

Modul 11	Epistemological Aspects of Scientific Knowledge Production			
	<i>Epistemological Aspects of Scientific Knowledge Production</i>			
	Modulart		Wahlpflichtmodul	
	Modulkennnummer		102201100	
	Leistungspunkte (LP)		10 LP	
	Semesterwochenstunden (SWS)		4 SWS	
	Spezialisierungsoption		M.Ed. Lehramt an Gemeinschaftsschulen: sofern Fach B Chemie: Pflicht	
			Fachwissenschaftlicher Masterstudiengang: sofern Fach B Chemie: Pflicht	
			Erziehungswissenschaftlicher Fach-Masterstudiengang: sofern Fach B Chemie: Pflicht	
	Studienabschnitt	5. Semester	Workload (gesamt)	
Turnus	Jedes Herbstsemester	Davon	Präsenzzeit	60 h
Dauer	1 Semester		Selbststudium	240 h
Qualifikationsziel:		The students understand that physics is a human endeavour which is not a fixed set of knowledge but a cultural activity with specific outcomes that shape and are shaped by society. In this respect, they also understand how physics and the respective knowledge production were developed in the European context and that they are part of the European culture. Moreover, they understand central aspects of materiality in the process of research and laboratory practices, but also sociological aspects in knowledge production.		
Fachkompetenz:		The students develop an understanding of how scientific concepts and scientific methods were developed historically. They are able to identify internal and external factors that shaped, triggered or obstructed these developments and can identify central periods of scientific development. The students can use methods for understanding, criticising, and reflecting texts by scientists as well as by historians of science. They can analyse procedures in order to compare cerebral knowledge and non-cerebral knowledge (skills, tacit knowing) as well as their role in scientific knowledge production. They can also discuss material aspects with respect to the production of scientific knowledge and are able to discuss scientific instrumentation with respect to aspects of materiality.		
Methodenkompetenz:		The students can analyse primary and secondary source texts as well as material objects that are related to conceptual and methodological developments. They can develop practical procedures based on textual and material sources and reflect on this process. They reflect practical experiences with reconstructed instruments in order to develop an understanding of performative and material aspects of knowledge production. They are able to value conceptual understandings that are historical and transfer their understanding to contemporary discussions about social issues related to scientific developments.		

Fortsetzung von Modul 11:

Sozial- und Selbstkompetenz:	The students can collaborate in order to perform procedures based on their interpretation of the published account. They can analyse and discuss material aspects of instruments both based on objects and written accounts. The students can place their understanding in the respective historical contexts, reflect on their interpretation and on those of others. They are able to reflect on different procedures of producing a consensus and on epistemological aspects of knowledge production in different historical situations. In this respect, they are able to identify criteria that are historically relevant and put them in relation to their modern understanding of knowledge production.
Lehr-/ Lernformen:	Lecture, seminar, laboratory
Modulverantwortliche/r:	Peter Heering
Teilnahmevoraussetzung:	keine
Verwendbarkeit des Moduls:	B.A. Bildungswissenschaften
Anmerkungen / Sonstiges:	Dieses Modul wird von Studierenden des Fachs Physik (= Fach A) belegt, deren zweites Fach Chemie (= Fach B) ist. Das Modul findet (zumindest zum Teil) in englischer Sprache statt.

M 11: Teilmodul 1	Science as Culture			
	Teilmodulkennnummer	102201101	Lehrveranstaltungsart	Seminar
	SWS	2 SWS	Workload (Teilmodul)	90 h
	Art des Teilmoduls	Pflicht	Davon	Präsenzzeit
	Geplante Gruppengröße	40		Selbststudium
Teilnahmepflicht	-			
M 11: Teilmodul 2	Materiality in the History of Physics			
	Teilmodulkennnummer	102201102	Lehrveranstaltungsart	Seminar
	SWS	2 SWS	Workload (Teilmodul)	90 h
	Art des Teilmoduls	Pflicht	Davon	Präsenzzeit
	Geplante Gruppengröße	12		Selbststudium
Teilnahmepflicht	-			
M 11: Modulprüfung	Modulprüfung			
	Exam			
	Prüfungsnummer	102201105	Prüfungsumfang	Siehe Erläuterung
	Prüfungsform	Essay	Prüfungsvorbereitung, Prüfungserarbeitung	120 h
	Benotete Prüfung?	Ja		
	Erläuterungen bzgl. Mo- dulprüfung	Umfang des Essays: 18.000 bis 25.000 Zeichen		
Letzte Änderung: 10.02.2020				