



Welcome to Hanover

Hanover, situated in the heart of Europe, enjoys international reputation as trade fair and convention venue. The Hannover Messe is the biggest exhibition centre in the world, hosting prestigious events such as the CeBIT, HANNOVER MESSE and EMO trade fair.

In addition to that a number of renowned higher education institutions are located in the city of Hanover. Around 37,000 students are enrolled in a wide variety of disciplines offered by the different universities and various private academies in the city.

More than 500,000 inhabitants and numerous visitors benefit from the variety of opportunities in Hanover, the capital of Lower Saxony. The city offers not only city forests, parks and attractive recreation areas but also an extensive pedestrian zone and shopping malls located directly in the city centre.

Here, in the centre of Hanover, you may find the beautiful Old Town quarter too. In case you need a place to relax or to take a walk, visit the Eilenriede, Europe's biggest city forest, or the Maschsee Lake, where the Mediterranean flair will make you feel like you are on vacation.

By kind permission of Melanie Köster, International Office, Hochschule Hannover

**HOCHSCHULE
HANNOVER**
UNIVERSITY OF
APPLIED SCIENCES
AND ARTS

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*Fakultät IV
Wirtschaft und
Informatik*

Summer School @ HsH 2017

**Business Intelligence & Data Mining
August 5 - 19, 2017**

Contact details:

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Summer School 2017 at a glance

- Business Intelligence & Data Mining
- August 5-19, 2017
- For undergraduate students of Business Information Systems, Computer Science or related areas
- 6 ECTS points
- 450 Euro (including accommodation, course material, public transport, weekend trip to Berlin, other excursions)
- Deadline for application: March 31, 2017
- Website: <http://bit.ly/2lqCv8u>



Summer School @ HsH 2017

Business Intelligence & Data Mining August 5-19, 2017

The Department of Business Information Systems of Hochschule Hannover - University of Applied Sciences and Arts (HsH) will be hosting a Summer School on Business Intelligence and Data Mining.

Students will understand Business Intelligence and closely related areas such as Data Warehousing and Data Mining as an integrated approach. It allows cross-departmental decision support based on analytical applications and on an appropriate preparation and presentation of information. They will get to know relevant Business Intelligence applications (reporting, dashboards, OLAP and data mining) and will be able to apply technical knowledge, tools for analysis and best practices in business scenarios around Corporate Performance Management.

The academic programme is composed of lectures with practical case study exercises, group work, an intercultural workshop and company visits.

In addition to the academic programme there will be a large offer of leisure activities such as a sightseeing trip to the capital Berlin which includes a visit of the Reichstag and the Wall Museum. There will also be a chance to get to know Hanover and its surroundings and much more.

Department of Business Information Systems

The Department of Business Information Systems is part of the Faculty of Business and Computer Science of Hochschule Hannover. The department offers the bachelor degree courses Business Information Systems (BIS) and Applied Mathematics and the master degree course Business Planning and Development.

In the bachelor programme of BIS professional expertise in Business Information Systems as well as methodical and social competencies are stressed. In the second stage of the programme students may specialize in either Business Intelligence, Customer Relationship Management, Information Management or Supply Chain Management.

How to apply

Please fill out the application form: <http://bit.ly/2lz6eaH>

Application deadline: March 31, 2017

After receiving a letter of acceptance, please transfer the non-refundable deposit of 100 Euro within two weeks. The final payment has to be done until June 30, 2017.

Please transfer the amount under indication of „Summer School @ HsH 2017 - IANr. 65.402.001“ to:

Bank Account Holder: Hochschule Hannover

SWIFT/BIC: NOLADE2HXXX

IBAN: DE13250500000106020084



About the Hochschule Hannover

With more than 10,000 students the Hochschule Hannover is the second largest university in Hanover. Institutionalized in 1971 from various educational precursors, the oldest dating back to the year 1791, the HsH offers a particularly wide range of subjects in five different faculties.

The Hochschule Hannover is particularly outstanding when it comes to a rather short duration of studies and an intensive practical orientation in teaching. That is why graduates meet with high acceptance in the industry. Work placements that have been included in the study programmes ensure that students gain first-hand experience on the job and have the chance to establish important contacts in companies. A very special feature among the subjects are the specific courses which combine on-the-job training with university study.

The Hochschule Hannover encourages and supports international mobility of students and staff to keep up with the growing globalization of the economy. Cooperative agreements with more than 80 partner institutions worldwide provide opportunities for students and staff to enhance their language skills and increase their professional chances both at home and abroad.



Business Intelligence & Data Mining

Persons in Charge	Prof. Dr. Michael Autenrieth, Prof. Dr. Stephan König, Prof. Dr. Dagmar Mack, Prof. Dres. Christiaan Scholten, MSc. / Hogeschool van Arnhem en Nijmegen (HAN)
Language of Instruction	English
Course Type	Lectures with exercises
ECTS Credits	6
Contact Hours	60 hrs
Duration of Course	~2 weeks, 05/08/2017 – 19/08/2017
Recommended Prerequisites	First phase of study program
Suggestions for Independent Study	<ul style="list-style-type: none"> • Preparation and follow-up based on the script • Reading of the suggested literature • Exercises for the case studies • Preparation for the final exam
Examination	Written exam, 120 min
Learning Outcomes	Students understand Business Intelligence (BI) and closely related areas such as Data Warehousing (DWH) and Data Mining (DM) as an integrated approach that allows (cross-departmental) decision support (especially in the context of management support) based on analytical applications and on an appropriate preparation and presentation of information. Students know relevant BI applications (reporting, dashboards, OLAP and data mining) and can apply technical knowledge (e.g. multidimensional data modelling), tools for analysis and best practices in business scenarios around Corporate Performance Management. Group exercises during several case studies support the enhancement of social competencies.
Content	<p>Data Warehousing</p> <ul style="list-style-type: none"> • Introduction to DWH and BI • Multidimensional data models, star schema • Data vault • Basics of ETL • DWH architectures <p>Business Intelligence</p> <ul style="list-style-type: none"> • BI applications • Reporting • Dashboards • OLAP <p>Data Mining</p> <ul style="list-style-type: none"> • Introduction to DM, business understanding • Data understanding (Attributes, visualization, correlation, ...) • Data preparation (selecting data, transformation feature selection) • Modeling (Patterns, decision and regression trees, random forests, support of vector machines, neural networks, ...)

	<ul style="list-style-type: none"> • Deployment
Requirements for Contact Hours	<ul style="list-style-type: none"> • Regular attendance of all classes • Active participation in lectures • Intensive collaboration during practical case study exercises (group work) • Participation in discussions of publications and webinars
Requirements for Independent Study Hours	<ul style="list-style-type: none"> • Follow-up work after class • Completion of knowledge reinforcement assignments through case studies • Independent work using the supplied class materials
Bibliography	<p>Adamson, C. (2006), Mastering data warehouse aggregates, Wiley, Indianapolis, IN.</p> <p>Berthold, M.R., Borgelt, C., Höppner, F., Klawonn, F. (2010), Guide to Intelligent Data Analysis: How to Intelligently Make Sense of Real Data, Springer, London.</p> <p>Collier, K. W. (2012), Agile analytics, Addison-Wesley, Upper Saddle River, NJ.</p> <p>Hammergren, T. C.. Simon, A. R. (2009), Data warehousing for dummies, Wiley, Hoboken; NJ.</p> <p>Hughes, R. (2008), Agile data warehousing, iUniverse, New York.</p> <p>Inmon, W. H.; Strauss, D., Neushloss, G.(2005), DW 2.0, Morgan Kaufmann/Elsevier, Amsterdam, Boston.</p> <p>Kimball, R. (2008), The data warehouse lifecycle toolkit, Wiley Pub, Indianapolis, IN.</p> <p>Kimball, R. , Caserta, J. (2004), The data warehouse ETL toolkit, Wiley, Indianapolis, IN.</p> <p>Kimball, R., Ross, M. (2002), The data warehouse toolkit, Wiley, New York, NY.</p> <p>Langit, L. (200), Smart business intelligence solutions with Microsoft SQL Server 2008, Microsoft Press, Redmond, Wash.</p> <p>Loshin, D. (2010), Master data management, Elsevier Morgan Kaufmann, Amsterdam.</p> <p>Mundy, J., Thornthwaite, W., Kimball, R. (2011), The Microsoft data warehouse toolkit, Wiley, Indianapolis; Ind.</p> <p>Rad, R. (2014), Microsoft SQL Server 2014 business intelligence development beginner's guide, Packt Pub., Birmingham, UK.</p> <p>Rainardi, V. (2008), Building a data warehouse, Apress, Berkeley, Calif.</p> <p>Sarka, D., Lah, M., Jerkic, G. (2012), Exam 70-463, Microsoft Press, Redmont, Wash.</p>