
neu740 - Molecular Mechanisms of Ageing

Module label

Modulkürzel

Credit points

Workload

Molecular Mechanisms of Ageing

neu740

6.0 KP

180 h

(

4 SWS Supervised exercise (UE)

Total workload 180h: 26h contact / 50h group work / 50h prep. of thesis, presentations / 54h recap. literature

)

Verwendbarkeit des Moduls

- Bachelor's Programme Biology (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Business Administration and Law (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Business Informatics (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Chemistry (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Comparative and European Law (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Computing Science (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Economics and Business Administration (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Education (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Engineering Physics (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Environmental Science (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Intercultural Education and Counselling (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Mathematics (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Physics (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Physics, Engineering and Medicine (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Social Studies (Bachelor) > Fachnahe Angebote Biologie
- Bachelor's Programme Sustainability Economics (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Art and Media (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Biology (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Chemistry (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Dutch Linguistics and Literary Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Economic Education (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Education (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Elementary Mathematics (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme English Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Gender Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme General Education

Zuständige Personen

Prerequisites

Skills to be acquired in this module

- (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme German Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme History (Bachelor) > Fachnahe Angebote Biologie
- Dual-subject bachelor's programme Low German (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Material Culture: Textiles (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Mathematics (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Music (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Philosophy / Values and Norms (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Physics (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Politics-Economics (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Protestant Theology and Religious Education (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Slavic Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Social Studies (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Special Needs Education (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Sport Science (Bachelor) > Fachnahe Angebote Biologie
- Dual-Subject Bachelor's Programme Technology (Bachelor) > Fachnahe Angebote Biologie
- Fach-Bachelor Pädagogisches Handeln in der Migrationsgesellschaft (Bachelor) > Fachnahe Angebote Biologie
- Master's Programme Biology (Master) > Skills Modules
- Master's Programme Neuroscience (Master) > Skills Modules
- Thedieck, Kathrin (module responsibility)
- Ebbers, Lena (module responsibility)
- Thedieck, Kathrin (Prüfungsberechtigt)

[/code]+ Neurosci. knowlg.

+ Expt. methods

++ Scient. literature

++ Social skills

+ Interdiscipl. knowlg.

++ Data present./disc.

+ Scientific English

++ Ethics

In this module the participants gain an overview of arguments and experimental strategies in ageing research. We will focus on the fields of medicine/epidemiology, biochemistry/ cell biology, physiology, and genetics. In addition, the main ageing theories will be covered. The participants work throughout the semester in project groups and present their results at a conference at the end of the course. Ethicists and philosophers from Germany and The Netherlands accompany the course, and chair at the conference a session on ethical aspects of ageing research. Under their moderation, the participants derive joint standpoints and policy recommendations.

At the end of this course the participants can

understand, analyse, and present scientific articles from ageing research

present the results of their studies and analyses using different presentation techniques

apply the learned contents in novel contexts (ethics in ageing research)

		Topics		
		Major ageing theories		
		arguments and experimental strategies in the fields of medicine/epidemiology, biochemistry/ cell biology, physiology, genetics in ageing research application of the learned contents in novel contexts (ethics in ageing research) understanding, analysing, and presentation of scientific articles presentation of results with different presentation techniques		
Module contents		Lecture: major ageing theories and methods in ageing research are presented and discussed Exercise: project work 1) Students: Choice of research focus 2) Independent work on the chosen research paper 3) Writing a 1 page thesis paper 4) Presentation in own expert group 5) Expert groups: research strategies, approaches, methods in chosen focus area 6) Development of a group resenatation and group poster 7) Presentation at 1 day conference 8) Dutch and German ethics experts present bioethics and lobby work in German and Dutch political gremia 9) The students develop a comparative view on medical ethics in different countries and derive own standpoints and policy recommendations for the ethical assessment of metabolic and ageing research. The project work runs independently in the different expert groups throughout the semester and is organised via StudIP. The students and groups receive regular feedback and guidance in presence meetings.		
		The days for presence meetings and final conference are determined with the participants during the first meeting. The students organize their own work in groups according to the jigsaw concept. Their work is structured by a weekly schedule, tasks to be handed in at fixed deadlines across the semester, lectures and presence meetings. Primary and secondary literature will be provided and introduced at the first meeting		
Literatureempfehlungen		Recommended textbook(s) or other literature: Roger B. McDonald, Biologyof aging, Garland Science http://www.garlandscience.com/garlandscience_resources/book_resources.jsf?isbn=9780815342137&landing=student Altern : Zellula?re und molekulare Grundlagen, ko?rperliche Vera?nderungen und Erkrankungen, Therapieansa?tze Ludger Rensing ; Volkhard Rippe		
Links				
Language of instruction		English		
Duration (semesters)		1 Semester		
Module frequency		annually, summer term		
Module capacity		16		
Type of module		Wahlpflicht / Elective		
Examination		Type of examination		
Final exam of module		portfolio: thesis paper, oral presentation, poster presentation In addition, mandatory but ungraded: questionnaire on ageing theories, meeting protocols		
Prüfungszeiten		end of semester		
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		4	SoSe	56
Präsenzzeit Modul insgesamt				84 h