

Study Abroad for Chemistry students

Borders are meaningless in this early 21st century global economy. As a future graduate with Chemistry major or minor degree, you will be confronting global issues and will work in internationally operated companies. *'Wake up and face the earth!'* as T. Friedman advised us in his bestseller 'The World is Flat'. An international experience will provide you not only with essential skills to work effectively in industry, education, or the public sector but will touch and change all the facets of your life by the experience of living in another culture, will strengthen your character and will broaden your mind.

"Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover."

Mark Twain

Study abroad can help you...

- Understand the chemistry field from an international perspective
- Gain new perspective on scientific research
- Add a global dimension to your intellectual and career development
- Expand your cross-cultural communication and problem-solving skills
- Broaden your academic horizons
- Improve your language skills

After study abroad you...

- *Distinguish yourself* - a study abroad experience makes you more marketable than your peers
- *Become adaptable* - you exhibited the skills to place yourself out of your comfort level and succeed, you can adapt to new situations and surroundings, you can live/work in a multicultural environment; remember: these skills are needed without being physically in another country!
- *Understand* - no matter whether you are working abroad or in the U.S., communicating via email or by phone with people outside the U.S. on projects, or any other scenario, you will benefit from having been abroad.

Can I afford to study abroad?

YES! Early planning for study abroad helps you make cost-effective program decisions, prepare your finances through savings, scholarships, and financial aid. Financial aid applies to study abroad and, in some cases, your loan eligibility will increase to cover additional expenses. Grand Valley State University's Padnos International Center, PIC, offers grants and scholarships to qualified study abroad participants. PIC provides resources on these and a variety of other scholarships available to undergraduate students. Visit PIC to research all your options.

Do I need to speak a foreign language?

No! Most programs offer instruction in English, even in non-English speaking countries. However, you should not pass the chance to study the language of the land!

Will I take longer to graduate?

Not necessarily if you plan well! Study abroad is not meant to delay your graduation but to enrich your college experience.

What are my next steps?

Set goals and plan for results

Chemistry students can study abroad almost anytime during their undergraduate education. The process of selecting a study abroad program is similar to selecting your major or minor: the sooner, the better! If you are in education, you have opportunities for teacher assisting and student teaching as well. With proper planning study abroad can help you prepare for your professional life in today's global context.

- Plan ahead. Discuss it with your chemistry advisor at your very first meeting or at least six months prior to your planned study abroad.
- Set goals. There is not one program best suited for Chemistry students. There are many good study abroad programs, and the best one for you depends on what you want.
- Prioritize your goals. Consider your long-term academic and professional goals, as well as your on-campus degree requirements.
- Consider long-term programs. You can study abroad for a summer, a semester or even an academic year.
- Prepare academically. You may need to take prerequisite courses for your chosen program.

Attend an Information Session

Learn about study abroad resources and advising by attending an Information Meeting at the PIC, check website

www.gvsu.edu/studyabroad, or phone, 616.331.3898 for the latest schedule.

Investigate Programs

Use the PIC Study Abroad catalog, resource center, and website, meet with chemistry and PIC advisors in order to find a program that fits your goals.

Obtain approval for chemistry major classes

Meet with your Chemistry advisor to determine your best options for advancing toward your degree while studying abroad. The Chemistry Department is working closely with Padnos International Center, PIC, to select programs to fit particularly well for chemistry students. When deciding for a program, consider your academic interests and goals first, and then the geographic interests. Work with PIC and your Chemistry advisor to select a program that fits your goals and your interests.

The GVSU Chemistry Department must approve any chemistry courses you wish to take in order to ensure that they will be counted toward your degree requirements. Meet with your advisor while planning and selecting a program abroad. Bring the course description for each course you plan to take abroad along with the credit transfer form provided by the PIC at **least three months prior** to departing for your program.

What classes can I take while studying abroad?

By its scientific and universal nature, Chemistry takes place in an international context. There is much to be gained from understanding the common language of chemistry, to be exposed to different approaches to research and to become aware of the power of scientific contacts as tools for bridging economic, social and political differences. Study abroad is a very exciting way to begin approaching chemistry from a different perspective and build your professional skills.

What would be a good plan time-wise?

As a Chemistry student, you can study abroad at almost any time during your undergraduate career. You may fulfill your general education and chemistry pre-requisites such as Physics or Math, you may take Chemistry courses, like General and/or Organic Chemistry, or you may apply for research credits while abroad. Most programs have one-semester courses but you may also to go for a full year abroad or only for a summer internship/research program.

In the last two years, 15 students pursuing a degree in Chemistry were enrolled at GVSU and did successfully complete a Study Abroad program: seven of them went for a spring/Summer semester, while the rest went for one semester, with the exception of one student who completed one full year of study abroad.

Chemistry/Major Courses

Most programs offer a wide selection of chemistry classes that can be approved by the Chemistry department to contribute to your major. The courses are taught in English and, in many cases, the textbooks used abroad are/were also in use for Chemistry classes taught at GVSU.

Chemistry pre-requisite classes were identified at several universities abroad that will integrate well in your academic plan. Math, Physics, or Biology classes can be taken abroad, if pre-approved by the respective departments at GVSU.

Research or internship

The Chemistry department strongly recommends to our juniors to explore the possibility of summer research/internship programs abroad. Projects with dual supervision from a foreign advisor and at GVSU chemistry faculty are strongly encouraged. If interested, discuss first with your chemistry advisor; you may enroll at GVSU, in a research course such as CHM 391 or CHM 499, supervised by GVSU faculty, and earn credit for it, while abroad.

General education requirements

Most of the programs offer a large variety of courses, with excellent potential replacements for the classes offered at GVSU. You may choose to fulfill your foundation requirements with courses in the World Perspectives or other GenEd categories.

Custom Theme Abroad

Propose a unique study abroad theme and fulfill its requirements while abroad. For information, contact PIC, at <http://www.gvsu.edu/studyabroad/>. Students that wish to complete a custom theme abroad should contact the PIC directly for information on the appropriate process.

Opportunity for education students

Teacher assisting and student teaching can be completed while abroad. Check with College of Education and PIC staff.

Suggested Program Options for chemistry students.

Including chemistry courses already approved for GVSU credit; other chemistry courses may also be available for transfer credit. Instruction is in English unless otherwise noted. You will still need a completed and signed Study Abroad Credit form for all of you courses.

Africa

Ghana

The University of Cape Coast (UCC) was established in 1962. It is located just west of Cape Coast on a hill overlooking the Atlantic Ocean. The University operates two main campuses in Cape Coast, the South Campus and the North Campus. Two of the most historical sites in Ghana, Elmina Castle, and Cape Coast Castle, are located just a short distance from the University. Cape Coast is also home to a vast fishing industry.

<http://www.ucc.edu.gh/>

Asia & Middle East

Turkey

Robert College was founded in Istanbul, Turkey in 1863 by Dr.Cyrus Hamlin, an educator, inventor, technician, architect and builder, and Mr. Christopher Rheinlander Robert, a well-known philanthropist and a wealthy merchant from New York. In 1971 Bogazici University was officially established on what had been the Robert College campus for over one hundred years. Instruction at Boğaziçi University is in English.

GVSU Course

CHM 109

CHM 241

CHM 242

Bogazici Course

CHEM 105 Fundamentals of Chemistry

CHEM 201 Organic Chemistry I

CHEM 203 Organic Chemistry Lab I

CHEM 202 Organic Chemistry II

CHEM 204 Organic Chemistry Lab II

To view additional course options, visit:

<http://www.intl.boun.edu.tr/international.htm>

http://www.boun.edu.tr/undergraduate/index_tur.html

<http://www.boun.edu.tr/about/history.html>

Turkey

Imagine a highly selective, world-class research institution, a gigantic and forested campus of over 11,000 acres, a rich history with ancient artifacts continually unearthed on campus, and regular bus service to clear Mediterranean beaches: you have Middle Eastern Technical University. The most selective of all of GVSU's partner institutions, METU is renowned for its range of first-rate science, technology, and engineering programs, as well as its strong programs in the humanities and social sciences. All university courses are taught in English. Students can enjoy a wide-range of social, cultural and educational activities throughout the

year. With over 21,000 students, there is a significant campus life and rich academic life at this university

GVSU Course

CHM 115

CHM 116

CHM 231

CHM 241

CHM 242

METU Course

CHEM 105 General Chemistry I

CHEM 106 General Chemistry II

CHEM 233 Intro to Organic

CHEM 234 Organic Chemistry II

CHEM 236 Organic Chemistry II

To view additional course options, visit:

<https://catalog.metu.edu.tr/program.php?inst.prog=234>

<http://www.chem.metu.edu.tr/>

China

Founded in 1991, The Hong Kong University of Science and Technology (HKUST) is a young, dynamic and internationally renowned research university comprising four Schools: [Science](#), [Engineering](#), [Business and Management](#) (all offering undergraduate and postgraduate degrees including PhDs), and [Humanities and Social Science](#) (offering postgraduate degrees including PhDs, and general education for all undergraduates). The medium of instruction is English. Only 15 years after admitting its first students, HKUST has already been recognized among the world's leading universities, alongside institutions that have had centuries to forge their reputations.

GVSU Course

CHM 109

CHM 231

CHM 241

CHM 242

CHM 441

CHM 499

HKUST Course

CHEM 001 Introductory Chemistry

CHEM 101 Fundamentals of Organic

CHEM 111 Organic Chemistry I

CHEM 212 Organic Chemistry II

CHEM 313 Intermediate Organic

CHEM 398 Undergraduate Research

Australia & Oceania

Australia

With over 30,000 students, Macquarie University is considered one of Australia's leading universities. Macquarie University is dedicated to constant innovation in the way they prepare students and graduates for success in today's fast changing, highly competitive society. Added to the long list of achievements, in 2005, Macquarie University was ranked 67th in the Times Higher Education Supplement Report on the world's top 200 universities.

To view additional course options, visit:

<http://www.handbook.mq.edu.au/unitcodeprefix.php?edition=2007&ulevel=uq&unitCodePrefix=CBMS>

Australia

Founded in 1994, University of Sunshine Coast (USC), located in Sippy Downs just one hour away Queensland's capital of Brisbane, is considered an outstanding performer of higher education in Australia. The university has links with community groups, professional organizations, and other universities and research partners at both national and international levels. USC is one of the fastest growing campuses in Australia with a current enrollment of 4,000 students from over 39 different countries.

GVSU Course

CHM 109

CHM 231

CHM 232

USC Course

SCI105 Chemistry

CHM202 Organic Chemistry (SCI 105 pre req)

MBT251 Biochemistry

To view additional course options, visit:

<http://www.usc.edu.au/Students/Handbook/Courses/Science/CourseList.htm#Science>

Europe

England

Kingston University is located in the pleasant suburb of Kingston upon Thames, just 25 minutes from central London. With about 17,000 students, it is the largest provider of higher education in south west London. GVSU has had an exchange agreement with Kingston University since 1987. Visiting students take the same classes as Kingston students, offering them an opportunity to integrate into student life. Kingston University students attend GVSU as part of the exchange agreement

GVSU Course

CHM 109

CHM 241

CHM 242

Kingston Course

Foundation Chemistry I CH 1311

Organic Chemistry I CH 2030

Organic Chemistry II CH 2040

To view additional course options, visit:

http://extranet.kingston.ac.uk/webwork/studyabroadcourses/studyabroad_students/studyabroad/list_all.asp?course_group1=CH&Title=Chemistry

Norway

The University of Oslo is Norway's largest and oldest institution of higher education. It was founded in 1811 when Norway was still under Danish rule. Today, the University of Oslo has approximately 30,000 students and 4,600 employees. Four Nobel Prize winners demonstrate the quality of the research at this University.

GVSU Course

CHM 242

CHM 442

CHM 344

Oslo Course

KJM3200 Organic Chemistry II

KJM3550 General Polymer Chemistry

KJM 3000 Applied Spectroscopy

KJM 5250 Organic NMR Spectroscopy

To view additional course options, visit:

<http://www.uio.no/studier/emner/matnat/kjemi/in-english.xml>

Romania

Babes-Bolyai University, UBB, is located in Cluj-Napoca, the heart of Transylvania. The city, the second important academic, cultural and industrial center in the country, is located in the historic province of [Transylvania](#), being also its historic capital; it is located at equal distance (only 400 km in each direction) from [Bucharest](#), the capital of Romania, and Budapest, the capital of Hungary. UBB adheres to a policy of multiculturalism, its students and teaching staff being Romanian, as well as Hungarian, German and Roma.

GVSU Course

CHM 109

CHM 241

CHM 242

UBB Course

CC1103 General Chemistry

CC2204 Organic Chemistry I

CC3104 Organic Chemistry II

To view additional course options, visit: <http://www.ubbcluj.ro/en/despre/istoric.html> and <http://www.chem.ubbcluj.ro/>

South and Central America

Mexico

The Tecnológico de Monterrey is a Mexican private educational institution founded in 1943. Currently it has campuses distributed throughout Mexico, and academic centers in Mexico and other Latin American countries; it also has international offices in North America, Europe, and Asia. Through its Virtual University it is present all over the world, by means of learning networks and advanced information technologies. Many international students study in Mexico because they want to interact and meet local students, yet want to participate in classes taught in English because they have not grasped the Spanish language.

GVSU Course

CHM 109

CHM 242

Tecnologico de Monterrey Course

Q00-811 Chemistry

Q95-832 Organic Chemistry I

Independent Programs

If your geographical interest is different from the possibilities presented above remember that you can choose a different program. Search carefully for the program and have a detailed description of the content and credit hours of the classes you choose. Obtain the Chemistry Department approval of the and move on with your application. See below a sample list of available websites. For help, work closely with PIC stuff and your chemistry adviser.

Independent, non-GVSU, Programs

AustraLearn (www.australearn.org) Australia and New Zealand

Arcadia University's Center for Education Abroad

(<http://www.arcadia.edu/cea/index.aspx?id=1680>)

International Study Abroad (<http://www.studiesabroad.com>) Argentina, Chile, Mexico.

Cultural Experiences Abroad (<http://www.gowithcea.com/>)