collaborative generation of knowledge 8. Social media algorithms 9. The issues of oversight and content moderation on social media platforms 10. Alternative social media 11. Fake news 12. Artificial intelligence and social media 13. Digital surveillance & privacy 14. Influencers and social media content creators

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

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

60530 - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	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	
Module Code	60750
Unique Identifier	CreaSoc-01-BM-M
Module Leader(s)	Prof. Dr. Kacerauskas, Tomas (tomas.kacerauskas@haw-kiel.de)
Lecturer(s)	Prof. Dr. Kacerauskas, Tomas (tomas.kacerauskas@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	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.
Literature	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.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
60750 - Präsentation	Method of Examination: Präsentation Duration: 10 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	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	
Module Code	60890
Unique Identifier	JournPractWr-01-BM-M
Module Leader(s)	Dr. Möller, Christian (christian.moeller@haw-kiel.de)
Lecturer(s)	Dr. Möller, Christian (christian.moeller@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	Participants will learn about different journalistic forms and writing skills for (online) media. The 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.
Literature	The Missouri Group: News Reporting and Wrting. 12th Edition. Macmillan. Additional literature will be provided.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
60890 - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	Good English writing skills.
Miscellaneous	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

General information	
Module Code	60920
Unique Identifier	PubReltEurUn-01-BM-M
Module Leader(s)	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
Lecturer(s)	Dubbert, Mathias (mathias.dubbert@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	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.
Literature	European Commission (2024): The EU - what it is and what it does. Op.europa.eu. https://op.europa.eu/webpub/com/eu-what-it-is/en/ [access: 21.05.2025] Kaeding, M. (2024): Enlargement and the Future of Europe. Springer Cham Korkman, S. (2005): Economic Policy in the European Union. London: Palgrave Macmillan Nedergaard, P. (2007): European Union administration: legitimacy and efficiency. Boston: Nijhoff Kleine, M. (2013): Informal governance in the European Union: how governments make international organizations work. Ithaca: New York Cornell University Press

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
60920 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	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. A detailed description of the module examination will be announced at the beginning of the semester.

60960 - Visual Campaign

60960 - Visual Campaign

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

Curricular relevance (according to examination regulations)
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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	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.
Literature	A compendium (online) will be available upon the start of the course. Additional reading might be added.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
60960 - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	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	
Module Code	61140
Unique Identifier	RadPlayRadio-01-BM-M
Module Leader(s)	B.A. Ujc, Oliver (oliver.ujc@haw-kiel.de)
Lecturer(s)	B.A. Ujc, Oliver (oliver.ujc@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	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 ourselfs: 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 themselfs.
Literature	Peter Eckhart Reichel: STUDIO-WORKSHOP: Hörspiele konzipieren und professionell produzieren: Ein Ratgeber, hoerbuchedition words and music (2013)

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
61140 - Projektbezogene Arbeiten	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

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

General information	
Module Code	61190
Unique Identifier	DigProjBette-01-BM-M
Module Leader(s)	Prof. Dr. Uhing, Franziska (franziska.uhing@haw-kiel.de)
Lecturer(s)	Prof. Dr. Uhing, Franziska (franziska.uhing@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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.

Content information	
Content	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 (https://wsa-global.org/wsa_categories/wsa-young-innovators/). 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. 2. Weitere Teilnehmer sind Studierende anderer Hochschulen im Ausland. Z.B. Spanien, Ungarn, Dänemark, Finnland, Mazedonien… 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. Kommentar: In dem Seminar generieren Sie in der Regel spannende internationale Kontakte.

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
61190 - Portfolioprüfung	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

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

Miscellaneous	Die ersten 3 gemeinsamen Sitzungen in der FH dienen dem Kennenlernen und der Vorbereitung. Sie finden auf Deutsch statt. In der Vorbereitungsphase gibt es 3-4 Onlineseminare durch den Veranstalter. Die Teilnahme ist verpflichtend. Die Termine werden noch bekannt gegeben. Ein Vernachlässigen der Teilnahme oder Teamarbeit führt zum Ausschluss (Dies traf für Medienstudierende aus Kiel noch nie zu).

61260 - Learn to design like a Pro: Master Visual Communication (engl.)

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

General information	
Module Code	61260
Unique Identifier	LearntDesLik-01-BM-M
Module Leader(s)	Prof. Dr. Reich, Stefanie (stefanie.reich@haw-kiel.de)
Lecturer(s)	Prof. Dr. Reich, Stefanie (stefanie.reich@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	+ Introduction to vector graphic tools (mainly Adobe Illustrator) + Vector drawing techniques (shapes, paths, curves) + Use of color, gradients, and patterns + Typography and text layout in design projects + Logo creation and custom illustration techniques + Preparing files for digital and print media (formats, resolution) + Real-world design projects: business cards, posters, stickers, branding elements + Creative project management and self-evaluation through feedback sessions
Literature	Wood, B. (2023): Adobe Illustrator Classroom in a book, Release 2023, San José: Adobe Press Bokhua, G. (2022): Principles of Logo Design: A Practical Guide to Creating Effective Signs, Symbols, and Icons, Massachusetts: Rockport Publishers Heller, S.; Anderson, G. (2016): The Graphic Design Idea Book: Inspiration from 50 Masters, London: Laurence King

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
61260 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	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.
Miscellaneous	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	
Module Code	61270
Unique Identifier	MarkMgmtComp-01-BM-M
Module Leader(s)	Möglich, Jana (jana.moeglich@haw-kiel.de)
Lecturer(s)	Möglich, Jana (jana.moeglich@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Irregular
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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.

Content information	
Content	Students will aquire 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.
Literature	Ballhaus, W. (2020). Digital trend outlook 2020: Esports. PwC. https://www.pwc.de/en/technology-media-and-telecommunication/digital-trend-outlook-esport-2020.html Geyser, W. (2021, June 17). 9 of the best esports marketing strategies. Influencer Marketing Hub. https://influencermarketinghub.com/esports-marketing-strategies/ Leroux-Parra, M. (2020, April 24). Esports part 1–4: What are esports?; The evolving rules of esports; League of Legends, the esport that's rivaling giants; Developer control. Harvard International Review. https://hir.harvard.edu/esports-part-1-what-are-esports/ Ludwig, S., Lachmann, K. & Papenbrock, J. (Nov., 2022a). Let's Play! 2022 - The European esports market. Deloitte. https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-en.pdf Ludwig, S., Lachmann, K. & Papenbrock, J. (Nov., 2022b). Let's Play, Germany! Video gaming & esports 2022. https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/Deloitte_esport-study-2022-de.pdf Scholz, T. M. (2019). eSports is business: Management in the world of competitive gaming. Springer Nature.

Teaching formats of the courses	
Teaching format	**SWS**
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	Einreichung von Präsentationsfolien und einem Abstract von 500 Wörtern Umfang.
61270 - Präsentation	Method of Examination: Präsentation Duration: 15 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	• Marketing-Grundwissen • Gutes Englisch

ACA - Angewandte Kryptanalyse

ACA - Applied Cryptanalysis

General information	
Module Code	ACA
Unique Identifier	ApplCryptAna-01-MA-M
Module Leader(s)	Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de)
Lecturer(s)	Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Elektrische Energietechnik Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Kommunikationstechnik und Embedded Systems Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Mechatronik Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Students know selected cryptographic primitives as well as algorithms and can apply them in practice. They also know selected attack techniques and can apply them. This enables students to make a well-founded assessment of the security of the algorithms. On this basis, they can assess the security of security protocols used in practice.
Students master the ways of thinking used in modern cryptography. They deepen their knowledge in the field of mathematics and improve their programming skills by solving problems in cryptography.
They learn to discuss and debate problems of information security and cryptography for practical use with their fellow students.

Students critically reflect on the role of cryptanalysis within the broader context of IT security and responsible research practice. They justify their methodological approach to open-ended problems based on theoretical knowledge from cryptography and computer science. Through the analysis and application of attack techniques, they develop a realistic and professional understanding of the limits and responsibilities of designing secure systems. They are able to communicate their findings and reasoning to both technical and interdisciplinary audiences, and reflect on the societal implications of cryptographic (in)security, such as privacy, surveillance, and digital trust.

Content information	
Content	Modern cryptography has become an integral part of our everyday lives. Everyone uses various Internet services, online banking, contactless payment, etc. on a daily basis and therefore services that would not be possible without cryptography. In addition to encrypting confidential information, cryptography has been reliably guaranteeing other security goals such as authenticity, integrity and non-repudiation for decades. Cryptanalysis is the science and practice of analysing and breaking cryptographic systems, for example to decrypt confidential information without knowledge of the secret key. In addition to analysing encryption schemes, cryptanalysis also includes other cryptographic mechanisms in order to identify and exploit their vulnerabilities. In this course, selected attack techniques against modern cryptographic methods (e.g., factoring or side-channel attacks), with a focus on encryption methods, are presented, discussed and applied. What options do attackers have to break RSA? How can schemes based on discrete logarithms, like the Diffie-Hellman key exchange, be attacked? And what does all of that effect the security of security protocols like TLS? These and many more questions will be answered in this course which will lead to a better understanding of what the term "secure encryption" means. Knowledge of the possibilities of attacks is a prerequisite for the secure practical use of cryptographic algorithms in security protocols or for their implementation.
Literature	Aumasson J.-P.: Serious Cryptography – A Practical Introduction to Modern Encryption, 2nd Edition, No Starch Press, 2025. Ferguson, N., B. Schneier and T. Kohno: Cryptography Engineering – Design Principles and Practical Applications, Wiley, 2010. Hoffstein, J., J. Pipher und J. H. Silverman: An Introduction to Mathematical Cryptography, 2nd Edition, Springer, 2014. Katz, J. und Y. Lindell: Introduction to Modern Cryptography, 3rd Edition, CRC Press, 2020. Knospe, H.: A Course in Cryptography, American Mathematical Society, 2019. Paar C. und J. Pelzl: Understanding Cryptography. A Textbook for Students and Practitioners, Springer, 2009. Stamp, M. und R. M. Low: Applied Cryptanalysis. Breaking Ciphers in the Real World, Wiley, 2007. Von zur Gathen, J.: CryptoSchool, Springer, 2015.

Teaching formats of the courses	
Teaching format	**SWS**
Labor	2
Lehrvortrag	2

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
ACA - Laborprüfung	Method of Examination: Laborprüfung Weighting: 0% wird angerechnet gem. § 11 Satz 2 PVO: Yes Graded: No Remark: Participation in 80% of the lab exercises.
ACA - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: In addition to the contents of the lectures, all contents of the lab exercises are also relevant for the exam.

Miscellaneous	
Recommended Prerequisites	Knowledge of cryptography from other courses is advantageous, but not a prerequisite for participation in the course. Students should be familiar with fundamental concepts from discrete mathematics and number theory, such as modular arithmetic, prime numbers, greatest common divisors, and basic group theory. A basic understanding of algorithms and their complexity is expected. Prior exposure to concepts like modular exponentiation, Euclidean algorithm, and finite fields is helpful but not mandatory. Students should have basic programming experience in any general-purpose language (e.g., Python, Java, C, etc.). No prior experience with SageMath or Jupyter Notebooks is required. Familiarity with basic control structures (loops, conditionals, functions) is expected, as cryptanalytic techniques will be implemented and explored in an interactive programming environment.

AVDI - Audio/Video Design and Interaction

AVDI - Audio/Video Design and Interaction

General information	
Module Code	AVDI
Unique Identifier	AudVidDesInt-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Student are able to design sound, visuals and content of creative and technical areas Students develop a creative and technical installation or performance during the semester. The kind and technology of the installation used are freely selectable. The presentation of the project work at the end of the semester is basis for the grade.
Students are able to use various software for audio and visual production (e.g. processing, open frameworks, Unity, Puredata, Max / MSP). The idea here is experimenting with e.g. : - Techniques and methods for sound synthesis - Video and sound design - Interaction techniques with video, sound or light installations.

Content information	
Content	- Interactive media and creative applications - Interaction with sound and visuals - Media interaction based on -- Body/hand/eye tracking -- AR/VR/MR -- AI - Interaction with sound in 3D space - Practical consolidation with individual programming projects - Methods and strategies of generative design Possible topics: - Programming sounds and visual representations (visuals) - Programs for sound synthesis, sampling and processing - Use of interaction and network technology - Live coding of music and visuals - Programming mini-computers (e.g. Raspberry Pi) for generating sounds and visuals For the creative, experimental work, a surround music system (consisting of spatial loudspeaker system) and various mini computers (e.g. Raspberry Pi) for sound and video installations are available. Knowledge of composition or video production is not required.
Literature	- James R. Parker, Generative Art: Algorithms as Artistic Tool, Durvile, 2019 - Benedikt Gross, et al., Generative Design: Visualize, Program, and Create with JavaScript in p5.js, Princeton Architectural Press, 2018 - Matt Pearson, Generative Art - A practical Guide using Processing, Manning Publications, 2011. - Daniel Shiffman, The Nature of Code: Simulating Natural Systems with Processing, 2012 - Johannes Kreidler, Loadbang: Programmierung Elektronischer Musik in Pd, Wolke Verlag, 2009. - Andy Farnell, Designing Sound, MIT Press, 2010.

Teaching formats of the courses	
Teaching format	**SWS**
Projekt	2
Lehrvortrag	2

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
AVDI - Präsentation	Method of Examination: Präsentation Duration: 30 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

HAW Kiel
Hochschule für Angewandte Wissenschaften Kiel
Kiel University of Applied Sciences

CSC - Computer Science Colloquium

CSC - Computer Science Colloquium

General information	
Module Code	CSC
Unique Identifier	CompSciCollo-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Acker, Wolfram (wolfram.acker@haw-kiel.de) Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Dipl.-Inform. Kopka, Corina (corina.kopka@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Prieß, Malte (malte.priess@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)

Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1)
Module type: Pflichtmodul
Semester: 3

Qualification outcome

Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.

After successful completion, the students have the following skills according to the second cycle of the qualification framework for German university degrees (HQR):
- the ability to present and discuss scientific findings
- Oral communication skills
- Power of persuasion
- Presentation skills

Content information	
Content	The colloquium is an oral examination at the end of the course in terms of content, in which the candidate should first briefly explain and represent the results of the thesis and, if necessary, also defend them. Above all, the candidate should then show that he or she is able to recognize other problems in their degree program related to the topic of the work and to point out possible solutions. The colloquium should take up the subject areas of the courses of all modules of the course. The candidate should show that he or she can apply the scientific and practical knowledge acquired during his or her studies to facts from the area of his or her future professional activity.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	0

Workload	
Number of SWS	0 SWS
Credits	5,00 Credits
Contact hours	0 Hours
Self study	150 Hours

Module Examination	
Examination prerequisites according to exam regulations	None
CSC - Kolloquium	Method of Examination: Kolloquium Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

CSMT - Computer Science Master Thesis

CSMT - Computer Science Master Thesis

General information	
Module Code	CSMT
Unique Identifier	
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Acker, Wolfram (wolfram.acker@haw-kiel.de) Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Dipl.-Inform. Kopka, Corina (corina.kopka@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Prieß, Malte (malte.priess@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)

Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1)
Module type: Pflichtmodul
Semester: 3

Qualification outcome

Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.

With regard to the analysis and solution of technical and economic problems, the students can independently apply the skills they have acquired during their studies and penetrate and use expanding scientific literature.

The students ....
... can work out open technical questions using scientific methods and basic rules of scientific work and present them in written document
... can independently investigate a topic, collect information, as well as evaluate and interpret it.
... can independently investigate a topic and fill information gaps
... can develop case-related solutions and develop and implement them based on the current state of science.
... apply research methods in practice and prepare the central research findings for publication in a target domain-specific manner.

The students can work purposefully and successfully with involved cooperation partners and their supervisors on the basis of empathy, the ability to deal with conflict and consensus, the ability to persevere and social openness. They are able to deal scientifically with the complexity and uncertainty of an open problem or unclear and contradictory situations or open problems. In this context, they are able to make and communicate proposals and/or decisions with incomplete information.
The students have sufficient learning ability and willingness to learn to acquire (technical) knowledge and apply skills and behavior in the context of writing the thesis. They are able to develop, implement and implement innovations, even if they require unknown or unfamiliar patterns of action. They are able to organize their own work. They know how to write a scientific work that is correctly structured in terms of both form and method on the topic they have worked on independently.

Content information	
Content	The Master thesis is considered the final work of the program. It serves to apply knowledge what has been learned during the program to real world problem. For this purpose, the Master thesis deals with a scientific questions in the field of the study program or similar subject areas. The student works independently and finally documents his work.

Teaching formats of the courses	
Teaching format	**SWS**
Keine Präsenzzeit	0

Workload	
Number of SWS	0 SWS
Credits	25,00 Credits
Contact hours	0 Hours
Self study	750 Hours

Module Examination	
Examination prerequisites according to exam regulations	None
CSMT - Abschlussarbeit (Thesis)	Method of Examination: Abschlussarbeit (Thesis) Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	Master Thesis procedures - see https://collab.fh-kiel.de/course/view.php?id=127

CSRP - Computer Science Research Project

CSRP - Computer Science Research Project

General information	
Module Code	CSRP
Unique Identifier	CompSciResPr-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Dipl.-Inform. Kopka, Corina (corina.kopka@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Prieß, Malte (malte.priess@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Independent familiarisation of a new topic and/or deepening of existing knowledge through practical work. Application of theoretical knowledge to practical project. Scientific working, practical realization of scientific theories, creation and execution of experiments, improving problem solving competences. Improving communication skills, team work. Application of research methodologies in project work. Derivation scientific outcome.

Content information	
Content	Compulsory research oriented project work, which may be carried out either within the University or an external company. If carried out within the University it is desireable to be executed within a team of 4 people. In both cases, the research topic needs to be agreed upon with University staff prior to starting the project work. A written 2-4 page proposal needs to be provided prior to commencement , comprising: - Title and abstract - Research hypothesis / possible outcome - Separation into research and development components - Preliminary table of content - 4 relevant literature references The master research project requires independent and self-contained work on R&D projects to deepen the knowledge obtained from lectures. New research hypothesis may be developed independently. The project work typically includes: • Creation of literature surveys and comparative studies • Creation and assessment of methods according to standard research methodologies • Execution of experiments and documentation • Creation, implementation and documentation of tools and applications (development on a scientific basis) • Publishing research results The actual topic has to be discussed on an individual basis with a faculty member prior to commencement.

Teaching formats of the courses	
Teaching format	**SWS**
Projekt	0

Workload	
Number of SWS	0 SWS
Credits	15,00 Credits
Contact hours	0 Hours
Self study	450 Hours

Module Examination	
Examination prerequisites according to exam regulations	None
CSRP - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

En_BusB2 - English for Business Purposes B2

En_BusB2 - English for Business Purposes B2

General information	
Module Code	En_BusB2
Unique Identifier	EnglBusPurB2-01-BM-M
Module Leader(s)	Willson, Elena (elena.willson@haw-kiel.de) Wilson, Kirk (kirk.wilson@haw-kiel.de) Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de) Kruse, Katie (katie.kruse@haw-kiel.de)
Lecturer(s)	Troy-Inniss, Ann (ann.troy-inniss@haw-kiel.de) Wilson, Kirk (kirk.wilson@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.Eng. - IVE - Internationales Vertriebs- und Einkaufsingenieurwesen Module type: Wahlmodul Semester: 2, 3
Study Subject: B.Eng. - Wing - Wirtschaftsingenieurwesen - Elektrotechnik (PO 2017, V1) Module type: Wahlmodul Semester: 4
Study Subject: KA - OFK - Orientierungssemester Förde-Kompass Module type: Wahlmodul Semester: 1
Study Subject: KA - ZSIK - Wahlmodule des ZSIK Module type: Wahlmodul Semester:

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Die Studierenden können die Hauptinhalte komplexer Texte zu konkreten und abstrakten Themen aus der Geschäftswelt verstehen und wiedergeben. Die Studierenden können die meisten Nachrichtensendungen und Reportagen im Fernsehen verstehen (Standardsprache). Die Studierenden können die zentralen Regeln der Grammatik auf einem B2-Niveau anwenden.

Die Studierenden können sich zu einem breiten fachlichen Themenspektrum klar und detailliert ausdrücken, einen Standpunkt zu einer aktuellen Frage erläutern und die Vor- und Nachteile verschiedener Möglichkeiten angeben. Die Studierenden können Artikel und Berichte über Probleme der Gegenwart lesen und verstehen, in denen die Schreibenden eine bestimmte Haltung oder einen bestimmten Standpunkt vertreten. Die Studierenden können bei vertrauten Fachthemen auch komplexer Argumentation folgen. Die Studierenden können die persönliche Bedeutung von Ereignissen und Erfahrungen aus der Geschäftswelt deutlich machen. Die Studierenden können klare und detaillierte Darstellungen zu vielen fachlichen Themen aus eigenen Interessengebieten geben. Die Studierenden können Geschäftsbriefe schreiben und über eine Vielzahl von Fachthemen klare, detaillierte Texte verfassen.
Die Studierenden können sich so spontan und fließend verständigen, dass ein normales Geschäftsgespräch mit einem Muttersprachler recht gut möglich ist. Die Studierenden können sich in vertrauten Arbeitssituationen aktiv an einer Diskussion beteiligen und eigene Ansichten begründen und verteidigen.

Content information

Content	Fokus auf wirtschaftsbezogene Fähigkeiten auf dem B2 Niveau (GER): -- schriftlicher Ausdruck, insbesondere Geschäftsbriefe und Berichte -- mündlicher Ausdruck -- Lese- und Hörverstehen -- Wortschatzarbeit -- prüfungsbezogene Anleitung
Literature	Kursbuch für dieses Modul muss von allen Teilnehmer(innen) angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Teaching formats of the courses

Teaching format	SWS
Sprachkurs	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	Erfüllung der Anwesenheitspflicht gemäß § 52 Abs. 12 HSG.
En_BusB2 - Bericht	Method of Examination: Bericht Weighting: 10% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: Schriftliche Ausarbeitung zur Präsentation
En_BusB2 - Präsentation	Method of Examination: Präsentation Duration: 15 Minutes Weighting: 90% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: Inkl. Fragen

Miscellaneous	
Recommended Prerequisites	Teilnahme nur möglich nach einer Einstufung durch das ZSIK.
Miscellaneous	Nach erfolgreichem Abschluss verfügt jeder/jede Teilnehmer/Teilnehmerin über ein ausreichend breites Spektrum von Redemitteln, um in klaren Beschreibungen oder Berichten über sehr viele Themen aus der Geschäftswelt zu sprechen und eigene Standpunkte auszudrücken gemäß der 4. Stufe des Gemeinsamen Europäischen Referenzrahmens (GER). http://www.europaeischer-referenzrahmen.de/ Online unterstützt.

En_BusC1 - English for Business Purposes C1

En_BusC1 - English for Business Purposes C1

General information	
Module Code	En_BusC1
Unique Identifier	EnglBusPurC1-01-BM-M
Module Leader(s)	Willson, Elena (elena.willson@haw-kiel.de) Wilson, Kirk (kirk.wilson@haw-kiel.de) Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de) Kruse, Katie (katie.kruse@haw-kiel.de)
Lecturer(s)	Jones, Ryan (ryan.jones@haw-kiel.de) Wilson, Kirk (kirk.wilson@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.Eng. - IVE - Internationales Vertriebs- und Einkaufsingenieurwesen Module type: Wahlmodul Semester: 3
Study Subject: B.Eng. - Wing - Wirtschaftsingenieurwesen - Elektrotechnik (PO 2017, V1) Module type: Wahlmodul Semester: 4
Study Subject: KA - OFK - Orientierungssemester Förde-Kompass Module type: Wahlmodul Semester: 1
Study Subject: KA - ZSIK - Wahlmodule des ZSIK Module type: Wahlmodul Semester:

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Die Studierenden können ein breites Spektrum anspruchsvoller, längerer Fachtexte verstehen und auch implizite Bedeutungen erfassen. Die Studierenden können längeren Redebeiträgen folgen, auch wenn diese nicht klar strukturiert und Zusammenhänge nicht explizit ausgedrückt sind. Kann ohne allzu große Mühe Nachrichtensendungen und aktuelle Fernsehbeiträge verstehen, selbst wenn Standardsprache nicht verwendet wird. Die Studierenden können komplexe Sachtexte verstehen und Stilunterschiede wahrnehmen. Die Studierenden können Fachartikel und längere technische Anleitungen verstehen, auch wenn sie nicht im eigenen Fachgebiet liegen Die Studierenden können die zentralen Regeln der Grammatik auf einem C1-Niveau anwenden.

Die Studierenden können sich klar, strukturiert und ausführlich zu komplexen Sachverhalten äußern und dabei verschiedene Mittel zur Textverknüpfung angemessen verwenden. Die Studierenden können sich spontan und fließend ausdrücken, ohne öfter deutlich erkennbar nach Worten suchen zu müssen. Die Studierenden können ihre Gedanken und Meinungen präzise ausdrücken und seine/ihre eigenen Beiträge geschickt mit denen anderer verknüpfen. Die Studierenden können komplexe Sachverhalte ausführlich darstellen und dabei Themenpunkte miteinander verbinden, bestimmte Aspekte besonders ausführen und ihren Beitrag angemessen abschließen. Die Studierenden können sich schriftlich klar und gut strukturiert ausdrücken und seine/ihre Ansicht ausführlich darstellen. Die Studierenden können in Geschäftsbriefen oder Berichten über komplexe Sachverhalte schreiben und die wesentlichen Aspekte hervorheben.
Die Studierenden können in eigenen schriftlichen Texten den Stil wählen, der für die jeweiligen Leser angemessen ist. Die Studierenden können sich spontan und fließend an allen fachlichen Gesprächen und Diskussionen beteiligen, ohne öfter deutlich erkennbar nach Worten suchen zu müssen.
Die Studierenden können die Sprache im beruflichen Leben oder in Ausbildung und Studium wirksam und flexibel gebrauchen.

Content information

Content	Fokus auf allgemeinsprachliche Fähigkeiten auf dem C1 Niveau (GER): -- angemessener schriftlicher und mündlicher Ausdruck für den Berufsalltag -- Lese- und Hörverstehen -- Wortschatzarbeit auf dem entsprechenden Niveau -- Grammatik -- prüfungsbezogene Anleitung
Literature	Kursbuch für dieses Modul muss von allen Teilnehmer(innen) angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Teaching formats of the courses

Teaching format	SWS
Sprachkurs	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	Erfüllung der Anwesenheitspflicht gemäß § 52 Abs. 12 HSG.
En_BusC1 - Bericht	Method of Examination: Bericht Weighting: 10% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: Schriftliche Ausarbeitung zur Präsentation

En_BusC1 - Präsentation	Method of Examination: Präsentation Duration: 15 Minutes Weighting: 90% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: Inkl. Fragen

Miscellaneous	
Recommended Prerequisites	Teilnahme nur möglich nach einer Einstufung durch das ZSIK.
Miscellaneous	Nach erfolgreichem Abschluss verfügt jeder/jede Teilnehmer/Teilnehmerin über ein breites Spektrum von Redemitteln, aus dem er/sie geeignete Formulierungen auswählen kann, um sich klar und angemessen über ein breites Spektrum beruflicher oder wissenschaftlicher Themen zu äußern, ohne sich in dem, was er/sie sagen möchte, einschränken zu müssen, gemäß der 5. Stufe des Gemeinsamen Europäischen Referenzrahmens (GER). http://www.europaeischer-referenzrahmen.de/ Online unterstützt.

ENG - Englisch

ENG - English

General information	
Module Code	ENG
Unique Identifier	Engl-01-BA-M
Module Leader	Willson, Elena (elena.willson@haw-kiel.de) Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de)
Lecturer(s)	
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	No
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)
Study Subject: B.Sc. - INF - Informatik (PO 2021,V1) Module type: Pflichtmodul Semester: 1
Study Subject: B.Eng. - Me (PO 2024) - Mechatronik (PO 2024, V5) Module type: Pflichtmodul Semester: 4

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Entsprechend ihrem Niveau können die Teilnehmer: - Texte verstehen und auch implizite Bedeutungen erfassen. - Redebeiträgen folgen, auch wenn diese nicht klar strukturiert sind und wenn Zusammenhänge nicht explizit ausgedrückt sind. - Fernsehsendungen und Spielfilme verstehen, selbst wenn Standardsprache nicht verwendet wird. - Sachtexte und literarische Texte verstehen. - Fachartikel und technische Anleitungen verstehen, auch wenn sie nicht im eigenen Fachgebiet liegen - die zentralen Regeln der Grammatik anwenden.
Entsprechend ihrem Niveau können die Teilnehmer: - sich klar, strukturiert und ausführlich zu Sachverhalten äußern und dabei verschiedene Mittel zur Textverknüpfung angemessen verwenden. - sich spontan und fließend ausdrücken. - ihre Gedanken und Meinungen ausdrücken und seine/ihre eigenen Beiträge mit denen anderer verknüpfen. - Sachverhalte darstellen und dabei Themenpunkte miteinander verbinden, bestimmte Aspekte ausführen und ihren Beitrag abschließen. - sich schriftlich ausdrücken und seine/ihre Ansicht darstellen. - in Briefen, Aufsätzen oder Berichten über Sachverhalte schreiben und die wesentlichen Aspekte hervorheben.

Entsprechend ihrem Niveau können die Teilnehmer: - in eigenen schriftlichen Texten den Stil wählen, der für die jeweiligen Leser angemessen ist. - sich an allen Gesprächen und Diskussionen beteiligen.
Entsprechend ihrem Niveau können die Teilnehmer: - die Sprache im gesellschaftlichen und beruflichen Leben oder in Ausbildung und Studium gebrauchen.

Content information	
Content	Fokus auf allgemeinsprachliche Fähigkeiten auf dem B2, C1 oder C2 Niveau (GER): -- schriftlicher und mündlicher Ausdruck -- Lese- und Hörverstehen -- Wortschatzarbeit -- Grammatik -- prüfungsbezogene Anleitung
Literature	Kursbuch für dieses Modul muss von allen Teilnehmer:innen angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Courses

Elective Course(s)

The following table lists the available elective courses for this module.

ENGB2 - Englisch B2 - Page: 47
ENGC1 - Englisch C1 - Page: 49
ENGC2 - Englisch C2 - Page: 45

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	Erfüllung der Anwesenheitspflicht gemäß §52 Abs. 12 HSG.
ENG - Veranstaltungsspezifisch	Method of Examination: Veranstaltungsspezifisch Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	Teilnahme nur möglich nach einer Einstufung durch das ZSIK.

Miscellaneous	Sprachverwendung Entsprechend dem Niveau B2/C1/C2 http://www.europaeischer-referenzrahmen.de/ Online unterstützt. Nach erfolgreichem Abschluss des Moduls können die Studierenden beim ZSIK ein Zertifikat über ihr Sprachniveau beantragen.

Course: Englisch C2

General information	
Course Name	Englisch C2 English C2
Course code	ENGC2
Lecturer(s)	Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de) Willson, Elena (elena.willson@haw-kiel.de) West, Rob (rob.west@haw-kiel.de)
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Die Studierenden können praktisch alles, was er / sie liest oder hört, mühelos verstehen. Die Studierenden können ohne Schwierigkeit, gesprochene Sprache verstehen, gleichgültig ob "live" oder in den Medien, und zwar auch, wenn schnell gesprochen wird. (Braucht nur etwas Zeit, sich an einen besonderen Akzent zu gewöhnen.) Die Studierenden können praktisch jede Art von geschriebenen Texten mühelos lesen, auch wenn sie abstrakt oder inhaltlich und sprachlich komplex sind, z. B. Handbücher, Fachartikel und literarische Werke. Die Studierenden können die zentralen Regeln der Grammatik auf einem C2-Niveau anwenden.
Die Studierenden können Informationen aus verschiedenen schriftlichen und mündlichen Quellen zusammenfassen und dabei Begründungen und Erklärungen in einer zusammenhängenden Darstellung wiedergeben. Die Studierenden können sich spontan, sehr flüssig und genau ausdrücken und auch bei komplexeren Sachverhalten feinere Bedeutungsnuancen deutlich machen. Die Studierenden können fließend sprechen und auch feinere Bedeutungsnuancen genau ausdrücken. Bei Ausdrucksschwierigkeiten können sie so reibungslos wieder ansetzen und umformulieren, dass man es kaum merkt. Die Studierenden können eine Darstellung logisch aufbauen und es so den Zuhörern erleichtern, wichtige Punkte zu erkennen und sich diese zu merken. Die Studierenden können Fachtexte und literarische Werke schriftlich zusammenfassen und besprechen.
Die Studierenden können sich mühelos an allen Gesprächen und Diskussionen beteiligen und sind auch mit Redewendungen und umgangssprachlichen Wendungen gut vertraut. Die Studierenden können anspruchsvolle Briefe und komplexe Berichte oder Artikel verfassen, die einen Sachverhalt gut strukturiert darstellen und so dem Leser helfen, wichtige Punkte zu erkennen und sich diese zu merken.
Die Studierenden können Sachverhalte klar, flüssig und im Stil der jeweiligen Situation angemessen darstellen und erörtern. Die Studierenden können klar, flüssig und stilistisch dem jeweiligen Zweck angemessen schreiben.

Content information	
Content	Fokus auf allgemeinsprachliche Fähigkeiten auf dem C2 Niveau (GER): -- schriftlicher und mündlicher Ausdruck -- Lese- und Hörverstehen -- Wortschatzarbeit -- Grammatik -- prüfungsbezogene Anleitung
Literature	Kursbuch für dieses Modul muss von allen Teilnehmer(innen) angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Teaching format of this course	
Teaching format	**SWS**
Sprachkurs	4

Examinations	
ENGC2 - Präsentation	Method of Examination: Präsentation Duration: 7 Minutes Weighting: 40% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
ENGC2 - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 60% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
Ungraded Course Assessment	No

Miscellaneous	
Miscellaneous	Erfüllung der Anwesenheitspflicht gemäß §52 Abs. 12 HSG. Teilnahme nur möglich nach einer Einstufung durch das ZSIK. Kompetente Sprachverwendung (C2) Nach erfolgreichem Abschluss verfügt jeder/jede Teilnehmer/Teilnehmerin über viel Flexibilität, Gedanken mit verschiedenen sprachlichen Mitteln zu formulieren, um feinere Bedeutungsnuancen deutlich zu machen oder um etwas hervorzuheben, zu differenzieren oder um Mehrdeutigkeit zu beseitigen, außerdem verfügt jeder/jede Teilnehmer/Teilnehmerin auch über gute Kenntnisse umgangssprachlicher und idiomatischer Wendungen gemäß der 6. Stufe des Gemeinsamen Europäischen Referenzrahmens (GER). http://www.europaeischer-referenzrahmen.de/ Online unterstützt

Course: Englisch B2

General information	
Course Name	Englisch B2 English B2
Course code	ENGB2
Lecturer(s)	Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de) Willson, Elena (elena.willson@haw-kiel.de) West, Rob (rob.west@haw-kiel.de) Jones, Ryan (ryan.jones@haw-kiel.de)
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Die Studierenden können die Hauptinhalte komplexer Texte zu konkreten und abstrakten Themen verstehen und wiedergeben. Die Studierenden können die meisten Nachrichtensendungen, Reportagen und Spielfilme im Fernsehen verstehen (Standardsprache). Die Studierenden können die zentralen Regeln der Grammatik auf einem B2-Niveau anwenden.
Die Studierenden können sich zu einem breiten Themenspektrum klar und detailliert ausdrücken, einen Standpunkt zu einer aktuellen Frage erläutern und die Vor- und Nachteile verschiedener Möglichkeiten angeben. Die Studierenden können Artikel und Berichte über Probleme der Gegenwart lesen und verstehen, in denen die Schreibenden eine bestimmte Haltung oder einen bestimmten Standpunkt vertreten. Die Studierenden können bei vertrauten Themen auch komplexer Argumentation folgen. Die Studierenden können die persönliche Bedeutung von Ereignissen und Erfahrungen deutlich machen. Die Studierenden können klare und detaillierte Darstellungen zu vielen Themen aus eigenen Interessengebieten geben. Die Studierenden können Briefe schreiben und über eine Vielzahl von Themen klare, detaillierte Texte verfassen.
Die Studierenden können sich so spontan und fließend verständigen, dass ein normales Gespräch mit einem Muttersprachler recht gut möglich ist. Die Studierenden können sich in vertrauten Situationen aktiv an einer Diskussion beteiligen und eigene Ansichten begründen und verteidigen

Content information	
Content	Fokus auf allgemeinsprachliche Fähigkeiten auf dem B2 Niveau (GER): -- schriftlicher und mündlicher Ausdruck -- Lese- und Hörverstehen -- Wortschatzarbeit -- Grammatik -- prüfungsbezogene Anleitung
Literature	Kursbuch für die Lehrveranstaltungen dieses Moduls muss von allen Teilnehmer(innen) angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Teaching format of this course	
Teaching format	**SWS**
Sprachkurs	4

Examinations	
ENGB2 - Präsentation	Method of Examination: Präsentation Duration: 5 Minutes Weighting: 40% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
ENGB2 - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 60% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
Ungraded Course Assessment	No

Miscellaneous	
Miscellaneous	Erfüllung der Anwesenheitspflicht gemäß §52 Abs. 12 HSG. Teilnahme nur möglich nach einer Einstufung durch das ZSIK. Selbstständige Sprachverwendung (B2) Nach erfolgreichem Abschluss verfügt jeder/jede Teilnehmer/Teilnehmerin über ein ausreichend breites Spektrum von Redemitteln, um in klaren Beschreibungen oder Berichten über die meisten Themen allgemeiner Art zu sprechen und eigene Standpunkte auszudrücken gemäß der 4. Stufe des Gemeinsamen Europäischen Referenzrahmens (GER). http://www.europaeischer-referenzrahmen.de/ Online unterstützt.

Course: Englisch C1

General information	
Course Name	Englisch C1 English C1
Course code	ENGC1
Lecturer(s)	Wilson, Kirk (kirk.wilson@haw-kiel.de) Dr. Bubbers, Fiona (fiona.bubbers@haw-kiel.de) Willson, Elena (elena.willson@haw-kiel.de) West, Rob (rob.west@haw-kiel.de)
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Die Studierenden können ein breites Spektrum anspruchsvoller, längerer Texte verstehen und auch implizite Bedeutungen erfassen. Die Studierenden können längeren Redebeiträgen folgen, auch wenn diese nicht klar strukturiert sind und wenn Zusammenhänge nicht explizit ausgedrückt sind. Kann ohne allzu große Mühe Fernsehsendungen und Spielfilme verstehen, selbst wenn Standardsprache nicht verwendet wird. Die Studierenden können komplexe Sachtexte und literarische Texte verstehen und Stilunterschiede wahrnehmen. Die Studierenden können Fachartikel und längere technische Anleitungen verstehen, auch wenn sie nicht im eigenen Fachgebiet liegen Die Studierenden können die zentralen Regeln der Grammatik auf einem C1-Niveau anwenden.
Die Studierenden können sich klar, strukturiert und ausführlich zu komplexen Sachverhalten äußern und dabei verschiedene Mittel zur Textverknüpfung angemessen verwenden. Die Studierenden können sich spontan und fließend ausdrücken, ohne öfter deutlich erkennbar nach Worten suchen zu müssen. Die Studierenden können ihre Gedanken und Meinungen präzise ausdrücken und seine/ihre eigenen Beiträge geschickt mit denen anderer verknüpfen. Die Studierenden können komplexe Sachverhalte ausführlich darstellen und dabei Themenpunkte miteinander verbinden, bestimmte Aspekte besonders ausführen und ihren Beitrag angemessen abschließen. Die Studierenden können sich schriftlich klar und gut strukturiert ausdrücken und seine/ihre Ansicht ausführlich darstellen. Die Studierenden können in Briefen, Aufsätzen oder Berichten über komplexe Sachverhalte schreiben und die wesentlichen Aspekte hervorheben.
Die Studierenden können in eigenen schriftlichen Texten den Stil wählen, der für die jeweiligen Leser angemessen ist. Die Studierenden können sich spontan und fließend an allen Gesprächen und Diskussionen beteiligen, ohne öfter deutlich erkennbar nach Worten suchen zu müssen.
Die Studierenden können die Sprache im gesellschaftlichen und beruflichen Leben oder in Ausbildung und Studium wirksam und flexibel gebrauchen.

Content information	
Content	Fokus auf allgemeinsprachliche Fähigkeiten auf dem C1 Niveau (GER): -- schriftlicher und mündlicher Ausdruck -- Lese- und Hörverstehen -- Wortschatzarbeit -- Grammatik -- prüfungsbezogene Anleitung
Literature	Kursbuch für die Lehrveranstaltungen dieses Moduls muss von allen Teilnehmer(innen) angeschafft werden. Die ISB-Nummer wird am Anfang der ersten Lehrveranstaltung bekannt gegeben.

Teaching format of this course	
Teaching format	**SWS**
Sprachkurs	4

Examinations	
ENGC1 - Präsentation	Method of Examination: Präsentation Duration: 6 Minutes Weighting: 40% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
ENGC1 - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 60% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
Ungraded Course Assessment	No

Miscellaneous	
Miscellaneous	Erfüllung der Anwesenheitspflicht gemäß §52 Abs. 12 HSG. Teilnahme nur möglich nach einer Einstufung durch das ZSIK. Kompetente Sprachverwendung C1 Nach erfolgreichem Abschluss verfügt jeder/jede Teilnehmer/Teilnehmerin über ein breites Spektrum von Redemitteln, aus dem er/sie geeignete Formulierungen auswählen kann, um sich klar und angemessen über ein breites Spektrum allgemeiner, wissenschaftlicher, beruflicher Themen oder über Freizeitthemen zu äußern, ohne sich in dem, was er/sie sagen möchte, einschränken zu müssen gemäß der 5. Stufe des Gemeinsamen Europäischen Referenzrahmens (GER). http://www.europaeischer-referenzrahmen.de/ Online unterstützt.

GEOWEB - Geographical web applications

GEOWEB - Geographical web applications

General information	
Module Code	GEOWEB
Unique Identifier	GeoWebAppl-01-MA-M
Module Leader(s)	Oenings, Hendrik (hendrik.oenings@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Oenings, Hendrik (hendrik.oenings@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
The students - know the standards of the Open Geospatial Consortium (OGC). - are familiar with various open source solutions that support the creation of geoportals.
The students - can create web applications using current web technologies. - can retrieve and visualize geodata from various services using OGC standards.
The students - can justify in conversation why they use or do not use certain technologies. - can present and explain solutions they have developed. - can cooperate with other students in a team.
The students - can independently implement and provide smaller geoportals. - can localize and correct errors in existing applications.

Content information	
Content	Technologies for web applications: - Creation of single-page applications with Vue.JS - TypeScript - ESLint - Accessibility and responsive design Technologies for geoservices: - Coordinate reference systems / EPSG codes - OpenLayers - OGC Web Map Service (WMS) - OGC Web Feature Service (WFS) - Routing - POLAR (https://dataport.github.io/polar/) - Masterportal (https://www.masterportal.org/) Data sources: - Federal structure of geodata provision in Germany - Understanding and correctly applying licenses
Literature	will be announced in the course

Teaching formats of the courses	
Teaching format	**SWS**
Lehrvortrag + Übung	2
Labor	2

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
GEOWEB - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	Basic knowledge of web applications (HTML, CSS, ECMAScript, HTTP) For bachelor students from Kiel UAS, e.g. from the Web Applications or Web Engineering module.

MADS-EMGAI - Generative AI

MADS-EMGAI - Generative AI

General information	
Module Code	MADS-EMGAI
Unique Identifier	GenAI-01-MA-M
Module Leader(s)	Prof. Dr. Prange, Michael (michael.prange@haw-kiel.de)
Lecturer(s)	Brede, Max (max.brede@haw-kiel.de) Klick, Alwin (alwin.klick@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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.

Content information	
Content	Open Source Language Models - Overview of model lists - Ollama - Generation of synthetic text as training sets Agent Systems - Llamaindex, LangChain & Haystack - Function calling - Data analysis Embeddings and Vector Stores - Semantic Search - Retrieval-augmented generation - Recommendations AI Image Generators - Generative Adversarial Networks (GANs) - Variational Autoencoders / Diffusion Models - Generative approaches for image dataset augmentation Fine-Tuning of LLMs and Diffusion Models - Examples: LoRA, QLoRA, MoRA
Literature	Presentation slides

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
MADS-EMGAI - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

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

HAW Kiel
Hochschule für Angewandte Wissenschaften Kiel
Kiel University of Applied Sciences

MI115 - Data Quality Management

MI115 - Data Quality Management

General information	
Module Code	MI115
Unique Identifier	DataQualMgmt-01-MA-M
Module Leader(s)	Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de)
Lecturer(s)	Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Mielke, Michael (michael.mielke@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Irregular
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Students know - data quality dimensions - data quality metrics - data quality management techniques - data governance models Students understand - the growing need for measuring data quality - the growing need for data quality policies
Students are able to create a data quality strategy for an organisation.
Students are able - to communicate data quality strategies - to present modern data quality management techniques
Students are familiar with international standards in the field of data (quality) management and can communicate and apply these in a corporate context.

Content information	
Content	Contents: - Foundation of Data Quality - Data Quality Metrics - Data Cleansing - Data Profiling - Data Governance - Data Quality Tools
Literature	Batini, C. et al.: Data and Information Quality, Springer 2016 [English] Lee, Y.W. et al.: Journey to Data Quality, MIT Press 2009 [English] Hildebrand, K. et al.: Daten- und Informationsqualität, Vieweg+Teubner 2015 [German] Otto, B. et al.: Corporate Data Quality, Springer Gabler 2015 [German]

Teaching formats of the courses	
Teaching format	**SWS**
Labor	2
Lehrvortrag	2

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
MI115 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MK102 - Embedded Systems

MK102 - Embedded Systems

General information	
Module Code	MK102
Unique Identifier	EmbedSys-01-MA-M
Module Leader(s)	Prof. Dr. Patz, Ralf (ralf.patz@haw-kiel.de)
Lecturer(s)	Prof. Dr. Patz, Ralf (ralf.patz@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Sommersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)
Study Subject: M.Eng. - BT - Battery Technologies Module type: Pflichtmodul Semester: 1, 2
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Elektrische Energietechnik Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Kommunikationstechnik und Embedded Systems Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Mechatronik Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
The students will have a thorough knowledge about embedded systems in a real-time context and will be able to evaluate them. They will be able to make decisions about required components for real-world problems taking into account the various technical and economical requirements.

Content information	
Content	This module focuses on embedded systems in a real-time context using an embedded real-time operating system. The content can be divided into different aspects: - Introduction to the embedded hardware: embedded Controller (STM32) - Real-time issues and embedded operating systems - Embedded real-time operating system (e.g. AzureRTOS) - Networking for embedded systems
Literature	1. eigene Scripte 2. Bermbach, Rainer,Embedded Controller, Carl Hanser Verlag, 2001 3. Barr, Programming Embedded Systems in C and C++, O'Reilly Media 4. Catsoulis, Designing Embedded hardware, O'Reily Media 5. Berger, Embedded System Design, MCGRAW-HILL

Teaching formats of the courses	
Teaching format	**SWS**
Lehrvortrag	2
Labor	2

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
MK102 - Laborprüfung	Method of Examination: Laborprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: The examination will be a practical programming task in the last laboratory sessions. The attendance of the laboratory sessions is compulsatory.

Miscellaneous	
Recommended Prerequisites	Knowledge of programming microcontrollers

MK106 - Ausgewählte Kapitel der Signalverarbeitung
MK106 - Advanced Digital Signal Processing

General information	
Module Code	MK106
Unique Identifier	AdvDigSignal-01-MA-M
Module Leader(s)	Prof. Dr. Badri-Höher, Sabah (sabah.badri-hoeher@haw-kiel.de)
Lecturer(s)	Prof. Dr. Badri-Höher, Sabah (sabah.badri-hoeher@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

Curricular relevance (according to examination regulations)
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Study Specialization: Kommunikationstechnik und Embedded Systems Module type: Verpfl. Wahlmodul, PVO §3 Semester: 1, 2
Study Subject: M.Sc. - MCS - Computer Science (PO 2023, V1) Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Students who successfully complete this course will have a deep knowledge in the field of digital signal processing and their application in different areas.
The students obtain specialized deep knowledge in the field of signal processing matched to the master level in the area of electrical and information engineering. The students are capable to apply statistical methods of DSP in different areas, they are capable to explain important basic concepts of digital filter and their implementation by utilizing DSPs. Upon a successful completion of this course, students acquire skills to understand modern sampling techniques based on compressed sensing.
The course covers elements of a classical interactive on-line lecture/exercise, as well as team-working based on the handling of scientific papers and lab. The students learn to solve problems bot independently as well as team-oriented.

Content information	
Content	Numerical methods of signal processing. Digital filter, multirate systems, decimation and interpolation, polyphase channels, filter banks, modulated filterbanks. Working with high power DSP's . Fixed point arithmetic. Influence of quantization noise, noise shaping. Analysis of different filter structures with respect to quantization effects. Sampling of analog signals. Compressed sensing
Literature	- Mitra: Digital Signal Processing, McGraw-Hill. - J.G. Proakis, D.G. Manolakis: Digital Signal Processing: Principles, Algorithms, and Applications, Prentice Hall. - Stearn/David: Signal Processing Algorithms, Prentice-Hall.

Teaching formats of the courses	
Teaching format	**SWS**
Übung	1
Seminar	2
Labor	1

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
MK106 - Laborprüfung	Method of Examination: Laborprüfung Weighting: 0% wird angerechnet gem. § 11 Satz 2 PVO: Yes Graded: No Remark: Die in WS24/25 bestehende Teilprüfung "Übung" wird bei nicht abgeschlossener Modulprüfung auf die neue Teilprüfung "Laborprüfung" angerechnet.
MK106 - Präsentation	Method of Examination: Präsentation Duration: 20 Minutes Weighting: 30% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
MK106 - Klausur	Method of Examination: Klausur Duration: 90 Minutes Weighting: 70% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MK113 - Kanalcodierung
MK113 - Channel Coding

General information	
Module Code	MK113
Unique Identifier	ChannelCod-01-MA-M
Module Leader(s)	Prof. Dr. Badri-Höher, Sabah (sabah.badri-hoeher@haw-kiel.de)
Lecturer(s)	Prof. Dr. Badri-Höher, Sabah (sabah.badri-hoeher@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)
Study Subject: M.Eng. - MET - Elektrische Technologien (PO 2017, V3) Module type: Wahlmodul Semester: 1, 2
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Wahlmodul Semester: 1, 2, 3

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
After successful completion of this module, the students will be able to perform error detection and error correction in digital transmissions schemes and digital storage systems. Furthermore, the students will be able to perform channel encoding and channel decoding.
The students will be capable to distinguish between different code families, particularly block codes and convolutional codes. Furthermore, they will be able to perform suitable decoding methods, like syndrome decoding for block codes and Viterbi decoding for convolutional codes. Additionally, they can construct serial and parallel concatenated codes and use them in digital systems. In lab experiments, the students will emulate data transmission. They will model channel coding schemes and design suitable decoding methods in order to perform error detection and error correction. They will exploit different decoding schemes (hard-decision vs soft-decision decoding, maximum-likelihood decoding, Viterbi algorithm). The students will be able to measure bit error rates and to evaluate the decoders in different simulation environments.
Due to group-wise problem solving with typically just two students per group, problems can be solved efficiently. Soft skills like communication skills will be trained. The students will learn to split complex problems into sub-tasks and to join the corresponding sub-results.

Content information	
Content	Block codes (SPC, Hamming, BSH, CRC, RS, LDPC): Properties, parameters. Convolutional codes: Description, state diagramm, trellis diagramm. Decoding : Hard- and Soft-decoding, Syndrom-decoding, ML-decoding, Viterbi-algorithm. Concatenated codes: - Serial concatenation and their decoding - Parallel concatenation (Turbo codes)
Literature	- E. Biglieri, Coding for Wireless Channels. Springer, 2005. - J.G. Proakis, Digital Communication. McGraw-Hill, New York, 1995. - .M. Bossert, Channel Coding for Telecommunications, John Wiley & Sons, 1999. - P.M. Gray, Source Coding Theory. Kluwer Academic Publishers, 1998. - J.C.A Van der Lubbe, Information Theory. Cambridge University, 1988. - R. Veldhuis, Intorduction to Source Coding. Prentice Hall, UK, 1993.

Teaching formats of the courses	
Teaching format	**SWS**
Lehrvortrag	2
Labor	1
Übung	1

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
MK113 - Bericht	Method of Examination: Bericht Weighting: 20% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes
MK113 - Klausur	Method of Examination: Klausur Duration: 90 Minutes Weighting: 80% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MRP1 - Master Research Project - 1

MRP1 - Master Research Project - 1

General information	
Module Code	MRP1
Unique Identifier	ResProj1-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Method competences: Scientific working, practical realization of scientific theories, creation and execution of experiments, improving problem solving competences.
Social competences: Instructing other students, improving communication skills.
Professional competences: Independent familiarisation in a new topic and/or deepening of existing knowledge through practical work.

Content information	
Content	Independent and self-contained work on sub-topics of R&D projects, deepening knowledge obtained from lectures. New research hypothesis may be developed independently. By instructing other students knowledge and competences should be deepened and transfered to other students. The research assistantship may be carried out in parallel to lectures. It shall offer the opportunity to carry out team work or individual work and get acquainted with research areas and staff. Typical work topics would include: • Creation and assessment of methods • Execution of experiments and documentation • Creation, implementation and documentation of tools and applications • Mentoring other students • Creation of literature surveys • Assisting with lectures • Publishing and assisting with grant applications • Helping with start-up efforts • Setting up and maintaining open-source efforts The actual topic has to be discussed on an individual basis with a faculty member.
Literature	• Literature depends on the specific project.

Teaching formats of the courses	
Teaching format	**SWS**
Projekt	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
MRP1 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MRP2 - Master Research Project - 2

MRP2 - Master Research Project - 2

General information	
Module Code	MRP2
Unique Identifier	ResProj2-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Method competences: Scientific working, practical realization of scientific theories, creation and execution of experiments, improving problem solving competences.
Social competences: Instructing other students, improving communication skills.
Professional competences: Independent familiarisation in a new topic and/or deepening of existing knowledge through practical work.

Content information	
Content	Independent and self-contained work on sub-topics of R&D projects, deepening knowledge obtained from lectures. New research hypothesis may be developed independently. By instructing other students knowledge and competences should be deepened and transfered to other students. The research assistantship may be carried out in parallel to lectures. It shall offer the opportunity to carry out team work or individual work and get acquainted with research areas and staff. Typical work topics would include: • Creation and assessment of methods • Execution of experiments and documentation • Creation, implementation and documentation of tools and applications • Mentoring other students • Creation of literature surveys • Assisting with lectures • Publishing and assisting with grant applications • Helping with start-up efforts • Setting up and maintaining open-source efforts The actual topic has to be discussed on an individual basis with a faculty member.
Literature	• Literature depends on the specific project.

Teaching formats of the courses	
Teaching format	**SWS**
Projekt	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
MRP2 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MRP3 - Master Research Project - 3

MRP3 - Master Research Project - 3

General information	
Module Code	MRP3
Unique Identifier	ResProj3-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Method competences: Scientific working, practical realization of scientific theories, creation and execution of experiments, improving problem solving competences.
Social competences: Instructing other students, improving communication skills.
Professional competences: Independent familiarisation in a new topic and/or deepening of existing knowledge through practical work.

Content information	
Content	Independent and self-contained work on sub-topics of R&D projects, deepening knowledge obtained from lectures. New research hypothesis may be developed independently. By instructing other students knowledge and competences should be deepened and transfered to other students. The research assistantship may be carried out in parallel to lectures. It shall offer the opportunity to carry out team work or individual work and get acquainted with research areas and staff. Typical work topics would include: • Creation and assessment of methods • Execution of experiments and documentation • Creation, implementation and documentation of tools and applications • Mentoring other students • Creation of literature surveys • Assisting with lectures • Publishing and assisting with grant applications • Helping with start-up efforts • Setting up and maintaining open-source efforts The actual topic has to be discussed on an individual basis with a faculty member.
Literature	• Literature depends on the specific project.

Teaching formats of the courses	
Teaching format	**SWS**
Projekt	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
MRP3 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MRS - Master Research Seminar

MRS - Master Research Seminar

General information	
Module Code	MRS
Unique Identifier	ResSem-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Acker, Wolfram (wolfram.acker@haw-kiel.de) Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Prieß, Malte (malte.priess@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
In the everyday work of a university graduate, research on specific topics is often necessary, the results of which often have to be presented in elaborations and lectures. In preparation for this, appropriate skills are taught in the seminar, e.g. the technical basics for independent scientific work in literature searches, lectures and elaborations are learned and deepened; practice working independently and presenting a topic for a specific target audience; learned presentation techniques and speaking in front of an audience; Gained experience in moderation and discussion; learned to question the content of literature and lectures; communicated the open but critical approach to current developments and new topics. In addition, in-depth knowledge and interdisciplinary aspects on special topics are conveyed.

Every participant - can prepare and present a lecture and an essay; - can moderate an event; - can participate in technical and methodological discussions; - is able to critically question scientific texts and lectures.
The students learn the ability to take criticism and a corresponding culture of discussion. Your involvement in the department is promoted by getting to know all the lecturers personally during the presentations and excursions. Depending on the topic, changing contact persons bring broad professional competence, promote interdisciplinary networking and are therefore good preparation for the thesis and the later professional field.
The students acquire skills to increase their own and professional professionalism, e.g. B. for later work as a manager or employee in companies in the upstream and downstream areas of agriculture as well as in consulting firms.

Content information	
Content	- All participants must create and present a lecture and an essay; moderate an event once; Participate in the discussions at all events. - Each event is then critically reviewed by the lecturers; some computer programs are created and evaluated. - Topic-centric interdisciplinary aspects of a general topic.
Literature	- subject-specific

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
MRS - Präsentation	Method of Examination: Präsentation Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MTA - Master Teaching Assistantship

MTA - Master Teaching Assistantship

General information	
Module Code	MTA
Unique Identifier	TeachAssist-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Prof. Dr. Ehlers, Jens (jens.ehlers@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de) Prof. Dr. Manzke, Robert (robert.manzke@haw-kiel.de) Prof. Prieß, Malte (malte.priess@haw-kiel.de) Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de) Prof. Dr. Woelk, Felix (felix.woelk@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Teaching Assisntants learn the basic requirements for preparing, teaching, and postprocessing master-level courses. By swapping from student to teacher perspective, they learn basic skills in education, communication of scientific facts and concepts, and experience basic challenges in academic work.
Teaching Assistants are able to prepare and teach laboratory and exercise courses, create, propose and process examination tasks for university courses, and work with student results and grades in an academic environment.
Along with the teaching experience, teaching assisntants improve their presentation and rhetoric skills, learn how to handle critical situations in teaching events, and get additional experience in time managment. All of this improves their self-awareness and professionality as scientists.

Content information	
Content	Depending on the module the teaching assistantship is held in, the contents may vary. Beyond that, all theaching assistantships include preparation, performance and postprocessing of academis courses, exercises, laboratories, seminars, lectures, or similar, under the guidance of a responsible academic staff member.

Teaching formats of the courses	
Teaching format	**SWS**
Labor	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
MTA - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

MWD - Modern Web Development

MWD - Modern Web Development

General information	
Module Code	MWD
Unique Identifier	ModWebDev-01-MA-M
Module Leader(s)	Dipl.-Inform. Hinkelmann, Kai (kai.hinkelmann@haw-kiel.de)
Lecturer(s)	Dipl.-Inform. Hinkelmann, Kai (kai.hinkelmann@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
This is a project centered course in which students will learn to develop the entire stack of modern single page web app. Through the project students will learn to use the above technologies and ways to design software using them. Through unsupervised project students will learn to find and use technology documentation available openly on the web. By working on a software project as a team students will improve their ability to share responsibility communicate on technical and design matters use version control for collaborative working In the final project presentation students will learn to identify relevant issues and decisions encountered in the project present the above to an audience that was not part of the project justify the decisions made publicly Students are to learn to take responsibility and work without supervision and become familiar with a user problem centered mindset.

Content information	
Content	Some of th technologies taught will be: - Basics of single page applications - Installation and usage of node.js (client and server) - Coding in Typescript - Using Frontend-framework Angular - serversided Typescript - Implementation of a REST-Interface - Testing with Jest - Using MongoDB

Teaching formats of the courses	
Teaching format	**SWS**
Lehrvortrag	2
Labor	2

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
MWD - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

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Hochschule für Angewandte Wissenschaften Kiel
Kiel University of Applied Sciences

NSS - Network Systems and Security

NSS - Network Systems and Security

General information	
Module Code	NSS
Unique Identifier	NetSysSec-01-MA-M
Module Leader(s)	Prof. Dr. Aßmuth, Andreas (andreas.assmuth@haw-kiel.de) Caspar, Florian (florian.caspar@haw-kiel.de)
Lecturer(s)	Caspar, Florian (florian.caspar@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Irregular
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	No

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

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
- After completing this course, students are able capable of explicating protocols and algorithms used in network security. - They can identify threats for network systems and develop countermeasures. - Through the common work on a network security topic students are able to take on different roles in teams and present the solution.
- Students will be able to work with common tools in the IT security field upon completion of the course. - They are able to evaluate existing processes with regard to their applicability and to design their own processes. - They are able to understand the mindset of an attacker and plan anticipatory countermeasures at different work levels.

Content information	
Content	- Firewalls - Network Attacks - Intrusion Detection Systems - Advanced Persistent Threats - Virtualization and Containerization - Security Architectures - Authentication & Authorization - Applied Cryptography

Literature	1. Schneier, B.: Applied Cryptography, John Wiley & Sons, Inc., ISBN 0-471-12845-7 2. Stallings, W.: Cryptography and Network Security: Principles and Practice, Prentice Hall, ISBN 978-0137056323

Teaching formats of the courses	
Teaching format	**SWS**
Lehrvortrag	2
Labor	2

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
NSS - Laborprüfung	Method of Examination: Laborprüfung Weighting: 0% wird angerechnet gem. § 11 Satz 2 PVO: Yes Graded: No Remark: The examination assesses whether students are able to apply the techniques demonstrated in the lecture in practice. Die in SoSe 2024 bestehende Teilprüfung "Übung" wird bei nicht abgeschlossener Modulprüfung auf die neue Teilprüfung "Laborprüfung" angerechnet.
NSS - Klausur	Method of Examination: Klausur Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	BI127: Sicherheit in Netzwerken

PM100 - Wissenschaftliches Arbeiten

PM100 - Academic Studies

General information	
Module Code	PM100
Unique Identifier	AcadStudies-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de) Prof. Dr. Lüssem, Jens (jens.luessem@haw-kiel.de)
Lecturer(s)	Prof. Dr. Schmidt-Rethmeier, Kay (kay.schmidt-rethmeier@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)
Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3) Module type: Pflichtmodul Semester: 1, 2

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
Students who successfully complete this course are able to explicate the basics of scientific research and academic writing. They are familiar with the principles of good scientific practice and know the consequences of plagiarism.
Student are capable of: - locate and use scientific literature related to a research topic - reading, reviewing and writing scientific papers.

Content information	
Content	- The scientific method - Good scientific practice - Writing a Scientific Publication - Scientific Presentations
Literature	- Gibaldi, J. (2005): MLA Handbook for Writers of Research Papers, New York, NY : Modern Language Assoc. of America, 2005 - Quinlan, C. (2011): Business Research Methods. 2011. Andover, Hampshire, UK: South-Western, Cengage Learning. - Zikmund, W. G., Babin, B. J., Carr, J. C., Griffin, M. (2013): Business Research Methods. 9. ed., 2013. Mason, Ohio: South-Western, Cengage Learning

Teaching formats of the courses	
Teaching format	**SWS**

Lehrvortrag	1
Übung	1

Workload	
Number of SWS	2 SWS
Credits	5,00 Credits
Contact hours	24 Hours
Self study	126 Hours

Module Examination	
Examination prerequisites according to exam regulations	None
PM100 - Projektbezogene Arbeiten	Method of Examination: Projektbezogene Arbeiten Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Miscellaneous	This course is not offered anymore. Students who still need this course have to choose module Advanced Cloud Computing (ACC) as a substitute.

PM102 - Advanced Software Programming

PM102 - Advanced Software Programming

General information	
Module Code	PM102
Unique Identifier	AdvSWProg-01-MA-M
Module Leader(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Lecturer(s)	Prof. Dr. Prochnow, Steffen (steffen.prochnow@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)

Study Subject: M.Sc. - MIE - Information Engineering (PO 2022, V3)
Module type: Pflichtmodul
Semester: 1, 2

Qualification outcome

Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.

The Advanced Software Engineering course focuses on contemporary techniques for the development of software systems, with an emphasis on the construction and management large and sustainable software systems. The course deepens the knowledge about advanced software development practices. will also equip you with essential research, analytical and critical thinking skills.

In the context of this course, software generators are tools that application developers use to generate software artifacts with regard to a certain domain specific context. Students should be empowered to automatically develop and use executable software systems from formally specified models. The course is Java-based and builds on the Eclipse framework.

Methodological: Students have enhanced and deepened their scientific competencies, e.g. they are capable of formulating and presenting their results comprehensibly to other experts in the field

Content information	
Content	- Development and configuration of software development tools (plug-in development environment) based on Eclipse and Java - Concepts of model-driven software development (MDSD / MDA) based on the MOF (Meta Object Facility) - Design and implementation of domain-specific languages (DSL) with EMF (Eclipse Modeling Framework) - Language processing tools (including code generation) - Interpreter models - Development and application of tool chains for the partially automated production of software for selected example domains
Literature	- Beydeda, Sami; Book, Matthias; Gruhn, Volker (Eds.): Model-Driven Software Development, Springer, 2005. - Thomas Stahl , Markus Voelter, et al., Model-Driven Software Development: Technology, Engineering, Management, Wiley, 2008 - George T. Heineman, William T. Councill: Component-Based Software Engineering: Putting the Pieces Together, Addison-Wesley Professional, 2001 - E. Clayberg, D. Rubel: Eclipse Plug-ins. Addison-Wesley, 2009.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	2
Lehrvortrag	2

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
PM102 - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	Pre-requisites for this course are: - methods and processes of Software Engineering - Object Oriented Programming - Model-based Design with UML - Java
Miscellaneous	This course is not offered anymore. Students who still need this course have to choose module Advanced Software Engineering (ASE) as a substitute.

PR - Pattern Recognition

PR - Pattern Recognition

General information	
Module Code	PR
Unique Identifier	PatRec-01-MA-M
Module Leader(s)	Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de)
Lecturer(s)	Prof. Dr. Schramm, Hauke (hauke.schramm@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel im Wintersemester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	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
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.
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	
Content	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.
Literature	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	
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
PR - Klausur	Method of Examination: Klausur Duration: 120 Minutes Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes

Miscellaneous	
Recommended Prerequisites	Mathematical basics of algebra and analysis.
Miscellaneous	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.

STRAT-e - Strategisches Management engl.

STRAT-e - Strategic Management

General information	
Module Code	STRAT-e
Unique Identifier	StratMgmtB-01-BA-M
Module Leader(s)	Prof. Dr. Gulev, Rune Ellemose (rune.e.gulev@haw-kiel.de)
Lecturer(s)	Prof. Dr. Gulev, Rune Ellemose (rune.e.gulev@haw-kiel.de)
Offered in Semester	Wintersemester 2025/26
Module duration	1 Semester
Occurrence frequency	Regular
Module occurrence	In der Regel jedes Semester
Language	Englisch
Recommended for international students	Yes
Can be attended with different study programme	Yes

Curricular relevance (according to examination regulations)
Study Subject: B.A. - BWL BA - Betriebswirtschaftslehre Module type: Pflichtmodul Semester: 2
Study Subject: B.Eng. - Wing - Wirtschaftsingenieurwesen - Elektrotechnik (PO 2017, V1) Module type: Wahlmodul Semester: 6
Study Subject: B.Sc. - WINF 7 Sem. - Wirtschaftsinformatik (7 Sem.) Module type: Wahlmodul Semester: 5, 7

Qualification outcome
Areas of Competence: Knowledge and Understanding; Use, application and generation of knowledge; Communication and cooperation; Scientific self-understanding / professionalism.

After successful completion of the course, the student will be able to:

- Envision and competently work with the entire strategic management process
- Conduct highly proficient internal and external environment analyses and be able to present these via very structured and organized methods
- Confidently work with the tools of the strategic management process including PEST analysis, Porter 5 Forces analysis, Competitor profile analysis and mapping, Internal audits, Resource based view analysis, industry concentration analysis, etc.
- Understand the intricacies of mission and vision statements
- Learn how to analyse company strategies in conjunction with contemporary market developments
- Recognise the urgency of innovative behaviour for companies operating in developed markets
- Learn, via the tools of strategic analysis, how to evaluate strategic options and how to develop an effective strategic plan
- Discuss and work with various motivational methods of strategy implementation
- Create planned direction for strategic alliances
- Create coordinated governance systems for diversified companies
- Competently evaluate strategic performance and take corrective actions if needed
- Make a connection between a coherent strategic management plan and its marketing implications

After successful completion of the course, the student will be able to:

- Provide precise and valid strategic direction for companies
- Envision holistic management practices and be able to implement them at a strategic level
- Quickly identify current business affairs and their strategic repercussions
- Coordinate a unified business portfolio assessment
- Act as professional consultants for companies seeking strategic recommendations
- Present key findings in well-ordered overview form for management presentation
- Provide rational judgements and assessments of companies in domestic and international markets
- Assess leading edge technologies for companies operating within regulatory and environmental constraints
- Relating the PLC to innovative behaviour within companies

After successful completion of the course, the student will be able to:

- Present and confidently portray a strategic management plan for top executives that is consistent, logical, resilient and defendable at each level of analysis
- Talk competently regarding the strategic management process and the options companies can/should pursue
- Cut-to-the-core of complicated business plans revealing actual strategic intensions vs. codified management speak
- Work with company managers around the globe to facilitate optimal business outcomes
- Pursue and express strategic directions that act in the best interest of companies and their wealth gains

After successful completion of the course, the student will be able to:

- Critically reflect upon strategic business plans and their positive/negative ramifications on domestic and foreign environments
- Understand when company betterment is in the interest of societal gains vs. societal losses
- Have a firm understanding of why companies behave in the manner they do, and how they can achieve optimal outcomes

Content information	
Content	Content pivots around but is not limited to: Strategy Formulation • Strategic analysis in a globalized context • Competitive advantage and societal impacts • Vision and mission statements • Tools of external environmental analysis: Pest and Porter • Economies of scale as entry and exit barriers • Tools of internal environmental analyses: Resource based view and Internal audits • ROI and future value calculations • Calculating Herfindahl-Hirschman-Index • Strategies in action with cases • Tools of strategic analysis: SWOT Matrix, SPACE Matrix, BCG Matrix, Grand Strategy Matrix • Creating External and Internal Factor Evaluations Strategy Implementation • Management and operational issues • Establishing new annual objectives in tune with motivation • Managing conflict • Downsizing • Linking pay to performance • Strategy and structure • Cultures fit with structure and strategy • Cases of good and poor strategic structure-culture fit • Organizing corporate diversification • Agency conflicts • Organizing strategic alliances • Misrepresentation in alliances Strategy Evaluation • Developing a strategy evaluation framework • Balanced scorecard Aligning marketing ways with strategic assessment: • Manipulating customer needs • Irrationality of Price and Promotion • Examples of effective marketing today • Penetrating through the “cheese bell” • Questioning subliminal marketing #strategischeanalyse #externemarktbewertung #internebewertung #herfindahlhirschmanindex #swotmatrix #bcgmatrix# grandstrategymatrix #spacematrix #competitormapping #downsizing #pest #porter5forces #resourcebaseview #internesaudit #strategieformulierung #strategieimplementierung #strategiebewertung #visionstatement #leitbild #preisstrategien #unterschwelligesmarketing #strategicanalysis #externalmarketevaluation #internalevaluation #internalaudit #strategyformulation #strategyimplementation #strategyevaluation #missionstatement #pricingstrategies #subliminalmarketing

Literature	Recommended readings: • Strategic Management and Competitive Advantage, Concepts and Cases (2015, 5th ed.) by Barney and Hesterly. Pearson. (ISBN # 978-0-13-312740-9) • Strategic Management: Concepts and Cases: Competitiveness and Globalization (2016, 12th ed.) by Michael A. Hitt and R. Duane Ireland. Cengage. (ISBN # 978-1-305-50214-7) • Broedner, P. (2007) 'From Taylorism to competence-based production', AI & Society, Vol. 21, No. 4, pp.497–514. • Nadeau, J. and Casselman, R.M. (2008) 'Competitive advantage with new product development: implications for life cycle theory', Journal of Strategic Marketing, Vol. 16, No. 5, pp.401–411. • Nyland, C. and Heenan, T. (2005) 'Mary van Kleeck, Taylorism and the control of management knowledge', Management Decision, Vol. 43, No. 10, pp.1358–1374. • Sasagawa, M., Kajiyama, T. and Ouchi, N. (2014) 'A study of pricing strategy in platform business: a multi-agent simulation approach', International Journal of Technology Marketing, Vol. 9, No. 4, pp.421–435. • Tushman, M.A. and O'Reilly, C.A. (2002) Winning through Innovation: A Practical Guide to Leading Organizational Change and Renewal, Harvard Business School Press, Cambridge, MA. • Gulev, R. E. (2016). Connecting Culture to Creativity and Innovation: how trust and other forms of corporate culture influence innovative behaviour. International Journal of Sustainable Economy, 8(4): 342 - 356.

Teaching formats of the courses	
Teaching format	**SWS**
Seminar	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
STRAT-e - Portfolioprüfung	Method of Examination: Portfolioprüfung Weighting: 100% wird angerechnet gem. § 11 Satz 2 PVO: No Graded: Yes Remark: There are several graded assignments to be delivered: Short Project Assignment: 5% Mid Term Assignment: 10% Presentation: 10% Final Assignment: 75%