

## Area D – GEOMETRY AND TOPOLOGY

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### Foundation in Geometry and Topology F4D1:

- **Topology I** (winter term)
- **Topology II** (summer term)
- **Foundations in Analysis and Geometry on Manifolds** (not every year)
- **Geometry** (not every year)

Lectures of Foundation modules may be taught in German.

### Core Lecture Courses (taught in English):

- **V4D1 Algebraic Topology I**
- **V4D2 Algebraic Topology II**
- **V4D3 Advanced Geometry I**
- **V4D4 Advanced Geometry II**

### Advanced Lecture Courses (taught in English):

- **V5D1 Advanced Topics in Topology**
- **V5D2 Selected Topics in Topology**
- **V5D3 Advanced Topics in Geometry**
- **V5D4 Selected Topics in Geometry**
- **V5D5 Advanced Topics in Differential Geometry**
- **V5D6 Selected Topics in Differential Geometry**

You will find the list of modules that are actually offered in a given term in the course overview BASIS at <https://basis.uni-bonn.de>.

Please note that the summer/winter distribution can sometimes differ from the general schedule shown in the example curricula. Therefore please check BASIS first!

On the following pages you will find **recommended example curricula**.

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### Start in the Winter Term – October:

- **Option I**
  1. Algebraic Topology I
  2. Algebraic Topology II (+ Topics)
  3. Topics
  4. (Topics)
- **Option II**
  1. Topology I + Algebraic Topology I
  2. Algebraic Topology II
  3. Topics
  4. (Topics)

### Example Curriculum – Major Area D – Start in the Winter Term (October)

	Major (Area D)		Minor (Area A)	Minor (other)	Options
<b>1</b>	Algebraic Topology I <b>9 CP</b>	Graduate Seminar <b>6 CP</b>	Representation Theory I <b>9 CP</b>	e.g. Discrete Mathematics  Analysis  Scientific Computing <b>9 CP</b>	e.g. Practical Teaching Course  External Internship  Mathematical Finance  <b>15-20 CP</b>
<b>2</b>	Algebraic Topology II <b>9 CP</b>	Graduate Seminar <b>6 CP</b>	Representation Theory II <b>9 CP</b>		
<b>3</b>	Advanced Topics <b>7 CP</b>	Master's Thesis + Master's Thesis Seminar <b>30 CP + 6 CP</b>			
<b>4</b>	Selected Topics <b>5 CP</b>				

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### Start in the Summer Term – April:

- **Option I**
  1. Advanced Geometry II
  2. Algebraic Topology I ( + Topics)
  3. Algebraic Topology II
  4. (Topics)
- **Option II**
  1. Analysis and Geometry on Manifolds
  2. Advanced Geometry I ( + Topics)
  3. Advanced Geometry II
  4. (Topics)

### Example Curriculum – Major Area D – Start in the Summer Term (April)

	Major (Area D)		Minor (Area F)	Minor (Area A)	Options
<b>1</b>	F-Analysis and Geometry on Manifolds <b>9 CP</b>	Graduate Seminar <b>6 CP</b>	Stochastic Processes <b>9 CP</b>		e.g.  Practical Teaching Course  External Internship  Mathematical Finance  <b>13-18 CP</b>
<b>2</b>	Advanced Geometry I <b>9 CP</b>	Graduate Seminar <b>6 CP</b>		Algebra II <b>9 CP</b>	
<b>3</b>	Advanced Geometry II <b>9 CP</b>	Master's Thesis + Master's Thesis Seminar <b>30 CP + 6 CP</b>	Stochastic Analysis <b>9 CP</b>		
<b>4</b>	Selected Topics <b>5 CP</b>				