Study plan for the CAS programme Valvular Heart Disease Management

UNIVERSITÄT BERN

12 September 2025

The CAS in Valvular Heart Disease Management (hereafter „programme“) is a university further education programme leading to the award of the „Certificate of Advanced Studies in Valvular Heart Disease Management, University of Bern (CAS VHDM Unibe)“. The legal basis is the regulation of the Faculty of Medicine for the CAS VHDM programme dated 29 October 2025.

1. Objectives, scope and structure of the programme

Objectives

The programme is aimed at professionals working in the field of heart valve diseases or wishing to specialize themselves in such field, including cardiologists and cardiac surgeons, experts in cardiac imaging, in heart failure and/or in electrophysiology, and nursing staff.

At the end of the programme, participants will

a possess in-depth knowledge of different valvular heart diseases and their prevention, diagnosis, course, treatment options, and long-term care,

b be able to use different advanced diagnostic cardiac imaging techniques and appraise the results of these procedures critically to guide treatment decisions,

c are familiar with various cutting-edge catheter-based interventions for the treatment of heart valve diseases and can critically evaluate their suitability for different heart valve diseases and patient characteristics,

d be able to develop and implement individual clinical decision- evidence-based strategies for patient assessment and treatment planning,

e be able to identify criteria and take measures within their area of responsibility to achieve optimal cooperation in patient care in a multidisciplinary clinical environment.

Scope and structure of the programme

The programme comprises a total of 15 ECTS credits (ca. 400 working hours in total, of which 15 attendance days) and comprises five modules of 2 to 4 ECTS credits each.

Format

The programme comprises both in-person and online lectures (so-called „blended learning“).

Language

The teaching language in all modules is English. All performance assessments (written examination and presentations) will be conducted in English.

Scope, objectives, and content of the modules

The individual modules are described in detail in the module table in the Appendix to the study plan.

2. Performance assessments

Performance assessments

Performance assessments for each module are specified in the Appendix to the study plan.

Performance evaluation

The evaluation of performance is governed by the programme regulations. If a performance assessment is deemed insufficient, it may be repeated once. The retake must be completed within three months of the participant receiving written notification of the initial evaluation.Based on the results of the performance assessments and the fulfilment of all other requirements, the Programme Management Committee decides whether the CAS degree will be awarded.

Implementation provisions for the performance assessments

Further details regarding the performance assessment for each module are specified in the implementation regulations issued by the Programme Management Committee.

3. Final provisions

Entry into force

This study plan comes into effect on 10 December 2025.

Decided by the study commission:

Bern, 12 September 2025 The Chairman

Prof. Dr. Stephan Windecker

Approved by the Faculty of Medicine:

Bern, 29 October 2025 The Dean

Prof. Dr. med. Claudio Bassetti

Appendix to the study plan for the CAS programme Valvular Heart Disease Management

Module 1: General Concepts in Valvular Heart Disease

ECTS points	2 ECTS points (including self-study and examination)	**Scope**	2 days = 16 hours in-presence lectures
Performance assessments	• Written interim examination • Presentation of case study(ies)	**Attendance requirement**	80 %
Learning Objectives	Participants can • Demonstrate knowledge of epidemiology of valvular heart disease impacting different patient populations • Appraise the structure and role of the Heart Team and of the Heart Valve Centre in providing specialized care to patients with heart valve diseases • Show appropriate interdisciplinary and interprofessional skills to develop robust collaborations in their work environment • Assess comprehensively and critically the overall health status of patients with heart valve diseases • Appraise basic indications of rheumatic heart valve disease and endocarditis that might impact patient care		
Module Content	Block I • Epidemiological trends in valvular heart disease (VHD) Block II • The Heart Team and Heart Valve Centre • Interdisciplinary and interprofessional collaboration in the clinical practice Block III • Clinical evaluation of patients with VHD • Volume-outcome relationship for the treatment of VHD Block IV • Rheumatic heart valve disease • Endocarditis		
Teaching and learning methods	• Lectures • Practical demonstrations • Online platform with multimedia material • Selected literature		
Prior knowledge required	• Essential knowledge in cardiology • Content of the assigned preparatory study material		
Teaching language	English		

Module 2: Aortic Valve Disease

ECTS points	4 ECTS points (including self-study and examination)	**Scope**	4 days = 32 hours in-presence lectures
Performance assessments	• Written interim examination • Presentation of case study(ies)	**Attendance requirement**	80 %
Learning Objectives	Participants can • Demonstrate in-depth knowledge of the different aspects of aortic stenosis relevant to patient care • Evaluate the different treatment options for aortic stenosis in the clinical practice • Assess the health status of patients with aortic stenosis and the most appropriate intervention		

	• Illustrate the step-by-step procedure of transcatehter aortic valve intervention (TAVI) to treat aortic stenosis • Formulate a long-term patient management plan following an intervention for aortic stenosis • Illustrate the surgical interventions for the treatment aortic stenosis in the younger patient population • Demonstrate in-depth knowledge of the different aspects of aortic regurgitation relevant to patient care • Discuss the appropriate treatment options for aortic regurgitation in the clinical practice
Module Content	Block I • Aortic stenosis Block II • Procedural steps for transcatheter aortic valve intervention (TAVI) Block III • Aortic regurgitation
Teaching and learning methods	• Lectures • Practical demonstrations • Online platform with multimedia material • Selected literature
Prior knowledge required	• Essential knowledge in cardiology • Knowledge from Module 1 • Content of the assigned preparatory study material
Teaching language	English

Module 3: Mitral Valve Disease

ECTS points	4 ECTS points (including self-study and examination)	**Scope**	4 days = 32 hours in-presence lectures
Performance assessments	• Written interim examination • Presentation of case study(ies)	**Attendance requirement**	80 %
Learning Objectives	Participants can • Demonstrate in-depth knowledge of the different aspects of mitral regurgitation relevant to patient care • Discuss the different treatment options for aortic stenosis in the clinical practice • Assess the health status of patients with aortic stenosis and the most appropriate intervention • Illustrate the step-by-step procedure of transcatheter mitral edge-to-edge repair (TEER) intervention to treat mitral regurgitation • Illustrate the step-by-step procedure of transcatheter mitral valve replacement (TMVR) intervention to treat mitral regurgitation		
Module Content	Block I • Primary mitral regurgitation Block II • Treatment and techniques for mitral valve disease Block III • Secondary mitral regurgitation		
Teaching and learning methods	• Lectures • Practical demonstrations • Online platform with multimedia material • Selected literature		

Prior knowledge required	• Essential knowledge in cardiology • Knowledge from Module 1 • Content of the assigned preparatory study material
Teaching language	English

Module 4: Tricuspid Valve Disease

ECTS points	3 ECTS points (including self-study and examination)	**Scope**	3 days = 24 hours in-presence lectures
Performance assessments	• Written interim examination • Presentation of case study(ies)	**Attendance requirement**	80 %
Learning Objectives	Participants can • Demonstrate in-depth knowledge of the different aspects of tricuspid regurgitation relevant to patient care • Discuss the different treatment options for aortic stenosis in the clinical practice • Assess the health status of patients with aortic stenosis and the most appropriate intervention • Illustrate the step-by-step procedure tricuspid transcatheter edge-to-edge repair (T-TEER) intervention to treat tricuspid regurgitation • Illustrate the step-by-step procedure of transcatheter tricuspid valve replacement (TTVR) intervention to treat tricuspid regurgitation		
Module Content	Block I • Tricuspid valve disease Block II • Treatment and techniques for tricuspid valve disease		
Teaching and learning methods	• Lectures • Practical demonstrations • Online platform with multimedia material • Selected literature		
Prior knowledge required	• Essential knowledge in cardiology • Knowledge from Module 1 • Content of the assigned preparatory study material		
Teaching language	English		

Module 5: Pulmonary Valve Disease and Multivalve disease

ECTS points	2 ECTS points (including self-study and examination)	**Scope**	2 days = 16 hours in-presence lectures
Performance assessments	• Written interim examination • Presentation of case study(ies)	**Attendance requirement**	80 %
Learning Objectives	Participants can • Demonstrate in-depth knowledge of the different aspects of pulmonary heart disease relevant to patient care • Discuss the different treatment options for aortic stenosis in the clinical practice • Assess the health status of patients with aortic stenosis and the most appropriate intervention • Illustrate the step-by-step procedure of transcatheter pulmonary valve replacement (TPVR) to treat pulmonary heart valve disease • Demonstrate basic knowledge of the diagnostic and therapeutic interventions for multivalve disease		
Module Content	Block I		

	• Pulmonary valve disease Block II • Multivalve disease
Teaching and learning methods	• Lectures • Practical demonstrations • Online platform with multimedia material • Selected literature
Prior knowledge required	• Essential knowledge in cardiology • Knowledge from Module 1 • Content of the assigned preparatory study material
Teaching language	English