Syllabus

Descrizione corso

Titolo insegnamento	Fondamenti della didattica disciplinare I: scienze naturali, agrarie e alimenti scuola secondaria di II grado
Codice insegnamento	83025
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	AGRI-05/B
Lingua	Tedesco
Corso di Studio	Percorso universitario di formazione iniziale dei docenti della scuola secondaria di primo e secondo grado in lingua tedesca - 60CP
Altri Corsi di Studio (mutuati)	
Docenti	prof. dr. Sanja Baric, Sanja.Baric@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/1049
Assistente	
Semestre	Secondo semestre
Anno/i di corso	1
CFU	2
Ore didattica frontale	12
Ore di laboratorio	0
Ore di studio individuale	38
Ore di ricevimento previste	
Sintesi contenuti	The module "Didactics of Natural, Agricultural and Nutritional Sciences for Secondary Schools" teaches basic didactic skills for the planning, implementation and reflection of lessons in the subject of natural, agricultural and nutritional sciences. The aim is to enable students to professionally design competence-oriented teaching for different learning groups in secondary levels I and II.
Argomenti	In this module, students explore the fundamentals of subject-

dell'insegnamento	specific didactics in 'Natural, Agricultural and Nutritional Sciences for Secondary School' and reflect on the interplay between subject-specific knowledge, curriculum guidelines and school practice. Building on this, they develop skills in competence-based lesson planning by analysing subject-specific competences, formulating learning objectives and structuring lesson plans. A further focus is on designing appropriate learning environments and implementing teaching methods. Students learn to apply different teaching formats and methods in a subject-specific manner and to design learning processes in an active, differentiated and effective way. The course introduces the key foundations of science didactics and addresses the following topics: - Introduction to subject didactics in natural science education - Competence orientation and task-based learning - Scientific ways of thinking and working - Learners' prerequisites, preconceptions and conceptual change - Didactic analysis, reduction and reconstruction - Connections to students' everyday lives and interdisciplinary learning in nature, technology, environment/ecology and health
Parole chiave	Competence orientation; task-based learning; scientific ways of thinking and working; preconceptions; didactic analysis; learning environments
Prerequisiti	None
Insegnamenti propedeutici	
Modalità di insegnamento	The on-site course combines lecture-based teaching with seminar-style elements, group work, case studies, analysis of teaching materials and micro-teaching. Students gradually develop their own teaching and learning sequences, test selected elements, and reflect on them jointly in the light of key concepts in subject didactics.
Obbligo di frequenza	According to the regulations
Obiettivi formativi specifici e risultati di apprendimento attesi	Finally, the module deals with observing, giving feedback and evaluating learning processes and performance in the subject of natural, agricultural and nutritional sciences at secondary schools. Forms of feedback that promote learning as well as criteria for

	transparent and competence-oriented performance assessment are addressed.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	Knowledge and Understanding: Teachers - know the key foundations of science didactics and understand the importance of competence orientation, task-based learning, learners' prerequisites, preconceptions and didactic analysis for the planning of science lessons - understand scientific ways of thinking and working as a basis for developing subject-specific ideas and concepts Applying Knowledge and Understanding: Teachers - can didactically analyse, structure and reduce subject content from the natural sciences, agricultural sciences and nutritional sciences - plan competence-oriented and task-based learning processes that build on learners' prior knowledge, experiences and interests and promote scientific thinking and working Making Judgments: Teachers - can assess subject content, task formats and learning environments with regard to their didactic quality, connectivity, relevance to students' everyday lives and competence orientation - reflect on possible learning difficulties, preconceptions and misconceptions and evaluate which didactic approaches are suitable for further developing subject-specific concepts Learning Strategies: Teachers - develop strategies to guide learners towards independent, interconnected and reflective learning - promote conscious engagement with scientific questions, support the use of different sources of information, and create learning opportunities in which pupils can examine, expand and justify their ideas in a subject-specific way
Modalità di esame	- Development and written elaboration of a subject-didactic teaching or communication sequence: 50% - Presentation or micro-teaching with didactic justification: 30% - Active participation, reflection tasks and discussion of case studies: 20%
Criteri di valutazione	- Subject-matter knowledge

	- Capacity for reflection - Judgment and quality of innovation - Practical applicability - Presentation skills - Accuracy and correctness of expression
Bibliografia obbligatoria	Metzger, S., & Labudde, P. (Hrsg.). Fachdidaktik Naturwissenschaft: 1.–9. Schuljahr. Haupt / UTB. Nerdel, C. Grundlagen der Naturwissenschaftsdidaktik: Kompetenzorientiert und aufgabenbasiert für Schule und Hochschule. Springer Spektrum. Ausgewählte aktuelle Fachartikel und praxisorientierte Materialien zu naturwissenschaftlicher, agrarwissenschaftlicher und ernährungswissenschaftlicher Fachdidaktik.
Bibliografia facoltativa	
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità