

Area A – ALGEBRA, NUMBER THEORY AND LOGIC

Foundation in Algebra, Number Theory and Logic F4A1:

- **Algebra I** (Summer term)
- **Algebra II** (Winter term)
- **Foundations in Representation Theory** (not every year)
- **Set Theory** (not every year)

Lectures of Foundation modules may be taught in German.

Core Lecture Courses (taught in English):

- **V4A1 Algebraic Geometry I**
- **V4A2 Algebraic Geometry II**
- **V4A3 Representation Theory I**
- **V4A4 Representation Theory II**
- **V4A5 Advanced Algebra I**
- **V4A6 Advanced Algebra II**
- **V4A7 Advanced Mathematical Logic**
- **V4A8 Models of Set Theory I**
- **V4A9 Models of set Theory II**

Advanced Lecture Courses (taught in English):

- **V5A1 Advanced Topics in Algebra**
- **V5A2 Selected Topics in Algebra**
- **V5A3 Advanced Topics in Algebraic Geometry**
- **V5A4 Selected Topics in Algebraic Geometry**
- **V5A5 Advanced Topics in Representation Theory**
- **V5A6 Selected Topics in Representation Theory**
- **V5A7 Advanced Topics in Mathematical Logic**
- **V5A8 Selected Topics in Mathematical Logic**

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Recommended Curricula

Start in October:

- **Option I**
 1. Representation Theory I
 2. Representation Theory II (+ Topics)
 3. Topics
 4. (Topics)
- **Option II**
 1. Algebra II
 2. Algebraic Geometry I
 3. Algebraic Geometry II (+ Topics)
 4. (Topics)

Start in April:

- **Option I**
 1. Algebraic Geometry I
 2. Algebraic Geometry II (+ Topics)
 3. Topics
 4. (Topics)
- **Option II**
 1. Algebra I
 2. Representation Theory I
 3. Representation Theory II (+ Topics)
 5. (Topics)

Example Curriculum- Major Area A – Start in October

	Major (Area A)		Minor (Area D)	Minor (other)	Options
1	Representation Theory I		Graduate Seminar	Algebraic Topology I	e.g. Practical Teaching Course External Internship Mathematical Finance 15 CP
	9 CP		6 CP	9 CP	
2	Representation Theory II		Graduate Seminar	Algebraic Topology II	
	9 CP		6 CP	9 CP	
3	Advanced Topics	Master Thesis	Master Thesis Seminar		
	7 CP				
4	Selected Topics	30 CP	6 CP		
	5 CP				

Example Curriculum- Major Area A – Start in April

	Major (Area A)			Minor (Area F)	Minor (Area D)	Options
1	Algebraic Geometry I		Graduate Seminar	Stochastic Processes		e.g. Practical Teaching Course External Internship Mathematical Finance 15 CP
	9 CP		6 CP	9 CP		
2	Algebraic Geometry II	Advanced Topics	Graduate Seminar		Topology I	
	9 CP	7 CP	6 CP		9 CP	
3	Selected Topics	Master Thesis	Master Thesis Seminar	Stochastic Analysis		
4				5 CP	30 CP	6 CP