



Foto: Allianz Arena

## Accommodation and Support

Participants will be accommodated in youth hostels or shared apartments. Double and triple bedrooms are available. Breakfast is included. The hostels are located in downtown Munich, in **quiet and safe neighborhoods**. All amenities and shops are at walking distance.

Participating students get a carefree travel package. We guarantee professional assistance by the program coordinator and bilingual German tutors. There is a **pick-up service** from Munich **airport or central station**. The tutors will help you to settle in smoothly. They will also accompany the field trips, visits to companies and receptions. **Free access to the internet** and the library, as well as a **welcome package** including a Summer School t-shirt, will be provided by the university.

*» I had a very good experience in Munich because I got to interact with people from different cultures, in the program and in the city of Munich. Studying abroad has made me more open to try new things.«*

Lauren, California Polytechnic State University

## Application

The application deadline is **March 15, 2012**. Places are limited. Please be aware that early applications will be favored. The application form can be downloaded at **www.hm.edu/summerschool**. Please send it to Munich University of Applied Sciences via email, fax or post.

## Contact

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# Munich Summer School of Applied Sciences

**July 9 – August 10, 2012**  
**Munich, Germany**

## Engineering for Sustainability



## Add Munich to your Resume!

Munich is one of the leading economic, technological and scientific hubs in Germany. Companies including Siemens and BMW have their headquarters in the city. Other global players such as Apple and Microsoft have German branch offices here. They all benefit from our **central location in the heart of Europe**.

The historic city of Munich is over 850 years old. It is a vibrant center of **cultural activity** – a city of theater and music, literature, film, museums and festivals. Situated close to the Alps, the city is a great starting point for almost unlimited **outdoor activities** like climbing, hiking or mountain-biking. As for spectator **sports**, the »Allianz Arena« with soccer club Bayern Munich's home games is just around the corner.

Munich and the surrounding area are well known for a high standard of living. In Munich, tradition and innovation, industry and science, cultural and tourist attractions all contribute to the outstanding **quality of life** the city offers. In fact, Munich ranks among the top ten most livable cities in the world (source: Mercer Quality of Living Survey 2010). Numerous surveys and statistics regularly emphasize not only Munich's economic power, the variety of recreational opportunities or its excellent public transportation system, but also its exceptionally low crime rate.

Come and experience it for yourself, and enjoy your stay in one of Germany's most **beautiful and safe** cities!

[www.hm.edu/summerschool](http://www.hm.edu/summerschool)

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## Requirements

The summer school is designed for **advanced Engineering and Business students** (please also refer to the prerequisites specified in the course descriptions). Applicants must provide evidence of a good level of English (at least level B2 in the CEFR, TOEFL iBT 90 or equivalent, or mother tongue), as well as a letter of motivation and a transcript with their most recent grade point average.

## Fees

The program fee of € 2,490 covers: tuition for the German Language and Culture class, two subject courses, accommodation (incl. breakfast), the official cultural and social program, free internet access at the university and a welcome package. For students from partner universities, the fee is reduced to € 2,290. The deadline for applications is March 15, 2012. Please check our website for more details.



## Academic Program

The Munich Summer School of Applied Sciences offers in-depth study of engineering and business topics, integrating green issues with a focus on sustainability. The **courses focus on practical application** using **state-of-the-art technology** and **teaching methods**.

The program is intended for advanced undergraduate students in Mechanical Engineering, Automotive Engineering, Electrical Engineering, Industrial Engineering and Business Studies from Germany and abroad.

The summer school is a five-week program. International students participate in an intensive German language and culture course in the first week and continue these studies part-time throughout the program.

Students select two credit courses, which are taught in English by multi-national teams of renowned lecturers from Munich University of Applied Sciences, California Polytechnic State University (USA) and the Strascheg Center for Entrepreneurship. Each subject course covers **a minimum of 40 teaching contact hours**, including laboratory experiments and simulations. The academic program also includes a number of relevant **field trips**. See our website for detailed course descriptions.

*»This program was an incredible cultural and learning experience and I would recommend it to anyone«* Alex, Pennsylvania State University

## Courses

### German Language and Culture

- Overview of the most important German phrases and grammatical structures
- Vocabulary for day-to-day situations in Germany
- Ability to communicate and read in German
- Basic elements of German culture and its historical roots
- The impact of culture on intercultural behavior
- Three related field trips: White Rose Memorial Site, Dachau Concentration Camp Memorial Site, Representation of the European Commission
- **6 ECTS credits (or 4 US-credits)**

### Automotive Mechatronics

- Introduction to Simulink
- Design and simulation of active automotive suspension systems
- Simulation and control of internal combustion engines
- Simulink modeling of automotive mechatronic systems
- Simulation and control of mechatronic systems
- Two related field trips: to BMW research and innovation center and BMW factory
- Controller synthesis using industrial techniques of PID control design.
- Controller tuning for enhancement in ride comfort and vehicle handling.
- **4 ECTS credits (or 3 US credits)**

### Renewable Energies

- Introduction (Climate change, sustainable energy systems)
- Energy meteorology 1 (power and energy from the sun)
- Photovoltaic systems
- Solar thermal systems (flat collectors, solar cooling)
- Energy meteorology 2 (power and energy from wind)
- Excursion to a Bavarian company in the field of solar energy
- **4 ECTS credits (or 3 US credits)**

### Innovation and Entrepreneurship for Green Technologies

- Entrepreneurship and entrepreneurial spirit in engineering
- Implementation of business models (feasibility study, business plan, marketing and sales, finance, industrial property rights)
- Enterprise development and growth
- Interdisciplinary teamwork
- Objective: Entrepreneurship in theory and practice – creativity, holistic perspective, knowledge and teamwork.
- **4 ECTS credits (or 3 US credits)**

## Cultural Program

A broad and attractive cultural program will make your stay an unforgettable experience.

The cultural program includes the following field trips:

- a guided tour of Munich by bike and a visit to a typical beer garden
- field trips to BMW factory and the BMW research and innovation center
- a day trip to the beautiful Herrenchiemsee New Castle on an island in Lake Chiemsee with a boat trip and a Bavarian lunch
- trips to the White Rose Memorial Site, to the Dachau Concentration Camp Memorial Site and to the representation of the European Commission in Munich (as a part of the German Language and Culture class)

Meeting German students in class and afterwards provides unique insights into German every-day life. Joint studies with participants from all over the world round off this picture of an intercultural experience. The program will be complemented by receptions and get-togethers.

Munich University of Applied Sciences was founded in 1971. Today it is the largest University of Applied Sciences in Bavaria and the second largest in Germany, offering more than 60 degree programs. The university maintains excellent contacts with companies and businesses in and around Munich and Germany and with about 200 partner universities around the globe.