
DEPARTMENT OF CHEMISTRY (CH)

<i>Professor</i>	Don E. Gibbs, Ph.D. Rev. James D. Wheeler, S.J., Ph.D.
<i>Associate Professor</i>	James M. Chapman, Ph.D. (Chair) Dale W. Harak, Ph.D. D. Philip Colombo, Jr., Ph.D.
<i>Assistant Professor</i>	Annie Lee, Ph.D.

The chemistry department offers a broad spectrum of programs in chemistry designed to meet specific needs of students and a variety of vocational objectives: 1) chemical research and development in government or industry, 2) graduate school, 3) medical, dental and other health care professions, 4) pre-engineering training, 5) secondary school teaching, and 6) business administration in the chemical industry.

The department's goals are to provide the student with sound foundations in all major fields of chemistry, to enhance creativity and develop skillful laboratory techniques while promoting a deeper appreciation of chemical experimentation and research.

Major Field of Concentration

Students may choose either of the two following options:

- ◆ A BS degree in chemistry for professional preparation in chemistry which must include all the following courses: CH 3210/3220, CH 3230/3240, CH 3310, CH 3450, CH 3510/3520, CH 3530/3540, CH 4430, CH 4450, CH 4610, CH 4630, and a chemistry seminar. In addition the student must select a minimum of two credit hours from the following, or their equivalent: CH 3320, CH 4460, research projects, or special topics courses.
- ◆ A BS degree in chemistry which normally includes: 1) The following upper-division courses: CH 3210/3220, CH 3230/3240, CH 3310, CH 3450, CH 3510, CH 3530, CH 4430 or CH 4450, CH 4610 and a chemistry seminar, and 2) A minimum of six hours selected from the remaining upper-division chemistry courses listed in this Catalog.

Those students who are preparing for entry into graduate studies or industry should normally include the following courses in their programs: CH 3520, CH 3540, CH 4430, CH 4450, CH 4630 and one of the following: CH 3250, CH 3320, CH 4460 or a research project. Those students who are preparing for entry into professional school (medicine, dentistry, etc.) should include the following courses in their programs: CH 3310/3320, CH 3330 and at least one of the instrumentation courses, CH 4430 or CH 4450.

Students seeking secondary school teaching certification can use environmental science (3-4 hours) and senior level practice teaching (2-3 hours) to complete their upper-division chemistry requirements.

A chemistry major also will normally complete coursework in MT 1800 Calculus I and MT 1810 Calculus II, PH 2800/2810 General Physics I/General Physics I Lab and PH 2900/2910 General Physics II/General Physics II Lab. For the 12 upper-division hours in the "related area," students may choose from courses in biology, physics, computer science, mathematics or other fields appropriate to their career objectives, such as economics, communication, etc.

A chemistry department professor meets with the entering student to plan a curriculum tailored to the individual's career aspirations and to help select the appropriate chemistry and related courses.

A grade of C or better is required in each upper-division course of the major. (A grade of C- will not satisfy the requirement.)

- CH 1050. Principles of General Chemistry** (3)
A one-semester course, primarily for nursing and allied health students. This course is also strongly recommended for students with deficiencies in their chemistry background who plan to pursue other programs in the sciences that require CH 2610. Concurrently: CH 1060. (SCI)
- CH 1060. Principles of General Chemistry Laboratory** (1)
Basic laboratory techniques are used to investigate various theoretical principles. Laboratory two hours a week. Lab fee. Concurrently: CH 1050. (SCI)
- CH 2610. General Chemistry I** (4)
An introductory course treating the essential principles of theoretical and descriptive chemistry. Lecture three hours, laboratory four hours a week. Lab fee. Prerequisite or concurrently: MT 1190 Precalculus. (SCI)
- CH 2630. General Chemistry II** (4)
A continuation of General Chemistry I. Lecture three hours a week, laboratory four hours a week. Lab fee. Prerequisite: CH 2610 (MT 1800 Calculus I recommended). (SCI or SCII)
- CH 2650. Honors General Chemistry and Laboratory** (5)
The course provides a review of stoichiometry (including solution concentration), gas laws and atomic and molecular structure (covalent and ionic bonding) as commonly taught in the first semester of a general chemistry course. The emphasis of the course is on equilibrium, electrochemistry and kinetics as is usually done in the second semester of the two-semester course. Descriptive chemistry is built around the periodic table and integrated throughout the course. This course would be taken in place of the two-semester CH 2610/2630 sequence. Lab fee. (SCI)
- CH 3210. Organic Chemistry I** (3)
Basic principles including some theoretical considerations of structure and mechanism and interpretation of spectrometric data. Intended for students majoring in the natural or physical sciences. Lecture three hours a week. Prerequisite: CH 2630. Concurrently: CH 3220. (SCII)
- CH 3220. Organic Chemistry Laboratory I** (1)
Basic techniques and theory in various methods of separation and identification, including chromatography, spectroscopy, measurements of physical properties and interpretation of results. Simple organic preparations. Laboratory four hours a week. Lab fee. Prerequisite: CH 2630. Concurrently: CH 3210. (SCII)
- CH 3230. Organic Chemistry II** (3)
A further development of the material of Organic Chemistry I. Lecture three hours a week. Prerequisite: CH 3210. Concurrently: CH 3240.
- CH 3240. Organic Chemistry Laboratory II** (1)
More advanced synthetic reactions, including synthetic sequences. Qualitative organic analysis, using wet chemical methods, determination of physical properties and also instruments. Laboratory four hours a week. Lab fee. Prerequisite: CH 3220. Concurrently: CH 3230.
- CH 3250. Organic Syntheses** (1-3)
A laboratory course designed to allow the student to learn techniques in organic and/or medicinal chemistry research. Laboratory three to nine hours a week. Lab fee. Prerequisite: instructor approval.
- CH 3310. General Biochemistry I** (3)
The chemistry of living organisms and their components, including biosynthesis and metabolism of proteins, nucleic acids, lipids and carbohydrates. Lecture three hours a week. Prerequisites: CH 3210 and CH 3450.
- CH 3320. Biochemistry Laboratory** (1)
Basic techniques of experimental biochemistry, including isolation and/or characterization of the major classes of biomolecules. Laboratory four hours a week. Lab fee. Concurrently: CH 3310.
- CH 3330. General Biochemistry II** (3)
A continuation of General Biochemistry I. Lecture three hours a week. Prerequisite: CH 3310.
- CH 3450. Analytical Chemistry** (4)
A course in the theory and practice of quantitative analytical chemistry. Gravimetric, volumetric and simple instrumental methods of analysis are considered. Lecture three hours a week, laboratory four hours a week. Lab fee. Prerequisite: CH 2630.
- CH 3510 (PH 3510). Physical Chemistry I** (3)
Basic principles of physical chemistry with emphasis on thermodynamics and equilibria. Lecture three hours a week. Prerequisites: PH 2900 General Physics II, CH 3450, MT 1810 or instructor approval.
- CH 3520 (PH 3520). Physical Chemistry Laboratory I** (1)
Experiments designed to illustrate basic theories in thermodynamics, equilibrium, etc. Laboratory three and a half hours a week. Lab fee. Prerequisite: CH 3450. Concurrently: CH 3510.
- CH 3530 (PH 3530). Physical Chemistry II** (3)
Basic principles of chemical kinetics, introduction to quantum mechanics, molecular structure and kinetic theory. Lecture three hours a week. Prerequisite: CH 3510.
- CH 3540 (PH 3540). Physical Chemistry Laboratory II** (1)
Experiments designed to illustrate basic theories in kinetics and spectroscopy. Laboratory three and a half hours a week. Lab fee. Concurrently: CH 3530.

- CH 3650. Nuclear Chemistry** (2-3)
Introduction to theoretical concepts of nuclear chemistry and its most significant applications. Topics include fundamentals of the nuclear atom, radioactive decay, absorption of nuclear radiation and characteristics of radiation detectors. Lecture two or three hours a week. Prerequisite: CH 2630.
- CH 3970. Chemistry Work Experience, Introductory** (2)
Off-campus experience in industrial chemistry requiring minimal technical proficiency. The student works full-time for a summer or semester under the supervision of selected senior personnel. These credits are electives and are not credited toward requirements for the chemistry major. Prerequisite: departmental approval.
- CH 3990. Research Projects, Introductory** (1-3)
The student plans and attempts a series of original laboratory investigations of a scientifically significant problem planned in weekly consultation with the supervising faculty member, conducts the necessary literature searches, maintains a professional-style laboratory notebook, makes at least one oral presentation of results, and prepares a research report according to the guidelines of the American Chemical Society. Lab fee. Prerequisite: instructor approval.
- CH 4430. Instrumental Analysis I** (3)
The major types of electrometric methods and chromatography are emphasized with a survey of spectrophotometry. Lecture two hours a week. Laboratory three and a half hours a week. Lab fee. Prerequisites: CH 3230 and CH 3450.
- CH 4450. Instrumental Analysis II** (3)
The principles and methods of spectrophotometry are emphasized with a survey of chromatography and electrochemistry. Lecture two hours a week. Laboratory three and a half hours a week. Lab fee. Prerequisites: CH 3230 and CH 3450.
- CH 4460. Synthesis and Characterization of Compounds** (1)
Practical work in the synthesis, structure determination, and quantitative analysis of selected inorganic and organic compounds emphasizing the integrated use of instrumental methods. Laboratory four hours a week. Lab fee. Prerequisites: CH 3530, CH 4430, CH 4450 and CH 4610 or instructor approval.
- CH 4610. Inorganic Chemistry I** (3)
An advanced course in theoretical and descriptive inorganic chemistry. Lecture three hours a week. Prerequisite: CH 3530 or instructor approval.
- CH 4630. Inorganic Chemistry II** (2)
A continuation of Inorganic Chemistry I. Lecture two hours a week. Prerequisite: CH 4610.
- CH 4640. Inorganic Synthesis** (1-3)
Laboratory course in synthesis and characterization of inorganic compounds. Laboratory three to nine hours a week. Lab fee. Prerequisite: CH 4610 or concurrent or instructor approval.
- CH 4810. Advanced Organic Chemistry** (1-3)
Fall semesters of even-numbered years.
Specialized readings and lectures in organic chemistry. Lectures arranged. Prerequisites: CH 3230/3240, junior standing and department approval.
- CH 4820. Advanced Physical Chemistry** (1-3)
Specialized reading and lectures in physical chemistry. Lectures arranged. Prerequisites: CH 3530, junior standing and department approval.
- CH 4830. Advanced Analytical Chemistry** (1-3)
Specialized readings and lectures in analytical chemistry. Lectures arranged. Prerequisites: CH 3450, junior standing and department approval.
- CH 4840. Advanced Biochemistry** (1-3)
Introduction to the techniques utilized in recombinant DNA biotechnology including DNA sequencing, PCR, electrophoresis, restriction enzymes, southern blotting, transformation and cloning. The application of these methods to medicine, industry, and forensics is studied. Lecture one hour per week. Lab four hours per week. Lab fee. Prerequisites: CH 3330 (or concurrent) or instructor approval.
- CH 4960. Chemical Literature and Seminar** (1)
An introduction to the use of the technical library, typical literature searches and seminar presentations. Open to all students and faculty members. Prerequisite: departmental approval.
- CH 4970. Chemistry Work Experience, Advanced** (2)
Off-campus experience in industrial chemistry requiring high technical proficiency. The student works full-time for a summer or semester under the supervision of selected senior personnel. These credits are electives and are not credited toward requirements for the chemistry major. Prerequisite: departmental approval.
- CH 4990. Research Projects, Advanced** (1-3)
The student plans and attempts a series of original laboratory investigations of a scientifically significant problem planned in weekly consultation with the supervising faculty member, conducts the necessary literature searches, maintains a professional-style laboratory notebook, makes at least one oral presentation of results, and prepares a research report according to the guidelines of the American Chemical Society. Lab fee. Prerequisite: instructor approval.

CLASSICAL AND MODERN LANGUAGES AND LITERATURES

Associate Professor M. Kathleen Madigan, Ph.D. (Chair)
Assistant Professor Rocío Duncan, M.A.
Visiting Instructor D. Scott Hendrickson, S.J., M.A.

The ability to communicate in more than one language, both orally and in writing, is clearly the mark of a liberally educated person. The adoption of new patterns of thought and the discovery of sensitivities and perspectives different from our own enrich our understanding of the world and of the diversity of human experience. As global consciousness increases in all areas of academic study and professional occupations, the knowledge of more than one language is not only desirable but frequently essential. Such knowledge permits us to discern diverse cultural dynamics, form enlightened opinions about international issues, and better serve those of other linguistic and cultural backgrounds.

The language curriculum offers students the flexibility to consider a variety of purposes and careers. Building upon introductory instruction in grammar and oral proficiencies, the language major provides electives and immersion modules in culture, literature and professional areas to enrich the student's range of experience and increase fluency. In most cases, a foreign language is a prerequisite to graduate study. The demand for language teachers at the elementary and secondary levels is high, and students should know that their chances of obtaining an attractive teaching position increase if they are proficient in two languages other than their own. While knowledge of a foreign language does not by itself guarantee a career in other areas such as business, banking, law, or foreign service, it is clearly an asset when combined with another form of professional expertise. Given two candidates with similar professional preparation, the employer is most likely to hire the college graduate who shows evidence of effective communication skills and broad educational background. And language students are known to be well informed and articulate. In fact, surveys show that students who study a foreign language score consistently higher on the verbal proficiency sectors of standard tests like the ACT, SAT, GRE, and LSAT.

At Rockhurst, the aim of the language curriculum is twofold and in keeping with the mission of our Jesuit, liberal arts university. While it means to broaden the student's appreciation of the unity of knowledge and to challenge their critical ability, it is also designed to build bridges connecting language with other career-related disciplines in order to facilitate the transition into the work place.

Developing written and oral fluency from a literary and cultural context is essential at the undergraduate level. Therefore, the curriculum incorporates several opportunities for students to practice skills beyond the classroom. Study abroad is strongly encouraged. Rockhurst sponsors study in France, Germany, Mexico and Spain and is forging new study abroad programs as well. Other opportunities in the way of teaching exchanges between France and the U.S. are offered in order to give our students the immersion experiences which they need to succeed and serve in today's "global village".

Classical and Modern language courses and requirements for the majors and minors follow this page.

International Journalism Program

The International Journalism Program is an interdisciplinary program that combines a major in either French or Spanish with a minor in Journalism. Another minor in a second language (French, German or Spanish) is recommended if the student enters language courses at the advanced level (3100 or higher) in the freshman year. Six credits in language, literature, culture, communication or journalism courses taken abroad in the target language are required for non-native speakers. Non-native speakers of English are required to complete a minor in English (if they are native speakers of Spanish or French).

The International Journalism Program prepares the student not only for a challenging and exciting career track but also for global citizenship: language studies cultivate cultural sensitivity in the student, and journalism studies train one to communicate with those of diverse backgrounds on a variety of issues.

Courses

In the modern language, courses will be taken as listed for the “Major Field of Concentration” on the following pages. The Senior Capstone must include an oral presentation as well as a written component. Topics such as how journalism is practiced in other countries as well as the rights of American journalists in other countries may be investigated. In general, ethical and legal aspects of the profession are covered in all journalism courses taught at Rockhurst University, but some aspects of these concerns as they apply to specific settings may be researched for the presentation. The oral component of the senior capstone for the language major must be presented in the target language (French or Spanish).

Prerequisites for studies in journalism are AR 1400 Basic Photography or JN 3450 Photojournalism, CT 2200 Mass Communication and JN 2000 Introduction to Journalism. For the journalism program, four upper-division courses must be selected from the following: CT 4890 Seminar in Mass Media, JN 3000 Advanced Reporting, JN 3030 Feature Writing, JN 3050 Editing and Design, JN 4170 Advertising Copywriting, and JN 4180 Broadcast Journalism. Prior to entering the journalism program, the student must submit a writing sample to the journalism program director. If the sample does not reflect college-level proficiency, the student should not enter the program until mastery is achieved.

Exceptional students may be recommended for internships, which will give the student experience in journalism in a work setting; possibilities for gaining experience include settings such as TV news bureaus in Paris, bilingual regional newspapers or radio stations. Senior Capstone presentations may be based on the internship experience.

FRENCH (FR)

Major Field of Concentration

The major in French is based on the prior completion of 14 hours of proficiency-level preparation numbered FR 1100-FR 1150 and FR 2100-FR 2150, or the equivalent. Equivalent preparation can be completed in high school, junior college or other colleges or universities, or waived through ACCP and AP credits, satisfactory CLEP scores, or a department placement test.

The major concentration in French consists of a minimum of 21 upper-division semester hours of course work. In addition, 12 hours of related course work are required. A grade of C or better is required in each upper-division course of the major. (A grade of C- will not satisfy the requirement.)

The student must complete FR 3100, FR 3150, FR 3700 and 4940 and three courses from the following electives: FR 3200, FR 3400, FR 3500, FR 3800, FR 3850, FR 3890, FR 4200, FR 4250, FR 4300, FR 4350 and FR 4800. The three elective courses are selected in consultation with the major adviser in accord with the career goals of the student.

Minor Field of Concentration

Requirements for the minor consist of 12 upper-division hours of course work in French after completing FR 2100 and FR 2150. A grade of C or better is required in each upper-division course of the minor. (A grade of C- will not satisfy the requirement.)

A bilingual emphasis is available for the Communication Sciences and Disorders major. Please see description on the Communication Sciences and Disorders catalog pages.

Note: Courses designated as LTI and LTII satisfy the literary mode of inquiry of the liberal core curriculum.

FR 1000. Beginning Conversational French I (3)

An introductory course using a conversational approach. The overall objective is to promote understanding and appreciation for the foreign language by being able to communicate on a basic level in the foreign language. Culture capsules are added when appropriate.

FR 1010. Beginning Conversational French II (3)

A continuation of FR 1000. The overall emphasis in the course is on further development of oral skills. Prerequisite: FR 1000 or equivalent.

FR 1100. Fundamentals of French I (4)

Fall semester

A basic course designed to develop the skills students need for oral and written communication. Complementary video and computer-assisted instruction to introduce students to broader aspects of French culture and develop oral fluency. Class four hours, assigned laboratory work one hour a week.

FR 1150. Fundamentals of French II (4)

Spring semester

A continuation of FR 1100. Students further develop oral proficiency, reading and writing skills. Class four hours, assigned laboratory work one hour a week. Prerequisite: FR 1100 or approval of instructor.

FR 2050. Conversation and Composition I (3)

Conversational practice and short themes with continuing emphasis on grammar, vocabulary

and usage. Culture capsules are included when appropriate. Prerequisite: FR 1150 or approval of instructor.

FR 2060. Conversation and Composition II (3)

Continuation of FR 2050. Prerequisite: FR 2050 or approval of instructor.

FR 2100. Intermediate French I (3)

Fall semester

The course strengthens the student's grasp of grammar, and builds vocabulary to allow handling of more complex and idiomatic language. Cultural readings in French are included. Prerequisite: FR 1150 or equivalent.

FR 2150. Intermediate French II (3)

Spring semester

Continuation of French 2100 with more of a focus on historical and/or cultural readings and materials. Prerequisite: FR 2100 or approval of instructor.

FR 2800. Introduction to the Comedies of Molière (1)

A course designed as a survey for a general audience of some of the major works of Molière. Background information on French writing and the culture of Molière's time is considered as well as interpretation and analysis of the work in translation. Creative exercises and scenes from the plays are presented. Prerequisite: FR 2150 or approval of instructor.

- FR 3100. Advanced Composition and Conversation I** (3)
Fall semester
This course is a study of advanced French grammar construction, various styles of composition and speaking. Readings are included with each unit. Prerequisite: FR 2150.
- FR 3150. Advanced Composition and Conversation II** (3)
Spring semester
Continuation of FR 3100. Brief literature selections are included. This course prepares the student for the Introduction to French Literature (FR 3700) course. Prerequisite: FR 3100 or approval of instructor.
- FR 3200. French for the Professional** (3)
This course introduces the student to the language of various branches of business (management, marketing, banking). New terminology is stressed as well as the command of grammar and structures needed for composition. Attention is given to writing application letters, résumés, short reports and various types of business letters. Prerequisite: FR 2150 or approval of instructor.
- FR 3400. Introduction to French Civilization and Culture** (3)
A survey of modern France focusing on such topics as geography, monuments, transportation, education, government, industry and everyday life. Topics may vary. Prerequisite: FR 2150 or approval of instructor.
- FR 3500. Introduction to French Film** (3)
An introduction to concepts of French film, the development of film in France and film in the life of the French, with close study of selected films and creative writing in French. Prerequisite: FR 2150 or approval of instructor.
- FR 3700. Introduction to French Literature** (3)
This course is designed to give the student a broad scope of French literature as well as a historical context to facilitate comprehension. Students are given an introduction to movements, genres and styles and begin to address the critical study of literature. Texts are discussed and analyzed in French. Prerequisite: FR 3150 or approval of instructor. (LTI)
- FR 3800. Conversational Fluency** (3)
A course designed for students who wish to practice oral communication skills. Discussions include contemporary topics, concerns researched by students and reader/viewer responses to texts and movies. Prerequisite: FR 3150 or approval of instructor.
- FR 3850. Francophone Cultures** (3)
A survey of cultural aspects of francophone regions in the Caribbean, Europe, Canada, Africa, etc., with a focus on Haiti, Martinique and Québec. Cultural aspects include art, music and religion, with background information on history and politics. Similarities but also differences between these regions and France are discussed. Prerequisite: FR 3150 or approval of instructor.
- FR 3890. French Women and Literature** (3)
A survey of the French writings of representative major women authors from the twelfth century through the present day. Awareness of the tradition of writings in French by women and their literary accomplishments is gained and common themes and concerns are considered. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4200. Survey of French Literature I** (3)
A survey of literature from the 12th through the 17th century. Sustained discussion of the works studied in French. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4250 Survey of French Literature II** (3)
A survey of French literature from the 18th century through the present day. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4300. Nineteenth Century French Novel** (3)
Study of the novels of major 19th century authors such as Balzac, Flaubert, Stendhal and Zola with oral and written response in French. Continued attention to language skills. Some film versions in video of the novels studied may be viewed. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4350. Contemporary French Novel** (3)
Study of the novels of major 20th century authors such as Mauriac, Bernanos, Malraux, St. Exupéry, Camus, Sartre, Duras and Sarraute. Selections may vary. Discussion and creative writing in French as well as presentations of parts of the novels. Some film versions in video of the novels studied may be viewed. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4800. Contemporary French Theater** (3)
Study of the plays of major 20th century authors such as Claudel, Cocteau, Giraudoux, Sartre, Camus, Anouilh, Genet, Jarry, Artaud, Beckett and Ionesco. Selections may vary. Discussion and creative writing in French as well as presentations of parts of the plays. Some film versions in video of the plays studied may be viewed. Prerequisite: FR 3150 or approval of instructor. (LTII)
- FR 4940. Senior Capstone** (3)
Independent or collaborative research into major focus area; written/oral/artistic/presentations required to demonstrate mastery of major area of study and good level of language proficiency. Required to fulfill major.

GERMAN (GR)

Minor Field of Concentration

Requirements for the minor consist of 12 upper-division hours of course work after completing GR 2100 and GR 2150. A grade of C or better is required in each upper-division course of the minor. (A grade of C- will not satisfy the requirement.)

- GR 1000. Beginning Conversational German I** (3)
An introductory course using a conversational approach. The overall objective is to promote understanding and appreciation for the foreign language by being able to communicate on a basic level in the foreign language. Culture capsules are added as appropriate. Lecture three hours per week.
- GR 1010. Beginning Conversational German II** (3)
A continuation of GR 1000. Prerequisite: GR 1000 or equivalent.
- GR 1100. Fundamentals of German I** (4)
Fall semester
A basic course covering all aspects of German necessary for communication: usage, vocabulary and spelling. Intensive practice in comprehension, speaking and reading. Laboratory assignments in addition to four hours of class.
- GR 1150. Fundamentals of German II** (4)
Spring semester
A continuation of GR 1100. Prerequisite: GR 1100 or approval of instructor.
- GR 2100. Intermediate German I** (3)
Fall semester
Continued study of German language and culture requiring an increased command of vocabulary, grammar and sentence structure. Prerequisite: GR 1150 or approval of instructor.
- GR 2150. Intermediate German II** (3)
Spring semester
A continuation of GR 2100. Prerequisite: GR 2100 or approval of instructor.
- GR 3100. Advanced Composition and Conversation I** (3)
Fall semester
This course is a study of advanced German grammar construction, various styles of composition and speaking. Prerequisite: GR 2150 or approval of instructor.
- GR 3150. Advanced Composition and Conversation II** (3)
Spring semester
This course is a continuation of GR 3100. Prerequisite: GR 3100 or approval of instructor.
- GR 3200. Business German** (3)
A course dealing with the German technical language needed in business, finance and economics. This course helps prepare the student for a business German certificate. Prerequisite: GR 2100 or approval of instructor.
- GR 3480. Intercultural Communications** (3)
The course examines differences and variations in German verbal and written communication patterns, using text and video materials. It stresses social and business settings in German speaking countries. The course is conducted in German. Prerequisite: GR 2100 or approval of instructor.
- GR 3490. German Philosophers of Science** (3)
The course focuses on a prominent German scientist and gives the student the opportunity to read scientific material, social commentary and biographical material in German. Course is conducted in German. Prerequisite: GR 2100 or approval of instructor.
- GR 3510. German Film and Culture** (3)
Exploration of the culture of the German-speaking world through film. Breadth in understanding will be gained through analysis of the films, sustained discussion in German and research. Prerequisite: GR 2150 or approval of instructor.
- GR 3700. Introduction to German Literature** (3)
Students study the evolution of literary movements and learn basic analytical principles of textual analysis across the genres of drama, short fiction, the essay and poetry. Prerequisite: GR 3150 or approval of instructor. (LTI)
- GR 3800. Conversational Fluency** (3)
A course designed for students whose primary needs are verbal communication. The focus is on daily life, situations with complications and general survival skills. Recommended for students planning to study abroad, and those who plan to take a German proficiency test. Prerequisite: GR 3150 or approval of instructor.
- GR 3850. Introduction to German Poetry** (3)
This survey course introduces students to some works of major poets of the German language (e.g. Goethe, Schiller, Rilke, Jandl). It begins with the Romantics and ends with contemporary writers. Prerequisite: GR 3150 or approval of instructor.

JAPANESE (JA)

- JA 1100. Introduction to Japanese I** (4)
Integrates a study of basic Japanese with its culture using a conversational approach. Vocabulary and grammatical structures needed for basic communication is emphasized. Practice is given in a variety of everyday situations.
- JA 1150. Introduction to Japanese II** (4)
A continuation of JA 1100. Prerequisite: JA 1100 or approval of instructor.
- JA 2100. Intermediate Japanese I** (3)
A course designed to develop speaking, listening, writing and reading skills needed to perform everyday tasks such as asking for and giving directions, descriptions, eliciting and providing information. Prerequisite: JA 1150 or approval of instructor.
- JA 2150. Intermediate Japanese II** (3)
A continuation of JA 2100. Prerequisite: JA 2100 or approval of instructor.
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LATIN (LT)

- LT 1100. Introduction to Latin I** (4)
Integrates a study of basic Latin with its culture. A variety of methods are used to develop competence in vocabulary, sound patterns, forms, structure and elementary texts. A perceptive approach to language in general is gained by seeing English in relationship to Latin and how its linguistic root system is applicable.
- LT 1150. Introduction to Latin II** (4)
Continuation of LT 1100 with selected reading. Prerequisite: LT 1100 or approval of instructor.
- LT 2100. Intermediate Latin I** (3)
A systematic review and expansion of Latin grammar with increased knowledge of history and culture through study of Latin narrative from major prose works. Prerequisite: LT 1150 or approval of instructor.
- LT 2150. Intermediate Latin II** (3)
Development of reading skills, cultural awareness and linguistic base. Selections from the writings of a major poet are included. Prerequisite: LT 2100 or approval of instructor.
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SPANISH (SP)

Major Field of Concentration

The major in Spanish is based on the prior completion of 14 hours of proficiency-level preparation numbered SP 1100-SP 1150 and SP 2100-2150, or the equivalent. Equivalent proficiency preparation can be completed in high school, junior college or other colleges or universities, or waived through ACCP and AP credits, satisfactory CLEP scores, or a department test.

The major concentration in Spanish consists of a minimum of 21 upper-division semester hours of work. In addition, 12 hours of related courses are required. A grade of C or better is required in each upper-division course of the major. (A grade of C- will not satisfy the requirement.)

The student must complete SP 3100, SP 3150, SP 3700, and SP 4940 and nine hours of coursework from the following electives: SP 3070, SP 3200, SP 3400, SP 3470, SP 3800, SP 4200, SP 4250, SP 4300, SP 4350, SP 4360, SP 4370, SP 4380, SP 4400, SP 4550, SP 4700 or SP 4800. The three elective courses are selected in consultation with the major adviser in accord with the career goals of the student.

Minor Field of Concentration

Requirements for the minor consist of 12 upper-division hours of course work in the target language after completing SP 2100 and SP 2150. A grade of C or better is required in each upper-division course of the minor. (A grade of C- will not satisfy the requirement.)

A bilingual emphasis is available for the Communication Sciences and Disorders major. Please see description on the Communication Sciences and Disorders catalog pages.

Note: Courses designated as LTI and LTII satisfy the literary mode of inquiry of the liberal core curriculum.

- SP 1000. Beginning Conversational Spanish I** (3)
An introductory course using a conversational approach. The overall objective is to promote understanding and appreciation for the foreign language by being able to communicate on a basic level in the foreign language. Culture capsules are added when appropriate.
- SP 1010. Beginning Conversational Spanish II** (3)
Continuation of SP 1000. The overall emphasis in the course is on further development of oral skills. Prerequisite: SP 1000 or approval of instructor.
- SP 1100. Fundamentals of Spanish I** (4)
A basic course covering all aspects of Spanish necessary for communication: vocabulary, grammar, structure and spelling. Extensive practice using Spanish. Class four hours, assigned laboratory work, one hour a week.
- SP 1150. Fundamentals of Spanish II** (4)
A continuation of SP 1100. Students further develop oral proficiency, reading, and writing skills. Class four hours, one hour assigned laboratory work. Prerequisite: SP 1100 or approval of instructor.
- SP 2050. Conversation and Composition I** (3)
Conversational practice and short themes with continuing emphasis on grammar, vocabulary and usage. May be taken concurrently with SP 2100 and SP 2150. Prerequisite: SP 1150 or approval of instructor.
- SP 2060. Conversation and Composition II** (3)
Continuation of SP 2050. Conversational practice and short themes with continuing emphasis on grammar, vocabulary and usage. May be taken concurrently with SP 2100 and SP 2150. Prerequisite: SP 2050 or approval of instructor.
- SP 2070. Medical Spanish I** (3)
This course introduces the student to the technical language of medicine: anatomy, illness, treatment. It also prepares the student to conduct consultations and conversations in the Latino cultural context. Prerequisite: SP 1150 or approval of instructor.
- SP 2100. Intermediate Spanish I** (3)
Fall semester
Intended to increase ability to comprehend and speak Spanish as well as introduce the student to literature. Prerequisite: SP 1150 or approval of instructor.
- SP 2150. Intermediate Spanish II** (3)
Spring semester
Intended to increase ability to comprehend and speak Spanish as well as introduce the student to literature. Prerequisite: SP 2100 or approval of instructor.
- SP 3070. Medical Spanish II** (3)
Continuation of SP 2070. This course introduces the student to the technical language of medicine: anatomy, illness, and treatment. It also prepares the student to conduct consultation and conversations in the Latino cultural context. Prerequisite: SP 2150 or approval of instructor.
- SP 3100. Advanced Conversation and Composition I** (3)
Fall semester
This course is a study of advanced Spanish grammar construction, various styles of composition and speaking. Readings are included with each unit. Prerequisite: SP 2150 or approval of instructor.
- SP 3150. Advanced Conversation and Composition II** (3)
This course is a continuation of SP 3100. Brief literature selections are included. This course prepares the student for Introduction to Hispanic Literature (SP 3700). Prerequisite: SP 3100 or approval of instructor.
- SP 3200. Commercial Spanish** (3)
Practical exercises in business communication for international trade. New terminology as well as composition skills are stressed. Prerequisite: SP 2150 or approval of instructor.
- SP 3400. Introduction to Latin American Culture** (3)
An introduction to the economic, social and political background of Spanish America. The readings include contemporary fiction and non-fiction with the main emphasis on recent essays by leading authorities on the above topics. Prerequisite: SP 3150 or approval of instructor.
- SP 3470. Introduction to Spanish Culture** (3)
An introduction to the economic, socio-historical and political background of continental Spanish literature and civilization. Prerequisite: SP 3150 or approval of instructor.
- SP 3700. Introduction to Hispanic Literature** (3)
This course provides students with an introduction to the diversity of literary expression in Spain, Spanish America, and the United States. Students study the evolution of literary movements and learn basic analytical principles for textual analysis across the genres of drama, short fiction, the essay and poetry. Prerequisite: SP 3150 or approval of instructor. (LTI)

- SP 3800. Conversational Fluency** (3)
This course is designed for students wishing to practice oral communication skills. Discussions include contemporary topics, concerns researched by students, and reader/viewer responses to tests and movies. Prerequisite: SP 3150 or approval of instructor.
- SP 4060/6070. Spanish for the Health Care Professional** (3)
The purpose of this course is to provide students with the ability to overcome cross-cultural barriers in a medical setting and to communicate effectively with speakers of Spanish. Background information on Hispanic cultures (e.g. customs, conceptions of the role of health care providers and courtesy) as well as some medical terminology will be provided. Issues raised by the differences in conceptions of the role of doctors, medicine and health care will be addressed. The graduate course SP 6070 requires independent accelerated additional work appropriate for master's level study. Prerequisite: SP 3100 or approval of the instructor.
- SP 4200. Survey of Latin-American Literature I** (3)
A general survey of literature from the pre-Colombian period through 1888. Prerequisite: SP 3150 or approval of instructor.
- SP 4250. Survey of Latin-American Literature II** (3)
A general survey of Latin-American literature from the beginning of Modernism through the present day. Prerequisite: SP 3150 or approval of instructor.
- SP 4300. Survey of Spanish Literature I** (3)
A general survey of Spanish literature from the 12th through the 17th century. Prerequisite: SP 3150 or approval of instructor.
- SP 4350. Survey of Spanish Literature II** (3)
A general survey of Spanish literature from the 18th century through the present day. Prerequisite: SP 3150 or approval of instructor.
- SP 4360. Latin American and U.S. Latina Women's Literature** (3)
This course examines works by Latin American and U.S. Latina women writers, viewing the aggregate as well as the individual positions taken, the artistic and the political dimensions of the writing, the bonds the writers share, and in some cases the great differences between them. Prerequisite: SP 3150 or approval of instructor. (LTII)
- SP 4370. U.S. Latino Literature** (3)
This course covers the history and literature of U.S. Latino literature since 1848. Through literary analysis the student examines the artistic and the political dimensions of texts, focusing particularly on the inscription of individual, cultural and national identity. Prerequisite: SP 3150 or approval of instructor. (LTII)
- SP 4380. Twentieth-Century Latin American Theater** (3)
This course includes 20th century plays from the Hispanic world, focusing in particular on aspects of identity, nationalism and historical revision. Prerequisite: SP 3150 or approval of instructor. (LTII)
- SP 4400. Modern Latin American Novel** (3)
This course focuses on novels of the 20th century from the Hispanic world and includes major authors such as Fuentes, García Márquez and Cortázar. Prerequisite: SP 3150 or approval of instructor. (LTII)
- SP 4550. Latin American Short Story** (3)
This course examines the development of the short story from the end of the 19th century to the present time focusing on texts from the modernist, vanguard, Americanist, and feminist movements. Prerequisite: SP 3150 or approval of instructor.
- SP 4660. Latin American Film** (3)
This course familiarizes the student with the New Latin American Cinema Project, Latin American films made with the intention of providing social critique and instigating social reform. Included are works by Novarro, Echeverría, Bemberg, Diegues, Guzmán, Gumucio, Dragón, Alea, Solás, Ibarra and Fernández Violanta. Prerequisite: SP 2150 or approval of instructor.
- SP 4700. The Spanish Golden Age** (3)
Studies of representative writers of the Spanish Golden Age (1500-1680). Includes the "Lazarillo"; plays by Lope, Tirso and Calderón; the "Novelas Ejemplares" of Cervantes; and selections from Santa Teresa, San Juan de la Cruz, Luis de León, Quevedo and others. Prerequisite: SP 3150 or approval of instructor.
- SP 4800. Don Quixote** (3)
A careful reading of Cervantes' masterpiece seen as the prototype of the modern novel. Includes studies of structure and style, of traditional interpretations and of Cervantes' life and thought. Prerequisite: SP 3150 or approval of instructor.
- SP 4940. Senior Capstone** (3)
Independent and/or collaborative research into major focus area: written/artistic/oral presentations required to demonstrate mastery of major area and good level of language proficiency. Required to fulfill major.
- SP 4941. Senior Project** (3)
Summative project combining Spanish language and culture with a focus on a topic in Communication Sciences and Disorders. This project is required for undergraduates completing the CSD Bilingual Emphasis program. It replaces the requirement for SP 4940 (Senior Capstone) in the case of a double CSD/Spanish major.

CLINICAL LABORATORY SCIENCES (CLS)

(Formerly Medical Technology)

Associate Professor Janet Cooper, Ph.D. (Program Director)

Rockhurst University offers the Bachelor of Science degree in clinical laboratory sciences in cooperation with St. Luke's Hospital and North Kansas City Hospital. Formerly this program was called Medical Technology.

Prerequisite courses for admission to the clinical program, designed to meet the requirements established by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), include specific courses in chemistry, biological sciences and a minimum mathematics proficiency.

Upper-level professional course work is taken at one of the affiliated hospitals. Graduates of the program are eligible to challenge either of two nationally recognized certification examinations to become clinical laboratory scientists or medical technologists. (Graduation is not, however, contingent upon passing any type of certifying examination.)

Undergraduate students interested in clinical laboratory sciences may apply directly to the program. Applications are obtained from the academic director on campus, or from the specific program of an affiliate.

Students may elect one of two routes of entry into the program. Students who are seeking a baccalaureate degree in clinical laboratory sciences from Rockhurst University must complete 98 semester hours and all non-clinical degree requirements before beginning the professional component at a hospital site. The professional component lasts approximately one calendar year. Upon successful completion of the clinical laboratory sciences course work, the student is awarded a Bachelor of Science degree in clinical laboratory sciences.

Students may choose to complete a degree with a major in chemistry, biology, or other related area, including the specific required courses for clinical laboratory sciences admission, and then apply directly to one of the affiliated hospitals for admission to clinical laboratory sciences as a non-degree student. Students considering this option should discuss the relative advantages with the academic director and the program director.

CLS 4500. Clinical Microbiology (6)

Isolation and identification of microorganisms that cause disease; instrumentation and associated computer technology; clinical interpretation of tests; correlation of results with patient condition; evaluation of test validity. Prerequisite: College Microbiology with lab; upper division preferred. Pathogenic Microbiology recommended.

CLS 4550. Clinical Chemistry (6)

Quantitation of biochemicals; manual analytical techniques; instrumentation and associated computer technology; operation, clinical interpretation of tests; correlation of results with patient condition; problem solving and validation of results. Prerequisites: Minimum of 16 semester hours college chemistry, including course work in biologic chemistry and quantitative lab experience; at least half upper division.

CLS 4600. Clinical Hematology (6)

Identification of blood cell abnormalities; instrumentation and associated computer technology; microscopic evaluation and quantitation; evaluation of blood coagulation mechanisms, including monitoring anticoagulant therapy; identification and enumeration of cells in bone marrow, blood and other fluids; clinical interpretation of tests; correlation of results with patient condition; problem solving and validation of results.

CLS 4650. Immunoematology (4)

Analysis and evaluation of relationships between donor blood components and blood recipients; antigen and antibody detection; assessment of patient transfusion related states and component selection; prevention of transfusion incompatibilities; introduction to blood gases and stat services; instrumentation and associated computer technol-

ogy; clinical interpretation of tests; correlation of results with patient condition; problem solving and validation of results.

CLS 4700. Clinical Immunology (4)

Study of the human immune system in health and disease; immunologic techniques including immunofluorescence, immunochemistry, molecular diagnostics, serology, and other related testing and instrumentation, including computer technology; clinical interpretation of tests; correlation of results with patient condition; problem solving and validation of results.

CLS 4750. Topics in CLS/MT I (2)

Orientation workshop, including basic technique, safety, computer and LIS technology, microscopy; phlebotomy techniques; parasitology; mycology; urinalysis and other fluids.

CLS 4800. Topics in CLS/MT II (2)

Professional topics seminars including medical ethics; mathematics; case studies; principles and practices of quality management; principles of laboratory administration, management and supervision; acquisition and evaluation of laboratory information systems; educational methods; professional conduct; comprehensive review and evaluation.

DEPARTMENT OF COMMUNICATION AND FINE ARTS

Assistant Professor Michael K. McDonald, Ph.D. (Chair)

This department combines the study of communication, business communication, art, media studies, music, theatre and journalism.

The purpose of the department of communication and fine arts is to provide an integrated study of the art and science of human communication. The majors include the study of communication at all levels of human interaction: intrapersonal, interpersonal, small group, public, social, and artistic.

To achieve this, the student may select one of three majors: communication, business communication or the liberal arts theatre major. Students may choose from a variety of minors in communication as well. Students choosing communication may select one of four tracks: communication theory, media studies (including journalism), theatre arts, and fine arts. The business communication program is described in a preceding section while the major in theatre is described in a following section.

In each track of communication or business communication, the curriculum is designed to give a liberal understanding of human communication and to prepare students for the professions, business, the arts, journalism, industry, education, health and public service, as well as graduate study in either an academic or professional field. To receive the B.A. in communication, the student must show an understanding of communication which includes historical, philosophical, ethical, social, political and cultural dimensions. And the student must demonstrate skill in the art of speech communication.

Students are encouraged to expand their education beyond the classroom through directed learning experiences in broadcast journalism, video production and theatre. Internships and directed research are available to students with a 3.0 grade point average in their major and a 2.0 GPA in all subjects.

The department is guided by the belief that a careful study of the process of communication enables people 1) to integrate and exchange knowledge, 2) to effect social action, and 3) to analyze and evaluate the uses of speech in the conduct of human affairs. This requires a liberal education in arts, sciences and humanities.

Throughout the study of communication at Rockhurst, emphasis is placed upon the ethical responsibility of the communicator to develop intellectual and moral integrity.