MPROBT - Master Project - Battery Technologies

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Allgemeine Informationen	
Modulkürzel oder Nummer	MPROBT
Eindeutige Bezeichnung	ProjBatTech-01-MA-M
Modulverantwortlich(e)	Prof. Dr. Weber, Christoph (christoph.weber@haw-kiel.de)
Lehrperson(en)	Prof. Dr. Böhnke, Daniel (daniel.boehnke@haw-kiel.de) Dr. Kamm, Andre (andre.kamm@haw-kiel.de) Prof. Dr. Patz, Ralf (ralf.patz@haw-kiel.de) Prof. Dr. Weber, Christoph (christoph.weber@haw-kiel.de) Prof. Dr. Wree, Christoph (christoph.wree@haw-kiel.de)
Wird angeboten zum	Wintersemester 2026/27
Moduldauer	2 Fachsemester
Angebotsfrequenz	Regelmäßig
Angebotsturnus	In der Regel jedes Semester
Lehrsprache	Englisch
Empfohlen für internationale Studierende	Ja
Ist als Wahlmodul auch für andere Studiengänge freigegeben (ggf. Interdisziplinäres Modulangebot - IDL)	Nein

Studiengänge und Art des Moduls (gemäß Prüfungsordnung)
Studiengang: M.Eng. - BT - Battery Technologies Modulart: Pflichtmodul Fachsemester: 1, 2

Kompetenzen / Lernergebnisse
Kompetenzbereiche: Wissen und Verstehen; Einsatz, Anwendung und Erzeugung von Wissen; Kommunikation und Kooperation; Wissenschaftliches Selbstverständnis/Professionalität.
The Students are able to independently familiarize with new topics related to battery technologies and/or deepening existing knowledge through practical work.
They apply theoretical knowledge to a practical project of an unsolved technical problem. They evaluate existing solutions from literature and investigate different research methods in project work. From the developed outcome they are able to derive new scientific results.
Due to the organisation as a team of up to three members they are able to professionalize their communication and presentation skills towards different stakeholder groups (e. g. a client from a contracting company or the lecturer)
The project enables students to continously work scientifically, so that they are able to find practical solutions for scientific questions in the field of battery technologies. As the result, they create and implement innovative methods, experimental setups or devices. In this manner, students professionalize their problem-solving skills for unsolved technical problems.

Angaben zum Inhalt	
Lehrinhalte	This module consists of a compulsory research-oriented project work over two saemesters, which can be carried out either within the university or an external company. The topic of the project work should address an actual problem from the industry which is defined in the first semester. Students do a pre-planning of the the project usually accompanied with simulations and the setup of prototypes. The second semester should be used to optimize the final solution based on the knowlegde and the results of the first semester. If the project takes place within the university, it is desirable that it be carried out by a team of up to 3 members, where the company acts as a stakeholder. In both cases, the research topic must be agreed with the university staff before the project work begins. The master's research project requires independent work to deepen the knowledge from lectures. New research hypotheses can be developed independently. Project work typically includes: • Completing a literature review or comparative studies • Creation and evaluation of methods according to standard research methods • Conducting experiments and documentation • Publication of research results
Literatur	Linden’s Handbook of Batteries, Thomas Reddy (Ed.) – McGraw-Hill Engineering Project Management, Nigel J. Smith – Wiley IEEE Xplore articles

Lehrformen der Lehrveranstaltungen	
Lehrform	**SWS**
Projekt	0

Arbeitsaufwand	
Anzahl der SWS	0 SWS
Leistungspunkte	10,00 Leistungspunkte
Präsenzzeit	0 Stunden
Selbststudium	300 Stunden

Modulprüfungsleistung	
Voraussetzung für die Teilnahme an der Prüfung gemäß PO	Keine
MPROBT - Projektbezogene Arbeiten	Prüfungsform: Projektbezogene Arbeiten Gewichtung: 100% wird angerechnet gem. § 11 Absatz 2 PVO: Nein Benotet: Ja Anmerkung: The examination takes place over a period of two semesters

Sonstiges	
Sonstiges	The project work is an independent task carried out by a team of students. As a rule, the students' progress is monitored weekly during a 30-minute meeting with the supervisor.