



ZEUGNIS DER ALLGEMEINEN HOCHSCHULREIFE

FRAU / ~~HERR~~

Lina - Mareike

VORNAMEN

Milbrand

FAMILIENNAME

GEBOREN AM

27. Juni 1983

IN

Berlin

HAT SICH NACH DEM BESUCH DER GYMNASIALEN OBERSTUFE DER ABITUR-
PRÜFUNG UNTERZOGEN.

Dem Zeugnis liegen zugrunde:

- die „Vereinbarung zur Neugestaltung der gymnasialen Oberstufe in der Sekundarstufe II“ in der Fassung vom 11. April 1988 (Beschluß der Kultusministerkonferenz vom 11. April 1988),
- die „Vereinbarung über die Abiturprüfung in der neugestalteten gymnasialen Oberstufe in der Sekundarstufe II“ (Beschluß der Kultusministerkonferenz vom 13. Dezember 1973) in der jeweils gültigen Fassung,
- die Verordnung über die gymnasiale Oberstufe (VO-GO) vom 26. April 1984 in der jeweils gültigen Fassung,
- die Ausführungsvorschriften über die Abiturprüfung (AV Abitur) in der jeweils gültigen Fassung.

1. LEISTUNGEN IN DER KURSPHASE:

Punktzahlen der Kurse in einfacher Wertung

LF = Leistungsfach		1. Halbjahr	2. Halbjahr	3. Halbjahr	4. Halbjahr
Sprachlich-literarisch-künstlerisches Aufgabenfeld					
Deutsch	—	08	08	08	07
Musik	LF	12	11	11	12
Bildende Kunst	—	09	09	09	10
Englisch	—	08	08	08	08
Französisch	—	/	/	/	/
Latein	—	/	/	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
Gesellschaftswissenschaftliches Aufgabenfeld					
Politische Weltkunde	—	07	08	08	07
(Geschichte, Erdkunde, Sozialkunde)					
Geschichte	—	/	/	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
Mathematisch-naturwissenschaftlich-technisches Aufgabenfeld					
Mathematik	—	11	12	13	09
Physik	—	/	/	/	/
Chemie	—	12	11	12	13
Biologie	LF	10	10	10	10
Informatik	—	(07)	(09)	/	/
.....	—	/	/	/	/
.....	—	/	/	/	/
Weitere Fächer					
Sport	—	o.B.	/	o.B.	o.B.
.....	—	/	/	/	/
.....	—	/	/	/	/

2. LEISTUNGEN IN DER ABITURPRÜFUNG:

	Prüfungsfach	Prüfungsergebnis in einfacher Wertung	
		schriftlich	mündlich
1.	Biologie (Leistungsfach)	12	/
2.	Musik (Leistungsfach)	09	/
3.	Englisch (Grundkursfach)	05	/
4.	Polit. Weltkunde (Grundkursfach)		07

3. BERECHNUNG DER GESAMTQUALIFIKATION UND DER DURCHSCHNITTSNOTE:

Punktsumme aus 22 Grundkursen in einfacher Wertung: **208** mindestens 110, höchstens 330 Punkte

Punktsumme aus den 6 Leistungskursen des 1. bis 3. Kurshalbjahres in zweifacher Wertung und den beiden Leistungskursen des 4. Kurshalbjahres in einfacher Wertung: **150** mindestens 70, höchstens 210 Punkte

Punktsumme aus den Prüfungen in vierfacher Wertung und den Kursen der Prüfungsfächer im 4. Kurshalbjahr in einfacher Wertung: **169** mindestens 100, höchstens 300 Punkte

GESAMTPUNKTZAHL: **527** mindestens 280, höchstens 840 Punkte

DURCHSCHNITTSNOTE: **2,5**

Mit „E“ sind Erweiterungs- bzw. Ergänzungsgrundkurse gekennzeichnet.

In Klammern gesetzt sind die Punktzahlen von Kursen, die nicht in die Gesamtqualifikation eingehen.

Für die Umsetzung der Noten in Punkte gilt:

Notenstufen	sehr gut			gut			befriedigend			ausreichend			mangelhaft			ungenügend
Noten	+	1	-	+	2	-	+	3	-	+	4	-	+	5	-	6 nicht berücksichtigt
Punkte	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00

Lina-Mareike Milbrand

4. FREMDSPRACHEN:

Erste Fremdsprache Englisch von Kl. 5 bis 13 II
 Zweite Fremdsprache Französisch von Kl. 7 bis 11
 Dritte Fremdsprache / von / bis /

Das Zeugnis schließt den Erwerb

gemäß Vereinbarung der Kultusministerkonferenz vom 26. Oktober 1979 ein.

Bemerkungen:

FRAU / HERR

Lina-Mareike Milbrand

HAT DIE ABITURPRÜFUNG BESTANDEN UND DAMIT DIE BEFÄHIGUNG ZUM STUDIUM AN
 EINER HOCHSCHULE IN DER BUNDESREPUBLIK DEUTSCHLAND ERWORBEN.

BERLIN,

17. Juni 2003

C. Seule
 SCHULLEITER(IN)

Siegel
der Schule

Moll
 VORSITZENDE(R) DER PRÜFUNGSKOMMISSION

Die Durchschnittsnote (N) errechnet sich in Übereinstimmung mit Anlage 3 der Verordnung zur Durchführung des Staatsvertrages über die Vergabe von Studienplätzen nach der Formel:

$$N = 5^{2/3} - \text{Gesamtpunktzahl} : 168.$$

Die Durchschnittsnote wird auf eine Stelle hinter dem Komma errechnet; es wird nicht gerundet. Bei einer Gesamtpunktzahl von 768 und mehr Punkten ergibt sich eine Durchschnittsnote 1,0.

Ernst-Moritz-Arndt-Universität Greifswald

Mathematisch-Naturwissenschaftliche Fakultät



Zeugnis

Diplomvorprüfung im Studiengang Biochemie

Frau Lina-Mareike Milbrand

geboren am 27. Juni 1983 in Berlin

hat die Diplomvorprüfung gemäß der Gemeinsamen Prüfungsordnung für Diplomstudiengänge an der Ernst-Moritz-Arndt-Universität Greifswald mit dem Gesamturteil **gut (2,1)** bestanden.

Physikalische Chemie	gut (2,0)
Biochemie	gut (2,0)
Genetik	gut (2,0)
Experimentalphysik	gut (2,0)
Organische Chemie	befriedigend (2,7)

Greifswald, 25. April 2006



Siegel der Universität

Prof. Dr. K. Weisz
Prüfungsausschussvorsitzender
Studiengang Biochemie



Diplom

Die Mathematisch-Naturwissenschaftliche Fakultät
unter dem Dekanat des Universitätsprofessors
für Theoretische Physik Dr. rer. nat. Klaus Fesser
verleiht

Frau Lina-Mareike Milbrand

geboren am 27. Juni 1983 in Berlin

aufgrund der bestandenen Diplomprüfung im Studiengang Biochemie
den akademischen Grad

Diplom-Biochemikerin

Greifswald, 19. August 2008

Dekan

Prägesiegel der
Universität



Prof. Dr. Klaus Weisz
Prüfungsausschussvorsitzender
Studiengang Biochemie

Ernst-Moritz-Arndt-Universität Greifswald

Mathematisch-Naturwissenschaftliche Fakultät



Zeugnis

Diplomprüfung im Studiengang Biochemie

Frau Lina-Mareike Milbrand

geboren am 27. Juni 1983 in Berlin

hat die Diplomprüfung gemäß gültiger Fachprüfungsordnung für den
Diplomstudiengang Biochemie an der Ernst-Moritz-Arndt-Universität Greifswald
mit dem Gesamturteil **befriedigend (2,6)** bestanden.

Biochemie	befriedigend (3,0)	Prof. Dr. Klaus Weisz
<i>Biologisches Wahlfach</i> Molekularbiologie	befriedigend (3,0)	Prof. Dr. Reinhard Walther
<i>Chemisches Wahlfach</i> Organische Chemie	gut (2,3)	Prof. Dr. Sabine Müller

Thema der Diplomarbeit: Untersuchung zur zellulären Funktion von Ataxin-2

Note: gut (2,5) Prof. Dr. Reinhard Walther / Prof. Dr. Hans Lehrach

Tag der letzten Prüfung: Greifswald, 19. August 2008

Prägesiegel der
Universität

Prof. Dr. Klaus Weisz
Prüfungsausschussvorsitzender
Studiengang Biochemie



3. LEVEL OF THE QUALIFICATION

ERNST MORITZ ARNDT
UNIVERSITÄT GREIFSWALD

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPS. The purpose of the supplement is to provide independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully complemented by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason.

1. HOLDER OF THE QUALIFICATION

1.1 Family Name/ First Name

Milbrand, Lina-Mareike

1.2 Date, Place, Country of Birth

27 June 1983, Berlin, Germany

1.3 Student ID Number or Code

107632

2. QUALIFICATION

2.1 Name of Qualification

Diplom

Title Conferred (full, abbreviated; in original language)

Diplom-Biochemikerin / Diplom-Biochemiker (Dipl.-Biochem.)

2.2 Main Fields of Study

Biochemistry

2.3 Institution Awarding the Qualification (in original language)

Ernst-Moritz-Arndt-Universität Greifswald

Mathematisch-Naturwissenschaftliche Fakultät

Status (Type/ Control)

University/ State Institution

2.4 Institution Administering Studies

same

Status (Type/ Control)

same/ same

2.5 Language(s) of Instruction/ Examination

German

3. LEVEL OF THE QUALIFICATION

3.1 Level

Graduate program

3.2 Official Length of Program

Five years, i.e. ten terms

3.3 Access Requirements

Higher Education Entrance Qualification (HEEG) cf. Sec. 8.7. after 12 or 13 years

4. CONTENTS AND RESULTS GAINED

4.1 Mode of Study

Full-time

4.2 Program Requirements

The major in Biochemistry (diploma) is divided into a core of 4 semesters, followed by the diploma preliminary examination, and advanced studies of 6 semesters which conclude with oral diploma examinations and the preparation of the diploma thesis. The overall scope of courses amounts to 116 SWS (semester periods per week) during the core studies and 100 SWS during the advanced studies.

4.3 Program Details

During the first four semesters the basics in chemistry are covered. Further, fundamental knowledge in biochemistry and biology is attained in lectures, seminars and laboratory courses. In addition, courses in physics and mathematics are offered. The diploma preliminary examination includes five examinations in the subjects of Biochemistry, Organic Chemistry, an elective in chemistry (Inorganic Chemistry or Physical Chemistry), an elective in biology (Plant Physiology, Animal Physiology, Genetics or Microbial Physiology & Molecular Biology) as well as Experimental Physics or Mathematics.

The following six semesters primarily focus on biochemistry oriented courses. The students arrange their curriculum largely on their own depending on personal interest and future career plans. During semesters 5 through 8 mandatory courses as well as electives in biological and chemical subject areas must be attended. Further specialization in a chemical or biological elective provides an introduction to a research project. The advanced studies are concluded with the oral diploma examination in Biochemistry, and in a chemical and a biological elective. Furthermore, a diploma thesis has to be prepared within eight months. Organic Chemistry, Bioinorganic Chemistry, Biophysical Chemistry, Biotechnology, Environmental Analysis & Chemistry as well as Molecular Structural Biology are offered as elective subject areas in chemistry. Electives in biology include Molecular Biology, Pharmaceutical Biology, Physiology & Biochemistry of Microorganisms, Genetics, Animal Physiology, Plant Physiology and Immunology.

See also course record and Final Examination Certificate (Prüfungszeugnis) for subjects completed by written and/ or oral examinations and topic of thesis, including attained grades.

4.4 Grading Scheme

General grading scheme cf. 8.6

4.5 Overall Classification (in original language)

- befriedigend -

Based on the weighted average of grades in oral diploma examinations and diploma thesis (doubly weighted).

5. FUNCTION OF THE QUALIFICATION**5.1 Access to Higher Study**

Qualifies for admission to doctoral work (PhD programme). Prerequisite: acceptance for PhD research project.

5.2 Professional Status

n.a.

6. ADDITIONAL INFORMATION**6.1 Additional Information**

6.2 Further Information Sources

About the institution: www.uni-greifswald.de
for national information sources cf. Sec. 8

7. CERTIFICATION

This Diploma Supplement refers to the following original documents:

Urkunde über die Verleihung des Diploms 19 August 2008

Prüfungszeugnis 19 August 2008

Certification Date: 19 August 2008



(Official Stamp/ Seal)

Prof. Dr. rer. nat. Klaus Weisz
Chairman
Examination Committee

8. NATIONAL HIGHER EDUCATION SYSTEM

The information on the national higher education system on the following pages provides a context for the qualification and the type of higher education that awarded it (DSDoc 01/03.00)

8. INFORMATION ON THE GERMAN HIGHER EDUCATION SYSTEM¹

8.1. Types of Institutions and Institutional Control

Higher education (HE) studies in Germany are offered at three types of *Hochschulen*²

- *Universitäten* (Universities), including various specialized institutions, comprise the whole range of academic disciplines. In the German tradition, universities are also institutional foci of, in particular, basic research, so that advanced stages of study have strong theoretical orientations and research-oriented components.
- *Fachhochschulen* (Universities of Applied Sciences): Programs concentrate in engineering and other technical disciplines, business-related studies, social work, and design areas. The common mission of applied research and development implies a distinct application-oriented focus and professional character of studies, which include one or two semesters of integrated and supervised work assignments in industry, enterprises or other relevant institutions.
- *Kunst- und Musikhochschulen* (Colleges of Art/Music, etc.) offer graduate studies for artistic careers in fine arts, performing arts and music; in such fields as directing, production, writing in theatre, film, and other media; and in a variety of design areas, architecture, media and communication.

¹ The information covers only aspects directly relevant to purposes of the Diploma Supplement. All information as of 1 Jan 2000.

² Hochschule is the generic term for higher education institutions.

HE institutions are either state or state-recognized institutions. In their operations, including the organization of studies and the designation and award of degrees, they are both subject to HE legislation.

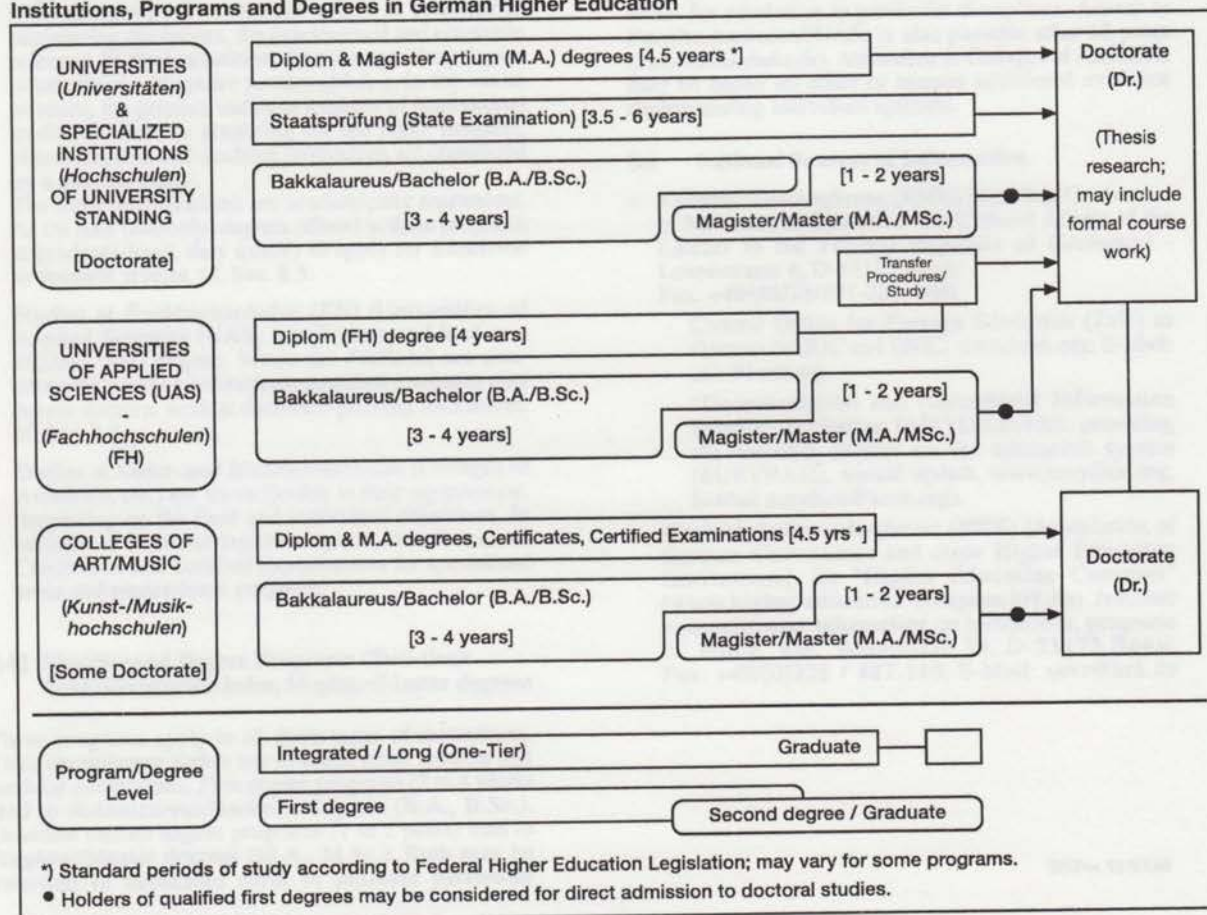
8.2 Types of programs and degrees awarded

- Studies in all three types of institutions are traditionally offered in integrated "long" (one-tier) programs leading to *Diplom-* or *Magister Artium* degrees or completion by a *Staatsprüfung* (State Examination).
- In 1998, a new scheme of first- and second-level degree programs (*Bakkalaureus/Bachelor* and *Magister/Master*) was introduced to be offered parallel to or *in lieu* of established integrated "long" programs. While these programs are designed to provide enlarged variety and flexibility to students in planning and pursuing educational objectives, they enhance also international compatibility of studies.
- For details cf. Sec. 8.41 and Sec. 8.42, respectively. Table 1 provides a synoptic summary.

8.3 Approval/Accreditation of Programs and Degrees

To ensure quality and comparability of qualifications, the organization of studies and general degree requirements have to conform to principles and regulations jointly established by the Standing Conference of Ministers of

Institutions, Programs and Degrees in German Higher Education



Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany (KMK) and the Association of German Universities and other Higher Education Institutions (HRK). In 1999, a system of accreditation for programs of study has become operational under the control of an Accreditation Council at national level. Programs and qualifications accredited under this scheme are designated accordingly in the Diploma Supplement.

8.4 Organization of Studies

8.41 Integrated "Long" Programs (One-Tier):

Diplom degrees, Magister Artium, Staatsprüfung

Studies are either mono-disciplinary (single subject, *Diplom* degrees, most programs completed by a *Staatsprüfung*) or comprise a combination of either two major or one major and two minor fields (*Magister Artium*). As common characteristics, in the absence of intermediate (first-level) degrees, studies are divided into two stages. The first stage (1.5 to 2 years) focuses - without any components of general education - on broad orientations and foundations of the field(s) of study including propaedeutical subjects. An Intermediate Examination (*Diplom-Vorprüfung* for *Diplom* degrees; *Zwischenprüfung* or credit requirements for the M.A.) is prerequisite to enter the second stage of advanced studies and specializations. Degree requirements always include submission of a thesis (up to 6 months duration) and comprehensive final written and oral examinations. Similar regulations apply to studies leading to a *Staatsprüfung*.

- Studies at *Universities* last usually 4.5 years (*Diplom* degree, *Magister Artium*) or 3.5 to 6 years (*Staatsprüfung*). The *Diplom* degree is awarded in engineering disciplines, the exact/natural and economic sciences. In the humanities, the corresponding degree is usually the *Magister Artium* (M.A.). In the social sciences, the practice varies as a matter of institutional traditions. Studies preparing for the legal, medical, pharmaceutical and teaching professions are completed by a *Staatsprüfung*. The three qualifications are academically equivalent. As the final (and only) degrees offered in these programs at graduate-level, they qualify to apply for admission to doctoral studies, cf. Sec. 8.5.
- Studies at *Fachhochschulen* (FH) /Universities of Applied Sciences (UAS) last 4 years and lead to a *Diplom* (FH) degree. While the FH/UAS are non-doctorate granting institutions, qualified graduates may pursue doctoral work at doctorate-granting institutions, cf. Sec. 8.5.
- Studies at *Kunst- and Musikhochschulen* (Colleges of Art/Music, etc.) are more flexible in their organization, depending on the field and individual objectives. In addition to *Diplom*/Magister degrees, awards include Certificates and Certified Examinations for specialized areas and professional purposes.

8.42 First/Second Degree Programs (Two-tier): *Bakkalaureus/Bachelor, Magister/Master degrees*

These programs apply to all three types of institutions. Their organization makes use of credit point systems and modular components. First degree programs (3 to 4 years) lead to *Bakkalaureus*/Bachelor degrees (B.A., B.Sc.). Graduate second degree programs (1 to 2 years) lead to *Magister*/Master degrees (M.A., M.Sc.). Both may be awarded in dedicated form to indicate particular

specializations or applied/professional orientations (B./M. of ... ; B.A., B.Sc. or M.A., M.Sc. in ...). All degrees include a thesis requirement.

8.5 Doctorate

Universities, most specialized institutions and some Colleges of Art/Music are doctorate-granting institutions. Formal prerequisite for admission to doctoral work is a qualified *Diplom* or *Magister*/Master degree, a *Staatsprüfung*, or a foreign equivalent. Admission further requires the acceptance of the Dissertation research project by a supervisor. Holders of a qualified *Diplom* (FH) degree or other first degrees may be admitted for doctoral studies with specified additional requirements.

8.6 Grading Scheme

The grading scheme usually comprises five levels (with numerical equivalents; intermediate grades may be given): "*Sehr Gut*" (1) = Very Good; "*Gut*" (2) = Good; "*Befriedigend*" (3) = Satisfactory; "*Ausreichend*" (4) = Sufficient; "*Nicht ausreichend*" (5) = Non-Sufficient/Fail. The minimum passing grade is "*Ausreichend*" (4). Verbal designations of grades may vary in some cases and for doctoral degrees. Some institutions may also use the ECTS grading scheme.

8.7 Access to Higher Education

The General Higher Education Entrance Qualification (*Allgemeine Hochschulreife*, *Abitur*) after 12 to 13 years of schooling gives access to all higher education studies. Specialized variants (*Fachgebundene Hochschulreife*) allow for admission to particular disciplines. Access to *Fachhochschulen*/(UAS) is also possible after 12 years (*Fachhochschulreife*). Admission to Colleges of Art/Music may be based on other or require additional evidence demonstrating individual aptitude.

8.8 National Sources of Information

- *Kultusministerkonferenz* (KMK) [Standing Conference of Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany] - Lennéstrasse 6, D-53113 Bonn; Fax: +49/[0]228/501-229; with
 - Central Office for Foreign Education (ZaB) as German NARIC and ENIC; www.kmk.org; E-Mail: zab@kmk.org
 - "Documentation and Educational Information Service" as German EURYDICE-Unit, providing the national dossier on the education system (EURYBASE, annual update, www.eurydice.org; E-Mail eurydice@kmk.org).
- *Hochschulrektorenkonferenz* (HRK) [Association of German Universities and other Higher Education Institutions]. Its "Higher Education Compass" (www.higher-education-compass.hrk.de) features comprehensive information on institutions, programs of study, etc. Ahrstrasse 39, D-53175 Bonn; Fax: +49/[0]228 / 887-210; E-Mail: sekr@hrk.de