Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Master-Zeugnis
Verfügung

6562 0363 1503

Zürich, den 18. Januar 2024

Nils Christian LANG
geboren am 6. Februar 1998, Matrikelnummer 21-952-148
hat am Departement Biosysteme
und an der Universität Zürich und der Universität Basel
für das Master-Diplom in Computational Biology and Bioinformatics
nach dem Reglement vom 18. Oktober 2016
die folgenden Leistungen erbracht:

	Note/Resultat	Kreditpunkte (ECTS)
Kernfächer und Seminar		
Kernfächer		
Bioinformatics		
Computational Biology	5.50	6
Biophysics		
Current Topics in Biophysics	bestanden	6
Biosystems		
Computational Systems Biology	5.00	6
Mathematical Modelling for Bioengineering and Systems Biology	5.50	4
Spatio-Temporal Modelling in Biology	5.25	4
Data Science		
Data Mining I	5.75	6
Data Mining II	4.75	6
Seminar		
Computational Biology and Bioinformatics Seminar	6.00	2
Vertiefungsfächer		
Vertiefungsfächer - Theorie		
Big Data for Engineers	5.25	6
Computational Systems Biology: Stochastic Approaches	4.75	4
Information Systems for Engineers	5.50	4
Introduction to Dynamical Systems with Applications to Biology	4.50	4
Vertiefungsfächer - Biologie		
ImmunoEngineering	5.75	4
Synthetic Biology I	5.25	4
Systems Genomics	5.75	4
Anwendungen		
Lab Rotation Short 1	5.75	9
Lab Rotation Short 2	bestanden	9

Studiendirektorin
P. Dittrich
Prof. Dr. Petra S. Dittrich

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ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Master-Zeugnis
Verfügung

Zürich, den 18. Januar 2024

Nils Christian LANG
geboren am 6. Februar 1998, Matrikelnummer 21-952-148
Master-Diplom in Computational Biology and Bioinformatics

	Note/Resultat	Kreditpunkte (ECTS)
Wissenschaft im Kontext		
Open- and User Innovation	5.75	3
Master-Arbeit		
Master's Thesis	6.00	30
Gesamtdurchschnitt (Gewicht=Kreditpunkte)	5.54	
Gesamtkreditpunkte		121

Notenskala: 6 ist die beste, 4 eine genügende und 1 die geringste Note. Nicht benotete Leistungen werden mit "bestanden" oder "nicht bestanden" bewertet. Ein ECTS-Kreditpunkt entspricht einem Arbeitspensum von 30 Stunden.

Es wird verfügt:

1. Der Kandidat erhält das Master-Diplom in Computational Biology and Bioinformatics.
2. Dem Kandidaten wird der Titel Master of Science ETH UZH UNIBAS in Computational Biology and Bioinformatics verliehen. Die Kurztitel lauten MSc ETH UZH UNIBAS CBB oder MSc ETH UZH UNIBAS.

Studiendirektorin

P. Dittrich

Prof. Dr. Petra S. Dittrich

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ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Beiblatt

Zürich, den 18. Januar 2024

Nils Christian LANG

geboren am 6. Februar 1998, Matrikelnummer 21-952-148

Weitere erbrachte Leistungen im Master-Studiengang Computational Biology and Bioinformatics

	Note/Resultat	Kreditpunkte (ECTS)
Auflagen		
Data Structures and Algorithms	4.75	8

Studiendirektorin

P. Dittrich

Prof. Dr. Petra S. Dittrich

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Degree certificate

Albert-Ludwigs-Universität Freiburg

UNI FREIBURG

Philosophische Fakultät

University College Freiburg

Nils Lang

born on February 6, 1998

completed the degree program

Bachelor of Science (B.Sc.)

in

Liberal Arts and Sciences

majoring in

Specialization Life Sciences

on July 31, 2021

with the final grade of

excellent (1.3)

and has earned 240 ECTS credits.

Die Bachelorarbeit mit dem Titel "Morphological Classification of Cell Dedifferentiation in a Bovine Chondrocyte Momolayer Culture" wurde mit der Note excellent (1.0) bewertet.

Freiburg i. Br., August 10, 2021

Prof. Dr. Sitta von Reden

Chair of the Examination Committee

.841

ID: 7948938

EXA 257s1-4(e) (07/2021)

Diploma

Albert-Ludwigs-Universität Freiburg

UNI FREIBURG

Philosophische Fakultät

University College Freiburg

Nils Lang

born on February 6, 1998

completed the final examination in

Liberal Arts and Sciences

on July 31, 2021

The candidate has been awarded the academic degree

Bachelor of Science (B.Sc.)

Freiburg i. Br., August 10, 2021

Prof. Dr. Dietmar Neutatz
Dean

Prof. Dr. Sitta von Reden
Chair of Examination Committee

Albert-Ludwigs-Universität Freiburg

Mr
Nils Lang
born on February 6, 1998

Transcript of Records

Degree program: Bachelor
Major: Liberal Arts and Sciences, PO 2015

	Status / Grade	ECTS	Semester / Remark
Intermediate Examination	1.5		
Total ECTS credits		240	
Bachelor Thesis Morphological Classification of Cell Dedifferentiation in a Bovine Chondrocyte Momolayer Culture	1.0	12	WS 2020/21
Language Proficiency	BE		
Language Proficiency in English	BE		WS 2018/19
Latin	BE		WS 2016/17
Core Studies	1.4	66	
English for Academic Purposes	2.7	6	
Lecture English for Academic Purposes	2.7	3	WS 2016/17
Work Group English for Academic Purposes	BE	3	WS 2016/17
Research and Presentation	2.3	6	
Lecture Research and Presentation: Inter-Nationalism	2.3	3	WS 2016/17
Work Group Research and Presentation: Inter-Nationalism	BE	3	WS 2016/17
Written Expression	1.3	6	
Lecture Written Expression: Inter-Nationalism	1.3	3	WS 2016/17
Work Group Written Expression: Inter-Nationalism	BE	3	WS 2016/17
Theory of Knowledge	1.3	6	
Lecture Theory of Knowledge: Knowledge, Truth, and Inference	1.3	3	WS 2016/17
Work Group Theory of Knowledge: Knowledge, Truth, and Inference	BE	3	WS 2016/17
Dealing with Numerical Information	1.3	6	
Lecture Dealing with Numerical Information	1.3	3	SS 2017
Work Group Dealing with Numerical Information	BE	3	SS 2017
Knowledge in Context	1.3	6	
Lecture Knowledge in Context: Living Knowledge. Practise and Reflection of Qualitative Methods	1.3	3	SS 2017
Work Group Knowledge in Context: Living Knowledge. Practise and Reflection of Qualitative Methods	BE	3	SS 2017
Theory of Science	1.3	6	
Lecture Theory of Science: Perspectives on Science	1.3	3	SS 2018
Work Group Theory of Science: Perspectives on Science	BE	3	SS 2018
Science in Context	1.0	6	
Lecture Science in Context: Science in Context: An Introduction to Science and Technology Studies - Lecture	1.0	3	WS 2019/20
Work Group Science in Context: Science in Context: An Introduction to Science and Technology Studies - Lecture	BE	3	WS 2019/20
Research Design Across Disciplines	1.0	6	
Lecture Research Design Across Disciplines	1.0	3	WS 2019/20
Work Group Research Design Across Disciplines	BE	3	WS 2019/20
Responsibility and Leadership I	1.3	6	
Lecture Responsibility and Leadership I: An Introduction to Responsibility and Leadership	1.3	3	WS 2016/17
Work Group Responsibility and Leadership I: An Introduction to Responsibility and Leadership	BE	3	WS 2016/17
Responsibility and Leadership II	1.0	6	
Lecture Responsibility and Leadership II: Sustainable Entrepreneurship	1.0	3	SS 2021
Work Group Responsibility and Leadership II: Sustainable Entrepreneurship	BE	3	SS 2021
Specialization Governance	1.7	6	
Introduction to Governance	1.7	6	
Lecture Introduction to Governance	1.7	3	SS 2017
Work Group Introduction to Governance	BE	3	SS 2017
Specialization Life Sciences	1.3	78	
Introduction to Life Sciences	1.7	6	

	Status / Grade	ECTS	Semester / Remark
Lecture Introduction to Life Sciences	1.7	3	SS 2017
Work Group Introduction to Life Sciences	BE	3	SS 2017
Mathematics and Physics for the Liberal Arts and Sciences	1.7	6	
Lecture Mathematics and Physics for the Liberal Arts and Sciences: Maths and Physics	1.7	3	WS 2017/18
Work Group Mathematics and Physics for the Liberal Arts and Sciences: Maths and Physics	BE	3	WS 2017/18
Computer Science, Data Processing and Modeling in the Sciences	1.0	6	
Lecture Computer Science, Data Processing and Modeling in Life Sciences: Computational Modeling	1.0	3	SS 2018
Work Group Computer Science, Data Processing and Modeling in Life Sciences: Computational Modeling	BE	3	SS 2018
Biochemistry	1.7	6	
Lecture Biochemistry	1.7	3	SS 2018
Work Group Biochemistry	BE	3	SS 2018
Physiology	1.0	6	
Lecture Physiology: Human Physiology	1.0	3	WS 2019/20
Work Group Physiology: Human Physiology	BE	3	WS 2019/20
Cell Biology	1.0	6	
Lecture Cell Biology	1.0	3	SS 2018
Work Group Cell Biology	BE	3	SS 2018
Laboratory Work for the Life Sciences	1.0	6	
G.E.R.N. Tissue Replacement, Regeneration & Neurogenesis	1.0	3	WS 2020/21
G.E.R.N. Tissue Replacement, Regeneration & Neurogenesis	BE	3	WS 2020/21
Methods	1.3	6	
Lecture Methods: Advanced Statistics	1.3	3	SS 2020
Work Group Methods: Advanced Statistics	BE	3	SS 2020
Advanced Life Sciences I	1.3	6	
Lecture Advanced Life Sciences I: Drug Development and Regulation	1.3	3	WS 2017/18
Work Group Advanced Life Sciences I: Drug Development and Regulation	BE	3	WS 2017/18
Advanced Life Sciences II	1.7	6	
Lecture Advanced Life Sciences II: Genetics and Molecular Biology - Genealogy of a Science	1.7	3	SS 2018
Work Group Advanced Life Sciences II: Genetics and Molecular Biology - Genealogy of a Science	BE	3	SS 2018
Advanced Life Sciences III	1.3	6	
Lecture Advanced Life Sciences III: Anatomy and Functions of the Brain	1.3	3	WS 2017/18
Work Group Advanced Life Sciences III: Anatomy and Functions of the Brain	BE	3	WS 2017/18
Specialization Option: Life Sciences I	1.3	6	
Lecture Specialization Option: Life Sciences I: Introduction to Tissue Engineering and Cellular Therapies in Regenerative Medicine	1.3	3	WS 2019/20
Work Group Specialization Option: Life Sciences I: Introduction to Tissue Engineering and Cellular Therapies in Regenerative Medicine	BE	3	WS 2019/20
Specialization Option: Life Sciences II	1.0	6	
Lecture Specialization Option: Life Sciences II	1.0	3	SS 2020
Work Group Specialization Option: Life Sciences II	BE	3	SS 2020
Specialization Earth and Environmental Sciences	1.3	6	
Introduction to Earth and Environmental Sciences	1.3	6	
Lecture Introduction to Earth and Environmental Sciences	1.3	3	SS 2017
Work Group Introduction to Earth and Environmental Sciences	BE	3	SS 2017
Electives	BE	72	
Electives - Elective Modules (Joker)	BE	20	
Elective Module	BE	3	
Workgroup UCF Course: Faszination Wissenschaft: ‚Genome Editing' – Möglichkeiten, rechtliche Herausforderungen und ethische Grenzen	BE	3	WS 2017/18
Elective Module	1.3	8	
Lecture UCF Course: Robot Design – Theory, Practice, Philosophy	1.3	4	WS 2019/20
Workgroup UCF Course: Robot Design – Theory, Practice, Philosophy	BE	4	WS 2019/20
Elective Module	BE	3	
Workgroup UCF Course: Beer and Wine as Crafts	BE	3	SS 2020
Elective Module	2.7	6	
Lecture UCF Course: Nervous System Disorders	2.7	3	SS 2020
Workgroup UCF Course: Nervous System Disorders	BE	3	SS 2020
Courses of other Degree Programs (University of Freiburg)	BE	8	
Introduction to Programming	BE	8	WS 2017/18
Language Courses	BE	14	
Spanish	BE	6	
Spanish A1.1	BE	6	WS 2016/17
Language Courses (miscellaneous)	BE	8	
Italian B1.1	BE	4	WS 2019/20
Italian V (B1.1 -- B1.2)-G	BE	4	WS 2020/21
Accreditation	BE	30	
Studies Abroad (graded)	1.5	30	
Studies Abroad (graded)	1.5	30	accreditation

	Status / Grade	ECTS
Bachelor Thesis: Morphological Classification of Cell Dedifferentiation in a Bovine Chondrocyte Momolayer Culture	excellent (1.0)	12
Bachelor	**excellent (1.3)**	**240**
Date of the last assessment	**July 31, 2021**	

Freiburg i. Br., August 10, 2021

Prof. Dr. Sitta von Reden
Chair of the Examination Committee

Key of statuses:
BE = assessment passed; TRE = regular participation in course.

Key of remarks:
accreditaion Univ. FR = credits earned at University Freiburg; accreditation = credits earned at another institution.

Grades:
1,0 to 1,5 = excellent
1,6 to 2,5 = good
2,6 to 3,5 = satisfactory
3,6 to 4,0 = sufficient
5,0 = insufficient