| **Georg-August-Universität Göttingen**<br>**Module B.Inf.1240: Visualization** | 5 C<br>3 WLH |
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| **Learning outcome, core skills:**<br>Knowledge of<br>• the potentials and limitations of data visualization<br>• the fundamentals of visual perception and cognition and their implications for data visualization. Students can apply these to the design of visualizations and detect manipulative design choices<br>• a broad variety of techniques for visual representation of data, including abstract and high-dimensional data. Students can select appropriate methods on new problems<br>• integration of visualization into the data analysis process, algorithmic generation and interactive methods | **Workload:**<br>Attendance time:<br>42 h<br>Self-study time:<br>108 h |
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| **Course: Visualization** (Lecture, Exercise) | 3 WLH |
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| **Examination: Practical project (2-3 weeks) with presentation and questions during oral exam in groups (approx. 20 minutes per examinee).**<br>**Examination prerequisites:**<br>At least 50% of homework exercises solved.<br>**Examination requirements:**<br>Knowledge of potentials and limitations of data visualization, fundamentals of visual perception and their implications for good design choices, techniques for visual representation and how to use them. | 5 C |

| **Admission requirements:**<br>none | **Recommended previous knowledge:**<br>Foundations of linear algebra and analysis (e.g. B.Mat.0801 and B.Mat.0802) and programming skills (e.g. B.Inf.1842). |
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| **Language:**<br>English | **Person responsible for module:**<br>Prof. Dr. Bernhard Schmitzer |
| **Course frequency:**<br>once a year | **Duration:**<br>1 semester[s] |
| **Number of repeat examinations permitted:**<br>twice | **Recommended semester:**<br>3 - 6 |
| **Maximum number of students:**<br>50 | |