DEUTSCHE BUNDESBANK
EUROSYSTEM

Module catalogue
Bachelor of Science

“Zentralbankwesen/Central Banking” degree programme

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Hochschule der Deutschen Bundesbank
Schloss Hachenburg

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1 Degree programme concept

Since its founding in 1980, the educational concept of the Deutsche Bundesbank University of Applied Sciences (hereinafter "University") has been characterised by the following **unique aspects**:

- *orientation to the Bundesbank* (→ focus on the Bundesbank's core services and value streams);
- *dual studies* (→ combination of theoretical studies and practical experience);
- *dual qualification* (→ students obtain a university degree and also qualify for a career in the Upper Intermediate Service at the Bundesbank).

The Bachelor's degree programme essentially follows these guiding principles. However, it places even greater emphasis on the role of the Bundesbank in the Eurosystem and on providing students with methodological expertise rather than simply transferring knowledge. In addition, students have **options** in their theoretical and practical studies. This means that, while they gain an overview of all core services of a central bank, they can also acquire in-depth understandings of individual business areas and the key methods that they use.

The degree programme leads to a **Bachelor of Science** degree, as **quantitative business administration methods** are a common thread throughout the programme, representing roughly half of the curriculum. The bilingual title of the degree programme "**Zentralbankwesen/Central Banking**" in German and English reflects the fact that, as the Bundesbank is part of the ECSB, the curriculum is largely international in nature and selected classes are therefore held in **English**. Opportunities to take optional English courses as well as participate in summer schools or attend the International Week with students from partner universities help students to hone their English skills and improve their ability to navigate the international environment. In addition to quantitative and English-language content, the degree programme also covers the application and interpretation of laws and regulations. As the Bundesbank has many responsibilities in its capacity as a public authority, **legal knowledge** is also necessary in order to be able to perform tasks in the Upper Intermediate Service. With the exception of a few modules that cover exclusively legal topics, legal aspects are taught together with banking operations content in keeping with the interdisciplinary approach of the degree programme.

The **dual concept** of the Bachelor's programme ensures a high degree of **practical relevance** by continually alternating between theoretical and practical modules, with the material covered by these modules being coordinated in parallel by the University. Students complete a total of seven different internships (deployment areas) and are familiar with the corporate culture in their recruiting authority at the end of their studies. Both the **Bachelor's thesis, with its strong practical focus,** and a final five-month internship ensure a seamless transition into employment.

The degree programme follows a fixed structure (see also Sections 1.1 and 1.2), meaning that students must complete their modules in a prescribed order, taking into account their specialisations or choice of optional modules. The modules fit together and build on each other thematically. As a result, students do not need to consider how their modules relate to each other and what prior knowledge they require, as the programme ensures this by design. Students do not need to register for individual modules; this is done automatically. The degree programme has a duration of three years and must be completed by students within the prescribed period. Students can extend this period or repeat study stages only under mitigating circumstances, which are assessed on a case-by-case basis.

The qualifications awarded in this degree programme are based on the qualifications framework for German higher education qualifications established by the Standing Conference of the Ministers of Education and Cultural Affairs from Germany's federal states. In addition to broadening and deepening their knowledge of a subject, the goal is to teach students the ability to apply this knowledge to professional activities and problems using academic methods. This includes empowering students to generate new knowledge independently.

The abilities required for this can be divided into four categories: specialist expertise, methodological expertise, interpersonal skills, and intrapersonal skills. Specialist expertise comprises all the knowledge and skills needed to successfully cope with the tasks and problems in a given line of professional work and to overcome any new challenges that may arise. In particular, it covers basic knowledge of all economic, legal and public finances disciplines, including the methods used in each of these, as well as language proficiency.

Methodological expertise refers to the ability to use appropriate methods and strategies to structure one's own activities and to make decisions, but also to plan, do and check. This also includes self-organisation, in particular the ability to set priorities, use one's time efficiently and effectively, and obtain information. Methodological expertise also includes using general academic working methods, being able to independently obtain and evaluate information and to solve problems using analytical means, responding flexibly to societal changes, using modern information and communication technologies, mastering organisational, planning and decision-making techniques, and mastering presentation and moderation techniques.

Interpersonal skills relate to developing and shaping social and professional relationships, with the ability and willingness to behave in an appropriate, cooperative and goal-oriented manner during social interactions. Amongst other things, these skills cover the ability to work in a team, take criticism, handle conflict, communicate, work with others, manage staff, and empathise. Intercultural skills, which are cultivated during English language training, for example, are also a subset of interpersonal skills.

Finally, intrapersonal skills concern how people treat themselves and use their skills and actively apply themselves in their professional work. These skills include, amongst other things, adequate and critical self-reflection and self-assessment, as well as the willingness to create conditions for further professional development. In addition, they are about how people deal with stress, their perseverance and work motivation, their ability and willingness to assume responsibility, as well as their ability to communicate appropriately. Intrapersonal skills include, in particular, self-criticism, willingness to assume responsibility, self-confidence, determination and assertiveness, resilience, the ability to cope with stress, self-organisation and self-motivation, the ability to innovate, adaptability to changing work requirements, and appropriate communication with the social environment.

Alongside imparting specialist and interdisciplinary knowledge through theoretical and practical study components, plenty of time is also dedicated to working on **personal and social skills**. For example, students can attend events focused on drawing up a "student code of conduct", two communication seminars, as well as regular feedback events. In addition, living together on campus, working together on case studies and business games, as well preparing for assessment in study groups play a key part in developing students' social skills. In the practical modules, students gain hands-on experience of the work routines at the recruiting authorities and have to adapt to a range of working environments and teams of staff. As part of the official assessment of the seven practical modules, each student's commitment, social conduct and analytical thinking are also graded, meaning that they influence the student's final grade.

Students are encouraged to play an active role in shaping their study experience by making their voices heard at an in-person general meeting on academic life at the University, which is held once or twice a year. In addition, there is a weekly event with student representatives in the student council in which students can express their comments and criticism to university officials. The academic senate, on which two students sit as voting members, takes positions on all matters of fundamental importance relating to teaching, studying, training and research.

1.1 Module overview: Students from the Deutsche Bundesbank

P1-1

Overview of the Deutsche Bundesbank (Onboarding) (Part 1)

* See P1-2 for ECTS

P1-2 Required module, 7 ECTS*

Possible Areas of Application in P1:
- **PX-AN** Public face and sustainability
- **PX-DI** Data and IT
- **PX-GE** Money
- **PX-IS** Infrastructure and services
- **PX-PB** HR and education (Part 2)

* total for P1-1 und P1-2

P2 Required module, 7 ECTS

Additional Areas of Application in P2:
- **PX-FA** Financial supervision and stability
- **PX-FD** Financial market services
- **PX-SC** Management, financial control and internal audit

P3 (A/B) Two required modules, each worth 7 ECTS*

Additional Areas of Application in P3:
- **PX-PB** Monetary Policy
- **PX-WM** Optional Module

Branch Stay (at least one week) in P1, P2, or P3

*PX-WM see also P4

P4 (A/B/C) Three required modules, each worth 8 ECTS*

In this phase, three areas of application can be selected and completed from all the areas mentioned in P1, P2, and P3. (A repeated visit to an area of application from the practical phases P1, P2, and P3 is possible once!)

***The optional area of application (PX-WM) can be used once in P3 and P4 for an external practical stay, in accordance with the provisions of § 8 (3) of the study plan, and for professional orientation or specialization with regard to** the first professional assignment.

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
Study stage/ workload	P1	Foundation stage 32 ECTS						Practical studv 1 7 ECTS	Advanced study 32 ECTS						Practical studv 2 7 ECTS		In-depth study 1 32 ECTS						Practical studv 3 14 ECTS			In-depth study 2 20 ECTS				Bachelor's thesis 10 ECTS		Practical studv 4 24 ECTS						Σ 180 ECTS

5 Foundation stage modules
(all required modules)

G1 Methodological foundations and digital skills
7 ECTS, 142 teaching sessions

G1-1 Academic research and study methods
G1-2 Digital skills and methods
G1-3 Financial mathematical methods and statistical foundations

G2 General business administration 1
7 ECTS, 140 teaching sessions

G2-1 Introduction to general business administration
G2-2 Accounting 1: Introduction to annual financial statements and cost accounting

G3 Fundamentals of the banking industry
8 ECTS, 142 teaching sessions

G3-1 Structure of the banking system and fundamentals of the banking industry
G3-2 Introduction to central banking

G4 Fundamental to the legal system: German Basic Law, Civil Code and Commercial Code
5 ECTS, 90 teaching sessions

G5 Principles of economics
5 ECTS, 88 teaching sessions

Total: 32 ECTS, 602 teaching sessions

5 Advanced study modules
(all required modules)

A1 Digital applications and quantitative methods
7 ECTS, 120 teaching sessions

A1-1 Digital applications at central banks
A1-2 Quantitative Methods in the financial industry and statistics

A2 General business administration 2
7 ECTS, 128 teaching sessions

A2-1 Management and transformation 1
A2-2 Accounting 2: Single-entity and consolidated financial statements

A3 Payment systems
5 ECTS, 80 teaching sessions

A4 Credit and banking supervision
7 ECTS,160 teaching sessions

A4-1 Applied management of credit institutions
A4-2 Fundamentals of banking and financial services supervision

A5 Monetary economics
6 ECTS, 114 teaching sessions

Total: 32 ECTS, 600 teaching sessions

4 out of 5 In-depth Study 1 modules
(required and optional modules)

Students select a study profile, which includes two required modules and two optional modules, each worth 8 ECTS and 140 teaching sessions

A Supervisory/Fin.stab functions: V1, V2, V5 + *V3 or V4*
B Bank operational functions: V1, V2, V3 + *V4 or V5*
Q Interdisciplinary/Digitalis. funct.: V1, V2, V4 + *V3 or V5*

Modules in In-depth study 1:

V1 Bank and central bank management (required)
V1-1 Bank management and risk management
V1-2 Central bank management
V1-3 Derivative financial instruments: Valuation and use in risk management

V2 General business Administration 3 (required)
V2-1 Management and transformation 2
V2-2 Accounting 3: Analysis of annual financial statements
V2-3 Theory of corporate finance

V3 Financial markets and international economics (optional)
V3-1 Securities and foreign exchange transactions, international financial markets
V3-2 International economics and international governance

V4 Advanced Analytics and digital transformation (option.)
V4-1 Management of digital transformation
V4-2 Advanced analytics and artificial intelligence
V4-3 Legal aspects of digital transformation
V4-4 Projects on analytics and digital transformation

V5 Banking, securities and insurance supervision (optional)
V5-1 Basel Capital Accord
V5-2 Securities and insurance supervision

Total: 32 ECTS, 560 teaching sessions

4 out of 6 In-depth Study 2 modules
(optional modules only)

Depending on chosen study profile, students pass
4 optional modules
4 modules worth 5 ECTS each, 88 teaching sessions

A Supervisory and financial stability functions: W1, W2, W3, W5
B Bank operational functions: W1, W3, W4, W6
Q Interdisciplinary and Digitalisation functions: W2, W4, W5, W6

Modules in In-depth study 2:

Module group 1 – Case studies on core services and value stream structure in central banks and supervisory authorities:

W1 Case studies on monetary policy and financial stability
W2 Case studies on financial supervision
W3 Case studies on payment transactions and financial market infrastructure

Module group 2 – Key methods for employees in central banks and supervisory authorities:

W4 Corporate law, contract practice and contract management
W5 Financial econometrics
W6 Process and project management

Total: 20 ECTS, 352 teaching sessions

Defence of bachelor's thesis (2 ECTS)

1.2 Module overview: Students from the Federal Financial Supervisory Authority (BaFin)

P1-1
Overview of BaFin
(part 1)
* See P1-2 for ECTS

P1-2
Overview of BaFin
(part 2)
Mandatory module,
7 ECTS for P1-1 and P1-2 combined

P2 Organisation and tasks of banking supervision
Mandatory module,
7 ECTS

P3A Organisation and tasks of securities supervision
Mandatory module, 7 ECTS

P3B Organisation and tasks of insurance supervision
Mandatory module, 7 ECTS

P4A Organisation and tasks of interdisciplinary supervisory areas and consumer protection department
Elective module, 8 ECTS

P4B Organisation and tasks of banking supervision (deepening of knowledge)
Mandatory module, 8 ECTS

P4C Professional specialisation at BaFin or internship at a different suitable institution in Germany or abroad Elective module, 8 ECTS

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
Study stage/ workload	P1	Foundation stage 32 ECTS						Practi-cal studv 1 7 ECTS	Advanced study 32 ECTS						Practi-cal studv 2 7 ECTS		In-depth study 1 32 ECTS						Practical studv 3 14 ECTS			In-depth study 2 20 ECTS				Bachelor's thesis 10 ECTS		Practical studv 4 24 ECTS					Σ 180 ECTS

5 Foundation stage modules
(all required modules)

G1 Methodological foundations and digital skills
7 ECTS, 142 teaching sessions

G1-1 Academic research and study methods
G1-2 Digital skills and methods
G1-3 Financial mathematical methods and statistical foundations

G2 General business administration 1
7 ECTS, 140 teaching sessions

G2-1 Introduction to general business administration
G2-2 Accounting 1: Introduction to annual financial statements and cost accounting

G3 Fundamentals of the banking industry
8 ECTS, 142 teaching sessions

G3-1 Structure of the banking system and fundamentals of the banking industry
G3-2 Introduction to central banking

G4 Fundamental to the legal system: German Basic Law, Civil Code and Commercial Code
5 ECTS, 90 teaching sessions

G5 Principles of economics
5 ECTS, 88 teaching sessions

Total: 32 ECTS, 602 teaching sessions

5 Advanced study modules
(all required modules)

A1 Digital applications and quantitative methods
7 ECTS, 120 teaching sessions

A1-1 Digital applications at central banks
A1-2 Quantitative Methods in the financial industry and statistics

A2 General business administration 2
7 ECTS, 128 teaching sessions

A2-1 Management and transformation 1
A2-2 Accounting 2: Single-entity and consolidated financial statements

A3 Payment systems
5 ECTS, 80 teaching sessions

A4 Credit and banking supervision
7 ECTS,160 teaching sessions

A4-1 Applied management of credit institutions
A4-2 Fundamentals of banking and financial services supervision

A5 Monetary economics
6 ECTS, 114 teaching sessions

Total: 32 ECTS, 600 teaching sessions

4 out of 5 In-depth Study 1 modules
(required and optional modules)
Students select a study profile, which includes two required modules and two optional modules,
each worth 8 ECTS and 140 teaching sessions

A Supervisory/Fin.stab functions: V1, V2, V5 + *V3 or V4*
Q Interdisciplinary/Digitalis. funct.: V2, V4, V5 + *V1 or V3*

Modules in In-depth study 1:

V1 Bank and central bank management (optional)
V1-1 Bank management and risk management
V1-2 Central bank management
V1-3 Derivative financial instruments: Valuation and use in risk management

V2 General business Administration 3 (required)
V2-1 Management and transformation 2
V2-2 Accounting 3: Analysis of annual financial statements
V2-3 Theory of corporate finance

V3 Financial markets and international economics (optional)
V3-1 Securities and foreign exchange transactions, international financial markets
V3-2 International economics and international governance

V4 Advanced Analytics and digital transformation (option.)
V4-1 Management of digital transformation
V4-2 Advanced analytics and artificial intelligence
V4-3 Legal aspects of digital transformation
V4-4 Projects on analytics and digital transformation

V5 Banking, securities and insurance supervision (optional)
V5-1 Basel Capital Accord
V5-2 Securities and insurance supervision

Total: 32 ECTS, 560 teaching sessions

4 out of 6 In-depth Study 2 modules
(optional modules only)
Depending on chosen study profile, students pass
4 optional modules
4 modules worth 5 ECTS each, 88 teaching sessions

A Supervisory and financial stability functions: W1, W2, W3, W5
Q Interdisciplinary and Digitalisation functions: W2, W4, W5, W6

Modules in In-depth study 2:

Module group 1 – Case studies on core services and value stream structure in central banks and supervisory authorities:

W1 Case studies on monetary policy and financial stability
W2 Case studies on financial supervision
W3 Case studies on payment transactions and financial market infrastructure

Module group 2 – Key methods for employees in central banks and supervisory authorities:

W4 Corporate law, contract practice and contract management
W5 Financial econometrics
W6 Process and project management

Total: 20 ECTS, 352 teaching sessions

Defence of bachelor's thesis (2 ECTS)

2 Theoretical studies

The programme's theoretical studies set themselves apart through the wide variety of teaching methods that they incorporate. These range from in-person/online/hybrid lectures and exercises through to business games and role playing and even to the use of IT tools and game-design teaching elements ("gamification"), all of which involve students working together to complete tasks, solve problems and learn how to act with a goal in mind. In addition, the theoretical studies incorporate time for self-directed study. While the University provides students with a broad introduction to the subject of central banking and methodological foundations using the above-mentioned teaching methods in the first two six-month stages of study, i.e. the **foundation stage and advanced study stage**, students are able to specialise and choose optional modules in the subsequent two stages of study (as well as in their practical studies; see Chapter 3). At the **in-depth study stage**, students first decide where they want to focus their area of study by choosing one of the following specialisations offered by the University:

A Supervisory and financial stability functions	Q Interdisciplinary and digitalisation functions	B Bank operational functions

Depending on the specialisation they have chosen, students can also select an optional module. The specialisations and optional modules are oriented towards the skills and methods that are important in specific areas of a central bank or a banking supervisory authority. In accordance with the curriculum, each recruiting authority may modify the curriculum and structure of degree programme specialisations in agreement with the University. Accordingly, Bundesbank and BaFin students have the following options for specialisation:

Overview 1: Modules[1] for each specialisation and recruiting authority during in-depth study stages

Specialisation / Recruiting Authority	Supervisory and financial stability functions	Interdisciplinary and digitalisation functions	Bank operational functions
Modules: In-depth study 1 (depending on the chosen specialisation, three required modules and one optional module must be completed)			
Bundesbank	V1, V2, V5 and either V3 or V4	V1, V2, V4 and either V3 or V5	V1, V2, V3 and either V4 or V5
BaFin	V1, V2, V5 and either V3 or V4	V2, V4, V5 and either V1 or V3	
Modules: In-depth study 2 (depending on the chosen specialisation, the following modules must be completed)			
Bundesbank	W1, W2, W3, W5	W2, W4, W5, W6	W1, W3, W4, W6
BaFin	W1, W2, W3, W5	W2, W4, W5, W6	

[1] **Key: Overview of in-depth study modules**

In-depth study 1:	In-depth study 2:
V1: Bank and central bank management V2: General business administration 3 V3: Financial markets and international economics V4: Advanced analytics and digital transformation V5: Banking, securities and insurance supervision	W1: Case studies on monetary policy and financial stability W2: Case studies on financial supervision W3: Case studies on payment systems and financial market infrastructure W4: Corporate law, contract practice and contract management W5: Financial econometrics W6: Process and project management

To help students to prepare for active forms of assessment such as assignments, reports, seminar papers, presentations, and expert lectures – which must be completed on a more frequent basis as of the advanced study stage – the University offers various types of support in the form of compulsory classes and optional extracurricular courses. Lectures on the subject of academic research (study sub-unit G1-1a, module G1: Methodological foundations) focus on study and learning methods at the beginning of the students' theoretical studies, i.e. during the foundation stage. Later on, at the start of the in-depth study stage, optional events offered across eight teaching sessions focus on academic work with regard to writing academic texts and preparing presentations. It is primarily during the optional events that students are shown the basics and the process of producing academic work as well as coached on how to produce seminar papers and written work in reports and on how to complete their Bachelor's thesis. Specifically, this covers planning, organising and then carrying out the writing process (selecting and evaluating literature, structuring, writing in the narrower sense, presenting findings, etc.). The events also look at the types of literature sources and rankings, an overview of academic approaches and methods (desk research, quantitative and qualitative research methods, focus on structure and presentation of findings), as well as at fundamental aspects of selecting research methods. In addition, they examine formal aspects of academic work and quality criteria and also touch upon the topics of academic integrity and ethical aspects of producing academic work. These courses are supplemented by a 90-minute information event in the library at the Bundesbank's Central Office in Frankfurt am Main, in which students can learn about the research resources available to them among the library's specialist books and media databases as well as in the Bundesbank's press archive.

Teaching is supported by the ILIAS learning platform. This provides students with all learning materials and supporting materials for preparation and revision. The learning platform can be accessed via the internet on any end-user device, at any time and in any place. The University offers an introduction to the learning platform at the start of the course.

Even with the options offered to students and their opportunities for playing an active role in shaping their study experience, the overall course of study remains general in nature and covers the core services of a central bank or banking supervisory authority. The choices made regarding specialisations and optional modules provide an indication of graduates' subsequent areas of employment, professional growth and future academic career, but do not prejudice it.

The 180 ECTS credits awarded upon successful completion of the study programme are intended to promote student mobility. One ECTS credit corresponds to 30 hours of student workload. The ECTS credits allow periods of study and forms of assessment undertaken at this University, as well as the skills and qualifications obtained, to be recognised by other state or state-accredited universities and comparable institutions in Germany and abroad. In addition, the University recognises equivalent periods of study and forms of assessment undertaken at other universities in its "Zentralbankwesen/Central Banking" degree programme (see Section 29 of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (*Verordnung über den Vorbereitungsdienst für den gehobenen Bankdienst der Deutschen Bundesbank* – GBankDVDV)).

The name of the degree programme highlights the fact that the course content has a significant international orientation and that selected classes and the associated assessments are conducted in English (for more information, see Section 7(2) of the Assessment Office Structural Order (*Ausgestaltungsordnung des Prüfungsamtes* – AusgO)). A strong command of written and spoken English is not only an essential prerequisite for engaging with the academic content of the "Zentralbankwesen/Central Banking" degree programme – students will also need it if they are to be able to navigate the international environment in which the Bundesbank's Upper Intermediate Service operates. The University therefore sees it as its responsibility to enable students to develop their language skills in the best possible way over the course of their studies.

Given students' differing levels of English-language proficiency in their first year, the University does not focus on teaching in English during the foundation stage – instead, it provides students with an opportunity to work on their language skills. To this end, the University offers optional language courses that are tailored to the curriculum and students' future areas of employment. In order to increase the appeal of these courses and ensure that they can be taken by every student, they are allocated fixed weekly morning slots in the lecture timetable to avoid any scheduling conflicts with other activities. This means that students have the opportunity to improve their language skills based on their individual level of language proficiency.

The share of English-language teaching increases steadily as of the advanced study stage. Due to the set modules that students are required to complete, there is no option to switch to German-language modules. They thus have extensive opportunities over the course of the advanced study stage to continue improving their language skills and also to build up additional, specialist vocabulary. As of in-depth study 1, English-language teaching is accompanied by active learning-based English-language assessments. This further promotes the active use of the English language by students. As a result, students refine their English skills over the course of the programme so that they can understand challenging and complex specialist texts as well as comprehend implied meaning and specialist discourse. The way in which the **percentage of English-language and quantitative study content** (classes, independent study and assessment preparation) in students' **theoretical studies** is calculated is explained in more detail on the following pages.

Overview of the proportion of English-language study content (lectures, self-study, and exam preparation) in the theoretical studies

Calculation of the proportion of English-language study content in the module (to

Contact time in the module [LSt.] x proportion of English-language teaching hours [%] + self-study for reviewing contact time*) [LSt.] x proportion of English-language teaching hours [%] + remaining self-study for exam preparation [LSt.] x proportion of English in exams [%]

*) depending on the study phase or module in a ratio of 1:1 or 1:0.5 (see explanations on the next page)

	1	2	3	4	5	6	7	8	9	10	11	12	13
	Determination of English-language teaching hours							Determination of the English-language self-study components					
Modul/-bezeichnung	**ECTS**	**Workload in the Module** (in teaching hours of 60 minutes each)	**Workload in the module** (in teaching hours of 45 minutes each)	**Proportion of contact time in the module** (in %)	**Number of teaching hours in contact time in the module** (in teaching hours of 45 minutes each)	**Proportion of English-language teaching hours in contact time** (in %)	**Number of English-language teaching hours in contact time** (in teaching hours of 45 minutes each)	**Number of self-study hours in the module (TOTAL), i.e., workload - contact time** (in teaching hours of 45 minutes each)	**Number of self-study hours for preparation/review of contact time in the module** (in teaching hours of 45 minutes each)	**of which: Number of English-language self-study hours for preparation or review of English-language teaching hours in contact time** (in teaching hours of 45 minutes each and according to the proportion of	**Number of remaining self-study hours in the module for exam preparation, i.e., workload - contact time - self-study** (in teaching hours of 45 minutes each)	**Proportion of English-language self-study for preparation for the English proportion in exams** (in %)	**Number of English-language self-study hours for preparation for the English proportion in exams** (in teaching hours of 45 minutes each)
G1: Methodological foundations and digital skills	7	210	280	51%	**142**	0%	0	**138**	108	0	30	0%	0
G2: General business administration 1	7	210	280	50%	**140**	10%	14	**140**	110	11	30	10%	3
G3: Fundamentals of the banking industry	8	240	320	44%	**142**	30%	42	**178**	148	44	30	30%	9
G4: Fundamentals of the legal system: German Basic Law, Civil Code and Commercial	5	150	200	45%	**90**	0%	0	**110**	90	0	20	0%	0
G5: Principles of economics	5	150	200	44%	**88**	36%	32	**112**	92	33	20	36%	7
Total Foundation stage	**32**	**960**	**1280**	=	**602**	=	**88**	**678**	548	**88**	**130**	=	**19**
A1: Digital applications and quantitative methods	7	210	280	39%	**110**	15%	16	**170**	140	20	30	15%	5
A2: General business administration 2	7	210	280	41%	**116**	6%	7	**164**	134	8	30	6%	2
A3: Payment systems	5	150	200	40%	**80**	0%	0	**120**	100	0	20	0%	0
A4: Credit and banking supervision	7	210	280	64%	**180**	2%	4	**100**	70	2	30	2%	1
A5: Monetary economics	6	180	240	48%	**114**	39%	44	**126**	96	37	30	37%	11
Total Advanced study	**32**	**960**	**1280**	=	**600**	=	**71**	**680**	540	**67**	**140**	=	**18**
V1: Bank and central bank management	8	240	320	44%	**140**	11%	16	**180**	150	17	30	26%	8
V2: General business administration 3	8	240	320	44%	**140**	33%	46	**180**	70	23	110	19%	21
V3: Financial markets and international economics	8	240	320	44%	**140**	59%	83	**180**	70	42	110	40%	44
V4: Advanced analytics and digital transformation	8	240	320	44%	**140**	18%	25	**180**	70	13	110	0%	0
V5: Banking, securities and insurance supervision	8	240	320	44%	**140**	41%	57	**180**	150	61	30	41%	12
Total In-depth study 1: 4 out of 5 modules	**32**	**960**	**1600**	=	**700**	=	**227**	**900**	510	**155**	**390**	=	**85**
W1: Case studies on monetary policy and financial stability	5	150	200	44%	**88**	77%	68	**112**	44	34	68	100%	68
W2: Case studies on financial supervision	5	150	200	44%	**88**	39%	34	**112**	88	34	24	100%	24
W3: Case studies on payment transaction and financial market infrastructure	5	150	200	44%	**88**	27%	24	**112**	44	12	68	85%	58
W4: Corporate law, contract practice and contract management	5	150	200	44%	**88**	10%	9	**112**	44	5	68	0%	0
W5: Financial econometrics	5	150	200	44%	**88**	43%	38	**112**	88	38	24	50%	12
W6: Process and project management	5	150	200	44%	**88**	0%	0	**112**	44	0	68	50%	34
Total In-depth study 2: 4 out of 6 modules	**20**	**600**	**1200**	=	**528**	=	**173**	**672**	352	**123**	**320**	=	**196**
Total (Theoretical studies)			**5360**										

For determining the individual share for students, the modules not attended in VS1 and VS2 - according to the choice of the study profile and elective module - must be deducted.

24,4%
Overall English proportion

Calculating the percentage of English-language study content: explanatory notes and assumptions (including assessment preparation)

1) Assumptions when calculating the percentage of English-language content in modules with written and oral examinations

a) Revision: Students revise what they have been taught during contact hours at a ratio of 1:1

Students revise more intensively for modules with written or oral examinations (G1-G5, A1-A5 as well as V1 and V5, W2 and W5) than they do for modules with active learning-based forms of assessment, which require the preparation of assignments, seminar papers, presentations, reports or expert lectures. This also affects the percentage of English-language study content that is revised. It is therefore assumed that the time spent on independent study for English-language content is roughly the same as the *percentage of English-language teaching* specified in the module catalogue. Specifically, this means:

i. One hour of independent study for one teaching session in German (1:1)
ii. One hour of independent study for one teaching session in English (1:1)

b) Preparation for written and oral examinations

The students' remaining workload (workload - contact hours - independent study) is assumed to be assessment preparation. The division of preparation time between German and English-language content is based on the *percentage of English-language module assessment*:

i. Independent study to revise German-language content -> dependent on percentage of written examination in German
ii. Independent study to revise English-language content -> dependent on percentage of written examination in English

2) Assumptions when calculating the percentage of English in modules with active learning-based forms of assessment

a) Students revise what they have been taught during contact hours at a ratio of 0.5:1

Experience has shown that students spend less time on independent study when revising what they have been taught during contact hours for modules without written examinations, as students focus more on preparing assignments, seminar papers, presentations, expert lectures and reports. The time spent on independent study of English-language study content is weighted based on the *percentage of English-language lectures* specified in the module catalogue:

i. ½ hour of independent study for one teaching session in German (0.5:1)
ii. ½ hour of independent study for one teaching session in English (0.5:1)

b) Students prepare seminar papers/presentations, reports/assignments or expert lectures

The students' remaining workload (workload - contact hours - independent study) is assumed to be preparation for active-learning based forms of assessment. The time spent on English-language study content is calculated based on the *percentage of English-language assessment*:

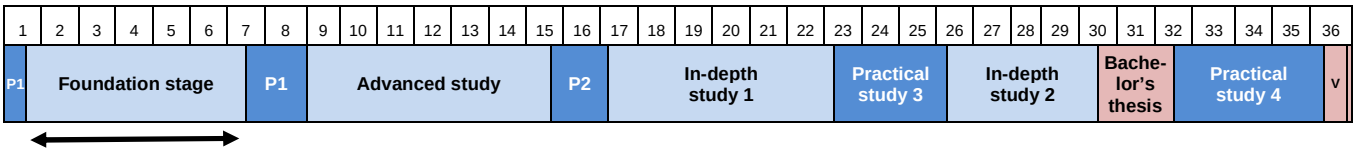
i. Preparation time for German-language content -> dependent on percentage of seminar paper, presentation or written and oral parts of report in German
ii. Preparation time for English-language content -> dependent on percentage of seminar paper, presentation or written and oral parts of report in English

3) Formula for calculating percentage of English-language study

Percentage of English-language study in module (total) =
contact hours in module × percentage of English-language teaching sessions + independent study to revise material taught during contact hours*
× percentage of English-language teaching sessions + remaining independent study for examination preparation × preparation for English-language part of examination

* Ratio of 1:1 or 0.5:1 depending on the study stage or module.

2.1 Foundation stage



Modules (5 required modules)	**ECTS[2] credits**	**Contact hours** (45-minute teaching sessions)	**Workload** (hours)	**Form of assessment** (percentage in English)
G1: Methodological foundations and digital skills (required module)	**7**	**142**	**210**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
G1-1: Academic research and study methods		10	10	
G1-2: Digital skills and methods		76	110	
G1-3: Financial mathematical methods and statistical foundations		56	90	
G2: General business administration 1 (required module)	**7**	**140**	**210**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
G2-1: Introduction to general business administration		68	105	
G2-2: Accounting 1: Introduction to annual financial statements and cost accounting		72	105	
G3: Fundamentals of the banking industry (required module)	**8**	**142**	**240**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
G3-1: Structure of the banking system and fundamentals of the banking industry		68	120	
G3-2: Introduction to central banking		74	120	
G4: Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code (required module)	**5**	**90**	**150**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
G5: Principles of economics (required module)	**5**	**88**	**150**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
Total	**32**	**602**	**960**	**5 module assessments**

[2] ECTS credits under the European Credit Transfer and Accumulation System (ECTS). According to Section 3(3) of the curriculum, one ECTS credit corresponds to 30 hours student workload.

Module	**Methodological foundations and digital skills**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G1
Stage of module	Foundation stage
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 7%
ECTS credits	7 ECTS credits
Student workload	210 hours, of which 106.5 contact hours (142 × 45-minute teaching sessions) and 103.5 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units G1-1, G1-2 and G1-3; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Study content	Academic work and study methodology; writing academic texts. Basic digital skills and methods, i.e. the ability to navigate and actively shape the digitalised world of work. Financial mathematics. Introduction to statistics.
Qualification objectives	Students are taught about the academic learning and working process. They are provided and discuss information on learning methods so that they are able to reflect on and improve their individual learning processes. Students are familiarised with relevant Office applications. In addition, students acquire basic and further knowledge on digitalisation and digital transformation in the areas of “processes”, “projects”, “analysis” and “innovation”, and thus the ability to understand and shape change in these areas. Students are introduced to stochastic modelling and the modelling of random processes. They also understand and master the fundamentals of financial mathematics as well as the objectives and typical problems of statistics.
Preparation	A bridge course on mathematics at the start of the foundation course (20 × 45-minute teaching sessions) provides students with the knowledge to adequately prepare for and successfully participate in module G1. To prepare for participation in module G1, students are advised to study the recommended preliminary reading texts for study sub-units G1-1, G1-2 and G1-3.
Prerequisites	None; students are advised to study the recommended preliminary reading texts for study sub-units G1-1, G1-2 and G1-3.
Applicability of module	The module counts towards other relevant degree programmes. Module A1 builds directly on the content in this module; all modules with quantitative and IT-related content build indirectly on module G1. Furthermore, the knowledge gained is applicable to activities in numerous areas of the Bundesbank, BaFin and other central banks.
Connection to other modules	Study sub-unit G1-2 is the foundation for modules A1, A2, A3, V1, V2, V4, V5, W5, and W6. Study sub-unit G1-3 is the foundation for modules A1, A2, A3, V1, V2, V4, V5, and W5.
Follow-on modules (potential)	A1 Digital applications and quantitative methods A2 General business administration 2 W6 Process and project management

Study sub-unit of G1	**Academic research and study methods**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G1-1
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 0%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	10 hours, of which 7.5 contact hours (10 × 45-minute teaching sessions) and 3.5 hours independent study
Teaching methods	Classes, exercises, group work, situational tasks, role playing with critical reflection and feedback, video training
Coordinator of study sub-unit	Prof. Matthias Goeken
Academic objectives	Students are taught about the academic learning and working process. They are provided and discuss information on learning methods so that they are able to reflect on and improve their individual learning processes. Students are also familiarised with the of use Office applications relevant to the preparation of academic papers and presentations. This includes using Microsoft Word to write, edit and publish academic texts and other assessment work.
Preliminary reading	Stickel-Wolf, C., J. Wolf: Wissenschaftliches Arbeiten und Lerntechniken, latest edition. Theisen, M. R.: Wissenschaftliches Arbeiten: Technik – Methodik. Munich, latest edition. Balzert, H. et al.: Wissenschaftliches Arbeiten. Wissenschaft, Quellen, Artefakte, Organisation, Präsentation. W3L Herdecke, latest edition. Litzcke, S. M. et al.: Studieren lernen, latest edition (available online).
G1-1a	Introduction to the degree programme and study methodology
Syllabus	– Overview of the degree programme – Working and learning techniques and the learning process – Learning strategies and methods (cognitive strategies, resource strategies and metacognitive strategies) – Assessments in theoretical and practical studies (written exam, presentation, seminar paper, report, specialist talk, assignment, internship report, completion of any other practical tasks typically performed in the Upper Intermediate Service, paper, oral exam)
G1-1b	Writing academic texts
Syllabus	– Microsoft Word (basics and advanced functions: Format and document templates, field functions, footnotes) – Formal aspects of academic work and writing

Study sub-unit of G1	**Digital skills and methods**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G1-2
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 30%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	110 hours, of which 57 contact hours (76 × 45-minute contact hours) and 53 hours independent study
Teaching methods	Classes (sometimes using PCs), case studies, study group exercises, independent study
Coordinator of study sub-unit	Prof. Matthias Goeken
Academic objectives	– Students are introduced to methods of business informatics that relate to the management of processes, projects and innovations as well as the analysis of data. – Students learn process-oriented working in organisations and are able to model and evaluate processes in accordance with the globally recognised BPMN 2.0 standard. In addition, students learn the fundamentals of project management and are able to use terminology with confidence. – Students recognise the importance of data management and business analytics in organisations and understand the tasks and tools (spreadsheets and databases) needed to gain insights from data assets. They can apply these to smaller data analysis projects and case studies. – Students learn the importance of innovation and digital transformation for organisations. They understand the basic functions and prerequisites of successful innovation processes. They develop an understanding of agile thinking and action as a basis for forms of organisation that promote innovation. In addition, they learn selected methods and techniques for generating and evaluating ideas. By applying these to practical case studies, they reflect on options for their own roles in the digital transformation.
Preliminary reading	Leimeister, J.-M.: Einführung in die Wirtschaftsinformatik. Berlin, latest edition. Ernst, D. et al.: Financial Modeling, Stuttgart 2016. Seiter, M.: Business Analytics: Wie Sie Daten für die Steuerung von Unternehmen nutzen. Munich, 2023. Haneke, U., S. Trahasch, M. Zimmer, C. Felden (eds.): Data Science. Grundlagen, Architekturen und Anwendungen. Heidelberg, 2nd edition, 2021. Kleuker, S.: Grundkurs Datenbankentwicklung. Von der Anforderungsanalyse zur komplexen Datenbankabfrage. Berlin, 2024. Scripts on Excel from HERDT-Verlag, which are available on the Bundesbank’s intranet (https://intranet.inet.bundesbank.de/wissen/lernen/elearning/it/excel) Schmelzer, H. J. et al.: Geschäftsprozessmanagement in der Praxis, latest edition. Deutsche Bundesbank: Projektleitfaden. Timinger, H.: Modernes Projektmanagement, latest edition. Project Management Institute: A Guide to the Project Management Body of Knowledge, latest edition. Deutsche Bundesbank: Internal rules and regulations (DB) 1-15. Hauschildt, J. et al.: Innovationsmanagement. Munich, latest edition. Hennig, P.: Digitalisierung in der öffentlichen Verwaltung erfolgreich gestalten: Ein Praxisleitfaden zur Zielerreichung. Freiburg, latest edition. Scheller, T.: Auf dem Weg zur agilen Organisation. Munich, 2017. Tidd, J., J. Bessant: Managing Innovation. Hoboken, NJ, latest edition.
G1-2a	Introduction to process and project management
Syllabus	– Business processes – Process modelling using graphical modelling languages (e.g. BPMN 2.0) Fundamentals of project management (process models, terms and definitions, project design, stakeholders and opportunity/risk management, project organisation, case studies)

G1-2b	Introduction to business analytics and data management
Syllabus	– Basics, procedural models and standards of data analysis – Excel – Basics and advanced techniques (functions and formulas, diagrams, working with tables and large volumes of data) – Creating evaluations and analyses (preparing data, analysis, evaluation, visualisation) – application and case studies – Basic concepts of databases (ER model, relational model, normalisation, SQL basics, structure of Access as a relational database) – Case study on structuring a data model for a core banking system
G1-2c	Introduction to innovation management and agility
Syllabus	– Digitalisation and digital transformation – Innovation in digital transformation as a management task – Digitalisation and transformation strategies – The innovation process: Functions, roles, steering – Dealing with pushback; innovation culture; promoter concept – Open innovation – Agile thinking and agile action in everyday organisational life – Agile methods and techniques for ideas development and innovation-related teamwork – Agility and innovation at the Bundesbank – Case study on design thinking

Study sub-unit of G1	**Financial mathematical methods and statistical foundations**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G1-3
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 100%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	90 hours, of which 42 contact hours (56 × 45-minute teaching sessions) and 48 hours independent study
Teaching methods	Classes, exercises, independent study
Coordinator of study sub-unit	Prof. Annabelle Kehl-Beckmann
Academic objectives	Students master the fundamentals of financial mathematics and its practical application in the financial sector. Students are able to use investment analysis methods to assess investments and make decisions regarding their implementation. They are also able to create repayment schedules for annuity loans and amortisation loans. Students are able to formally represent and interpret random processes. They are familiar with concepts of model formation as well as one-dimensional discrete and continuous distributions in order to be able to apply them in a targeted manner to typical financial issues. Moreover, they comprehend the objectives of statistics and typical problems associated with statistics. Students master the basic methods of descriptive statistics. .
Preliminary reading	Fahrmeir, L., R. Künstler, I. Pigeot, G. Tutz: Statistik: Der Weg zur Datenanalyse, Springer, Berlin, Heidelberg, New York, latest edition. Bamberg, G. et al.: Statistik, latest edition. Benninga, S., T. Mofkadi: Financial Modelling, latest edition. Brealey, R., S. Myers, F. Allen: Principles of Corporate Finance, latest edition. Trautmann, S.: Investitionen, latest edition. Supplementary reading: Heidorn, T.: Finanzmathematik in der Bankpraxis, latest edition. Bosch, K.: Elementare Einführung in die angewandte Statistik, latest edition. Bourier, G.: Beschreibende Statistik, latest edition.
G1-3a	Financial mathematical methods
Syllabus	– Methods of interest and present value accounting (including intra-year interest and accrued interest) – Investment calculation: Net present value method, annuity method, internal rate of return (IRR) – Financing with debt capital (1): Forms of repayment and repayment schedule – Using financial mathematical methods in Excel
G1-3b	Statistical foundations
Syllabus	– Basic concepts of statistics – Descriptive statistics (including location parameters and dispersion measures of distributions) – Formal representation of random processes, elementary probability theory and combinatorics – Discrete random variables, probability function, graphical representations (including using statistical software) and univariate distribution models (including binomial and Poisson distribution) – Continuous random variables and univariate distribution models (including uniform and normal distribution)

Module	**General business administration 1**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G2
Stage of module	Foundation stage
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 13%
ECTS credits	7 ECTS credits
Student workload	210 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 105 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units G2-1 and G2-2; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Study content	Fundamentals of business administration Business administration in key operational functions Introduction to double-entry bookkeeping and annual financial statements Particular features of accounting structures at credit institutions and the Deutsche Bundesbank Introduction to cost accounting
Qualification objectives	Students learn key terms, concepts and developments in business administration and the related research and are able to describe and solve challenges in operational resource management using specialist terminology. They have an overview of operational functions, their interrelationships and the underlying issues regarding decision-making and are able to apply business administration methods in a targeted manner. In addition, the module covers accounting tasks in general and bookkeeping tasks in particular. Furthermore, it provides initial insights into the accounting and, in particular, the financial statements of industrial enterprises, credit institutions and the Bundesbank. Lastly, students learn about commonly used cost accounting systems.
Preparation	To prepare for participation in module G2, students are advised to study the recommended preliminary reading texts for study sub-units G2-1 and G2-2.
Prerequisites	None; students are advised to study the preliminary reading texts for study sub-units G2-1 and G2-2.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge acquired is applicable to roles in all areas of the Bundesbank, BaFin and other central banks on account of its focus on business administration. Furthermore, the knowledge gained is directly applicable in Directorates General C, B, K and H.
Connection to other modules	Besides the modules that follow it, this module has a particular thematic connection with modules G1, G3 and G5.
Follow-on modules (potential)	A2 General business administration 2 V1 Bank and central bank management V2 General business administration 3 W2 Case studies on financial supervision

Study sub-unit of G2	**Introduction to general business administration**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G2-1
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 5%
Student workload	105 hours, of which 51 contact hours (68 × 45-minute teaching sessions) and 54 hours independent study
Teaching methods	Classes, exercises, independent study
Coordinator of study sub-unit	Prof. Dr Nicole Jung
Academic objectives	Students are able to describe operational resource management using the appropriate terminology and solve relevant problems. They have an overview of operational functions, their interconnections and the underlying issues regarding decision-making and are able to apply business administration methods to them.
Preliminary reading	Wöhe, G. and U. Döring: Einführung in die allgemeine Betriebswirtschaftslehre. Munich: Vahlen, latest edition. Vahs, D. and J. Schäfer-Kunz: Einführung in die Betriebswirtschaftslehre. Stuttgart: Schäffer-Poeschel, latest edition. Staehle, W. H. et al.: Management: Eine verhaltenswirtschaftliche Perspektive. Munich: Vahlen, latest edition. Supplementary reading: Bamberg, G. and A. G. Coenenberg: Betriebswirtschaftliche Entscheidungslehre. Munich: Vahlen, latest edition. Homburg, C. and H. Krohmer: Grundlagen des Marketingmanagements. Wiesbaden: Gabler, latest edition. Jung, H.: Allgemeine Betriebswirtschaftslehre. Munich: Oldenbourg, latest edition. Schweitzer, M.: Einleitung: Grundfragen. In: Bea, F. X., Allgemeine Betriebswirtschaftslehre, Volume 1. Stuttgart: Lucius & Lucius, latest edition.
G2-1a	Foundations of business administration
Syllabus	– Basic terms, concepts, developments and theories of business administration – Foundations of corporate governance with regard to operational target systems and planning, including the fundamentals of the Bundesbank’s current steering concepts – Fundamentals of decision-making theory
G2-1b	Business administration in key operational functions
Syllabus	– Decision-making in procurement – Decision-making in production – Decision-making in marketing

Study sub-unit of G2	**Accounting 1: Introduction to annual financial statements and cost accounting**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G2-2
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 20%
Student workload	105 hours, of which 54 contact hours (72 × 45-minute teaching sessions) and 51 hours independent study
Teaching methods	Classes, exercises, independent study
Coordinator of study sub-unit	Prof. Dr Andreas Kremer
Academic objectives	This module covers accounting tasks in general and bookkeeping tasks in particular. Students learn double-entry bookkeeping as well as how to make entries in stock accounts and profit and loss accounts. They practise and gain a greater understanding of double-entry bookkeeping on the basis of selected transactions by industrial enterprises and credit institutions. Classes provide an initial insight into the accounting, and in particular the financial statements, of industrial enterprises, credit institutions and the Bundesbank. Students learn about commonly used cost accounting systems and practise and apply their knowledge in a wide range of practical exercises and examples.
Preliminary reading	Coenenberg, A. G. et al.: Jahresabschluss und Jahresabschlussanalyse, latest edition. Deutsche Bundesbank: Grundsätze zur Rechnungslegung der Deutschen Bundesbank, latest edition. Schuster, D.: Rechnungswesen und Controlling der Kreditinstitute, latest edition. Weber, J., B. Weißenberger: Einführung in das Rechnungswesen, latest edition. Wöhe, G. et al.: Einführung in die Allgemeine BWL, latest edition. Wüstemann, J.: Buchführung case by case, latest edition.
G2-2a	Introduction to double-entry bookkeeping and financial statements in accordance with the German Commercial Code
Syllabus	– Introduction to the (legal) basis of bookkeeping and financial statements – Inventories and stocktaking – Principles of proper accounting – Fundamentals and techniques of double-entry bookkeeping – Booking selected transactions – Balance sheet theory – Fundamentals of the recognition and measurement of assets in accordance with the German Commercial Code
G2-2b	Annual financial statements for credit institutions in accordance with the German Commercial Code
Syllabus	– Fundamentals of external accounting at credit institutions – Special features in the recognition and measurement of assets in accordance with the German Commercial Code at credit institutions – Current accounts and payment systems – Lending business and loss provisioning pursuant to the German Commercial Code – Own securities and securities commission business – Deposit business
G2-2c	Introduction to cost accounting
Syllabus	– Fundamentals of cost accounting – Cost-type, cost-centre, cost-unit accounting as full-cost accounting – Revenue and expenditure accounting

Module	**Fundamentals of the banking industry**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G3
Stage of module	Foundation stage
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 20%
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 106.5 contact hours (142 × 45-minute teaching sessions) and 133.5 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units G3-1 and G3-2; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Study content	Structure of the banking system and fundamentals of the banking industry Functions of credit institutions in an economy Life cycle of credit institutions and their business models The banking industry in Germany, Europe, and the world Business administration transformation functions at credit institutions Customer relations at credit institutions; corporate governance at credit institutions Regulation and supervision of credit institutions; current challenges (fintech, Brexit, climate-related risks) Introduction to central banking Money and central banks: basic concepts The Eurosystem Payment instruments
Qualification objectives	Students understand the fundamentals of credit institutions’ lending and deposit business as well as the other services that they offer. The module covers the most important underlying legal relationships and frameworks between customers, credit institutions, and banking supervisors. In this context, students gain an overview of the design and structure of the banking system as well as the value chain of credit institutions. Moreover, they gain an overview of the structure and functioning of the banking sector and of deposit guarantee schemes in Germany. Students also learn about the tasks of central banks as well as the organisation, structure and objectives of the Eurosystem and the ECB, including the key instruments of cash and cashless payments.
Preparation	To prepare for participation in module G3, students are advised to study the recommended preliminary reading texts for study sub-units G3-1 and G3-2.
Prerequisites	None; students are advised to study the recommended preliminary reading texts for study sub-units G3-1 and G3-2.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge acquired is applicable to roles in all areas of the Bundesbank, BaFin, other central banks, and commercial banks.
Connection to other modules	Besides the modules that follow it, this module has a particular thematic connection with modules G2 and G5.

Follow-on modules (potential)	A3 Payment systems A4 Credit and banking supervision A5 Monetary economics V1 Bank and central bank management V5 Banking, securities and insurance supervision W2 Case studies on financial supervision

Study sub-unit of G3	**Structure of the banking system and fundamentals of the banking industry**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G3-1
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 15%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 10%
Student workload	120 hours, of which 51 contact hours (68 × 45-minute teaching sessions) and 69 hours independent study
Teaching methods	Classes, independent study
Coordinator of study sub-unit	Prof. Dr Markus Rose
Academic objectives	Students understand the key functions of credit institutions and their risks. They are able to explain the special structure of the German banking system compared with the banking industries in Europe and around the world, as well as the structure and function of the deposit guarantee scheme. Students learn the definitions of business models and their individual components. They understand the areas of business models in which digitalisation offers competitive opportunities and can illustrate this by comparing the innovative digital business models of neobanks and with those of traditional institutions. They are also able explain the specific features of banking products and services, the key sources of success at credit institutions, and banks’ operational target systems. In addition, students learn about the need for and objectives of banking supervision and gain an overview of the European supervisory structure.
Preliminary reading	Hartmann-Wendels, T. et al.: Bankbetriebslehre, latest edition. Supplementary reading: Büschgen, H. E. et al.: Bankbetriebslehre, latest edition. Cecchetti, S. G. and Schoenholtz, K. L.: Money, Banking and Financial Markets, latest edition. Ettmann, B., K. Wolff, G. Wurm: Kompaktwissen Bankbetriebslehre, latest edition. Pastor, D., T. Int-Veen, H. Menz: Wirtschaftslehre des Kreditwesen, latest edition. Bieg, H., G. Krämer G, G. Waschbusch, A. Igl: Bankenaufsicht in Theorie und Praxis, 6th edition. Buchmüller, P., A. Igl, W. Neus: Einführung in die Bankenregulierung: Darstellung wesentlicher aufsichtsrechtlicher Vorgaben, latest edition.
Syllabus	– Functions of credit institutions in an economy – Life cycle of credit institutions and their business models – The banking industry in Germany, Europe, and the world – Credit institutions’ business administration transformation functions – Customer relations and key sources of success at credit institutions – Corporate governance at credit institutions – Regulation and supervision of credit institutions – Current challenges (digitalisation and fintech, deglobalisation, climate-related risks)

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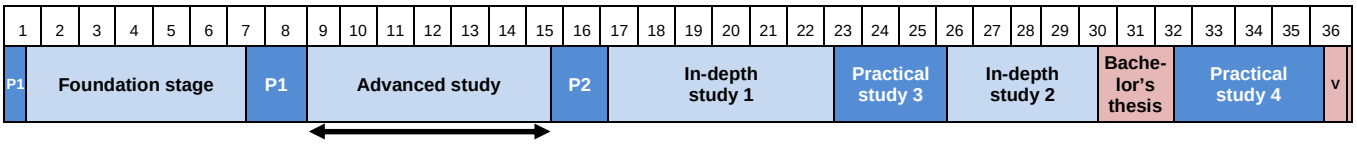
Study sub-unit of G3	**Introduction to central banking**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G3-2
Stage of module	Foundation stage
Type	Study sub-unit; quantitative content 20%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 30%
Student workload	120 hours, of which 55.5 contact hours (74 × 45-minute teaching sessions) and 64.5 hours independent study
Teaching methods	Classes, seminars, independent study
Coordinator of study sub-unit	Uwe Schollmeyer
Academic objectives	Students learn about the tasks of central banks as well as the organisation, structure and objectives of the Eurosystem and the ECB. They are able to explain the money creation of central and commercial banks in the balance sheet context. Students learn the key instruments involved in cash payments and cashless payments, and are able to classify and explain basic logistical concepts related to cash. They acquire detailed knowledge of the Eurosystem and the business activities of the Bundesbank. The main language of instruction and assessment for this module is English.
Preliminary reading	Berndsen, R. J.: Financial Market Infrastructures and Payments. Veghel, 2018. Herger, N.: Wie funktionieren Zentralbanken? Springer Gabler, latest edition. Gudehus, T.: Logistik 1 – Grundlagen, Verfahren und Strategien. Springer Vieweg, latest edition. Verbeck, D.: Einführung in die Bargeldökonomie der Bundesrepublik Deutschland. Stuttgart, 2017. Wienbracke, M.: Grundwissen Europarecht. Munich, latest edition.
G3-2a	Money and central banks: Basic concepts
Syllabus	– Fundamentals of money and central banking – Money creation in the modern economy – The central bank as a bank – The central bank’s balance sheet
G3-2b	The Eurosystem
Syllabus	– Introduction to EU law and governance – Euro area, the ECB, the ESCB and the Eurosystem – The role of national central banks in the Eurosystem – Independence and accountability – The Deutsche Bundesbank: History, role, organisation and functions
G3-2c	Payment instruments
Syllabus	– Definition of cash and cashless payments – Legal basis of cash and cashless payments – Key concepts of logistics, particularly cash logistics – Cash cycle, automation of cash processing – Cash planning and supply – Credit transfers and direct debits, debit and credit cards – Business activities of the Deutsche Bundesbank branches

Module	**Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G4
Stage of module	Foundation stage
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 100%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 67.5 contact hours (90 × 45-minute teaching sessions) and 82.5 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, group work, exercises, independent study
Coordinator of module	Prof. Dr Urs Lendermann
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module G4, students are also referred to the recommended preliminary reading list.
Prerequisites	None; students are advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. The acquired legal knowledge and application skills are essential for a role in a government authority. They are particularly applicable in Directorates General B, Z, R, P, Rv and Ve of the Bundesbank, in most business units of BaFin, and in other central banks.
Connection to other modules	This module has a particular thematic connection with modules A4 and W4.
Follow-on modules (potential)	A3 Payment systems A4 Credit and banking supervision V2 General business administration 3 V3 Securities market and capital market law, European governance W4 Corporate law, contract practice and contract management
Academic objectives	Students understand the fundamentals of the German and European legal systems. They have knowledge of legal sources and are able to develop criteria to determine whether these pertain to public or private law. They are able to describe the protective effects of the German Basic Law, the national objectives and government bodies anchored in the Basic Law, as well as their mandate and functioning; they are also able to distinguish between a state and other types of society. Moreover, they understand the opportunities that citizens have to play a role in various regional or local authorities. In addition, students understand the fundamentals of the German Civil Code and the Commercial Code. They have the ability to analyse problems relating in particular to contract law and property law, develop solutions to case studies and present these in the style of legal opinions. They know how to defend their solutions against criticism using legal argumentation and are able to develop alternative solutions. Students are capable of using the available textbooks to acquire knowledge independently.

Preliminary reading	Brox, H., W.-D. Walker: Allgemeiner Teil des BGB, latest edition. Jellinek, G.: Allgemeine Staatslehre, 3rd edition, Berlin 1914. Kallwass, W. and P. Abels: Privatrecht, Munich, latest edition. Katz, A.: Staatsrecht: Grundkurs im öffentlichen Recht (Jurathek Studium), latest edition. Müssig, P.: Wirtschaftsprivatrecht. Heidelberg, latest edition. Wienbracke, M.: Einführung in die Grundrechte. Wiesbaden, latest edition.
G4a	Fundamentals of political science and German constitutional law
Syllabus	– Legal sources – Concept, features and types of state – Fundamental rights and organisation of the state pursuant to the German Basic Law
G4b	Fundamentals of civil law
Syllabus	– Introduction to the German legal system – Fundamentals of civil law (contract law, legal obligations and property law)
G4c	Fundamentals of commercial law
Syllabus	– Fundamentals of commercial law – Concept of merchant – Functions of the commercial register – Issuing power of procuration
G4d	– Resolving legal cases in the style of legal opinions
Syllabus	– Practical application of acquired legal knowledge – Resolution of practice legal cases – Analysis of facts and posing questions – Legal opinion style (major premise, constituent elements of offence, minor premise, conclusion)

Module	**Principles of economics**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	G5
Stage of module	Foundation stage
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 0%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, exercises, independent study
Coordinator of module	Prof. Dr Lilli Zimmermann
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module G5, students are advised to study the recommended preliminary reading texts.
Prerequisites	None; students are advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge acquired is applicable to roles in all areas of the Bundesbank, BaFin or other central banks on account of its focus on economics. Furthermore, the knowledge gained is particularly applicable in Directorates General Vo, M, F and P.
Connection to other modules	Besides the modules that follow it, this module has a particular thematic connection with modules G2 and G3.
Follow-on modules (potential)	A5 Monetary economics V3 Financial markets and international economics W1 Case studies on monetary policy and financial stability
Academic objectives	Students understand the principles and methodologies of economics and are able to explain and assess the benefits and limitations of models used for economic analysis. They acquire the tools necessary to analyse and interpret economic trends and specific microeconomic and macroeconomic problems. Instruction and assessment in this course are partly in English.
Preliminary reading	Blanchard et al.: Macroeconomics – A European Perspective, latest edition. Mankiw, N. and M. Taylor: Economics, latest edition. Mankiw, N. and M. Taylor: Grundzüge der Volkswirtschaftslehre, latest edition. Further recommended titles will be given during the course.
G5a	Basic concepts
Syllabus	– Object and definition of economic principles – Basic economic concepts
G5b	Microeconomics
Syllabus	– Price and market theory – Budget theory
G5c	Macroeconomics
Syllabus	– National accounts – Determining general equilibria – Government activities and macroeconomic development – Economic fluctuations; economic growth in the long term

2.2 Advanced study



Modules (5 required modules)	**ECTS[3] credits**	**Contact hours** (45-minute teaching sessions)	**Workload** (hours)	**Form of assessment** (percentage in English)
A1: Digital applications and quantitative methods (required module)	**7**	**130**	**210**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
A1-1: Digital applications at central banks		74	120	
A1-2: Quantitative methods in the financial industry and statistics		56	90	
A2: General business administration 2 (required module)	**7**	**116**	**210**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
A2-1: Management and transformation 1		54	100	
A2-2: Accounting 2: Single-entity and consolidated financial statements		62	110	
A3: Payment systems (required module)	**5**	**80**	**150**	**Assignment, written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
A4: Credit and banking supervision (required module)	**7**	**160**	**210**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
A4-1: Applied management of credit institutions		74	90	
A4-2: Fundamentals of banking and financial services supervision		86	120	
A5: Monetary economics (required module)	**6**	**114**	**180**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
Total	**32**	**600**	**960**	**5 module assessments**

[3]ECTS credits under the European Credit Transfer and Accumulation System (ECTS). According to Section 3(3) of the curriculum, one ECTS credit corresponds to 30 hours student workload.

Module	**Digital applications and quantitative methods**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A1
Stage of module	Advanced study
Type	Required module; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 0%
ECTS credits	7 ECTS credits
Student workload	210 hours, of which 97.5 contact hours (130 × 45-minute contact hours) and 112.5 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units A1-1 and A1-2 in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-enhttps://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Digital applications and advanced data analysis tools Financing and investment analysis, statistics
Qualification objectives	Students become familiar with the practical use of important applications and standard workstation software and understand the theoretical foundations of process management and IT security management. They gain a broader understanding of the integration of applications and processes. They expand their skills in the use of applications for data analysis and gain a basic understanding of advanced analytics using descriptive/exploratory data analysis (EDA) and AI. In addition, students are able to use investment analysis methods to assess investments and make decisions regarding their implementation. They are also in a position to assess fixed-income securities under different term structures. Students gain an in-depth knowledge of multivariate descriptive statistics and are able to analyse relationships using regression analysis, amongst other methods. Furthermore, they acquire a deeper understanding of relevant statistical testing procedures.
Preparation	To prepare for participation in module A1, students are advised to study the recommended preliminary reading texts for study sub-units A1-1 and A1-2.
Prerequisites	Basic understanding of business processes and their objectives and purposes; basic skills and use of data analysis tools; basic understanding of digital transformation. Students are advised to study the recommended preliminary reading texts for study sub-units A1-1 and A1-2.
Applicability of module	The module counts towards other relevant degree programmes. Modules V4 and W6 build directly on the content in this module; all modules with quantitative and IT-related content indirectly build on module A1. The study sub-unit A1-2 is applicable in many different areas of the Bundesbank, particularly Directorates General B, S, Rc and M, as well as at BaFin and other central banks.
Connection to other modules	The study sub-unit A1-2 covers the material content needed for the subsequent modules A2, V1, V2, V4 and W5. G1-3 forms the content basis for the study sub-units A1-2.
Follow-on modules (potential)	V2 General business administration 3 V3 Financial markets and international economics V5 Banking, securities and insurance supervision W5 Financial econometrics W6 Process and project management

Study sub-unit of A1	**Digital applications at central banks**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A1-1
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 60%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	120 hours, of which 55.5 contact hours (72 × 45-minute teaching sessions) and 64.5 hours independent study
Teaching methods	Classes (sometimes using PCs), exercises, independent study
Coordinator of study sub-unit	Prof. Dr Norbert Frick
Academic objectives	Students build on the methodological knowledge gained from their foundation course and learn about applications at central banks that work in a process-oriented manner and use LLMs. Students are also able to describe the basics of process management, including the corresponding phases, and contextualise and evaluate these in an organisational setting. Students expand their knowledge of data analysis applications, tools and methods, learn about data analysis platforms and data analysis tools used at the Bundesbank (Data Warehouse and Python) and identify their benefits for solving practical, quantitative tasks (e.g. fraud and money laundering detection). Beyond this, students become familiar with basic IT security management issues.
Preliminary reading	Schmelzer H.J. et al.: Geschäftsprozessmanagement in der Praxis, latest edition. Deutsche Bundesbank: Projektleitfaden. Laudon, K. C. et al.: Wirtschaftsinformatik, latest edition. Baars, H.; Kemper, H.-G.: Business Intelligence & Analytics – Grundlagen und praktische Anwendungen: Ansätze der IT-basierten Entscheidungsunterstützung. Berlin (latest edition). Dörn, S.: Python in abgeschlossenen Lerneinheiten. Berlin (latest edition). Matthes E: Python Crashkurs: Eine praktische, projektbasierte Programmiereinführung. Heidelberg, latest edition. VanderPlas, J.: Handbuch Data Science mit Python. Heidelberg, latest edition.
A1-1a	IT at the Bundesbank – organisation and security
Syllabus	– IT at the Bundesbank – organisation and applications – Introduction to IT security management
A1-1b	Processes and application systems at central banks
Syllabus	– Business process management (process identification, design, execution, monitoring), process categorisation – Central bank-specific processes and application systems – Large language models (LLMs/TIA) and prompt engineering as AI applications – Enterprise collaboration systems and support for group work – Case studies
A1-1c	Data analysis – methods and applications at central banks
Syllabus	– Business intelligence and data warehouse systems – Introduction to Python for data analysis (basics, data preparation and manipulation, simple analysis and data visualisation) Case studies and use cases (e.g. risk data aggregation and reporting, fraud and money laundering detection)

Study sub-unit of A1	**Quantitative methods in the financial industry and statistics**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A1-2
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 100%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	90 hours, of which 42 contact hours (56 × 45-minute teaching sessions) and 48 hours independent study
Teaching methods	Classes, independent study, group work
Coordinator of study sub-unit	Prof. Dr Christopher Priberny
Academic objectives	Students gain a deeper understanding of equity and debt financing. Amongst other things, they are able to assess equity and debt capital, including with differing interest rate structures. They are also able to quantify and assess associated risks. Students gain an in-depth knowledge of multivariate descriptive statistics and are able to analyse relationships using regression analysis, amongst other methods. Furthermore, they acquire a deeper understanding of relevant statistical testing procedures.
Preliminary reading	Fahrmeir, Künstler, Pigeot, Tutz: Statistik: Der Weg zur Datenanalyse, Springer, Berlin Heidelberg New York, latest edition. Bosch, K.: Elementare Einführung in die angewandte Statistik, latest edition. Supplementary reading: Heidorn, T.: Finanzmathematik in der Bankpraxis, latest edition. Klenke, A.: Wahrscheinlichkeitstheorie, latest edition. Bamberg, G. et al.: Statistik, latest edition. Franke, J. et al.: Statistics of Financial Markets, latest edition.
A1-2a	Quantitative methods in financing
Syllabus	– Debt financing: Bond valuation given a non-flat yield curve (duplication with coupon bonds, duplication with zero bonds, bootstrapping) – Financing with equity capital: Including corporate valuation – Quantifying equity risk – Quantifying interest rate risk/duration
A1-2b	Methods of statistical data analysis
Syllabus	– Multivariate descriptive statistics (contingency analysis, correlation) – Univariate regression and OLS estimation – Fundamentals of multiple regression – Statistical testing and estimation methods

Module	**General business administration 2**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A2
Stage of module	Advanced study
Type	Required module; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 15%
ECTS credits	7 ECTS credits
Student workload	210 hours, of which 87 contact hours (116 × 45-minute teaching sessions) and 123 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	At the end of the study stage
Forms of assessment; structure (percentage in English)	Written exam with tasks from study sub-units A2-1 and A2-2; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Fundamentals of organisation, traditional and modern organisational structures, including administrative organisation and civil service Behaviour of individuals and groups Organisational culture, leadership Fundamentals of change management Single-entity financial statements in accordance with IFRS, single-entity financial statements for credit institutions in accordance with IFRS Consolidated financial reporting Forensic accounting Theory of corporate finance
Qualification objectives	Students are able to classify and analyse formal and informal organisational structures and processes of enterprises and, taking account of the behaviour of individuals and groups, develop proposals with respect to shaping these in a timely and targeted manner. Students also learn about the importance of change within organisations as well as the associated challenges and possible solutions. They become familiar with the role and importance of managers in these contexts. Students gain an overview of the accounting requirements for credit institutions and other commercial enterprises in accordance with IAS/IFRS for both single-entity financial statements and consolidated financial statements, and master the key accounting, valuation and reporting requirements under IAS/IFRS. They are also able to understand and apply the consolidation measures in the context of group accounting.
Preparation	To prepare for participation in module A2, students are advised to study the recommended preliminary reading texts for study sub-units A2-1 and A2-2.
Prerequisites	G1 Methodological foundations and digital skills G2 General business administration 1 Students are advised to study the recommended preliminary reading texts for study sub-units A2-1 and A2-2.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge acquired is applicable to roles in all areas of the Bundesbank, BaFin or other central banks on account of its focus on fundamentals. Furthermore, the knowledge gained is particularly applicable in Directorates General C, B and M.
Connection to other modules	Besides the preceding modules from the foundation course and those that follow, this module has a particular thematic connection with A1 and A4.
Follow-on modules (potential)	V1 Bank and central bank management V2 General business administration 2 V5 Banking, securities and insurance supervision W2 Case studies on financial supervision

Study sub-unit of A2	**Management and transformation 1**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A2-1
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 0%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 5%
Student workload	100 hours, of which 40.5 contact hours (54 × 45-minute teaching sessions) and 59.5 hours independent study
Teaching methods	Classes, independent study
Coordinator of study sub-unit	Prof. Dr Nicole Jung
Academic objectives	Students are able to classify and analyse formal and informal organisational structures and processes of enterprises and develop proposals with respect to shaping these in a timely and targeted manner. In this context, students also become familiar with typical administrative structures and their rights and duties as civil servants. They understand the significance of the persons involved in guaranteeing the survival, success and transformation of an organisation and its structures and know how to motivate and manage individuals and groups.
Preliminary reading	Hayes: The theory and practice of change management, latest edition. Kieser and Walgenbach.: Organisation, latest edition. Greenberg: Managing Behavior in Organizations, latest edition. Kotter et al. Al: Change: How Organizations Achieve Hard-to-Imagine Results in Uncertain and Volatile Times, latest edition. Meyer et al.: Contemporary Management (European edition), latest edition. Schreyögg and Geiger: Organisation: Grundlagen moderner Organisationsgestaltung, latest edition. Palmer et al: Managing organizational change: a multi-perspective approach, latest edition. Wichmann, M. and Langer, K.-U.: Öffentliches Dienstrecht, latest edition. Supplementary reading: Vahs: Organisation. Ein Lehr- und Managementbuch, latest edition.
A2-1a	Fundamentals of organisation
Syllabus	– Basic organisational concepts – Traditional and modern organisational models – Behaviour of individuals and groups in organisations Organisational and innovation culture
A2-1b	Fundamentals of leadership
Syllabus	– Importance and current challenges of leadership – Definitions, objectives and power bases of leadership – Leadership research, leadership theories and leadership success – Practical application of insights
A2-1c	Fundamentals of change management
Syllabus	– Definitions, concepts and models of change and change management – Reasons, types and bearers of change – Barriers to change – Organisational learning
A2-1d	Digital simulation game “Leading Change”
Syllabus	– Gathering practical experience based on real management situations – Linking the topics of organisation, leadership and change management – Applying studied theories, models and relationships

Study sub-unit of A2	**Accounting 2: Single-entity and consolidated financial statements**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A2-2
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 30%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 20%
Student workload	110 hours, of which 46.5 contact hours (62 × 45-minute teaching sessions) and 63.5 hours independent study
Teaching methods	Classes, independent study, analysing case studies in groups
Coordinator of study sub-unit	Prof. Dr Anke Lenk
Academic objectives	Students gain an overview of the accounting requirements for credit institutions and other business enterprises in accordance with the German Commercial Code and IAS/IFRS, both for single-entity and consolidated financial statements. They become acquainted with the key balance sheet recognition, valuation and disclosure requirements under the German Commercial Code and IAS/IFRS, the differences between them, and how to apply them. They understand how reporting an item on the balance sheet impacts on other parts of the financial statement and are able to understand and apply the consolidation measures used in group accounting.
Preliminary reading	Bieg, H.: Bankbilanzierung nach HGB und IFRS, latest edition. Coenenberg, A. G.: Jahresabschluss und Jahresabschlussanalyse, latest edition. Küting, K./Weber, C.: Der Konzernabschluss, latest edition. Pellens et al.: Internationale Rechnungslegung, latest edition. Scharpf, P./Schaber, M.: Handbuch Bankbilanz, latest edition. Wagenhofer, A.: Internationale Rechnungslegungsstandards, latest edition.
A2-2a.	Individual accounts in accordance with IFRS
Syllabus	– Objectives and purposes of financial statements according to IFRS – Institutional and conceptual foundations of IFRS – Financial statement components – Realisation principle – Recognition and valuation rules for assets and liabilities according to IFRS
A2-2b	Single-entity financial statements for credit institutions according to IFRS
Syllabus	– Recognition and valuation of financial instruments in accordance with IFRS 9Expected Credit Loss Model – Hedge accounting – Conversion of currency – Selected disclosure requirements according to IFRS
A2-2c	Consolidated financial reporting
Syllabus	– Introduction to consolidated financial statements – Basis, definition and methods of consolidation according to the German Commercial Code and IAS/IFRS

Module	**Payment systems**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A3
Stage of module	Advanced study
Type	Required module; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 45%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 60 contact hours (80 × 45-minute teaching sessions) and 90 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, group work, independent study
Coordinator of module	Uwe Schollmeyer
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Assignment, written exam in accordance with Section 7(3) AusgO) (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module A3, students are advised to study the recommended preliminary reading texts.
Prerequisites	G3 Fundamentals of the banking industry G4 Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. Module W3 builds directly on the content in this module. Furthermore, the knowledge gained is applicable in the Bundesbank’s Directorates General F, H, M, and Z, BaFin’s WA Directorates and at other central banks.
Follow-on modules (potential)	V2 General business administration 3 V3 Financial markets and international economics W3 Case studies on payment and financial market infrastructure
Connection to other modules	A4 Credit and banking supervision A5 Monetary economics
Academic objectives	Students become familiar with the basic principles of account and portfolio management and gain an overview of the legal issues relating to bank accounts as well as banking secrecy and the disclosure of bank account information. They understand the structure of payment systems and securities settlement infrastructures as well as the procedures for accepting monetary policy collateral in the Eurosystem. They are able to critically assess key innovations in payment systems. Students are capable of applying their theoretical knowledge of the methods and specialist subject matter to practice-related tasks in the field of digital money and explaining the business strategies and roles of central banks and payment service providers to externals.
Preliminary reading	Berndsen, R. J.: Financial Market Infrastructures and Payments, Veghel, 2018. European Central Bank (2010), The payment system, Frankfurt am Main. Grill, W.; Perczynski, H.; Grill, H.: Wirtschaftslehre des Kreditwesens, latest edition. Drescher, D., Blockchain Grundlagen, mitp-Verlag, Blaufelden, 2018.

A3a	Organisation of cash and cashless payments at central banks
Syllabus	– Processes, participants and structures in cashless payments – Business strategies and roles of central banks in payments – Counterfeits, monitoring cash recycling – Foreign payments, reserve assets and gold
A3b	Account and portfolio management, prevention and control of money laundering and terrorism financing
Syllabus	– Bank account, bank secrecy and bank inquiry – Account and portfolio management at the Bundesbank – Money Laundering Act (*Geldwäschegesetz*) including covenants
A3c	Infrastructure of financial markets
Syllabus	– Large-value and retail payment systems including instant payments – Liquidity and risk in interbank payment systems – Foreign payments including correspondent banking – European and international settlement of payment and security settlement systems, innovations in the sector of financial infrastructures – Management of monetary policy collateral in the Eurosystem – Supervision of financial market infrastructure and payment systems
A3d	Digital money and programmable payments
Syllabus	– Fundamentals of distributed ledger technology (DLT) – Tokenisation – Programmable payments, smart contracts – Central bank digital currency

Module	**Credit and banking supervision**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A4
Stage of module	Advanced study
Type	Required module; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 72%
ECTS credits	7 ECTS credits
Student workload	210 hours, of which 120 contact hours (160 × 45-minute teaching sessions) and 90 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units A4-1 and A4-2; according to Section 7(3) of the Examination Office Structural Order (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Management of selected assets and liabilities Credit risk measurement and transfer Loan agreements and loan collateral Introduction to financial services supervision Ongoing supervision of institutions Fundamentals of administrative law Financial institutions’ corporate governance
Qualification objectives	Students gain an understanding of the design and application options of traditional financial products in banks’ lending and deposit business and are familiar with the major credit substitutes (including line of credit, leasing, factoring, forfaiting, ABS) and hybrid financial instruments (including subordinated loans, participation certificates), covering credit risk measurement and the key legal problems in lending business. In addition, students learn about the core objectives and the organisation of banking supervision in Germany. They gain an overview of standards regarding own funds positions, minimum capital requirements in the case of loans and operational risks, and the instruments of the risk-based supervisory approach. Students also learn generally applicable rules concerning government administrative actions.
Preparation	To prepare for participation in module A4, students are advised to study the recommended preliminary reading texts for study sub-units A4-1 and A4-2.
Prerequisites	G3 Fundamentals of the banking industry G4 Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code Students are advised to study the recommended preliminary reading texts for study sub-units A4-1 and A4-2.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge gained is also applicable to all areas of the Bundesbank, BaFin and other central banks. Furthermore, the knowledge gained is particularly applicable in Directorates General B, F, M, P, S, Vo and Z as well as in the regional offices.
Connection to other modules	Besides the preceding and following modules, this module has a particular thematic connection with modules A3 and A5.
Follow-on modules (potential)	V1 Bank and central bank management V2 General business administration 3 V3 International economics and international governance V5 Banking, securities and insurance supervision W2 Case studies on financial supervision W4 Corporate law, contract practice and contract management

Study sub-unit of A4	**Applied management of credit institutions**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A4-1
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 15%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 50%
Student workload	90 hours, of which 55.5 contact hours (74 × 45-minute teaching sessions) and 34.5 hours independent study
Teaching methods	Classes, independent study
Coordinator of study sub-unit	Prof. Dr Markus Rose
Academic objectives	Students gain an understanding of the structure and potential applications of traditional financial products in banks’ lending and deposit business. They understand the major credit substitutes (including line of credit, leasing, factoring, forfaiting, ABS) and hybrid financial instruments (including subordinated loans, participation certificates) and their possible uses at non-bank institutions. The module also includes an introduction to credit risk measurement. Students have an overview of the key legal issues relating to lending business. They can assess the nature and structure of loan collateral (personal and property hedges) as well as their advantages and disadvantages. In addition, students recognise the importance of digitalisation in bank management and the Digital Operational Resilience Act (DORA) in the context of digital transformation in the banking system. They also understand the objectives and importance of selected MaRisk requirements as the national implementation of the principles-oriented Pillar 2 of the Basel framework.
Preliminary reading	Schulte et al.: Die Praxis des Kreditgeschäfts, latest edition. Henking, C. Bluhm, L. Fahrmeier: Kreditrisikomessung – Statistische Grundlagen, Methoden und Modellierung, latest edition. B. Rudolph, B. Hofmann, A. Schaber, K. Schäfer: Kreditrisikotransfer: Moderne Instrumente und Methoden, latest edition. Bieg, H./Krämer G./Waschbusch, G./Igl, A.: Bankenaufsicht in Theorie und Praxis, 6th edition. Buchmüller, P., /Igl, A./Neus, W.: Einführung in die Bankenregulierung: Darstellung wesentlicher aufsichtsrechtlicher Vorgaben, latest edition. Claussen, C.P., Bank- und Börsenrecht, current edition. Supplementary reading: Brealey R.A. et al.: Principles of Corporate Finance, latest edition.
A4-1a	Applied management of institutions and current issues with a special focus on digitalisation in banking operations
Syllabus	– Management of assets and liabilities (ALM) • Types of lending business • Assessing creditworthiness • Credit monitoring and auditing • Non-performing loans – challenges in Europe – Minimum requirements for risk management (MaRisk) – Digitalisation in bank management – an overview – Digital Operational Resilience Act (DORA) – regulatory requirements in response to digital transformation and cyber threats in the financial sector – Current issues and challenges • Digitalisation, demographics, deglobalisation, decarbonisation (the four “Ds”) • Ongoing supervision • 8th MaRisk amendment: Interest rate risk and credit spread risk in the banking book (IRRBB/CSRBB)
A4-1b	Credit risk measurement and transfer
Syllabus	– Introduction to credit risk measurement – Credit risk transfer products (securitisations, factoring, leasing, etc.)

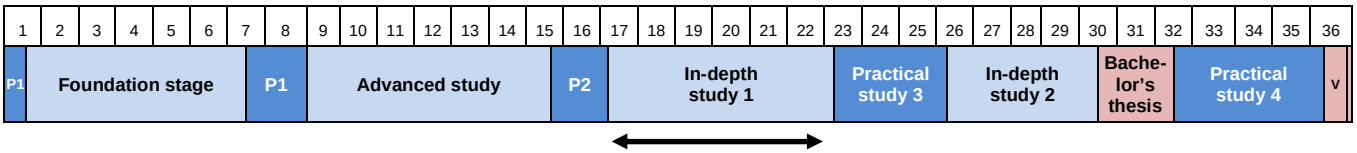
A4-1c	Loan agreements and loan collateral
Syllabus	Legal issues relating to the lending business – Concluding credit agreements – Duty of credit institutions to advise and provide information – Interest claim and other core contractual elements, withdrawal of credit – Consumer loans and other key types of credit – Legal aspects of loan collateral – Types and legal differences – Surety and guarantee, joint liability and letter of comfort – Liens, collateral transfer, security assignment – Liens on property, in particular land charges serving as collateral

Study sub-unit of A4	**Fundamentals of banking and financial services supervision**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A4-2
Stage of module	Advanced study
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 90% (not additional to quantitative content)
Student workload	120 hours, of which 64.5 contact hours (86 × 45-minute teaching sessions) and 55.5 hours independent study
Teaching methods	Classes, independent study, group work
Coordinator of study sub-unit	Prof. Dr Christoph Schmidhammer
Academic objectives	Students learn about the core objectives and the organisation of banking supervision in Germany. They understand the division of tasks among the supervisory institutions and become familiar with the concessions and requirements vis-à-vis institutions as part of ongoing supervision as well as with measures taken in special cases. They gain an overview of standards regarding own funds positions, minimum capital requirements in the case of loans and operational risks, and the instruments of the risk-based supervisory approach, in particular the Minimum Requirements for Risk Management of credit institutions taking account of environmental sustainability and relevant ESG criteria. In addition, students learn the generally applicable rules concerning government administrative actions.
Preliminary reading	Bieg, H./Krämer G./Waschbusch, G./Igl, A.: Bankenaufsicht in Theorie und Praxis, latest edition. Buchmüller, P., /Igl, A./Neus, W.: Einführung in die Bankenregulierung: Darstellung wesentlicher aufsichtsrechtlicher Vorgaben, latest edition. Burghof, H.-P./Rudolph, B.: Bankenaufsicht: Theorie und Praxis der Regulierung, Wiesbaden, latest edition. De Haan, J./Oosterloo, S./Schoenmaker, D.: European Financial markets and institutions, Cambridge et al., latest edition. EBA, 2025: Guidelines on the management of environmental, social and governance (ESG) risks. Grieser, Simon/Heemann, Manfred (eds.), Bankaufsichtsrecht: Entwicklungen und Perspektiven, Frankfurt, latest edition. Hannemann, R. et al., Mindestanforderungen an das Risikomanagement, latest edition. Unruh, G.-Ch.v. et al.: Grundkurs Öffentliches Recht, latest edition.
A4-2a.	Introduction to financial services supervision
Syllabus	– Core aims and organisation of banking supervision in Germany and Europe – BaFin tasks and sharing of tasks with the Bundesbank – Banking business and financial services – Simple approaches for determining minimum capital requirements for credit, market and operational risk – Components of institutions’ capital
A4-2b	Ongoing supervision of institutions taking account of environmental sustainability
Syllabus	– Granting of authorisation for institutions to conduct business operations – Ongoing supervision of institutions (monthly returns, financial statements, inspection reports, reporting systems, inspections pursuant to Section 44 of the Banking Act – Measures (including in special cases) and resolution of an institution – Overview of the risk-based supervisory approach (risk profile, risk classification, MaRisk provisions, international framework of the SRP) – Identification and management of ESG risks at banks
A4-2c	Fundamentals of administrative law
Syllabus	– Government administrative actions and administrative acts – Administrative regulations and measures in banking and financial services supervision – Protest procedure, administrative claim
A4-2d	Financial institutions’ corporate governance
Syllabus	– Management bodies and key function holders – fit and proper assessment – Remuneration regulation – Holder control procedures – Group management structures

Module	**Monetary economics**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	A5
Stage of module	Advanced study
Type	Required module; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 0%
ECTS credits	6 ECTS credits
Student workload	180 hours, of which 85.5 contact hours (114 × 45-minute teaching sessions) and 94.5 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, group work, independent study
Coordinator of module	Prof. Dr Lilli Zimmermann
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module A5, students are advised to study the recommended preliminary reading texts.
Prerequisites	G3 Fundamentals of the banking industry G5 Principles of economics
Applicability of module	The module counts towards other relevant degree programmes. The knowledge gained is applicable to all areas of the Bundesbank, BaFin and other central banks. Furthermore, the knowledge gained is particularly applicable in Directorates General B, F, M, P, S, Vo and Z.
Connection to other modules	Besides the preceding modules from the foundation course, this module has a particular thematic link to A1, A3 and A4.
Follow-on modules (potential)	V3 Financial markets and international economics W1 Case studies on monetary policy and financial stability W5 Financial econometrics
Academic objectives	Students acquire basic knowledge of monetary theory, monetary policy and financial stability. They analyse how monetary policy decisions influence economic variables, such as national income, employment and the price level. The instruments used for implementing the monetary policy strategy is discussed in detail, as is monetary policy transmission. Alongside providing theoretical information, the module focuses on the implementation of monetary policy in the Eurosystem in practice. Furthermore, students are able to assess the significance of financial stability for overall economic welfare. They are aware of the fundamental causes of systemic risk and, on that basis, are able to classify the starting points of macroprudential policy. The main language of instruction and examination of this course is English.
Preliminary reading	Blanchard et al.: Macroeconomics – A European Perspective, latest edition. Görgens et al., Europäische Geldpolitik, latest edition Mishkin: The Economics of Money, Banking, and Financial Markets, latest edition.
A5a	Macroeconomic basics of financial markets and monetary theory
Syllabus	– Introduction to financial markets – Inflation: measurement, types and causes – The Phillips Curve, the Taylor rule and the natural rate of unemployment – Rational expectations and policy implications – Rule-based monetary policy and the IS-PC-MR model – Transmission mechanisms of monetary policy – Monetary policy strategy and tactics

A5b	Central banking and the conduct of monetary policy
Syllabus	– ECB monetary policy framework – Statistical data as a tool for empirical monetary policy analysis – Monetary policy instruments and implementation – Liquidity provision and the collateral framework – Introduction to digital central bank money
A5c	Introduction to financial stability
Syllabus	– Financial crises and macroeconomic outcomes – The sources of systemic risk – Basics of macroprudential policy

2.3 In-depth study 1



Modules (required and optional modules)	**ECTS[4] credits**	**Contact hours** (45-minute teaching sessions)	**Workload** (hours)	**Form of assessment** (percentage in English)
V1: Bank and central bank management (required module for Bundesbank students / optional module for BaFin students)	**8**	**140**	**240**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
V1-1: Bank management and risk management		66	114	
V1-2: Central bank management		28	48	
V1-3: Derivative financial instruments: Valuation and use in risk management		46	78	
V2: General business administration 3 (required module)	**8**	**140**	**240**	**Seminar paper, oral examination, written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
V2-1: Management and transformation 2		44	75	
V2-2: Accounting 3: Analysis of annual financial statements		70	120	
V2-3 Theory of corporate finance		26	45	
V3: Financial markets and international economics (optional module)	**8**	**140**	**240**	**Report** (generally in the language of instruction in accordance with Section 7(2) AusgO)
V3-1: Securities and foreign exchange transactions, international financial markets		50	90	
V3-2: International economics and international governance		90	150	
V4: Advanced analytics and digital transformation (optional module)	**8**	**140**	**240**	**Seminar paper** (generally in the language of instruction in accordance with Section 7(2) AusgO)
V4-1: Managing digital transformation		26	40	
V4-2: Advanced analytics and artificial intelligence		50	70	
V4-3: Legal aspects of digital transformation		30	50	
V4-4: Projects on analytics and digital transformation		34	50	
V5: Banking, securities and insurance supervision (optional module for Bundesbank students / required module for BaFin students)	**8**	**140**	**240**	**Written exam** (generally in the language of instruction in accordance with Section 7(2) AusgO)
V5-1: Basel Capital Accord		90	150	
V5-2: Securities and insurance supervision		50	90	
Total: 4 out of 6 modules	**32**	**560**	**960**	**4 module assessments**

[4]Credits under the European system for the transfer and accumulation of academic achievements. According to Section 3(3) of the curriculum, one ECTS credit corresponds to 30 hours student workload.

Module	**Bank and central bank management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V1
Stage of module	In-depth study 1
Type	Required module for Bundesbank students; optional module for BaFin students; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 4%
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 135 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units V1-1, V1-2 and V1-3; in accordance with Section 7(3) AusgO) (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	This required/optional module is generally offered twice a year.
Syllabus	Overall bank management and risk control Banking simulation game Internal central bank management Audits and inspections at central banks External and internal communication at central banks
Qualification objectives	Students are able to understand the key instruments and methods used to control profitability and risk from the normative and economic perspectives of a commercial bank, to calculate these and apply them in a bank simulation. They gain an overview of operational and organisational structures which facilitate efficient overall bank management and are familiar with the methods of risk-adjusted capital allocation. Students gain an overview of the support functions controlling, auditing and compliance at central banks, including the relevant legal basis: This enables them to identify the relationship between these support functions and the Bundesbank’s core services and value stream structure.
Preparation	To prepare for participation in module V1, students are advised to study the recommended preliminary reading texts listed in module sub-units V1-1 and V1-2.
Prerequisites	G2 General business administration 1 A2 General business administration 2 A3 Payment systems A4 Credit and banking supervision Students are also advised to study the recommended preliminary reading texts for study sub-units V1-1 and V1-2.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge gained is applicable to all areas of the Bundesbank, BaFin and other central banks. The internal bank management aspect of the module prepares students for work in the area of auditing (ongoing supervision, on-site inspections, internal audit). The knowledge gained is particularly applicable in the Bundesbank’s Directorates General B, C, K, M, Rc and Rv.
Connection to other modules	Besides the preceding modules from the foundation course and those that follow, this module has a particular thematic connection with V5, W2, W5 and W6.
Follow-on modules (potential)	W2 Case studies on financial supervision W5 Financial econometrics W6 Process and project management

Study sub-unit of V1	**Bank management and risk management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V1-1
Stage of module	In-depth study 1
Type	Study unit; quantitative content 100%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 5% (not additional to quantitative content)
Student workload	114 hours, of which 49.5 contact hours (72 × 45-minute teaching sessions) and 64.5 hours independent study
Teaching methods	Classes, case studies, exercises, independent study, group work, role-playing simulation
Coordinator of study sub-unit	Prof. Dr Christoph Schmidhammer
Academic objectives	Students are able to understand the key instruments and methods used to control profitability and risk from the normative and economic perspectives of a commercial bank, to calculate these and apply them in a bank simulation. They recognise the importance of an interdisciplinary, interconnected approach for achieving profitable, entrepreneurial results. They wgain an overview of operational and organisational structures which facilitate efficient overall bank management and are familiar with the methods of risk-adjusted capital allocation. Students are able to assess interdependencies between the individual risks (interest rate risk, liquidity risk, correlation and diversification effects), to estimate the volume and quality of own funds required to cushion the impact of risks (ICAAP, ILAAP) and to evaluate the qualitative processes which reveal the potential financial implications of unfavourable conditions (including stress tests).
Preliminary reading	EU Delegated Regulation 2024/856; Regulatory technical standards specifying the supervisory shock scenarios Rolfes, B.: Gesamtbanksteuerung, latest edition. Supplementary reading: Schierenbeck, H.: Ertragsorientiertes Bankmanagement, Vol. 1, Vol. 2, Vol. 3. Latest edition in each case. Matten, C.: Managing Bank Capital, latest edition.
V1-1a	Overall bank management and risk control
Syllabus	– Market interest rate method (basic concept and practice models) – Calculating risk and operating costs – ROI analysis and hierarchy of ROI ratios – Target variables and competitive strategies of profitability management – Risk measurement using internal risk models – Risk/opportunity calculation and internal capacity adequacy – Quantifying and managing counterparty credit risk – Quantifying and managing market risk (interest risk, equity risk) – Earnings-based risk capital allocation for integrated risk/reward management – Liquidity risk management
V1-1b	Banking simulation game
Syllabus	– Applying selected methods of overall bank management in a close-to-reality simulation game

Study sub-unit of V1	**Central bank management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V1-2
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 10%
Student workload	48 hours, of which 21 contact hours (28 × 45-minute teaching sessions) and 27 hours independent study
Teaching methods	Classes, group work, exercises, independent study, case studies
Coordinator of study sub-unit	Prof. Dr Christoph Schmidhammer
Academic objectives	Students gain an overview of the following support functions in central banks, including the relevant legal basis: controlling, auditing and compliance. They are able to describe and assess the key controlling instruments at the Bundesbank and the features of the Bundesbank’s internal control system (ICS). Moreover, students are able to establish links between these support functions and the Bundesbank’s core business areas and core services.
Preliminary reading	Buchholz, U./Knorre, S.: Grundlagen der internen Unternehmenskommunikation, Berlin, latest edition. Ewert, R./Wagenhofer, A.: Interne Unternehmensrechnung, Berlin, latest edition. Freidank/Peemöller: Kompendium der Internen Revision: Internal Auditing in Wissenschaft und Praxis, Berlin, latest edition. Herbst, Dieter Georg: Rede mit mir: Warum interne Kommunikation für Mitarbeitende so wichtig ist und wie sie funktionieren könnte, Berlin, latest edition. Peemöller/Kregel: Grundlagen der Internen Revision – Standards, Aufbau und Führung, Berlin, latest edition. Rolfes, B.: Gesamtbanksteuerung, latest edition. Weber, J./Schäffer, U.: Einführung in das Controlling, Stuttgart, latest edition. Weber, J./Weißenberger, B.; Einführung in das Rechnungswesen, Stuttgart, latest edition.
V1-2a	Internal central bank management
Syllabus	– Tasks and objectives of controlling at central banks – Key controlling instruments at central banks – Operational and strategic controlling at the Bundesbank – Staff controlling (operational statistics and standard procedures) – Controlling in the Eurosystem – Risk management and business continuity planning
V1-2b	Audits and inspections at central banks
Syllabus	– The internal management and control system as a basic operational function – Requirements for internal audits, methods and instruments – Structure of internal audits at the Bundesbank – Cooperation within the ESCB, with the Federal Court of Auditors and external auditors
V1-2c	Compliance at central banks
Syllabus	– Structure and tasks of compliance – Legal framework for performing tasks, knowledge of roles and processes – Anti-money laundering and countering terrorist financing – Prevention of corruption and insider trading.

Study sub-unit of V1	**Derivative financial instruments: Valuation and use in risk management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V1-3
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 100%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	78 hours, of which 34.5 contact hours (46 × 45-minute teaching sessions) and 43.5 hours independent study
Teaching methods	Classes, group work, exercises, independent study, case studies
Coordinator of study sub-unit	Prof. Dr Christopher Priberny
Academic objectives	Students gain an in-depth understanding of derivative financial instruments relevant to the banking industry. Students are familiar in particular with the structure of such financial instruments and the associated payment, profit and loss profiles. In addition, they are able to apply commonly used fair valuation formulas to financial derivatives. Students develop a deeper understanding of price discovery in spot and futures markets, as well as their interaction. They also have an overview of typical use cases of these financial instruments (hedging, arbitrage, speculation) and a deeper understanding of how portfolio positions can be hedged and managed using a combination of financial instruments. During lectures, students also learn to use professional financial market data such as LSEG and MS Excel VBA tools.
Preliminary reading	Hull, J.C.: Options, Futures, and Other Financial Derivatives, latest edition. Hull, J.C.: Risk Management and Financial Institutions, latest edition. Supplementary reading: Benninga, S.: Financial Modeling, latest edition. Neftci, S.: An Introduction to the Mathematics of Financial Derivatives, latest edition. Wiedemann, A.: Financial engineering, latest edition.
Syllabus	– Fundamentals of derivatives and futures markets – Fundamentals of financial engineering – Valuation of forwards and futures – Valuation of swaps – Valuation of credit derivatives – Valuation of options (including sensitivities) – Valuation of interest rate derivatives – (Combined) profit and loss profiles of derivative financial instruments – Risk sensitivities of derivative instruments (“Greeks”) – Risk management using derivative financial instruments (including delta, gamma, vega hedging)

Module	**General business administration 3**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V2
Stage of module	In-depth study 1
Type	Required module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 25%
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 135 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	During and at the end of the study phase
Form of assessment; structure (percentage in English)	Seminar paper, oral examination, written exam; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Design, management and development of human resources management Understand corporate ethics as part of corporate culture Fundamentals of interculturality Collaboration in multicultural teams and bodies Fundamentals of financial statement analysis Special features of the analysis of credit institutions’ financial statements and data analysis Analysis of the financial statements of the Bundesbank and the European Central Bank Valuation and risk analysis of financial instruments Consolidation and joint application of the knowledge acquired in the various general business administration modules
Qualification objectives	Students understand the basic functions and processes of human resources management and are thus able to analyse and assess the impact of digitalisation, change, interconnectedness and globalisation in the world of work. This includes understanding the importance of diversity and inclusion as well as intercultural communication skills. In addition, students have the ability to identify ethical challenges and dilemmas in an operational context and develop responsible solutions. Students are able to assess the financial position and financial performance of enterprises and credit institutions on the basis of financial statements and highlight links to banking supervisors, including central bank applications and needs. Students gain an in-depth understanding of the financial instruments and derivatives relevant to the banking industry, including their structure and valuation. They have an overview of typical uses of these financial instruments (hedging, arbitrage, speculation) and how payment profiles can be hedged using a combination of financial instruments.
Preparation	To prepare for participation in module V2, students are advised to study the recommended preliminary reading texts listed in study sub-units V2-1 and V2-2.
Prerequisites	A1 Digital applications and quantitative methods A2 General business administration 2 Students are also advised to study the recommended preliminary reading texts for study sub-units V2-1 and V2-2.

Applicability of module	The module counts towards other relevant degree programmes. The knowledge acquired is applicable to roles in all areas of the Bundesbank, BaFin or other central banks on account of its focus on fundamentals. Furthermore, the knowledge gained is particularly applicable in Directorates General C, B and M as well as in the regional offices.
Connection to other modules	Besides the preceding modules from the foundation course and those that follow, this module has a particular thematic link to V1, V3, V5, W2 and W5.
Follow-on modules (potential)	W1 Case studies on monetary policy and financial stability W2 Case studies on financial supervision W3 Case studies on payment and financial market infrastructure W5 Financial econometrics

Study sub-unit of V2	**Management and transformation 2**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V2-1
Stage of module	In-depth study 1
Type	Study unit; quantitative content 0%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	75 hours, of which 33 contact hours (44 × 45-minute teaching sessions) and 42 hours independent study
Teaching methods	Classes, independent study, analysing case studies in groups
Coordinator of study sub-unit	Prof. Dr Norbert Frick
Academic objectives	Building on the knowledge of organisation, management and change management provided in A2-1, students understand the basic functions and processes of human resources management and are thus able to analyse and assess the effects of digitalisation, change and interconnectedness and globalisation in the working world. This includes knowledge and understanding of the importance of diversity and inclusion as well as the ability of intercultural communication. In addition, students are able to identify ethical challenges and dilemmas in an operational context and develop responsible solutions based on fundamental theories and principles.
Preliminary reading	Bröckermann, R.: Personalwirtschaft: Lehr- und Übungsbuch für Human Resource Management, latest edition. Jung, H.: Personalwirtschaft, latest edition. Holliday et al.: Intercultural Communication: An advanced resource book for students, latest edition. Krell et al.: Diversity Studies. Grundlagen und disziplinäre Ansätze, latest edition. Meyer: The culture map: Decoding how people think, lead, and get things done across cultures, latest edition. Ting-Toomey and Dorjee: Communicating across cultures, latest edition. Trevino, L.; Nelson, K: Managing Business Ethics Straight talk how to do it right, latest edition
V2-1a	Fundamentals of human resources and diversity management
Syllabus	– Human resources and labour: practice and theory – Staff requirement planning – Staff recruitment – Staff deployment and management (appraisals, remuneration) – Staff development – Challenges of human resources management (focus on diversity management)
V2-1b	Corporate social responsibility and multi-cultural collaboration
Syllabus	– Corporate ethics guidelines and understanding ethics as part of corporate culture – Understanding of the fundamentals of intercultural communication and cultural differences. – Preparation for successful cooperation in international and multicultural teams and bodies
V2-1c	Digital simulation game corporate management
Syllabus	– Consolidation and joint application of the knowledge acquired in the various general business administration modules – Achieving an overall view – Gathering practical experience based on real world problems – Using business management methods and information resources and making decisions under time pressure

Study sub-unit of V2	**Accounting 3: Analysis of annual financial statements**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V2-2
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 80%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 50%
Student workload	120 hours, of which 52.5 contact hours (70 × 45-minute contact hours) and 67.5 hours independent study
Teaching methods	Classes, independent study, analysing case studies in groups
Coordinator of study sub-unit	Prof. Dr Anke Lenk
Academic objectives	Students are able to assess the financial position and financial performance of enterprises and credit institutions on the basis of financial statements and highlight links to banking supervisors, They are familiar with the Deutsche Bundesbank’s credit assessment procedure for enterprises and are able to explain and interpret the Eurosystem’s weekly report and the financial statements of the Bundesbank and the European Central Bank.
Preliminary reading	Baetge et al.: Bilanzanalyse, latest edition. Beck’sches IFRS-Handbuch, latest edition. Bieg: Bankbilanzierung nach HGB und IFRS, latest edition. Coenenberg et al.: Jahresabschluss und Jahresabschlussanalyse, latest edition. Küting et al.: Die Bilanzanalyse, latest edition. Kremnow et al. (eds.): Rechnungslegung der Kreditinstitute, latest edition. Padberg: Bankbilanzanalyse, latest edition. Supplementary reading: Penman: Financial Statement Analysis and Security Valuation, latest edition. Ryan: Financial Instruments and Institutions, latest edition.
V2-2a	Financial analysis of enterprises
Syllabus	– Information needs of readers of the financial statements – Measures taken to prepare the financial statements – Analysis of the financial position and financial performance – Analysis of key figures – Strategic perspective – Credit assessment of business enterprises by the Bundesbank
V2-2b	Particularities of analysing credit institutions’ annual financial statements and empirical data analysis
Syllabus	– Financial statement analysis and balance sheet policy – Empirical measurability of balance sheet policy – Accounting as an information tool for banking supervision – Data analysis
V2-2c	Analysis of the financial statements of the Bundesbank and the European Central Bank
Syllabus	Weekly financial statement of the Eurosystem: – Legal basis, layout and valuation rules – Purpose and informative value: the weekly financial statement as a reflection of the functions of a central bank Bundesbank financial statement and ECB balance sheet: – Preparation guidelines – Valuation rules and accounting policies – Profit and loss account

Study sub-unit of V2	**Theory of corporate finance**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V2-3
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 100%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	45 hours, of which 19.5 contact hours (26 × 45-minute teaching sessions) and 25.5 hours independent study
Teaching methods	Classes, independent study
Coordinator of study sub-unit	Prof. Dr Beate Jüttner-Nauroth
Academic objectives	Students study the quantitative methods for decision-making given uncertainty in arbitrage-free financial markets. They are able to assess the application conditions and limitations of the models covered (including portfolio diversification, market model, SML, models for capital and equity costs), in order to correctly interpret model results. Students are also capable of applying their theoretical knowledge of the methods and specialist subject matter to practice-related tasks. The main language of instruction and assessment of this course is English.
Preliminary reading	Benninga, S.: Financial Modeling, latest edition. Brealey, R. A. et al.: Principles of Corporate Finance, latest edition. Deutsche Bundesbank: German enterprises’ profitability and financing, Bundesbank Monthly Report. European Central Bank: Measuring the cost of equity of euro area banks. Dothan: Prices in Financial Markets, latest edition Kruschwitz, L.; Löffler, A.: Stochastic Discounted Cash Flow, latest edition Penman: Financial Statement Analysis and Security Valuation, latest edition. Trautmann, S.: Investitionen, latest edition. Supplementary reading: Christensen, P.O.; Feltham, G.: Economics of Accounting. Volume I: Information in markets, latest edition. Neftci, S.: An Introduction to the Mathematics of Financial Derivatives, latest edition.
Syllabus	– Mathematical tools for making investment decisions in a setting of uncertainty – Portfolio diversification, market model, systematic risk versus unsystematic risk – CAPM and SML – Cost of (equity) capital (earnings yield, ICC, WACC) – German enterprises’ financing decisions – Arrow-Debreu securities and their impact on pricing of financial assets in a setting of uncertainty – Using financial mathematical methods in MS Excel

Module	**Financial markets and international economics**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V3
Stage of module	In-depth study 1
Type	Optional module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 25%
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 135 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	During the study stage
Form of assessment; structure (percentage in English)	Report; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Securities and capital market law Securities transactions and international financial markets Foreign exchange market, foreign exchange market interventions and reserve assets International trade theory and policy; exchange rates, open-economy macroeconomics and international macroeconomic policy International and European governance, international statistical concepts
Qualification objectives	Students gain an overview of the general conditions prevailing in the national and international financial markets. They are able to distinguish the various types of securities, analyse their risks and use the key market information systems. Students are familiar with the Bundesbank’s securities and foreign exchange transactions, including the management of reserve assets and civil servant pension funds, and are able to apply the relevant legal provisions (securities trading, investor protection). Students also gain an overview of the reasons for the emergence of foreign trade, are able to gauge the implications of foreign trade ties for the domestic and global economy, and learn how to evaluate trade policy measures. Students thus acquire a deeper understanding of the institutional framework of the European Union and the role Germany plays within it.
Preparation	To prepare for participation in module V3, students are advised to study the recommended preliminary reading texts listed in study sub-units V3-1 and V3-2.
Prerequisites	A1 Digital applications and quantitative methods A3 Payment systems A4 Credit and banking supervision A5 Monetary economics Students are also advised to study the recommended preliminary reading texts for study sub-units V3-1 and V3-2.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge gained is essential for staff employed at a central bank belonging to the European System of Central banks and is applicable in the Bundesbank’s Directorates General B, F, M, R, S, Vo and Z, in BaFin and other central banks.
Connection to other modules	In addition to the previous modules and the (potential) modules that follow, this module has a particular link to V2 and V5.
Follow-on modules (potential)	W1 Case studies on monetary policy and financial stability W2 Case studies on payment and financial market infrastructure W4 Corporate law, contract practice and contract management W5 Financial econometrics

Study sub-unit of V3	**Securities and foreign exchange transactions, international financial markets**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V3-1
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 30%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 60%
Student workload	90 hours, of which 37.5 contact hours (50 × 45-minute teaching sessions) and 52.5 hours independent study
Teaching methods	Classes, independent study, group work
Coordinator of study sub-unit	Prof. Dr Beate Jüttner-Nauroth
Academic objectives	Students gain an overview of the general conditions prevailing in the national and international financial markets. They are able to distinguish the various types of securities, analyse their risks and use the key market information systems. They have an overview of the forms and procedures for national and international security issuances as well the settlement, safe custody and administration of securities. They also understand common investment strategies of both credit institutions and customers and have an overview of the taxation of capital gains. Students are familiar with the Bundesbank’s securities and foreign exchange transactions, including the management of reserve assets and civil servant pension funds, and are able to apply the relevant legal provisions (securities trading, investor protection).
Preliminary reading	Steiner, M. and Bruns, C.: Wertpapiermanagement, latest edition. Hartmann-Wendels, T. et al.: Bankbetriebslehre, latest edition. Langenbucher, Bliesener, Spindler, Bankrechts-Kommentar, Munich, latest edition. Supplementary reading: Buch-Heeb, P.: Kapitalmarktrecht, latest edition. Spremann, K. et al.: Zinsen, Anleihen, Kredite, latest edition. Hull, J.C.: Risk Management and Financial Institutions, latest edition.
V3-1a	Securities and capital market law
Syllabus	– Securities: types, features and transfer – Securities transactions: exchange trading and over-the-counter (OTC) trading; investment advice – Capital markets law: stock exchange; investor protection – Underwriting business and syndicated lending
V3-1b	Securities transactions and international financial markets
Syllabus	– Trading in conventional, special and derivative securities – General and product-specific investment risks; investment strategies – International financial markets, types/forms of trading, information systems – Issuance procedures; national and international settlement of securities – Taxation of capital gains – National and international clearing and settlement systems – Capital market statistics
V3-1c	Foreign exchange market, foreign exchange market interventions and reserve assets
Syllabus	– Foreign exchange transactions from the perspective of commercial banks and the Bundesbank – Organisation and settlement of foreign exchange transactions at the Bundesbank – Management of foreign reserves (national reserves and ECB reserves) – Setting euro reference exchange rates – Reporting on the foreign exchange market and exchange rate and gold price statistics

Study sub-unit of V3	**International economics and international governance**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V3-2
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 30%
Student workload	150 hours, of which 67.5 contact hours (90 × 45-minute teaching sessions) and 82.5 hours independent study
Teaching methods	Classes, independent study, group work
Coordinator of study sub-unit	Prof. Dr Tobias Körner
Academic objectives	Students gain an overview of the reasons for the emergence of foreign trade, are able to gauge the implications of foreign trade ties for the domestic and global economy, and learn how to evaluate trade policy measures. They are able to establish connections between real and monetary foreign trade relations. They are familiar with the determinants of exchange rates and are able to classify and analyse monetary systems based on their structural features. Students acquire a deeper understanding of the institutional framework of the European Union and the role Germany plays within it. They gain an overview of the basic concepts of external sector statistics and learn about the Bundesbank’s tasks in this context. The main language of instruction and assessment of this course is English.
Preliminary reading	Herdegen, Europarecht, latest edition. Chalmers et al.: European Union Law, latest edition. Krugman, P.R. et al.: International Economics, latest edition. Mishkin, F. S.: The Economics of Money, Banking, and Financial Markets, latest edition.
V3-2a.	International trade theory and policy
Syllabus	– Empirical characterisation of international trade patterns – Theoretical foundations of specialisation and the gains from trade – Economic analysis of international trade policy – Political economy of trade policy
V3-2b	Exchange rates, open-economy macroeconomics and international macroeconomic policy
Syllabus	– National income accounting and the balance of payments – Exchange rates and the foreign exchange market – Money, interest rates and exchange rates – Exchange rates, price levels and output – Fixed exchange rates and foreign exchange intervention
V3-2c	International and European governance
Syllabus	– EU law and governance – The role of the ECB in European economic policies
V3-2d	International statistical concepts
Syllabus	– Balance of payments and international investment position – Cooperation on statistics in the ESCB – Role and tasks of the Bundesbank

Module	**Advanced analytics and digital transformation**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V4
Stage of module	In-depth study 1
Type	Optional module; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to table on p. 13; legal content 25%
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 135 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	During the study stage
Form of assessment; structure (percentage in English)	Seminar paper; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Introduction and basic concepts Leadership and work in digital transformation Agile methods and innovation culture Quantitative methods of data science and their application Project work, excursions and laboratory projects on digital transformation, machine learning, big data and artificial intelligence; in the form of lectures as well as in innovative formats such as “thinkathons” or “hackathons”, planned and implemented in cooperation with interested areas of the Bank. Ongoing projects from various directorates general are presented and combined with exercises, thus linking theory, application and practical implementation.
Qualification objectives	Students learn the challenges organisations face in light of increasing digitalisation from an organisational, technical, legal and human resources perspective; They grasp the digital transformation as a holistic phenomenon and recognise that it requires a comprehensive approach. There is an especially in-depth look at change management, data science/machine learning and AI applications in business and administration as well as legal aspects.
Preparation	To prepare for participation in module V4, students are advised to study the recommended preliminary reading texts listed in study sub-units V4-1 and V4-4.
Prerequisites	G1: Methodological foundations and digital skills G2: General business administration 1 G4 Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code A1: Digital applications and quantitative methods
Applicability of module	The module counts towards other relevant degree programmes. The essential nature of its content and its focus on understanding digital transformation and its legal and methodological form make this module useful for activities – especially analytical and management activities – in all areas of the Bundesbank, BaFin and other central banks.
Connection to other modules	In addition to the previous modules, there are links primarily with modules W5 and W6 as well as all modules that focus on digital transformation and data analysis.
Follow-on modules (potential)	Modules W5 and W6

Study sub-unit of V4	**Managing digital transformation**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V4-1
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 10%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	40 hours, of which 19 contact hours (26 × 45-minute teaching sessions) and 21 hours independent study
Teaching methods	Classes, group work, independent study
Coordinator of study sub-unit	Prof. Dr Norbert Frick
Academic objectives	Students – learn the wide-ranging challenges organisations face in light of increasing digitalisation from a technical, organisational and human resources perspective; – are able to describe key management challenges, approaches and concepts for dealing with them; – learn methods aimed at implementing innovations and changes within organisations.
Preliminary reading	Baltes G, Freyth A: Veränderungsintelligenz: Agiler, Innovativer, Unternehmerischer Den Wandel Unserer Zeit Meistern. Wiesbaden: Gabler, latest edition. Brynjolfsson E, McAfee A: The second machine age: Work, progress, and prosperity in a time of brilliant technologies. New York, London: W.W. Norton & Company, latest edition. Hess T: Digitale Transformation strategisch steuern: Vom Zufallstreffer zum systematischen Vorgehen. Wiesbaden: Springer Fachmedien Wiesbaden, latest edition. Siebel TM, Rice C: Digital transformation: Survive and thrive in an era of mass extinction. New York, NY: RosettaBooks, latest edition. Stahl R, Staab P: Don't worry, be digital: Tipps für einen angstfreien Umgang mit Digitalisierung, latest edition. Streicher HW: Digitale Transformation in der öffentlichen Verwaltung: Praxishandbuch für Projektleiter und Führungskräfte. 1st ed. Berlin: Springer Berlin; Springer Gabler, latest edition. Uebernickel, Falk et al.: Design Thinking: Das Handbuch. Frankfurter Allgemeine Verlag, latest edition.
V4-1a	Change management in digital transformation
Syllabus	– Expand existing change management approaches to include the requirements of digital transformation – Analyse how software-assisted applications increase the effectiveness of change projects – Requirements for management styles in organisations for digital transformation projects, including their management, monitoring and documentation – Organisational learning as part of the digital transformation and the resulting implications for change management – Changes in governance structures in businesses and public authorities as part of digital transformation
V4-1b	Work and leadership and in digital transformation
Syllabus	– Challenges of a new working environment – New work/future work – Digital leadership/new leadership – Change intelligence and change management – Roles in digital transformation – Case studies on work and leadership in digital transformation

Study sub-unit of V4	**Advanced analytics and artificial intelligence**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V4-2
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 90%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 0%
Student workload	70 hours, of which 37.5 contact hours (50 × 45-minute contact hours) and 32.5 hours independent study
Teaching methods	Classes, group work, independent study
Coordinator of study sub-unit	Prof. Dr Matthias Goeken
Academic objectives	Students – become familiar with data preparation, data analysis and machine learning procedures that are used throughout the Bundesbank and are able to apply them independently – are able to weigh up the strengths and weaknesses of the various procedures – are able to apply tools relevant in practice/at a later date in order to solve technical problems
Preliminary reading	Géron, Aurélien: Praxiseinstieg Machine Learning mit Scikit-Learn, Keras und TensorFlow. Konzepte, Tools und Techniken für intelligente Systeme, latest edition Haneke U, Trahasch S, Zimmer M, Felden C: Data Science: Grundlagen, Architekturen und Anwendungen. Heidelberg: dpunkt, latest edition. Herbold, S.: Data-Science-Crashkurs: Eine interaktive und praktische Einführung. Heidelberg: dpunkt, latest edition. Nguyen CN, Zeigermann O: Machine Learning – kurz & gut: Eine Einführung mit Python, Pandas und Scikit-Learn. Heidelberg: O'Reilly, latest edition. Russell, S; Norvig, P.: Artificial Intelligence: A Modern Approach. 4th edition, Pearson 2020. Schwaiger, R./Steinwender, J.: Neuronale Netze programmieren mit Python, latest edition, Bonn. Stahl R, Staab P: Die Vermessung des Datenuniversums: Datenintegration mithilfe des Statistikstandards SDMX. Berlin: Springer Vieweg, latest edition.
Syllabus	– Introduction to machine learning and artificial neural networks – Supervised learning procedures – Unsupervised learning procedures – Other machine learning styles and procedures: reinforcement learning, deep learning – Data preparation (data wrangling) – Practical exercises with financial and central banking use cases, exercises, frameworks and tools (Python, low-code tools) – Presenting data and analyses appropriately: data visualisation, storytelling

Study sub-unit of V4	**Legal aspects of digital transformation**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V4-3
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 0%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 100%
Student workload	50 hours, of which 22.5 contact hours (30 × 45-minute teaching sessions) and 27.5 hours independent study
Teaching methods	Classes, group work, independent study
Coordinator of study sub-unit	Prof. Dr Urs Lendermann
Academic objectives	Upon successful completion of the module, students are able to: – identify and critically analyse the key legal framework conditions for digital transformation in the financial sector; – show a legal understanding of key legal issues relating to the use of artificial intelligence, digital (financial) services and the operational resilience of digital infrastructures (expands on A4-1a); – understand requirements arising from European and German law (particularly the Electronic Securities Act (eWpG) and assess their impact on financial institutions; – identify legal risks of digital technologies and formulate legally sound recommendations for their use; – establish links to civil law and recognise the fundamental particularities of digital assets; – reflect on interdisciplinary connections between technology, business and law in a practise-oriented manner in the context of digitalisation.
Preliminary reading	Balogh-Preininger/Hysek/Beham, Praxishandbuch Digital Operational Resilience Act, DORA, Linde Verlag, latest edition Bender/Schuster (eds.): Digitalisation and Law – Grundlagen, Anwendungen und Perspektive, C.H. Beck, latest edition. Kalss/Krönke/Völkel, Crypto-Assets, C.H. Beck, latest edition Kaulartz/Merkle, Rechtshandbuch Künstliche Intelligenz, C.H. Beck, latest edition Maume (ed.), Verordnung über Markt für Kryptowerte (MiCAR), C.H.Beck, latest edition Möslein/Omlor, FinTech Handbook, Digitalisation, Law, Finance, C.H.Beck, latest edition Segna/Möslein/Omlor/von Buttlar, Gesetz über elektronische Wertpapiere, C.H. Beck, latest edition Schulz/Neumann(eds.): Gesetz über elektronische Wertpapiere, RWS Verlag, latest edition.
V4-3a	Markets in Crypto Assets Regulation (MiCAR), electronic Securities (eWpG), civil law governing digital electronic assets (including digital euro)
Syllabus	– The Electronic Securities Act (eWpG): basic structures and references to traditional securities law – Markets in Crypto Assets Regulation (MiCAR): overview of regulation governing crypto-assets – Fundamentals of civil law aspects of digitalisation (including digital euro) – Regulatory supervision and compliance: role of national and European supervisory authorities (BaFin, BBk, ESAs, ECB, etc.)
V4-3b	Artificial intelligence, digital services and digital operational resilience in the financial sector
Syllabus	– Introduction to the legal challenges of digital transformation in the financial sector – Artificial intelligence in finance: potential applications, ethical and legal issues, overview of regulatory developments (especially AI Regulation) – Digital operational resilience: overview of the Digital Operational Resilience Act (DORA), IT security requirements, reporting requirements, third-party management, – The Digital Services Act (DSA): objectives and scope, obligations of platform providers and hosting services, transparency requirements, supervision and liability – Practical examples and case studies on the legal assessment of digital technologies at banks and financial institutions

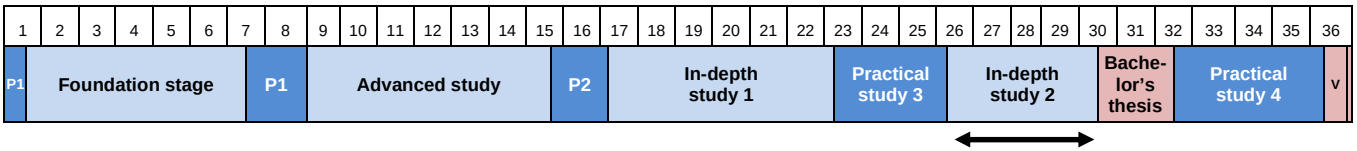
Study sub-unit of V4	**Projects on analytics and digital transformation**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V4-4
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 50%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 15%
Student workload	50 hours, of which 25.5 contact hours (34 × 45-minute teaching sessions) and 24.5 hours independent study
Teaching methods	Classes, group work, independent study
Coordinator of study sub-unit	Prof. Dr Giselher Pankratz
Academic objectives	Students – learn examples of successful data science/machine learning and AI applications in business and administration – gain practical experience in applying advanced analytical techniques – gain the knowledge needed to assess the suitability of individual procedures for different practical analysis situations – are able to apply this experience and knowledge to their own analyses and during periods of practical training – are able to assess the economic and social risks as well as the opportunities of data-driven decision-making
Preliminary reading	Buxmann P, Schmidt H (eds.): Künstliche Intelligenz: Mit Algorithmen zum wirtschaftlichen Erfolg. Berlin, Heidelberg: Springer Berlin Heidelberg, latest edition. See also information for study sub-units V4-1 to V4-3.
Syllabus	Project work, excursions and laboratory projects on digital transformation, machine learning, big data and artificial intelligence; in the form of lectures as well as in innovative formats such as “thinkathons” or “hackathons”, planned and implemented in cooperation with interested areas of the Bank. Ongoing projects from various directorates general are presented and combined with exercises, thus linking theory, application and practical implementation. Examples of projects: – Innovate@HDB – improving the study experience. A design thinking group project (Dan Hasse, Digital Office) – “Thinkathon” lasting several days at Innowerk, the Deutsche Bundesbank’s innovation ecosystem in Frankfurt, in the Trianon building – News analytics – evaluating social media posts for banking supervision (Dr Stotz/Godini, B44) – Market intelligence – using data science to analyse the capital market (Dr Zajonz, M) – Natural language processing (Dr Rumpf/Dr Sahamie, IT/Rc) – To buy or not to buy? The stock market participation puzzle, solved using machine learning – Forensic accounting – analytics for anomaly detection (Prof. Dr Kremer) – Digitalisation and its implications for IT auditing – demonstration with a model bank (TBA)

Module	**Banking, securities and insurance supervision**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V5
Stage of module	In-depth study 1
Type	Optional module for Bundesbank students/required module for BaFin students; English-language content according to table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 90% (not additional to quantitative content)
ECTS credits	8 ECTS credits
Student workload	240 hours, of which 105 contact hours (140 × 45-minute teaching sessions) and 135 hours independent study
Duration of module	6 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Written exam with tasks from study sub-units V5-1 and V5-2; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Syllabus	Basel III – Pillar 1 Basel III – Pillars 2 and 3 (including liquidity supervision) Current developments in European supervisory law Securities supervision Insurance industry: organisation, business lines and insurance policies Insurance supervision
Qualification objectives	Students gain knowledge of the regulations of risk-based banking supervision under the Basel framework, including the monitoring of liquidity risks, and are able to apply them. They are aware that supervision is based not only on quantitative indicators, but also on a broader assessment of banks’ risk management systems, taking into account the overall circumstances. They are also familiar with the tasks of the international standard-setting bodies and European supervisory authorities. Students learn about the statutory supervision standards for organised capital markets and for enterprises that are able to tap the capital markets as well as the links with other areas of financial market supervision. Moreover, students acquire an overview of the economic and legal framework of the insurance industry, its risk profile and the structures of insurance supervision.
Preparation	To prepare for participation in module V5, students are advised to study the recommended preliminary reading texts listed in module components V5-1 and V5-2.
Prerequisites	A1 Digital applications and quantitative methods A2 General business administration 2 A4 Credit and banking supervision Students are also advised to study the recommended preliminary reading texts for module components V5-1 and V5-2.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge gained is helpful for activities in the Bundesbank’s Directorates General B, F, S, and M, as well as at BaFin and other central banks. This module provides a holistic overview of banking and financial (services) supervision and in Germany and Europe.
Connection to other modules	Besides the preceding modules, this module is most closely related to modules W2 and W5.
Follow-on modules (potential)	W1 Case studies on monetary policy and financial stability W2 Case studies on financial supervision W5 Financial econometrics

Study sub-unit of V5	**Basel Capital Accord**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V5-1
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 70%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 90% (not additional to quantitative content)
Student workload	150 hours, of which 67.5 contact hours (90 × 45-minute teaching sessions) and 82.5 hours independent study
Teaching methods	Classes, case studies, exercises, independent study, group work
Coordinator of study sub-unit	Prof. Dr Markus Rose
Academic objectives	Students gain knowledge of the regulations of risk-based banking supervision under the Basel framework, including the monitoring of liquidity and sustainability risks, and are able to apply them. This includes the Pillar 1 minimum capital requirements for credit, operational and market risks under CRR III, the implementation of the supervisory review process (SRP) described in Pillar 2 in the Minimum Requirements for Risk Management (MaRisk), the disclosure requirements under Pillar 3, and liquidity supervision pursuant to the Delegated Regulation and the CRR. In particular, students are able to understand the calculation of minimum capital requirements for significant institutions (SIs) as well. They are aware that supervision is based not only on quantitative indicators, but also on a broader assessment of banks’ risk management systems, taking into account the overall circumstances. They also become familiar with the tasks of the international standard-setting bodies and European supervisory authorities.
Preliminary reading	Bieg, H., G. Krämer G, G. Waschbusch, A. Igl: Bankenaufsicht in Theorie und Praxis, 6th edition. Buchmüller, P., /Igl, A./Neus, W.: Einführung in die Bankenregulierung: Darstellung wesentlicher aufsichtsrechtlicher Vorgaben, latest edition. Cramme, T. et al. (eds.): Handbuch Solvabilitätsverordnung. Eigenkapitalunterlegung von Markt-, Kredit- und Operationellem Risiko, Stuttgart, latest edition. Supplementary reading: Klauck, K.-O. and C. Stegmann: Basel III, Stuttgart, latest edition. Hartley, T. C.: The Foundations of European Community Law, latest edition. Zeranski, S. (ed.): Ertragsorientiertes Liquiditätsrisikomanagement, second edition, Heidelberg, latest edition. Bartetzky et al. (eds.): Handbuch Liquiditätsrisiko, Stuttgart, latest edition. In addition, preliminary reading for study sub-unit A4-2.
V5-1a	Basel III – Pillar 1
Syllabus	– Approaches to calculating the minimum capital requirements in CRR III for o credit risk (IRBA, credit risk mitigation techniques) o operational risk (incl. management standards) o Market risk (trading book risk) including the fundamental review of the trading book (FRTB) – Securitisation transactions – Quantitative impact study (QIS) to estimate the minimum own funds requirement for new regulations (current transitional arrangements, implementation of the output floor) – Qualitative requirements for implementing the IRBA – European banking supervision in depth (EBA, SSM, banking union)
V5-1b	Basel III – Pillars 2 and 3 (including liquidity supervision)
Syllabus	– Individual provisions of MaRisk taking into account ESG – Additional capital buffer for institutions – Disclosure requirements for institutions – German Liquidity Regulation, LCR and NSFR and associated provisions on the supervision of liquidity risk
V5-1c	Current developments in European supervisory law
Syllabus	– Architecture, tasks and objectives of international standard-setting bodies and supervisory authorities – Legislative process in the European committee structure – Case study on legal hierarchy: from recommendation to national regulation

Study sub-unit of V5	Securities and insurance supervision
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	V5-2
Stage of module	In-depth study 1
Type	Study sub-unit; quantitative content 20%; English-language content according to the table on p. 10 and annex to the module catalogue; legal content 90%
Student workload	90 hours, of which 37.5 contact hours (50 × 45-minute teaching sessions) and 52.5 hours independent study
Teaching methods	Classes, independent study, group work, exercises, case studies
Coordinator of study sub-unit	Prof. Dr Andreas Höfer
Academic objectives	Students learn about the statutory supervision standards for organised capital markets and for enterprises that are able to tap the capital markets as well as the links with other areas of financial market supervision. Moreover, students acquire an overview of the economic and legal framework of the insurance industry, its risk profile and the structures of insurance supervision. In addition, students are able to apply the core insurance supervision standards and identify differences and similarities vis-à-vis banking supervision.
Preliminary reading	Farny, D.: Versicherungsbetriebslehre, latest edition. Schäfer, H. (eds.): Compliance – Konsequenzen verschärfter Vorgaben aus WpHG und Bankenaufsicht, latest edition. Gründl, H. and H. Perlet: Solvency II & Risikomanagement, latest edition. Gründl, H./Kraft, M. (eds.): Solvency II – Eine Einführung, latest edition. Nguyen, T./Romeike, F.: Versicherungswirtschaftslehre – Grundlagen für Studium und Praxis, latest edition. Gondring, H.: Versicherungswirtschaft: Handbuch für Studium und Praxis, latest edition. Bennemann, C./Oehlenberg L./Stahl, G.: Handbuch Solvency II, latest edition. Führer, C./Grimmer, A.: Einführung in die Lebensversicherungsmathematik, latest edition. Looschelders, D./Paffenholz, C./Krimphove, D.: Versicherungsvertragsrecht, latest edition. Lengyel, S.: Die Bilanzen der Versicherungsunternehmungen – Eine Bilanzlehre und eine Bilanzanalyse, latest edition. Bähr (ed.): Handbuch des Versicherungsaufsichtsrechts, latest edition. Schwepcke, A./Vetter, A.: Praxishandbuch: Rückversicherung, latest edition. Schwepcke, A.: Rückversicherung, latest edition. Erdmann, K. (ed.): Grundzüge des Versicherungsaufsichtsrechts, latest edition.
V5-2a	Securities supervision
Syllabus	– BaFin’s responsibilities regarding securities supervision/asset management – Obligations arising from listing securities on a stock exchange as well as acquisition procedures and balance sheet checks – Inspection of securities and investment prospectuses – Market integrity, in particular monitoring of insider trading, market manipulation – Organisational rules and rules of conduct for securities service providers – Supervision of investment companies – International supervisory bodies
V5-2b	Insurance industry: organisation, business lines and insurance policies
Syllabus	– Organisational forms of insurance companies, associations – Types of policies, types of insurance, definition and balancing of risk – Primary insurance and reinsurance, insurtech companies, fundamentals of calculating premiums – Structure and items of financial statements; financial statement analysis
V5-2c	Insurance supervision
Syllabus	– Fundamentals of insurance supervision; granting and lapsing of authorisation – Legal supervision – supervisory activities, authorisation requirements and supervision of special supervised institutions – Financial supervision – quantitative and qualitative requirements for insurance companies in the context of ongoing supervision (including mathematical aspects of supervision, e.g. with regard to insurance technical reserves and surplus distribution) – Supervision of institutions for occupational retirement provision

2.4 In-depth study 2



Modules (optional modules for Bundesbank students / required and optional modules for BaFin students)	**ECTS[5] credits**	**Contact hours** (45-minute teaching sessions)	**Workload** (hours)	**Form of assessment** (percentage in English)
Module group 1: Case studies on core services and value stream structure in central banks and supervisory authorities				
W1: Case studies on monetary policy and financial stability (optional module)	**5**	**88**	**150**	**Expert lecture** (generally in the language of instruction in accordance with Section 7(2) AusgO)
W2: Case studies on financial supervision (optional module for Bundesbank students / required module for BaFin students)	**5**	**88**	**150**	**Oral examination** (generally in the language of instruction in accordance with Section 7(2) AusgO)
W3: Case studies on payment transactions and financial market infrastructure (optional module)	**5**	**88**	**150**	**Expert lecture** (generally in the language of instruction in accordance with Section 7(2) AusgO)
Module group 2: Key methods for employees in central banks and supervisory authorities				
W4: Corporate law, contract practice and contract management (optional module)	**5**	**88**	**150**	**Expert lecture** (generally in the language of instruction in accordance with Section 7(2) AusgO)
W5: Financial econometrics (optional module for Bundesbank students / required module for BaFin students)	**5**	**88**	**150**	**Oral examination** (generally in the language of instruction in accordance with Section 7(2) AusgO)

[5] Credits under the European Credit Transfer and Accumulation System. According to Section 3(3) of the curriculum, one ECTS credit corresponds to 30 hours student workload.

W6: Process and project management (optional module)	**5**	**88**	**150**	**Assignment Assignment** (generally in the language of instruction in accordance with Section 7(2) AusgO)
Total: 4 out of 6 modules	**20**	**352**	**600**	**4 module assessments**

Module	**Case studies on monetary policy and financial stability**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W1
Stage of module	In-depth study 2
Type	Optional module from the “Core services and value stream structure” module group; English-language content according to the table on p. 10 and the annex to the module catalogue; quantitative content according to the table on p. 13; legal content 10%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, independent study, group work
Coordinator of module	Prof. Dr Tobias Körner
Date of assessment	During the study stage
Form of assessment; structure (percentage in English)	Expert lecture; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W1, students are advised to study the recommended preliminary reading texts.
Prerequisites	A5 Monetary economics V2 General business administration 3 Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge gained is applicable in the Bundesbank’s Directorates General B, F, M, P, Vo and Z, at BaFin and other central banks.
Connection to other modules	In addition to the preceding modules, there are connections to modules V3, W2, W3 and W5.
Academic objectives	Students learn about the framework conditions and current developments in monetary and macroprudential policy in Germany and Europe. They are in a position to analyse current developments using underlying economic models and statistical methods. They gain an understanding of the historical, economic and political-economic reasons for the current institutional framework of European monetary union. They learn how to assess the importance of systemic risk in the context of current financial stability reports and historical financial crises. In addition, they are able to establish links between monetary and macroprudential policy as well as to other central bank tasks, such as banking supervision and payment systems.
Preliminary reading	De Grauwe, P., Economics of Monetary Union, OUP, latest edition. Financial stability reports and regular publications of selected central banks, IMF, BIS. Kruse, O. and T. Körner (eds.), Einführung in die Finanzstabilität, Schäffer-Poeschel, 1st edition, 2022.
W1a	Case studies on monetary policy
Syllabus	– Economics of European monetary union – Selected topics in applied monetary policy – Current developments in the monetary policy of the euro area
W1b	Financial stability: analysis and policy
Syllabus	– Surveillance framework for macroprudential analysis – Data-driven tools and applications for the analysis of systemic risk – Policy framework in Germany and the euro area
W1c	Case studies on financial stability
Syllabus	– Case studies of selected financial crises – Recent financial stability developments in Germany and the euro area

Module	**Case studies on financial supervision**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W2
Stage of module	In-depth study 2
Type	Optional module for Bundesbank students / required module for BaFin students from the “Core services and value stream structure” module group; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 80%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; exercises, case studies
Teaching methods	Classes, independent study, group work
Coordinator of module	Prof. Dr. Markus Rose
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Oral examination; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W2, students are advised to study the recommended preliminary reading texts.
Prerequisites	G3 Fundamentals of the banking industry A4 Credit and banking supervision V1 Bank and central bank management V2 General business administration 3 V5 Banking, securities and insurance supervision (recommended) Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge gained is applicable in the Bundesbank’s Directorates General B, F, M, P, S, Vo and Z as well as at the Bundesbank’s regional offices, at BaFin and at other central banks.
Connection to other modules	Besides the preceding modules, the module is most closely related to module W5.

Academic objectives	Students gain an in-depth insight into the various areas of work involved in ongoing supervision and on-site inspections. In addition to cooperation with BaFin for the supervision of less significant institutions (LSIs), the approaches used in the SSM with the involvement of ECB Banking Supervision are covered in individual case studies. The content of the case studies undergo refinements to take into account current developments: • Students learn about the steps involved in an approval procedure for an internal risk model (e.g. IRBA or market risk model) and are able to identify the associated coordination and measurement issues. They learn how to incorporate findings made during the procedure into an overall assessment and to decide on whether the institution should be allowed to apply the internal risk model for supervisory purposes. • Furthermore, students become familiar with inspection reports (in particular pursuant to Section 44 of the Banking Act) and evaluate these reports from a risk perspective. They use information obtained in the analysis to make measurements and recommendations for action and identify those areas where additional information may be required. • In addition, students gain an overview of the supervisory review and evaluation process (SREP) which must be applied to each institution or group of institutions. They learn that their final overall assessment in this process must be proportional to the size and complexity of the institution and develop an awareness of the importance of dialogue (e.g. via supervisory meetings) with the institution. Moreover, they learn which topics require particular attention (e.g. stress tests, coverage of risk concentrations) and which banking supervision tools are useful in implementing the SREP (e.g. risk analysis). • In view of the ongoing digitalisation process in the banking system, students learn about the important role of IT inspections by supervisors and the applicable supervisory requirements.
Preliminary reading	Bieg, H., G. Krämer G, G. Waschbusch, A. Igl: Bankenaufsicht in Theorie und Praxis, 6th edition. Buchmüller, P., A. Igl, W. Neus: Einführung in die Bankenregulierung: Darstellung wesentlicher aufsichtsrechtlicher Vorgaben, latest edition. Anonymised extracts from inspection reports on internal risk models (in particular for groups of institutions with cross-border activities). Anonymised Bundesbank evaluation of an audited set of annual financial statements and of a report on an inspection pursuant to Section 44 of the Banking Act. Current project documentation, inspection strategies and guidelines for on-site inspections; current publications by the Bundesbank's directorates general and the ECB.
W2a	Case studies on ongoing supervision
Syllabus	– Implementation of the SREP at an SI and LSI; DORA and data literacy; inspection of IT risks; use of risk profiles; inspection of corporate governance at credit institutions; – Banking Act provisions on lending business: definition of credit, definition of group of connected clients, large exposures including the Regulation governing large exposures and loans of €1 million or more (*Großkredit- und Millionenkreditverordnung*), loans of €1 million or more, loans to governing bodies
W2b	Case studies on on-site inspections
Syllabus	– Risk-oriented analysis and evaluation of financial statement audit reports and inspection reports; business model and profitability assessment; business model analysis in the SREP context; examination of PD/LGD models; interest rate risk (measurement and management)
W2c	Case studies on strategic issues relating to banking regulation and topical issues
Syllabus	– Current developments in the ICAAP and ILAAP, inspection of sustainability risks, management of banking supervision data, deposit insurance, areas of application of (advanced) data analytics in banking supervision

Module	**Case studies on payment transactions and financial market infrastructure**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W3
Stage of module	In-depth study 2
Type	Optional module from the “Core services and value stream structure” module group; English-language content according to the table on p. 10 and the annex to the module catalogue; quantitative content according to the table on p. 13; legal content 20%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, independent study, group work
Coordinator of module	Prof. Dr Giselher Pankratz
Date of assessment	During the study stage
Form of assessment; structure (percentage in English)	Expert lecture; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W3, students are advised to study the recommended preliminary reading texts.
Prerequisites	A3 Payment systems: The knowledge imparted in modules G3 and A3 is required: Basic understanding of payment systems and financial market infrastructures; knowledge of actors and processes in cash payments and cash logistics. Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge gained is applicable in the Bundesbank’s Directorates General B, F, H, M, Vo and Z, as well as at BaFin and other central banks and commercial banks.
Connection to other modules	W1 Case studies on monetary policy and financial stability
Follow-on modules (potential)	---
Academic objectives	Students are able to assess the monetary policy aspects of payment transactions and analyse the links between payment transactions, securities settlement and financial stability. They are able to assess more recent developments in payment transactions and financial market infrastructures and to represent the Bundesbank or BaFin in working groups appropriately.
Preliminary reading	Berndsen, R. J.: Financial Market Infrastructures and Payments, Veghel, latest edition. ECB (ed.: Kokkola, T.): The Payment System, Frankfurt, 2010. Bundesbank and ECB publications
W3a	Financial market infrastructures
Syllabus	– Microfoundations of financial market infrastructures – Network theory applied to the settlement of financial derivatives via central counterparties – Innovative instruments and methods for transferring financial assets – Projects to further develop financial market infrastructures (EU, global) – Impact of financial sector regulation on financial market infrastructures and central bank money creation

W3b	Current issues relating to cash payments
Syllabus	– The changing role of cash – Digitalisation and automation in cash payments – Coexistence of and competition between cash and digital forms of money – Analysis of processes and structures in cash payments and cash logistics – Important national and European projects in the field of cash payments

Module	**Corporate law, contract practice and contract management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W4
Stage of module	In-depth study 2
Type	Optional module from the “Methods” module group; English-language content according to the table on p. 10 and the annex to the module catalogue; quantitative content according to the table on p. 13; legal content 90%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, group work, and independent study
Coordinator of module	Prof. Dr André Alfes
Date of assessment	During the study stage
Form of assessment; structure (percentage in English)	Expert lecture; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W4, students are advised to study the recommended preliminary reading texts.
Prerequisites	G4 Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code A4 Credit and banking supervision
Applicability of the module	The module counts towards other relevant degree programmes. The knowledge gained is applicable in the Bundesbank’s Directorates General B, M, Rc and Z, as well as at BaFin, other central banks and commercial banks.
Follow-on modules (potential)	---
Academic objectives	Students are able to assess the most important company forms as well as their economic and legal advantages and disadvantages with regard to formation, organisation, representation and liability (including digital aspects such as virtual shareholders’ meetings and issuance of electronic shares). This gives students the ability to apply what they have learnt to issues in the areas of monetary policy, banking supervision and payment transactions. Students also acquire initial experience in planning, drawing up and negotiating contracts. Students gain an overview of the different procedures for enforcing claims and are able to develop recommendations for action in specific circumstances. In the area of financial contracts, they are able to identify, assess and recognise any need to amend the key legal and economic points in contractual documentation.
Preliminary reading	Grunewald/Müller, Gesellschaftsrecht, latest edition Musielak, Grundkurs ZPO, latest edition Foerste, Insolvenzrecht, latest edition Heussen / Pischel / Curschmann, Handbuch Vertragsverhandlung und Vertragsmanagement, latest edition
W4a	Corporate law
Syllabus	– Partnerships (civil-law associations, general partnerships, limited partnerships, limited partnerships with limited company as general partner) – Corporations (limited liability companies, public limited companies)
W4b	Contract management
Syllabus	– Contract planning – Contract drafting – Contract negotiations – Contract conclusion

W4c	Legal action in civil proceedings, compulsory enforcement and insolvency
Syllabus	– Introduction to procedural enforcement of claims in civil proceedings – Fundamentals of compulsory enforcement – Fundamentals of insolvency law – Financial collateral in compulsory enforcement and insolvency
W4d	Case studies on financial contracts

Syllabus	– Contractual documentation of financial transactions:
	  – Derivatives contracts
	  – The Bundesbank's repo agreements
	  – Monetary policy lending agreements
	– Contractual documentation of projects:
	  – TARGET2-Securities (T2S)
	  – Common Eurosystem Pricing Hub (CEPH)
	  – Common Credit Assessment System (CoCAS)

Module	**Financial econometrics**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W5
Stage of module	In-depth study 2
Type	Optional module for Bundesbank students / required module for BaFin students from the “Methods” module group; English-language content according to the table on p. 10 and annex to the module catalogue; quantitative content according to the table on p. 13; legal content 0%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats
Teaching methods	Classes, independent study, group work, case studies, project work
Coordinator of module	Prof. Dr Christopher Priberny
Date of assessment	At the end of the study stage
Form of assessment; structure (percentage in English)	Oral examination; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W5, students are advised to study the recommended preliminary reading texts.
Prerequisites	A1 Digital applications and quantitative methods V1-1 Bank management and risk management V2 General business administration 3 Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. Furthermore, the knowledge gained is applicable in many of the Bundesbank’s directorates general, but especially in S, B, Rc and M, as well as at BaFin and other central banks.
Connection to other modules	Besides the preceding modules mentioned above, this module is particularly related to modules W2, V1 and A1.
Follow-on modules (potential)	---
Academic objectives	Students – acquire basic knowledge about data structures and are able to process and manage datasets using spreadsheet programs (Excel) and apply the programming language R for coding; – acquire basic knowledge of data sources at the Bundesbank; – gain a theoretical understanding of econometric model structures and their estimation methods; – acquire basic econometric knowledge; – are able to analyse econometric problems in the financial sector and economics and place them in the theoretical context; – are able to carry out empirical analyses independently using software by means of descriptive and inductive statistical methods.
Preliminary reading	Cameron, Trivedi, Microeconometrics using stata, latest edition, stata press. Crawley 2012, The R book, 2nd edition, Wiley. Dougherty C.: Introduction to Econometrics, latest edition. George, E.P. et al.: Time Series Analysis, latest edition. Pindyck, R.S. et al.: Econometric Models and Economic Forecasts, latest edition. Rösch D.: Understanding Statistics and Probability: An Introduction to Methods, Techniques and Computer Applications, 2017.

Syllabus	Working with (extensive) financial data and data sources – Fundamentals of data structures – Data sources at the Bundesbank (including Refinitiv Workspace) – Programming in the statistical software R Econometric methods Multiple regression – OLS estimator, BLUE characteristic – Statistical tests: t-test, F-test, Goldfeldt-Quandt test, White test, Durbin Watson test, Jarque-Bera test – Robust estimation procedures (GLS, FGLS, ARCH) – Adjustments for non-linearity – Non-metric exogenous variables: dummy and interaction terms – Endogeneity Binary regression – Maximum likelihood estimator – Logit and probit transformation Modelling and data cases – Modelling research-related problems in the areas of market microstructure (complete research-related analysis), ESG, credit risk and economics (please expand on all content) – Independent use of spreadsheet programs (Excel), statistical software (R, EViews and/or stata) – Interpretation of estimation results in the case context

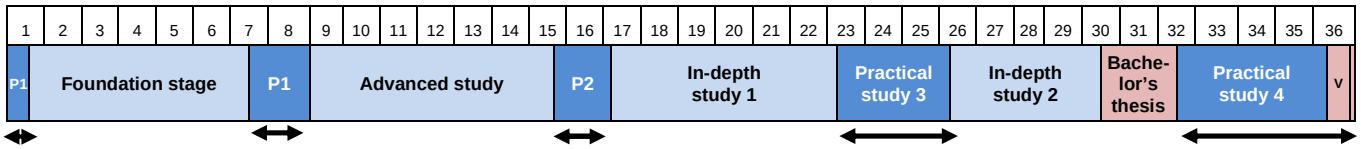
Module	**Process and project management**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	W6
Stage of module	In-depth study 2
Type	Optional module from the “Methods” module group; English-language content according to the table on p. 10 and the annex to the module catalogue; quantitative content according to the table on p. 13; legal content 0%
ECTS credits	5 ECTS credits
Student workload	150 hours, of which 66 contact hours (88 × 45-minute teaching sessions) and 84 hours independent study
Duration of module	4 months
Teaching and learning formats	In-person classes, online classes, hybrid teaching formats; lectures, exercises, case studies
Teaching methods	Classes sometimes using PCs, independent study, group work
Coordinator of module	Prof. Dr Norbert Frick
Date of assessment	During the study stage
Form of assessment structure (percentage in English)	Assignment, Assignment; in accordance with Section 7(3) AusgO (generally in the language of instruction in accordance with Section 7(2) AusgO)
Grading	The module assessment is graded in line with the rules of the Regulation on the Preparatory Training Scheme for the Upper Intermediate Service at the Deutsche Bundesbank (Article 22 GBankDVDV Grading of assessments, in conjunction with Section 11 AusgO). Information on grading as well as failure and drop-out rates can be found in the Rector’s Annual Report. This information is available at https://www.hochschule-bundesbank.de/hochschule-en.
Frequency of module	The required module is generally offered twice a year.
Preparation	To prepare for participation in module W6, students are advised to study the recommended preliminary reading texts.
Prerequisites	A1 Digital applications and quantitative methods; knowledge already acquired on application systems, digital transformation and integration, information management and project management. Existing knowledge of data and process modelling and data analysis are deepened and applied. A4, V1 and/or V5: in-depth understanding of business processes in banking and insurance. V1 Bank and central bank management Students are also advised to study the recommended preliminary reading texts.
Applicability of module	The module counts towards other relevant degree programmes. The knowledge gained is also applicable to activities in all the Bundesbank’s directorates general, as well as at BaFin and other central banks.
Connection to other modules	A1, V1
Follow-on modules (potential)	---
Academic objectives	Students become familiar with internal approaches to and market standards for project management as well as methods and procedures, and are able to place and apply them accordingly. They are capable of formulating the objective, content and scope of a project and are able to draw up a general plan (costs, timeframe, staff, risks). They are able to use IT tools to support project management. In addition, students recognise that the human aspect of projects is a key factor for success and complete projects in working groups. Students become familiar with basic aspects (objectives, approaches, problems) of process management and are able to model processes. They work with a process modelling tool, using it to create operable process models. They are also able to analyse and document moderately difficult problems using the right methods and techniques as part of system analysis. They are capable of selecting and applying appropriate models and presentation techniques for simple problems as part of system design.

Preliminary reading	Sommerville, I.: Software Engineering, latest edition. Krallmann H. et al. (eds.): Systemanalyse im Unternehmen, latest edition. Schmelzer, H.J. et al.: Geschäftsprozessmanagement in der Praxis, latest edition. Deutsche Bundesbank: Projektleitfaden. Schelle H., Ottmann R., Pfeiffer A.: Projekt Manager, GPM Deutsche Gesellschaft für Projektmanagement, latest edition. Becker, J.; Mathas, C.; Winkelmann, A.: Geschäftsprozessmanagement. Heidelberg, latest edition. Becker, J.; Kugeler, M.; Rosemann, M. (eds.): Prozessmanagement. Ein Leitfaden zur prozessorientierten Organisationsgestaltung. Heidelberg, latest edition Gadatsch, A.: Grundkurs Geschäftsprozess-Management. Methoden und Werkzeuge für die IT-Praxis: Eine Einführung für Studenten und Praktiker. Wiesbaden, latest edition.
W6a	Project management
Syllabus	– Project management at the Deutsche Bundesbank – Project structuring, planning, controlling and implementation; risk management, quality management, conflict management and team development – Case studies
W6b	Process management
Syllabus	– Business processes, business process management – Process modelling using graphical modelling languages (e.g. EPK) – Analysis and optimisation of business processes, business process re-engineering – Case studies
W6c	Requirements engineering and prototyping
Syllabus	– Techniques for capturing requirements – Textual and conceptual techniques for specifying and conveying requirements – Dealing with requirements in agile projects – Prototyping techniques (mockups and wire frames), use of low-code/no-code environments – Case studies and small group projects

3 Practical studies

The practical studies are divided into four study phases and generally take place at a student's employer. Students should be given the opportunity to work independently during the practical modules. Activities that do not serve the study objectives should not be assigned to the students.

3.1 Practical studies for students from the Deutsche Bundesbank



Study stage		ECTS credits	Duration	Assessment
P1-1	**Practical study 1** (part 1)	7	Around 7 to 8 weeks per module	**For each module**, students must pass **one assessment** in accordance with Article 18(5) GBankDVDV, **consisting of** a **performance evaluation** (25% weight) **and** an **examination** (75% weight). The different forms of examination are: o Internship report o Completion of any other practical task typically performed in the Upper Intermediate Service o Presentation o Paper o Oral examination
P1-2	**Practical study 1** (part 2)			
P2	**Practical study 2**	7		
P3A	**Practical study 3**	7		
P3B		7		
P4A	**Practical study 4**	8		
P4B		8		
P4C		8		

The deployment areas for practical studies are located along the core service/value stream structure as follows:

Outward core services	Inward core services	Public face, sustainability and management
Financial supervision and stability	Data and IT	Public face and sustainability
Financial market services	Infrastructure and services	Management, financial control and internal audit
Money	Human resources and education	
Monetary policy		

Students can be deployed in these areas from the following study stages onwards in the context of intertwining theory and practice; the Bundesbank's main tutor ensures that students are only deployed for practicals in line with their study progress and level of theoretical knowledge:

Study stage	Deployment areas	Practical code
From practical study 1	Public face and sustainability	PX-AN
	Data and IT	PX-DI
	Money	PX-GE
	Infrastructure and services	PX-IS
	Human resources and education	PX-PB
From practical study 2	Financial supervision and stability	PX-FA
	Financial market services	PX-FD
	Management, financial control and internal audit	PX-SC
From practical study 3	Monetary policy	PX-GP
	Optional area	PX-WM

By the end of **practical study 3**, students are required to complete four out of a total of seven practical modules in the following deployment areas:

- The deployment area *Financial supervision and stability (PX-FA)*
- At least one of the following deployment areas:
  Public face and sustainability (PX-AN), Data and IT (PX-DI), Infrastructure and services (PX-IS), Human resources and education (PX-PB) or Management, financial control and internal audit (PX-SC)
- At least one of the following deployment areas:
  Financial market services (PX-FD), Money (PX-GE) or Monetary policy (PX-GP)
- A branch visit lasting at least one week

Practical study 4 consists of three compulsory modules (required modules) worth 8 ECTS credits each. To complete practical phases P4A, P4B and P4C, all deployment areas from the table above can be selected. Students can also complete multiple practicals in the deployment areas, taking into account the constraints listed above. However, no more than two practical phases should be completed in the same business unit. In addition, the elective deployment area (PX-WM) can be used once for an external internship in accordance with Section 8(3) of the curriculum or for a student's chosen career path or specialisation with a view to their first professional assignment.

Overview of the links between the main content of the theoretical and practical modules.

The overview on the next page shows how the main content of the practical modules is linked to that of the theoretical modules. The broad range of business units covered by the practical modules requires a sound theoretical knowledge base, which is covered by the theoretical modules. The modules are interlinked throughout the entire study programme. Knowledge gained from the theoretical modules is applied during the practical placements, and by the same token, expertise acquired during the practical placements also contributes to students' success in the theoretical modules.

Links between the main content of the theoretical and practical modules

Theoretical modules	Practical modules (for Bundesbank students)									
	PX-AN	PX-DI	PX-GE	PX-IS	PX-PB	PX-FA	PX-FD	PX-SC	PX-GP	PX-WM
G1: Methodological foundations and digital skills		X			O	O	O	O		Cannot be specified (due to the heterogeneity of the units accepting students)
G2: General business administration 1	X		O	O	O	O	O	O		
G3: Fundamentals of the banking industry			X	O	O	O	X	O	O	
G4: Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code			O	X		O	O	O		
G5: Principles of economics									X	
A1: Digital applications and quantitative methods		X				O	X			
A2: General business administration 2	X	O		O	X	O	O		O	
A3: Payment systems			X			O	X		O	
A4: Credit and banking supervision	O					X	O		O	
A5: Monetary economics			O						X	
V1: Bank and central bank management	X	O	O	O		X	O	X		
V2: General business administration 3	X	O	O	O	X	O	O	O		
V3: Financial markets and international economics						O	X	O	X	
V4: Advanced analytics and digital transformation		X		O		X	O			
V5: Banking, securities and insurance supervision	O		O			X	O			
W1: Case studies on monetary policy and financial stability						O			X	
W2: Case studies on financial supervision	O					X				
W3: Case studies on payment transaction and financial market infrastructure			X				X			
W4: Corporate law, contract practice and contract management	X		O	X	X		O			
W5: Financial econometrics		X				O			X	
W6: Process and project management		X		X	X	O	O	X		

X Major connection
O Minor connection

Deployment area	**Public face and sustainability** (e.g. communication, public relations, sustainability, international cooperation, economic education)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-AN
Stage of module	From **practical study 1**
Type	Required module; quantitative content 10%; English-language content 10%; legal content 30%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	None
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course, in particular G2 General business administration 1 and G3 Fundamentals of the banking industry
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a comprehensive understanding of the Bundesbank’s public face, especially relating to communication with the general public. They learn about central bank communication, economic education and sustainability aspects and recognise their importance for the Bundesbank’s image and transparency. In addition, they learn about international cooperation with other central banks, e.g. in international bodies concerned with relevant topics.

Deployment area	**Data and IT** (e.g. data and statistics, information technology, project management)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-DI
Stage of module	From **practical study 1**
Type	Required module; quantitative content 50%; English-language content 40%; legal content 10%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	None
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course, in particular G1 Methodological foundations and digital skills
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students recognise the importance of using data responsibly and of carefully maintaining and analysing data. They learn to use relevant software, become increasingly adept at using it independently, and draw and interpret insights from this. They put into practice their theoretical skills in project and process management and understand the importance of digital support for business processes. Students become familiar with the required process infrastructure and system architecture and learn key principles of data and IT engineering. They learn how to use artificial intelligence in a targeted manner, e.g. when monitoring business partners.

Deployment area	**Money** (e.g. digital euro, cash, payments, branches)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-GE
Stage of module	From **practical study 1**
Type	Required module; quantitative content 20%; English-language content 10%; legal content 20%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	None
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course, in particular G2 General business administration 1 and G3 Fundamentals of the banking industry
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a comprehensive understanding of the means and methods of payment for which the Bundesbank is responsible and their importance for the money supply in Germany. They become familiar with both cash and cashless payments and gain insights into the underlying processing steps at the Bundesbank. For example, they learn about the flow of cash in branches and gain an overview of the cash cycle as a whole. They also apply their knowledge of payment systems in the national and international context and become familiar with the range of services offered for cash and cashless payments. They are actively involved in further developing payment instruments in the national and international setting.

Deployment area	**Infrastructure and services** (e.g. procurement, construction management, administration)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-IS
Stage of module	From **practical study 1**
Type	Required module; quantitative content 10%; English-language content 0%; legal content 40%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	None
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course, in particular G2 General business administration 1
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a comprehensive understanding of the organisational and administrative activities required within the Bundesbank to provide infrastructure and the range of services. They gain insights into real estate management or office management and learn about important security aspects. They also learn about contract management and gain an overview of technical requirements for the operation of buildings and infrastructure. Students learn the fundamentals of logistics and engineering and gain insights into the Bundesbank’s administrative processes.

Deployment area	**Human resources and education** (e.g. human resources management, human resources development, internal staff services, education and training, compliance)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-PB
Stage of module	From **practical study 1**
Type	Required module; quantitative content 10%; English-language content 10%; legal content 30%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	None
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course, in particular G2 General business administration 1 G3 Fundamentals of the banking industry G4 Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a basic understanding of human resources and education work within the Bundesbank and develop an awareness of the processes involved in human resources management. They gain insights into internal staff services and recognise their importance and added value for employees. Students become familiar with the Bundesbank’s portfolio of education and training opportunities. They also understand the importance of a functioning compliance system within the Bundesbank.

Deployment area	**Financial supervision and stability** (e.g. financial stability, banks and financial supervision, BaFin)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-FA
Stage of module	**From practical study 2**
Type	Required module; quantitative content 30%; English-language content 20%; legal content 20%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	From practical study 2
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course and advanced study, in particular G3 Fundamentals of the banking industry and A4 Credit and banking supervision
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a comprehensive understanding of the Bundesbank’s microprudential and macroprudential supervision of the financial system and its components. They become familiar with the division of responsibilities in German and European banking supervision and learn about the processes and interfaces between the ECB, the Bundesbank and BaFin in the context of banking and financial services supervision. Students gain experience in inspection activities and ongoing supervision of institutions. They understand the importance of microprudential and macroprudential supervision for the functioning of the financial sector and thus of the entire economy. They are also expected to gain an overview of the key tasks and processes that are required to monitor financial stability. Students apply their knowledge of relevant legal provisions in practice and learn important analytical procedures. They are actively involved in (inter)national committee work (e.g. G-FSC, ESRB, FSB) and in monitoring and analysing financial markets and foreign economies.

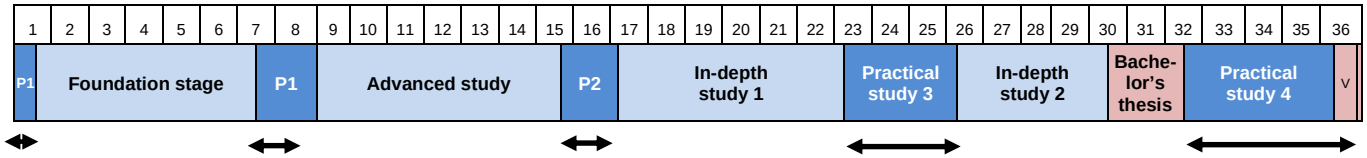
Deployment area	**Financial market services** (e.g. securities trading, credit assessment, portfolio management, monetary policy implementation, monetary and foreign exchange policy operations)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-FD
Stage of module	**From practical study 2**
Type	Required module; quantitative content 10%; English-language content 30%; legal content 20%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	From practical study 2
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course and advanced study, in particular G3 Fundamentals of the banking industry and A3 Payment systems
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain a comprehensive understanding of the range of services offered by the Bundesbank. They gain insights into the provision and preparation of statistical data for third parties and help to further develop analytical methods with the customer in mind. They learn about the Bundesbank’s portfolio management and trading activities and become familiar with analyses of annual financial statements and with corporate ratings, applying their theoretical knowledge in a targeted manner. The syllabus also includes risk mitigation and investment management for foreign reserve assets, foreign exchange trading and portfolios, asset management for third parties, and methods for measuring risk and earnings such as risk metrics and stress tests.

Deployment area	**Management, financial control and internal audit** (e.g. strategy and innovation, controlling, organisation, risk control, internal audit, legal services, international committee work, conference management)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-SC
Stage of module	**From practical study 2**
Type	Required module; quantitative content 20%; English-language content 10%; legal content 20%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	From practical study 2
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Classes in the foundation course and advanced study, in particular G2 General business administration 1 G3 Fundamentals of the banking industry A2 General business administration 2 and A3 Payment systems
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students gain comprehensive insights into the Bank’s management, financial control and advisory processes. They develop an awareness of the tools used in internal corporate governance and contribute to the Bank’s strategic development and organisational transformation. They also gain insights into the legal advice provided by the relevant bodies and understand the importance of conscientiously implementing internal audit standards. Students gain knowledge of the Bundesbank’s role in international bodies and of committee work. They also learn about conference management. Finally, they understand the key processes involved in assessing, managing and monitoring financial risks in the various business areas of the Bundesbank.

Deployment area	**Monetary policy** (e.g. economics, market intelligence and market analysis, research)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-GP
Stage of module	From **practical study 3**
Type	Required module; quantitative content 40%; English-language content 40%; legal content 0%
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	From practical study 3
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Courses in the advanced and in-depth study stages, in particular A5 Monetary economics and V3 Financial markets and international economics
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	Students develop a comprehensive understanding of the principles of economics and capital markets and are able to apply their theoretical knowledge of economic theories in practical situations. They gain insights into quantitative analytical methods and their importance in the context of decisions relating to monetary policy, capital markets or banking supervision. Students gain an understanding of the importance of central bank money provision in the implementation of monetary policy decisions and are able to expand their knowledge of the implementation of monetary policy instruments in the context of the transmission mechanism in practical situations. They obtain an overview of the Bundesbank’s money market operations and the required analyses as a monetary policy tool and understand the economic impact of interest rate changes on the real economy. Finally, they look at risk issues in monetary policy, e.g. relating to purchase programmes, the collateral framework and haircut calculations.

Deployment area	**Optional module** (e.g. external internship, professional orientation and specialisation)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	PX-WM
Stage of module	From **practical study 3** ***(abroad: From practical study 4)***
Type	Required module; quantitative content; English-language content and legal content cannot be specified due to the heterogeneity of the units accepting student placements
ECTS credits	7 or 8 ECTS credits, depending on stage
Duration of module	Around 6 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring sessions with practical studies tutors and training staff, shadowing activities at individual posts, practical assignment, independent study
Coordinator of module	Main tutor or practical tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	From practical study 3
Applicability of module	The knowledge is applicable to activities within the Bundesbank and at other central banks and supervisory authorities in the ESCB.
Connection to other modules	Cannot be specified due to the heterogeneity of the units accepting student placements
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Deutsche Bundesbank: internal rules and regulations. Recent publications by the Directorates General. Relevant legal sources.
Objectives of professional competence and syllabus	This optional module is intended to give students the opportunity to establish their orientation or specialisation in preparation for their first professional assignment at the Bundesbank. It is also possible to complete a one-off external internship at a suitable institution in Germany or abroad in accordance with the requirements of the curriculum and the recruiting authority. The objectives of professional competence and syllabus differ depending on the deployment area.

3.2 Practical studies for students from the Federal Financial Supervisory Authority (BaFin)



Code	Module	Stage	ECTS credits	Duration	Type	Assessment
P1-1	**Overview of the Federal Financial Supervisory Authority (BaFin)** Part 1	Practical study 1 (part 1)	See part 2	Around 7 weeks (part 1: 4 to 9 days)	Required module	In part 2
P1-2	**Overview of the Federal Financial Supervisory Authority (BaFin)** Part 2	Practical study 1 (part 2)	7		Required module	For **each module**, students must pass **one assessment consisting of** a **performance evaluation** (25%) **and** an **examination** (75%). The different forms of examination are: o internship report; o completion of any other practical task typically performed in the in the Upper Intermediate Service; o presentation; o paper or o oral examination.
P2	**Organisation and tasks of banking supervision**	Practical study 2	7	Around 6 to 7 weeks	Required module	
P3A	**Organisation and tasks of securities supervision**	Practical study 3	7	Around 6 to 7 weeks	Required module	
P3B	**Organisation and tasks of insurance supervision**		7	Around 6 to 7 weeks	Required module	
P4A	**Organisation and tasks of interdisciplinary supervisory areas and of the Consumer Protection Directorate**	Practical study 4: Required module P4B and 2 out of 3 optional modules	8	Around 7 to 8 weeks	Optional module	
P4B	**Organisation and tasks of banking supervision (in-depth study)**		8	Around 7 to 8 weeks	Required module	
P4C	**Professional specialisation at the Federal Financial Supervisory Authority (BaFin) or internship at another suitable institution in Germany and abroad**		8	Around 7 to 8 weeks	Optional module	
P4D	**Organisation and tasks of BaFin as the national resolution authority**		8	Around 7 to 8 weeks	Optional module	

An overview of the links between the main content of the theoretical and practical modules can be found on the following page.

Links between the main content of the theoretical and practical modules

The overview shows the two-way link between the main content of the practical modules and that of the theoretical modules. The wide range of business units covered by the practical modules requires a broad theoretical knowledge base, which is covered by the theoretical modules. There is a dovetailing of modules throughout the programme. Knowledge gained from the theoretical modules is required during the practical placements, and by the same token, expertise acquired during a practical placement also contributes to students' success in the theoretical modules.

Theoretical modules	**Practical modules (BaFin students)**							
	P1 Overview of BaFin	P2/P4B Banking supervision	P3A Securities supervision	P3B Insurance supervision	P4A Interdisciplinary supervisory areas, consumer protection	P4B Organisation and tasks of banking supervision (in-depth study)	P4C Professional specialisation/ external institution	P4D Organisation and tasks of BaFin as the national resolution authority
G1: Methodological foundations	Cannot be specified due to the heterogeneity of the units accepting students	X	X	X	Cannot be specified due to the heterogeneity of the units accepting students	Cannot be specified due to the heterogeneity of the units accepting students	Cannot be specified due to the heterogeneity of the units accepting students	Cannot be specified due to the heterogeneity of the units accepting students
G2: General business administration 1		X	X	X				
G3: Fundamentals of the banking industry		X	X	X				
G4: Fundamentals of the legal system: German Basic Law, Civil Code and Commercial Code		X	X	X				
G5: Principles of economics								
A1: Digital applications and quantitative methods		X	X	X				
A2: General business administration 2								
A3: Payment systems								
A4: Credit and banking supervision		X	X	X				
A5: Monetary economics								
V1: Bank and central bank management		X	X	X				
V2: General business administration 3		X	X	X				
V3: Financial markets and international economics		X	X	X				
V4: Advanced analytics and digital transformation		O	O	O				
V5: Banking, securities and insurance supervision		X	X	X				
W1: Case studies on monetary policy and financial stability		X	X	X				
W2: Case studies on financial supervision		X	X	X				
W3: Case studies on payment and financial market infrastructure		X	X	X				
W4: Corporate law, contractual practice and contract management		O	O					
W5: Financial econometrics		X	X	X				
W6: Process and project management		O	O	O				

X Major connection O Minor connection

Module	**Overview of the Federal Financial Supervisory Authority (BaFin) – Part 1**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P1-1
Stage of module	Prior to the foundation course
Type	Required module; quantitative content 0%; English-language content 0%; legal content 20%
ECTS credits	See P1-2
Duration of module	4 to 9 working days
Date of assessment	See P1-2
Form of assessment	See P1-2
Teaching methods	Classes, assignments, independent study
Coordinator of module	Main tutor
Prerequisites	---
Follow-on modules (potential)	G3 Fundamentals of the banking industry
Objectives of professional competence	Students gain an overview of the tasks and organisation of BaFin. They receive instruction on the corresponding legal bases and are familiar with the relevant Rules of Procedure of the institution. In addition, students understand BaFin’s role in the context of national, European and international supervision. They have a general understanding of legal and technical oversight by the Federal Ministry of Finance, the activities of the Administrative Council, Advisory Board, special advisory committees of the business units and the inspection and monitoring rights of the Federal Court of Auditors. The students understand their legal status as civil servants. They also become familiar with basic rules and regulations, procedures and internal directives. They have the opportunity to become acquainted with the staff representation committee. Students receive an introduction to BaFin’s standard software.
Preliminary reading	Civil service law provisions, internal rules and regulations of BaFin
Syllabus	- Course of study including rules and regulations - Overview of the tasks and organisation of BaFin including legal bases and BaFin’s role in the context of national, European and international supervision - Legal status of civil servants - Introduction to BaFin’s standard software

Module	**Overview of the Federal Financial Supervisory Authority (BaFin) – Part 2** (Z/IT and IF/GW)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P1-2
Stage of module	Part of practical study 1, i.e. following the foundation course
Type	Required module; quantitative content 10%; English-language content 0%; legal content 50%
ECTS credits	7 ECTS credits; including part 1 of practical study 1
Duration of module	Around 7 weeks (including P1-1)
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Practical training, independent study, working group on overarching issues
Coordinator of module	Practical studies tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	P1-1
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	G3 Fundamentals of the banking industry
Follow-on modules (potential)	All practical modules at BaFin
General objectives of professional competence P 1-2	Students learn about BaFin’s structure and organisation and its role and function with regard to fulfilling its statutory tasks. They are able to properly process transactions by following internal rules on co-signings, ICS and equity interests. Students are able to recognise interfaces and initiate contact accordingly without instruction. They get to know internal rules and instructions and are able to process transactions independently via subsumption.
Preliminary reading	Civil service and administrative provisions, internal rules and regulations of BaFin
Syllabus P 1-2 ZI 2 / ZI 3 / ZII 5	- Fundamentals of the organisational and operational structure (e.g. ICS, organisational breakdown, Rules of Procedure) - Career development (e.g. MAG, further training) - Staff relations (fundamentals of civil service and collective bargaining law)
Syllabus P 1-2 GW	- Fundamentals of institution-specific money laundering supervision - Overview of the tasks of the anti-money laundering (GW) Directorate regarding the supervision of credit institutions, insurance companies, financial services institutions and payment institutions and regarding the account access procedure - Evaluation of audit reports, risk classification and initiation of supervisory measures - Fundamentals of supervising leasing and factoring enterprises
Syllabus P 1-2 IT	- IT security, IT controlling, IT strategy, assistance in procurement and tenders - Budget, ITR4Web, assistance in establishing and developing IT concepts - Technical procedures, database applications, second level support for standard office applications, systems administration

Syllabus P 1-2 IF	- Fundamentals of the organisational and operational structure (e.g. ICS, organisational breakdown, Rules of Procedure) - Systematic foundations (definition of white, grey and black capital markets, banking and insurance supervision law as a special commercial law) - Fundamentals of authorisation requirement pursuant to the Banking Act, Insurance Supervision Act and Payment Services Oversight Act (actions requiring authorisation, exceptional circumstances, exemptions) - Fundamentals of prosecuting unauthorised financial transactions pursuant to the Banking Act, Insurance Supervision Act and Payment Services Oversight Act (powers of investigation and intervention, criminal liability/cooperation with law enforcement authorities, cross-border cases/cooperation with foreign supervisory authorities) - Overview of the system of appeal procedures (in conjunction with the prosecution of unauthorised financial transactions)

Module	**Organisation and tasks of banking supervision** (Departments BA 1–BA 4; Units ZK 2–ZK 4)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P2
Stage of module	Part of practical study 2, i.e. following the advanced study stage
Type	Required module; quantitative content 20%; English-language content 10%; legal content 20%
ECTS credits	7 ECTS credits
Duration of module	Around 6 to 7 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	A4 Credit and banking supervision
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	G3 Fundamentals of the banking industry and A4 Credit and banking supervision
Follow-on modules (potential)	V5 Banking, securities and insurance supervision
General objectives of professional competence	Students learn about the practical tasks and processes of BaFin’s banking and financial supervision activities (Pillar BA). They gain an overview of the importance of banking supervision for the proper functioning of the banking sector. Within the supervision divisions, students learn about typical areas of work in the Upper Intermediate Service, become familiar with the requirements of the key posts, and gain an overview of the relevant legal regulations. In particular, they are introduced to the main banking supervision processes 2-5 (processing of incoming information, active procurement and processing of information, invasive measures and decisions upon request).
Preliminary reading	Banking Act and regulations relating to the Banking Act; Capital Requirements Regulation, Capital Requirements Directive IV, as well as relevant regulatory technical standards, implementing technical standards and guidelines of the European Banking Authority (EBA); Single Supervisory Mechanism (SSM) Regulation and SSM Manual of the European Central Bank (ECB); Key publications and papers on supervision, e.g. the Prudential Supervisory Guideline, Minimum Requirements for Risk Management (MaRisk) and for the Design of Recovery Plans (MaSan); Basel II and Basel III frameworks.
Syllabus	In the divisions: - Tasks and functions of banking supervision in Germany - Supervisory toolkit (including supervisory actions, risk profile, supervisory meetings, decisions upon request or intervention) - Processes and competencies relating to supervisory activities

Module	**Organisation and tasks of securities supervision** (Directorates WA 1 to WA 5, BilKo)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P3A
Stage of module	Part of practical study 3, i.e. following in-depth study 1
Type	Required module; quantitative content 50%; English-language content 10%; legal content 40%
ECTS credits	7 ECTS credits
Duration of module	Around 6 to 7 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	A4 Credit and banking supervision
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	G3 Fundamentals of the banking industry A4 Credit and banking supervision Generally, V3 Financial markets and international economics
Follow-on modules (potential)	W2 Case studies on financial supervision
Objectives of professional competence P3A	Students obtain detailed knowledge of the legal rules and regulations relevant for securities supervision. In addition to the conditions and internal processes (e.g. technology for preparing orders) for preparing information requests and other administrative acts pursuant to Section 4 of the Securities Trading Act (*Wertpapierhandelsgesetz*) and Section 40 of the Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*), students become familiar with procedures for supervisory examinations, processing requests and issuing authorisations.
Preliminary reading	Current publications and papers by BaFin’s securities and financial supervision business units and by BaFin
Syllabus P3A; WA 1	- Monitoring of notification and disclosure requirements and requirements to transmit information to the company register in the event of changes in the share of voting rights in listed public limited companies (Sections 21 et seq. of the Securities Trading Act) and notification and disclosure requirements pursuant to Sections 30a to 30g of the Securities Trading Act - Processing bid offers (mandatory, takeover and securities acquisition bids) for target companies throughout Germany, processing market supervision procedures and exemption procedures - Monitoring financial reporting requirements pursuant to Sections 37v et seq. of the Securities Trading Act

Syllabus P3A; WA 2	- Insider monitoring (stages of an insider trading investigation, cooperation with the police and the public prosecutor's office) - Monitoring ad hoc disclosure of German and foreign enterprises admitted to exchange trading - Policy issues in the area of clearing and settlement - Monitoring disclosure requirements for directors' dealings - Monitoring the ban on short-selling - Review of securities and investment prospectuses - Monitoring market manipulation (stages of a market manipulation investigation, cooperation with the police and the public prosecutor's office) - Market analysis (preliminary inspection and analysis of potential insider and market manipulation breaches)
Syllabus P3A; WA 3	- Monitoring competence and transparency rules pursuant to Section 34b of the Securities Trading Act and notification requirements pursuant to Section 34c of the Securities Trading Act - Securities Trading Act supervision of organisational requirements at private banks, savings banks and cooperative banks - Banking Act and Securities Trading Act supervision of financial service providers including cross-border financial service providers and branches
Syllabus P3A; WA 4	- Supervision of investment management companies pursuant to the German Investment Code - Supervision of collective investment undertakings pursuant to the German Investment Code (including closed-end funds, open-end real estate funds and hedge funds as well as open-end securities funds) - Supervision of depositories in terms of their depository function pursuant to the German Investment Code
Syllabus P3A; WA 5	- Review of securities and investment prospectuses - Monitoring analysts of financial instruments and competence and transparency rules pursuant to Section 34b of the Securities Trading Act and notification requirements pursuant to Section 34c of the Securities Trading Act - Market supervision in the area of investment products and securities
Syllabus P3A; BilKo	- Financial reporting oversight and transparency obligations of issuers - Strategy and regulation - Random-sample and cause-based examinations (banks, market research/audit planning, insurance, international matters, financial reporting obligations) - Review and fundamental principles of sustainability reports, including modern audit methods such as AI

Module	**Organisation and tasks of insurance supervision** (Divisions VA 1 – VA 5, Unit WVA)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P3B
Stage of module	Part of practical study 3, i.e. following in-depth study 1
Type	Required module; quantitative content 20%; English-language content 10%; legal content 10%
ECTS credits	7 ECTS credits
Duration of module	Around 6 to 7 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	Generally, V5 Banking, securities and insurance supervision
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	V5 Banking, securities and insurance supervision
Follow-on modules (potential)	P4A, P4C, P4D
General objectives of professional competence for P3B	Students learn the practical tasks and processes of insurance supervisors at BaFin (Insurance and Pension Funds Supervision VA). They gain an overview of the importance of insurance supervision for the common good and for the proper functioning of the financial sector. Within the operational divisions, students learn about typical areas of work in the Upper Intermediate Service, become familiar with the requirements of the key tasks, and gain an overview of the relevant legal regulations. In the policy issues divisions, students become familiar with typical areas of work in the Upper Intermediate Service and gain an overview of the relevant legal regulations.
Preliminary reading	Current publications and papers by BaFin’s insurance and financial supervision business areas
Syllabus P3B	- Structure of insurance supervision with three division types: supervision divisions, competence centres and divisions dealing with basic issues, as well as an outline of the VA Directorates. - Main features of operational supervision of life and non-life insurers and institutions for occupational retirement provision under Solvency I and Solvency II (including group supervision) - Main features of the tasks of the basic issues divisions - Case studies from ongoing supervision, overview of typical activities of the Upper Intermediate Service - Case studies, e.g. preparing an analysis report for an insurance company’s annual financial statements

Module	**Organisation and tasks of interdisciplinary supervisory areas and the Consumer Protection Directorate** (e.g. QRM, ISRI, VBS, SDA, ZR)
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P4A
Stage of module	Part of practical study 4, i.e. following in-depth study 2
Type	Optional module; quantitative content 20%; English-language content 20%; legal content 20%
ECTS credits	8 ECTS credits
Duration of module	Around 7 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The optional module is generally offered twice a year.
Prerequisites	P3A, P3B
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	P3A, P3B
Follow-on modules (potential)	P4C, P4D
Preliminary reading	Internal rules and regulations of BaFin, publications relevant to the content being taught
Objectives of professional competence P4A	Upon completion of the module, students will understand the responsibilities of the operational department within the overall context of BaFin, as well as the key tasks and processes associated with their workplace. They will also have an overview of the main areas of work for staff in the higher intermediate and higher civil services within their department, along with the functional processes in their area.

Module	**Organisation and tasks of banking supervision (in-depth study)**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P4B
Stage of module	Part of practical study 4, i.e. following in-depth study 2
Type	Required module; quantitative content 20%; English-language content 10%; legal content 20%
ECTS credits	8 ECTS credits
Duration of module	Around 7 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The required module is generally offered twice a year.
Prerequisites	A4 Credit and banking supervision Generally, V5 Banking, securities and insurance supervision Generally, W2 Case studies on financial supervision
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	P4C, P4D
Follow-on modules (potential)	---
Preliminary reading	Banking Act and regulations relating to the Banking Act; Capital Requirements Regulation, Capital Requirements Directive IV, as well as relevant regulatory technical standards, implementing technical standards and guidelines of the European Banking Authority (EBA); Single Supervisory Mechanism (SSM) Regulation and SSM Manual of the European Central Bank (ECB); Key publications and papers on supervision, e.g. the Prudential Supervisory Guideline, Minimum Requirements for Risk Management (MaRisk) and for the Design of Recovery Plans (MaSan); Basel II and Basel III frameworks.
Objectives of professional competence	In-depth study module. Students learn the practical tasks and processes of the BaFin’s banking and financial supervision activities (Banking Supervision BA). They gain an overview of the importance of banking supervision for the proper functioning of the banking sector. Within the supervision divisions, students learn about typical areas of work in the Upper Intermediate Service, become familiar with the requirements of the key posts, and gain an overview of the relevant legal regulations. In particular, they are introduced to the main banking supervision processes 2-5 (processing of incoming information, active procurement and processing of information, invasive measures and decisions upon request). In the policy issues divisions, students become familiar with typical areas of work in the Upper Intermediate Service and gain an overview of the relevant legal regulations. In particular, they become acquainted with the main banking supervision processes 7 and 8 (general management and basic processes).

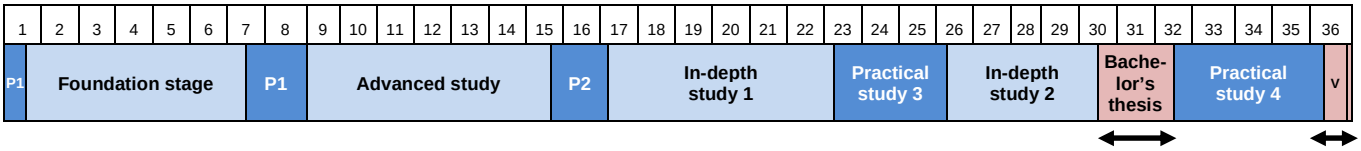
Syllabus	In the supervision divisions: – Tasks, structure and functions of banking supervision in Germany and Europe (including SSM, Joint Supervisory Teams, how the ECB, Bundesbank and BaFin cooperate when supervising significant institutions (SIs) and less significant institutions (LSIs)) – Instruments, processes and structures of JSTs (including risk assessment process, SREP assessment, monitoring reports) – Supervisory toolkit (including supervisory actions, risk profile, supervisory meetings, decisions upon request or intervention) – Processes and competencies relating to supervisory activities, taking into account the differences between SIs and LSIs (including reporting systems, financial statement audit reports, risk profiles, supervisory meetings, ordering special inspections, evaluation of recovery plans (group R)) In the policy issues divisions: – Tasks and functions of banking supervision in Germany and Europe – Policy and interpretation issues – Legal developments – Organisation of supervision

Module	**Professional specialisation at the Federal Financial Supervisory Authority (BaFin) (specialising where possible for the first professional assignment) or internship at another suitable institution in Germany or abroad**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P4C
Stage of module	Part of practical study 4, i.e. following in-depth study 2
Type	Optional module to specialise for the first professional assignment at the Bundesbank, BaFin or a foreign institution. Quantitative content 20%; English-language content 10% (higher percentage if module is completed abroad); legal content 10% (potentially higher)
ECTS credits	8 ECTS credits
Duration of module	Around 7 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The optional module is generally offered twice a year.
Prerequisites	P3A, P3B
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	P4D
Follow-on modules (potential)	---
Preliminary reading	Internal rules and regulations of BaFin, publications relevant to the content being taught
P4Ca: Objectives of professional competence to specialise for the first professional assignment	Students learn about the key tasks and processes in their future workplace. Moreover, students learn about the most important tasks carried out by the Upper Intermediate and the Higher Service in their division and the functional procedures within their unit.
P4Cb: Objectives of professional competence for internships outside the recruiting authority	Students learn about the key tasks of the recruiting institution and become familiar with the links between BaFin and other relevant national and international organisations. The University may specify additional objectives of professional competence for the student individually, depending on the host institution.
Syllabus P4C	Cannot be specified (due to the variety of possible assignments)

Module	**Organisation and tasks of BaFin as the national resolution authority**
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Code	P4D
Stage of module	Part of practical study 4, i.e. following in-depth study 2
Type	Optional module; quantitative content 20%; English-language content 10%; legal content 20%
ECTS credits	8 ECTS credits
Duration of module	Around 7 to 8 weeks
Date of assessment	During the module
Form of assessment	In accordance with Article 18(3) GBankDVDV in conjunction with Section 7 AusgO, module assessments during practical studies take the form of 1. an internship report; 2. or a presentation; 3. or a paper; 4. or completion of any other practical task typically performed in the Upper Intermediate Service; 5. or an oral exam. Each module of practical studies must be assessed. In accordance with Article 18(5) GBankDVDV, the assessment consists of the examination in accordance with subsection (3) (75%) and a practical performance evaluation (25%). The performance evaluation is carried out by the responsible training officer with the involvement of the training staff and includes the key performance and competence criteria (commitment, analytical and practical thinking, social conduct, organisational skills, communication skills).
Teaching methods	Tutoring session with practical studies tutors and training staff, practical training at individual posts, independent study
Coordinator of module	Practical studies tutor
Frequency of module	The optional module is generally offered twice a year.
Prerequisites	A4 Credit and banking supervision V1 Bank and central bank management V2 Analysis of financial statements and financial instruments Generally, V5 Banking, securities and insurance supervision
Applicability of module	The knowledge is applicable to activities within BaFin and at other supervisory authorities in the ESCB.
Connection to other modules	A4, V5
Follow-on modules (potential)	Cannot be specified (due to the heterogeneity of the acquired knowledge)
Preliminary reading	Bank Recovery and Resolution Directive (II), Recovery and Resolution Act (*Sanierungs- und Abwicklungsgesetz*), Single Resolution Mechanism Regulation; Capital Requirements Regulation (II), Capital Requirements Directive IV (V), as well as relevant regulatory technical standards, implementing technical standards and guidelines of the European Banking Authority (EBA); Single Supervisory Mechanism (SSM) Regulation and SSM Manual of the European Central Bank (ECB); Key publications and papers on supervision, e.g. Prudential Supervisory Guideline (*Aufsichtsrichtlinie*), the various minimum requirements; Basel II and Basel III frameworks.
Objectives of professional competence	Students learn about the practical tasks and processes of the resolution function. They gain an overview of the importance of the national resolution authority for safeguarding financial stability. Students learn about the division of responsibilities between the SRB and BaFin. Within the divisions, they gain an understanding of typical tasks, become familiar with the requirements and gain an overview of the relevant legal regulations.

Syllabus	Implementation of the resolution regime as part of the Single Resolution Mechanism (SRM), including: policy issues and the development of methods and instruments for resolution planning and the resolution of banks and financial market infrastructures, e.g. regarding the minimum requirements for own funds and eligible liabilities (MREL) and the bail-in tool; institution-specific resolution planning, e.g. preparation of resolution plans including strategic corporate analysis, determination of resolution strategies and the assessment of resolvability, including identification of impediments to resolution; preparation, i.e. design, implementation and further development of crisis processes, crisis infrastructure and crisis governance of the business area; collection of the bank levy and management of the Restructuring Fund.

4 Bachelor’s thesis



Study stage	Bachelor’s thesis
Degree programme	Bachelor of Science, “Zentralbankwesen/Central Banking” degree programme
Study stage code	BT
Type	Required component of the career development examination; the quantitative, English-language and legal content varies depending on the topic
ECTS credits	12 ECTS credits 10 credits are awarded for preparation of the Bachelor’s thesis and 2 credits for the defence of the Bachelor’s thesis under the European Credit Transfer and Accumulation System (ECTS).
Academic workload	360 hours
Duration of module	Preparation time: 8 weeks
Prerequisites	Bachelor’s thesis: Pass the module assessments of the study stages in accordance with Article 12(2) sentence 1 numbers 1 to 7 GBankDVDV Defence of Bachelor’s thesis: Pass the Bachelor’s thesis in accordance with Article 20(1) GBankDVDV
Form of assessment	Bachelor’s thesis: Prepare an academic thesis within 8 weeks (Article 19 GBankDVDV in conjunction with Section 8 AusgO); the clean copy of the Bachelor’s thesis comprises 40 pages (including tables and illustrations in the text of the Bachelor’s thesis; without abstract, table of contents, list of references, annex, internet sources; in compliance with the “Formal requirements for the preparation of written examinations” of the University’s examination office) Defence of Bachelor’s thesis (Article 20 GBankDVDV): – 15-minute presentation of the main content and conclusions of the Bachelor’s thesis – 30-minute discussion with examiners entailing technical questions on the Bachelor’s thesis, on the presentation, and on how the issues dealt with in the Bachelor’s thesis fit into the overall context of the course
Date of assessment	Bachelor’s thesis: Following in-depth study 2 Defence of Bachelor’s thesis: Following practical study 4
Academic objectives	In the Bachelor’s thesis, students demonstrate their ability to work independently on a problem relevant to the study objectives using academic methods within a specified period of time. By defending their Bachelor’s thesis, students are expected to prove that they have acquired sound knowledge of the topics they worked on, and that they are able to explain and substantiate the methods employed and results obtained as well as how their work fits into the overall context of the course.
Preliminary reading	Stickel-Wolf, C./Wolf, J.: Wissenschaftliches Arbeiten und Lerntechniken, latest edition. Vollmer, H. U./Brauner, D. J.: Erfolgreiches wissenschaftliches Arbeiten. Seminararbeit – Bachelor-/Masterarbeit – Doktorarbeit, latest edition.

A student is considered to have passed the career development examination if the module assessments specified in Section 7(3) AusgO and the Bachelor’s thesis, including the defence of the Bachelor’s thesis have each been passed or previously recognised. Upon successful completion of the degree programme, students acquire 180 credits under the European Credit Transfer and Accumulation System.