

Meteorology Exchange Program

*School of Meteorology,
University of Oklahoma,
Norman, USA*



*Meteorological Institute
University of Hamburg,
Germany*

About the Exchange Program

It is important for meteorologists to have an understanding not only of their regional weather and climatic conditions, but also of these conditions around the world. This increased knowledge results in further understanding of meteorological principles and the ability to apply them in different conditions. To help achieve this goal, in 2004 an exchange program between the University of Oklahoma, USA and University of Hamburg, Germany was created in an effort to give students first-hand experience of

meteorology in another country, and the possibility to study a foreign language. Both the University of Oklahoma and University of Hamburg are leading institutions in the field of meteorology in their respective regions. The 6-month exchange typically takes place in the junior year for OU students and 3rd year for Hamburg students. Exchanges during the Master-Phase or PhD-Phase are also possible. They require individual arrangements.

About the Universities

The University of Hamburg is located in the center of Hamburg, the second largest city in Germany with 1.7 million inhabitants. Hamburg University has identified atmospheric science as one of the university's priority research areas. The [Meteorological Institute](#) at the University of Hamburg is one of the larger academic units for meteorology in Germany. It is a member of the Center for Earth System Research and Sustainability (CEN), and closely linked to the Max Planck Institute for Meteorology. Access to supercomputers and HPC clusters at the nearby German Climate Computing Center (DKRZ) allows for running some of the most complex scale-overarching weather and climate model systems in the world. Research groups at the institute have established relationships with the European Centre for Medium-Range Weather Forecasts (ECMWF), the European Space Agency (ESA), the German Environmental Protection Agency (UBA) and other institutions, linking education and research with applied Meteorology and Climatology. As the only meteorological institute in Germany, a well-equipped laboratory with several boundary layer wind tunnels is operated. Hamburg University offers a comprehensive meteorology program, including graduate courses provided in English, and a wide range of subjects in meteorology and climatology (www.mi.uni-hamburg.de/en). Courses teach essential meteorological theory and may have an experimental component that gives students practical experiences.

The University of Oklahoma is located in Norman, Oklahoma, close to Oklahoma City. Its [School of Meteorology](#) (SoM), an academic unit of the OU [College of Atmospheric and Geographic Sciences](#), has one of the top atmospheric science programs in the United States, with both a comprehensive undergraduate degree and a large graduate research program. The SoM's faculty has expertise in weather, climate, and the interactions between them. The School is located in the National Weather Center (NWC) on OU's research campus. OU's Atmospheric Radar Research Center (ARRC), the South Central Climate Adaptation Science Center (SC CASC), the Center for Analysis and Prediction of Storms (CAPS), the Co-operative Institute for Severe and High Impact Weather Research and Operations (CIWRO) and the Oklahoma Climatological Survey (OCS), along with federal meteorology organizations, including the National Severe Storms Laboratory (NSSL), Storm Prediction Center (SPC), National Weather Service Forecast Office (WFO), and national Radar Operations Center (ROC) are housed in the NWC which positions Norman as a focus of meteorology-based activity in the United States. Major private sector weather companies are adjacent to the NWC. The co-location and close proximity to some of the country's best university, private and federal meteorological organizations enables students in the SoM opportunities for research, teaching, internships, and networking.

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Approved Course Equivalencies

The following course equivalency tables show typical course loads for students participating in the academic exchange program between the OU School of Meteorology and the Meteorological Institute, University of Hamburg. Changes can be made, but the list of courses taken abroad must be approved by the faculty liaisons and scientific advisers to guarantee that students remain on track with their degrees. It should be noted that the University of Hamburg uses the European Credit Transfer and Accumulation System (ECTS). 2 ECTS credits transfer back as 1 credit hour at OU. OU students visiting the University of Hamburg should ideally have basic knowledge in German since many meteorology courses are taught in German. However, English serves as a second language. Staff and students in Hamburg are more or less fluent in English, most textbooks are in English, and exams can be taken and reports can be written in English. Additionally, we advise OU students to take 3-months of Intensive German language training during January–March, which has provided sufficient training in German for OU participants in previous years.

Transfer Credits for OU Students:

Courses taken in Hamburg during Spring/Summer Semester:	ECTS credits	Equivalent OU course:	Credit hours
63-806 – Turbulence and Boundary Layer (Lectures)* 63-806a – Turbulence and Boundary Layer (Exercises)* 63-522 – Theoretical Meteorology (Lectures)* 63-522a – Theoretical Meteorology (Exercises)*	3 3 8	METR 3123 - Atmospheric Dynamics II METR 4133 - Atmospheric Dynamics III	6
63-523 – Optics, Radiation, Remote Sensing (Lectures)* 63-523a – Optics, Radiation, Remote Sensing (Exercises)*	5	METR 4233 – Phys. Meteorology III: Radiation & Climate	3
63-814a Scientific Presentation 1* 63-876 Energy Meteorology* or another elective selected in discussions with the OU advisor	3 3	Meteorology Elective or METR 3334 Principles of Research and Communication in Meteorology	3/4

*course typically taught in German but arrangements for tutoring and submission of assignments in English can be made

Transfer Credits for Students from Hamburg:

Courses taken at OU during Fall Semester:	Credit hours	Equivalent course in Hamburg:	ECTS credits
METR 3513 Atmospheric Chemistry in Weather and Climate	3	63-833 Chemie der Atmosphaere	3
METR 4233 Phys. Meteorology III: Radiation & Remote Sensing	3	63-819 Klimaphysik (Vorlesung) 63-819a Klimaphysik (Übung)	4
METR 3323 Statistical Meteorology	3	63-820 Meteorologische Statistik (Vorlesung) 63-820a Meteorologische Statistik (Übung)	3
METR 5113 Advanced Atmospheric Dynamics I METR 5443 Intro to Tropical Meteorology	3 3	63-831 Theoretische Meteorologie (Vorlesung) 63-831a Theoretische Meteorologie (Übung)	8
METR 2603 Severe and Unusual Weather	3	Wahlfach	5

Application Process for OU Students

Applications and selections for the Meteorology study abroad programs are handled by the School of Meteorology (SoM) and OU's Education Abroad Office. General information about the study abroad programs can be found at ou.edu/cis/education_abroad.html. SoM applicants must have a 3.0 GPA and must normally have passed the SoM courses METR 1003, 2004, 2213, and 2613 with grades of B or better. They should also perform well in METR 3113 and 3513 in the fall semester of their junior year (we typically review midterm grades of these two classes before a final decision about admission to the exchange program is made). A general information session about all SoM exchange programs and the application process is held every year held at the beginning of the Fall semester. Applications are submitted online at the OU Education Abroad website and detailed application instructions can be found at ou.edu/cis/education_abroad/get-started. The faculty liaison (Dr. Petra Klein for Hamburg) should be listed as a reference on the Education Abroad application.

The application deadline for Spring 2024 is October 1, 2023 . However, it is recommended that interested students speak to the Education Abroad advisor 6–7 months before the start of their intended semester abroad.

In addition to the online application with OU Education Abroad, SoM students should also contact the SoM faculty liaison of the chosen exchange program (Dr. Petra Klein for Hamburg) and send them an email with a short statement why they want to study abroad (can be the same statement as the Education Abroad application). The SoM faculty liaison will then schedule a meeting with the student. After the meeting the faculty liaison will send the formal recommendation to the Education Abroad Office, which will review all materials and make decisions about the acceptance of the applicants. It is important to note that applications without the SoM recommendation letter are not processed by the Education Abroad Office. A decision by Education Abroad is made in October, and a final decision is made by the SoM by November 1. Students performing poorly in their fall courses may cause a reversal of an initial favorable decision.

Costs and Housing

Participants enroll in at least 12 INTL hours, paying OU tuition at the same rate as they would on campus. This total includes all standard fees, including college technology and program fees. Additionally, students pay a \$50 application fee once they submit their application with OU's Education Abroad Office. Students are also responsible for pre-departure (e.g. passports and housing deposits) and transportation costs, as well as living expenses while abroad. To prove that their funds are sufficient to cover all living expenses, the German government requires exchange students to document that they have €934 (currently ~\$1050) per month available on a bank account in their name. Financial aid, loans, grants and scholarships can all be applied to cover these costs of studying abroad. Information about possible scholarships to fund your study abroad can be found at ou.edu/cis/education_abroad/resources/money-matters. SoM students can also apply for a John T. Snow Study Abroad Scholarship and other scholarships with details in the SoM [undergraduate handbook](#).

OU Education Abroad also requires that all students participating in credit-bearing OU study abroad programs pay the international health and safety fee, which covers enrollment in OU's international health insurance plan, 24/7 risk management monitoring, and all other health and safety assistance provided. The cost of the international health and safety fee for a semester-long program is \$350. Students are also advised to enroll in German health insurance after arriving in Germany. Such insurance costs €120 a month, but covers medical expenses with no out-of-pocket payments, and also covers basic dental services.

The housing in Hamburg is arranged by the study abroad advisor at the [Meteorological Institute](#) in Hamburg, and in most cases, students will live in a university-sponsored dormitory (single room with shared kitchen and bathroom facilities). The average housing costs for a dormitory room will be around €350-400/months (currently about \$380-430/months). **To guarantee a dormitory room, an early application is important. Please work with Dr. Klein on securing a dorm room as soon as you have submitted your study abroad application package.** Participation in intensive language courses (January–March) in German has the potential to be funded by the Meteorological Institute at the University of Hamburg.