| **Georg-August-Universität Göttingen**<br>**Modul B.Inf.1247: Introduction to Information Retrieval and Natural Language Processing**<br>*English title: Introduction to Information Retrieval and Natural Language Processing* | 6 C<br>4 SWS |
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| **Lernziele/Kompetenzen:**<br>After successfully completing the course, students should be able to:<br>• Summarize major IR and NLP applications<br>• Explain important IR and NLP algorithms and data structures<br>• Determine the conceptual requirements of specific IR and NLP problems<br>• Compare the suitability of algorithms and data structures for specific tasks<br>• Devise solutions for complex IR and NLP tasks by implementing and adapting suitable algorithms and data structures<br>• Evaluate IR and NLP methods and systems quantitatively and qualitatively | **Arbeitsaufwand:**<br>Präsenzzeit:<br>56 Stunden<br>Selbststudium:<br>124 Stunden |
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| **Lehrveranstaltung: Lecture Introduction to Information Retrieval and Natural Language Processing** (Vorlesung)<br>*Inhalte*:<br>The lecture will cover the following topics:<br>• Basics: Background, Text Preprocessing, Documents, Terms, Vocabulary, Inverted Index<br>• Boolean Retrieval, Positional Retrieval, Tolerant Retrieval<br>• Efficient Index Construction, Index Compression<br>• Term Weighting, Relevance Scoring, Ranked Retrieval<br>• Semantic Text Analysis, Link Analysis<br>• Complete Retrieval Systems<br>• Results Visualization and Exploration<br>• Evaluation of Retrieval Systems<br>Please visit www.gipplab.org/teaching for details on this course. | 2 SWS |
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| **Prüfung: Written test (90 min.) or oral exam (approx. 20 min.)**<br>**Prüfungsvorleistungen:**<br>Successful completion of the examination in the practical course component of this module.<br>**Prüfungsanforderungen:**<br>• Knowledge of major IR and NLP applications<br>• Ability to explain important IR and NLP algorithms and data structures<br>• Ability to analyze the conceptual requirements of specific IR and NLP problems<br>• Ability to compare the suitability of algorithms and data structures for specific tasks<br>• Ability to evaluate IR and NLP methods and systems quantitatively and qualitatively | 2 C |

| **Lehrveranstaltung: Practical Course Introduction to Information Retrieval and Natural Language Processing** (Laborpraktikum)<br>*Inhalte*: | 2 SWS |
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