

Georg-August-Universität Göttingen Module B.Geo.707: An Introduction to Molecular, Phylogenetic and DNA Barcoding Methods	4 C 4 WLH
Learning outcome, core skills: With rapid advances in DNA sequencing technologies molecular data is becoming more and more relevant to many fields of modern science. This course will provide students with an introduction to basic molecular procedures including genomic DNA extraction, PCR amplification and purification, DNA sequencing and sequence analysis with a variety of bioinformatic tools. As an exercise we will collect a variety of invertebrates from local Göttingen habitats, and we will sequence a so called "DNA barcode" gene from each of these. In theory this barcode has the potential to uniquely identify every species on the planet. In this course we will test that theory. <i>Students should have a basic understanding of biology but previous molecular experience is not necessary. The course will be held in English, so students should have the ability to understand, read and write in English.</i>	Workload: Attendance time: 56 h Self-study time: 64 h
Course: B.Geo.707.C An Introduction to Molecular, Phylogenetic and DNA Barcoding Methods (Lecture, Exercise)	4 WLH
Examination: Oral Presentation[in Form eines selbsterstellten Posters] (approx. 10 minutes) B.Geo.707.Mp: An Introduction to Molecular, Phylogenetic and DNA Barcoding Methods Examination prerequisites: Course participation and regular attendance in the practicals	4 C
Examination requirements: Students will collect samples from the field and process these using the variety of molecular techniques explained in the course. Once all of the raw data has been collected and analysed, each student must present their findings in the form of a poster. Course participation and the poster are the evaluation criteria for this course.	
Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Prof. Dr. Daniel Jackson
Course frequency: each summer semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: from 5
Maximum number of students: 20	