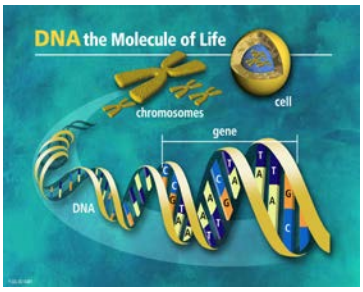
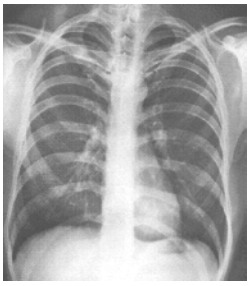
CABRINI COLLEGE

Science Department

Student Handbook





- Biology/Biological Sciences
- Biology/Molecular Biology & Biotechnology
- Biology/Pre-Medicine
- Chemistry
- Pre-Nursing
- Pre-Occupational Therapy
- Pre-Pharmacy
- Pre-Physical Therapy

www.cabrini.edu/Science

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Welcome

Dear Student,

Welcome to the Science Department. As scientific discovery and technology continues to advance at an astonishing rate, we think you'll find this field will always challenge and amaze you.

It is truly an exciting time to be at Cabrini and in the Science Department as well. We've recently redesigned our Biology and Chemistry majors to provide you with more flexibility in selecting the courses you want to meet your career goals, and we're housed in the $18,000,000 Antoinette Iadarola Center for Science, Education, and Technology.

We have ~10:1 ratio of science majors to science faculty, which allows for superb student-faculty interaction and a personalized approach to your education. In addition to our full-time faculty, we have experts teaching specialized courses part-time within the department, as well as opportunities to take courses at our eight affiliate institutions.

This handbook is designed to help you gain the most from your experience in our department at Cabrini College. It will acquaint you with requirements, procedures, opportunities, and services that exist within the department and will supplement the College Catalog and Student Handbook. Much of this information will be used throughout your two- or four-year program, so please save this handbook until you graduate.

We look forward to you becoming an integral part of our department. All of the faculty are dedicated to helping you acquire the skills and knowledge for success in the workplace, postgraduate education and life. If we can be of any assistance throughout your career here, please don't hesitate to contact us.

Sincerely,

Kimberly L. Boyd, Ph.D.
Associate Professor of Biology
Chair, Science Department

It is the responsibility of the student to be aware of and meet the requirements for graduation and to make suitable academic progress. Students taking classes out of sequence, declaring their major after their freshman year, or having to repeat classes might not be able to finish their degree within a four-year period. All information in this handbook is subject to change. Please contact the Department Chair with any questions regarding policy/standard updates.

Students follow the core general-education graduation requirements in place during the academic year in which they were enrolled and the major-degree requirements in place during the academic year in which they officially declared the major. Secondary Education students must meet certification criteria valid at their time of certification.

Science Department Faculty Information

Dr. Kimberly Boyd is an Associate Professor of Biology and Chair of the Science Department. She received her Ph.D. in Physiology from the University of Virginia in 1992 and completed postdoctoral research at the University of California, Berkeley and Princeton University in the fields of ion transport mechanisms in muscle and epithelium and control of cell division, respectively.
Her current research area focuses on clinical studies of factors influencing dental implant osseointegration. She teaches Biological Science I, Human Anatomy and Physiology I and II, General Physiology, Biological Evolution, Health and the Human Body, and Forensic Science. Dr. Boyd advises biology majors and also serves as the Coordinator of First-Year Advising for the College.

- Iadarola Center, Room 208 610-902-8397 kboyd@cabrini.edu

Dr. Anne Coleman is an Associate Professor of Life and Physical Sciences. She received her neuroscience Ph.D. from Alleghany University. She teaches Life and Physical Science for Elementary Education majors, Human Anatomy and Physiology I and II, Health and the Human Body, Physics for Everyone, and Neuroscience. Her research focuses on innovative pedagogical strategies in science education. Dr. Coleman advises biology majors and is the Pennsylvania State Science Olympiad program Executive Administrator.

- Iadarola Center, Room 204 610-902-8114 amc729@cabrini.edu

Dr. David Dunbar is an Associate Professor of Biology. He received his Ph.D. from Lehigh University in Molecular Biology and completed his postdoctoral studies at Yale University. His research focuses on mycobacteriphage proteogenomics and structural genomics, as well as course- and community-based research benefits. Dr. Dunbar teaches Cell and Molecular Biology, Developmental Biology, Forensic Science, Bioinformatics, Watershed Ecology, and Genetics and Heredity. Dr. Dunbar advises biology majors and also is the faculty athletic representative for the College's NCAA-sanctioned athletic teams.

- Iadarola Center, Room 220 610-902-8770 ddunbar@cabrini.edu

Dr. Sherry Fuller-Espie holds the rank of Professor of Biology. She received her Ph.D. and DIC in 1987 from the University of London in Biotechnology and completed postdoctoral research at the Royal Postgraduate Medical School, Hammersmith Hospital in London and the Wistar Institute in Philadelphia. Her current research focuses on innate immune responses in *Eisenia fetida*, the earthworm. She teaches Genetics, Theory and Practice in Biotechnology, Immunology, Virology, General Microbiology, Animal Behavior, Biochemistry of Cancer, and Nutrition. Dr. Fuller-Espie is a biology major advisor.

- Iadarola Center, Room 222 610-902-8369 sf723@cabrini.edu

Dr. Melinda Harrison joined the Science Department as an Assistant Professor of Chemistry. She earned her Ph.D. at Duquesne University. Her biochemistry research interests focus mainly on studying metals in biology specifically in copper metabolism; selenium metabolism and also wine chemistry research**.** Dr. Harrison teaches Forensic Science, General Chemistry I and II, Biochemistry I and II, Analytical Chemistry, and Instrumental Chemistry. Dr. Harrison advises students in the Pre-Allied Health programs and the *Gamma Sigma Epsilon* honor society.

- Iadarola Center, Room 304 610-902-8504 mah348@cabrini.edu

Dr. Carrie Nielsen serves as an Assistant Professor of Biology and Environmental Science. Dr. Nielsen earned her Ph.D. at Stanford University. She teaches Biological Science I and II, Biological Perspectives of Environmental Science, Terrestrial Ecosystems, Wetlands Ecology, and Ecology. Dr. Nielsen is a terrestrial ecosystem ecologist whose research examines both forests and more human-dominated ecosystems such as cities and college campuses. She focuses particularly on processes involving nitrogen, which is both an important plant nutrient and a harmful water pollutant. Her most recent research interests include bacteriophage ecology. Dr Nielsen is a Biology major advisor, the advisor to the *Beta Beta Beta* honor society, and Coordinator for the Environmental Studies minor.

- Iadarola Center, Room 206 610-902-8570 caroline.b.nielsen@cabrini.edu

Dr. Joseph Smith is an Associate Professor of Chemistry. He received his Ph.D. in 1993 from the University of Washington and completed postdoctoral work at the University of California, Irvine in the field of Organic Chemistry. His interests include synthesis and study of theoretically interesting and biological important molecules, such as highly pyramidalized olefins. Dr. Smith teaches General Chemistry I and II, Organic Chemistry I and II, Inorganic Chemistry, Astronomy, Forensic Science, and Combinatorial and Computational Chemistry. Dr. Smith serves as the Chemistry major advisor.

- Iadarola Center, Room 308 610-902-8585 js732@cabrini.edu

Part-time faculty maintain offices in Iadarola Center, Room 310.

Messages may be left with the Faculty Support Office at 610-902-8310.

General-Curriculum Requirements

All students receiving a four-year degree from Cabrini College complete a minimum of 123 credits and the requirements of the Core Curriculum. The general-education core is designed to help students develop the qualities, abilities, and skills of a liberally educated person.

While each student develops in-depth knowledge within a major, liberally educated students should also share a common core of knowledge. Detailed information regarding this curriculum is available in the college catalog.

General-Education Curriculum

Students intending to graduate from Cabrini College must complete the College's general-education program, broken down into the Engagements with the Common Good (ECG), The Explorations, the 21st Century Literacies, and the First-Year Experience.

- All first-year students at the College complete COL 101 – College Success Seminar. Other courses, such as developmental writing or mathematics courses might be required of some students based on their high school experiences, their SAT scores, and their results on first-year student academic placement exams.
- Students in Engagements with the Common Good take thematic and community-engagement coursework, culminating in a capstone in their major field. This requirement consists of ECG 100, 200, and 300, taken in the freshman, sophomore, and junior years, respectively. Transfer students who have already completed ENG 101 or its equivalent will be placed into the appropriate level of ECG course during the admission process.
- Explorations courses extend learning from the ECG and provide a broad exposure to various disciplinary experiences. Students are required to take courses in the following categories: Heritage (H), Imagination, Creativity, and Aesthetic Appreciation (A), Values (V), and Individual and Society (I).
- The 21st Century Literacies provide foundational knowledge, skills, and experiences that prepare students for deeper, broader, and more-integrated explorations of the Common Good. Students are required to take coursework in the Information, Cross Cultural/Global, Scientific, Quantitative, and Religious literacies.

Students in Pre-Professional Programs

Cabrini College does not have "majors" in allied health programs. Students in pre-professional programs (Pre-Nursing, Pre-Occupational Therapy, Pre-Pharmacy, and Pre-Physical Therapy) do not receive a degree from Cabrini College.

This option allows students to prepare for admission to a transfer institution. Most course requirements for each program are determined by the transfer institution. Some courses, such as COL 101 and ECG 100/200, are mandatory for all Cabrini students during their first two years.

Students with career interests in nursing, occupational therapy, pharmacy, and physical therapy wishing to earn a four-year degree must select and meet the graduation requirements for an approved major (Biology, Chemistry, Exercise Science and Health Promotion, Psychology, etc.) and will advised by faculty within that specific department when that major is declared.

Placement Results

Certain courses required for graduation are dictated by academic ability and background, as determined by evaluation of high school records, SAT/ACT scores, and placement exam results. Academic advisors inform students about placements, but students should record that information for future reference. Students may not enroll in courses below their placement level for academic credit.

Incoming freshmen should receive placement results during COL 101, the College Success Seminar, and transfer students will have their placements noted on their Transfer-Credit Evaluation (TCE).

Students should check placement results below to have a record of courses that must be completed to meet graduation requirements. Students with questions regarding the placements should contact Dr. Boyd or their academic advisors.

English

Developmental Level:	ENG 100	☐
Mid- to Honors Level:	Exempt	☐

Quantitative Literacy

Developmental Level:	MAT 098/MAT 110/MAT 111	☐
	or MAT 098/MAT 117/MAT 118	☐
	or MAT 099/MAT 110/MAT 111	☐
	or MAT 099/MAT 117/MAT 118	☐
Mid-level:	MAT 113/114	☐
	or MAT 117/118	☐
	Science, Exercise Science, Math, Computer Science, and Psychology majors only.	
Honors Level:	MAT 130	☐
	or EXEMPT	☐
Alternate Track:	Based on majors, some students may have an alternate course sequence and should consult their advisors for details.	

Cross Cultural & Foreign Language Literacy

Two years or less of prior foreign-language experience:	LAN 101/102	☐
Three or more years of prior foreign-language experience:	LAN 102	☐
	LAN 201	☐
	EXEMPT	☐

Please note that students placing in the developmental track of mathematics (quantitative literacy) will not be able to begin their science major curriculum until their developmental math requirements are complete. This might require the students to do coursework in the summer to graduate on time or stay for an additional year.

Admission and Retention Standards

Admission Standards: Departmental

In general, first-time, first-year students will be accepted to Cabrini College with the Biology or Chemistry majors or the Pre-Professional Allied Health programs as their “intended” fields of study based on criteria set by the Admissions Office of Cabrini College. Students not meeting those criteria may apply to the College as Undeclared.

Students “intending” to enter a Science program are not guaranteed admission to the Department.

When enrolled, students applying to the Science Department must meet the following criteria:

- Successful completion of one full-time semester (12 or more credits) of coursework or its equivalent at Cabrini
- Successful completion of at least one majors-level science course.
- 2.50 GPA overall
- 2.33 GPA in any attempted Science majors-level courses (BIO, CHE, ENS, PHY)
- Placement in MAT 117/118 or higher
  or Completion of the Math competency as required by Cabrini College

Undeclared students who are interested in pursuing a science degree, but who have not been formally accepted into the major/program, are eligible to enroll in BIO 101/102, CHE 111/112, or PHY 101/102 on a space available basis, assuming they meet course prerequisites, with approval of the Department Chair to help them prepare for entry into the major without jeopardizing a timely graduation.

Students not formally accepted into a major/program may not advance to major-specific 200-level or higher major-specific courses until they are formally accepted into the Department.

Retention Standards: College-wide

Graduation from the College requires the completion of 123 college credits or more, with an overall QPA of 2.0 or higher. Students must complete a minimum of 45 credits at Cabrini and it is expected that students will complete the last 30 credits of their degree at Cabrini College. Students who do not maintain the minimum QPA are subject to academic warning, probation, or dismissal based on the following standards:

Credits Completed	Grounds for Warning, Probation, or Dismissal
0–29 credits	QPA < 1.75
30–75 credits	QPA < 1.9
76 or more credits	QPA < 2.0

The first time the QPA drops below the minimum QPA standard he/she is generally placed on **Academic Warning**. Students may be placed on academic warning only once during their academic career at Cabrini College. If the student's QPA is not above the minimum level after a semester on warning, the student is placed on ***Probation***. A student on academic probation is not in good academic standing and is not eligible to participate in major extracurricular activities, including intercollegiate athletics or holding leadership positions in campus organizations.

Academic probation may not be extended beyond one year unless the student has earned a QPA of 2.0 or higher in the most recent semester. If the student's QPA is still below the minimum level at the end of the probation semester, the student will be ***Dismissed***.

Also, if a student's QPA falls below 1.0, he/she is subject to immediate dismissal. Please see Academic Affairs regarding questions on this policy.

Retention and Degree Completion Standards: Departmental

After attempting 16 credits in Science majors-level courses (BIO, CHE, ENS, PHY courses; MAT 131 for chemistry majors only; Calculations do not include non-majors science courses or remedial science courses), students declared in the Biology or Chemistry major or in the Pre-Nursing, Pre-Occupational Therapy, Pre-Pharmacy, or Pre-Physical Therapy programs will have their departmental GPA's evaluated each semester.

An attempt includes courses successfully completed, failed, or courses from which a student has withdrawn.
Students must maintain a GPA of 2.00 or higher in all Science majors-level courses taken at Cabrini College to continue in the major or minor and ultimately to graduate with a degree from the Science Department.

The GPA requirement will be enforced after attempting eight credits for transfer students. Transfer students will be assessed based only on the grades received in science courses completed at Cabrini College.

Students with a science course GPA below 2.00 will be considered "on probation" within the department. Students on probation will receive a formal letter from the department chair noting the conditions of the probation and will be required to schedule a meeting with the chair and his or her departmental advisor to discuss ways to improve academic standing within the department. The chair—in consultation with the advisor and student—will determine a list of courses that must be repeated to improve the GPA. All repeated courses must be taken at Cabrini College unless an exemption is granted by the chair.

During the probationary period, to maximize student success, students may enroll in a maximum of three science courses during the fall or spring semester. Students on probation within the department have one full semester (fall or spring) to bring their GPA to 2.00 or above or they will be formally dismissed from the department.

Students may only be on probation in the department once. Students who have a GPA that drops below 2.00 a second time will be dismissed immediately. Students dismissed from the department will receive a formal letter from the chair. Students who are formally dismissed from the department may not take any major-specific coursework in the department, except to repeat courses already attempted in order to improve their College GPA or to take courses offered as part of the general-education core curriculum.

When dismissed, students are not eligible to reapply for admission to or graduate with a major in the department. Students with extenuating circumstances may submit a formal written appeal to the chair and be considered for an

extension of the probationary period. All appeals must be received within two weeks of the dismissal letter date. Appeals will be reviewed and a final written decision will be sent to the student within one week of the appeal receipt date.

Students must have a 2.33 (C+) or higher GPA in all required science courses and have permission of the chair to enroll in BIO/CHE 488 – Internship or RBIO/RCHE 166 or 466 – Research. Also, students who have any academic honesty violations on record with the College will not be permitted to register for RBIO/RCHE 166 or 466. Those students not eligible to complete one of these courses will be required to complete one additional three- to four-credit elective in their major field at the 200-level or higher.

Students must successfully complete a minimum of 15 credits—including BIO/CHE 444 – Senior Seminar—at Cabrini College to graduate with a major from the Science Department. Students must successfully complete a minimum of nine credits at Cabrini College to graduate with a minor in Biology, Chemistry, or Environmental Science.

Any student may be subject to immediate dismissal, without a probationary period, from the department for egregious or repetitive violations of the lab-safety policy, theft or destruction of lab equipment/materials, or providing lab access to non-authorized personnel.

Departmental Learning Outcomes

The specific goal of the Science Department is to prepare students for successful careers in science and science-related fields, as well as prepare liberally educated individuals. The department has identified disciplinary-specific learning outcomes for students completing the biology or chemistry majors.

Biology Major Learning Outcomes

Learning Outcome #1: Graduates of Cabrini College with a major in Biology will have an understanding of foundational biological, chemical, and physical science concepts, as emphasized in the core science course requirements.

1. Biochemistry
2. Molecular Biology
3. Cell Biology
4. Genetics
5. Taxonomy and Diversity of Life
6. Animal Structure and Physiology
7. Ecology and Environmental Science
8. Evolution

Learning Outcome #2: Graduates of Cabrini College with a major in Biology will demonstrate the ability to apply the scientific method and will possess problem solving skills necessary to design, conduct, and troubleshoot experiments and to test a hypothesis.

Learning Outcome #3: Graduates of Cabrini College with a major in Biology will acquire the critical thinking, analytical, and quantitative skills necessary to read, understand, and critically review scientific papers and to interpret and analyze data presented in various forms (*e.g.*, graphs, tables, narrative).

Learning Outcome #4: Graduates of Cabrini College with a major in Biology will develop written and oral communication skills necessary to present scientific ideas to multiple audiences using the accepted format of the discipline.

Learning Outcome #5: Graduates of Cabrini College with a major in Biology will acquire basic proficiency in computational skills, lab techniques, and use of technology (*e.g.*, lab equipment, specialized computer hardware and software) necessary for entry into the science workplace or graduate/professional schools.

Chemistry Major Learning Outcomes

Learning Outcome #1: Graduates of Cabrini College with a major in Chemistry will have an understanding of foundational chemical and physical science concepts, as emphasized in the core science course requirements.

1. Inorganic chemistry
2. Organic chemistry
3. Analytical and Instrumental chemistry
4. Biochemistry
5. Physical chemistry

Learning Outcome #2: Graduates of Cabrini College with a major in Chemistry will demonstrate the ability to apply the scientific method and will possess problem solving skills necessary to design, conduct, and troubleshoot experiments and to test a hypothesis.

Learning Outcome #3: Graduates of Cabrini College with a major in Chemistry will acquire the critical thinking, analytical, and quantitative skills necessary to read, understand, and critically review scientific papers and to interpret and analyze data presented in various forms (*e.g.*, graphs, tables, narrative).

Learning Outcome #4: Graduates of Cabrini with a major in Chemistry will develop written and oral communication skills necessary to present scientific ideas to multiple audiences using the accepted format of the discipline.

Learning Outcome #5: Graduates of Cabrini College with a major in Chemistry will acquire basic proficiency in computational skills, lab techniques, and use of technology (*e.g.*, lab equipment, specialized computer hardware and software) necessary for entry into the science workplace or graduate/professional schools.

Biology Major – Track in Biological Sciences

Students intending to earn a Bachelor of Science in Biology / Biological Sciences complete the following courses to meet the scientific literacy and major requirements of the College:

- BIO 101/102 – Biological Science I and II — 8 credits
- BIO 206 – Cell and Molecular Biology — 4 credits
- BIO 231 – Human Anatomy + Physiology II ***or*** BIO 301 – General Physiology — 4 credits
- BIO 263 – Genetics — 4 credits
- BIO 315 – Introduction to Scientific Presentations — 1 credit
- BIO 348 – Ecology — 4 credits
- BIO 444 – Senior Seminar — 3 credits
- BIO 488 – Internship or RBIO 466 – Research Biology — 3 credits
  Students double majoring in Secondary Education may use SEC 490 to fulfill this requirement.
- Three BIO electives*
  One elective must include a lab, and two must be at the 300 level or higher. — 10 credits
- CHE 111/112 – General Chemistry I and II — 8 credits
- CHE 211 – Organic Chemistry I — 4 credits
- PHY 101/102 – General Physics I and II — 8 credits

Total: 61 credits

*Acceptable BIO electives include:

- BIO 205 – Animal Behavior
- BIO 225 – Parasitology
- BIO 230 – Human Anatomy and Physiology I
- BIO 250 – Nutrition
- BIO 308 – General Microbiology
- BIO 312 – Theory and Practice in Biotechnology
- BIO 314 – Endocrinology
- BIO 318 – Basic Virology
- BIO 331 – Neuroscience
- BIO 350 – Topics in Biology
- BIO 412 – Topics in Drug Design & Manufacturing
- BIO 420 – Immunology
- BIO 430 – Developmental Biology
- BIO 440 – Biochemistry I
- BIO 441 – Biochemistry II
- BIO 499 – Independent Study
- ENS 204 – Wetlands Ecology
  or others with approval of the department chair

Other Requirements:

- Students must meet all course prerequisites to enroll in an upper-level course.
- Students must take MAT 117, MAT 130, or be exempt ***and*** either MAT 118 or MAT 313 to fulfill the Quantitative Literacy requirement or as electives.
- Students must earn a C- or higher in BIO 101 to enroll in BIO 102.
- Students must earn a C- or better in both BIO 101 or BIO 102 to take upper-level biology courses.
- Students must be admitted to the Department formally to take coursework past BIO 102, CHE 112, and PHY 102.
- Based on SAT scores and high school preparation, some students will be required to complete CHE 100 as part of their major program.
- Students must achieve and maintain a 2.0 QPA or higher in majors-level BIO, CHE, ENS, and PHY courses when they have completed 16 or more credits in science courses to remain in and graduate from the Biology/Biological Sciences major. Transfer students with eight or more credits in science at the time of enrollment will be assessed after eight credits have been earned at Cabrini College. Students dropping below a 2.0 may be put on departmental probation or dismissed from the program.
- Students must have a 2.33 QPA or higher to enroll in BIO 488 or RBIO 466.
- No required or related courses in the major may be taken under the pass/fail option.
- Students must complete a minimum of 15 credits in BIO courses at Cabrini to earn a degree from the department.

Biology/Biological Sciences Student Progress Record

Update this progress record each semester, by checking off each course taken, to ensure you have completed the college and departmental requirements.

General-Education Requirements

Engagements: ECG 100 ☐ ECG 200 ☐ ECG 300 ☐

Explorations: Heritage ☐ Values ☐ Individual & Society ☐ Aesthetics ☐

Literacies:

Information	IST (100 or 125) ☐	
Religious	REL ☐	
Scientific	PHY 101 ☐	PHY 102 ☐
Quantitative	MAT 117 or MAT 130 or EXEMPT ☐	
	MAT 118 or MAT 313 ☐	
Cross Cultural	_____	and _____ (101/102-level)
	or	_____ (102, 201, or EXEMPT)

Other: COL 101 ☐ ENG 100 (if required) ☐ MAT 098/099 (if required) ☐

Major

Biology:

BIO 101 ☐	BIO 102 ☐	BIO 206 ☐	BIO 263 ☐
BIO 231 or 301 ☐	BIO 315 ☐	BIO 348 ☐	
BIO 444 (Part 1) ☐	BIO 444 (Part 2) ☐		
BIO 488 or RBIO 466 ☐			

BIO elective _____ (lab-based)

BIO elective _____

BIO elective _____

Chemistry:

CHE 100 (if required) ☐

CHE 111 ☐

CHE 112 ☐

CHE 211 ☐

Physics: See above.

Electives

Complete electives to reach 123 credits.

Biology Major – Track in Molecular Biology & Biotechnology

Students intending to earn a Bachelor of Science in Biology / Molecular Biology & Biotechnology complete the following courses to meet the scientific literacy and major requirements of the College:

• BIO 101/102 – Biological Science I and II	8 credits
• BIO 206 – Cell and Molecular Biology	4 credits
• BIO 263 – Genetics	4 credits
• BIO 308 – General Microbiology	4 credits
• BIO 312 – Theory and Practice in Biotechnology	4 credits
• BIO 315 – Introduction to Scientific Presentations	1 credit
• BIO 318 – Virology	3 credits
• BIO 420 – Immunology	3 credits
• BIO 440 – Biochemistry I	4 credits
• BIO 444 – Senior Seminar	3 credits
• BIO 488 – Internship or RBIO 466 – Research Biology	3 credits
• CHE 111/112 – General Chemistry I and II	8 credits
• CHE 211/212 – Organic Chemistry I and II	8 credits
• PHY 101/102 – General Physics I and II	8 credits
• Elective – Select one from BIO/CHE 441, CHE 201, CHE 316, CHE 407.	3–4 credits
Total:	**64–65 credits**

Other Requirements:

- Students must meet all course prerequisites to enroll in an upper-level course.
- Students must take MAT 117, MAT 130, or be exempt ***and*** either MAT 118 or MAT 313 to fulfill the Quantitative Literacy requirement or as electives.
- Students must earn a C- or higher in BIO 101 to enroll in BIO 102.
- Students must earn a C- or both in either BIO 101 or BIO 102 to take upper-level Biology courses.
- Students must be admitted to the Department formally to take coursework past BIO 102, CHE 112, and PHY 102.
- Based on SAT scores and high school preparation, some students will be required to complete CHE 100 as part of their major program.
- Students must achieve and maintain a 2.0 QPA or higher in majors-level BIO, CHE, ENS, and PHY courses when they have completed 16 or more credits in science courses to remain in and graduate from the Biology/Molecular Biology & Biotechnology major. Transfer students with eight or more credits in science at the time of enrollment will be assessed after eight credits have been earned at Cabrini College. Students dropping below a 2.0 may be put on departmental probation or dismissed from the program.
- Students must have a 2.33 QPA or higher to enroll in BIO 488 or RBIO 466.
- No required or related courses in the major may be taken under the pass/fail option.
- Students must complete a minimum of 15 credits in BIO courses at Cabrini to earn a degree from the department.

Biology/Molecular Biology & Biotechnology Student Progress Record

Update this progress record each semester, by checking off each course taken, to ensure you have completed the college and departmental requirements.

General-Education Requirements

Engagements: ECG 100 ☐ ECG 200 ☐ ECG 300 ☐

Explorations: Heritage ☐ Values ☐ Individual & Society ☐ Aesthetics ☐

Literacies:

Information	IST (100 or 125) ☐	
Religious	REL ☐	
Scientific	PHY 101 ☐	PHY 102 ☐
Quantitative	MAT 117 or MAT 130 or EXEMPT ☐	
	MAT 118 or MAT 313 ☐	
Cross Cultural	_____	and _____ (101/102-level)
	or	_____ (102, 201, or EXEMPT)

Other: COL 101 ☐ ENG 100 (if required) ☐ MAT 098/099 (if required) ☐

Major

Biology: BIO 101☐ BIO 102 ☐ BIO 206 ☐ BIO 263 ☐ BIO 308 ☐

BIO 312☐ BIO 315 ☐ BIO 318 ☐ BIO 420 ☐ BIO 440 ☐

BIO 444 (Part 1) ☐ BIO 444 (Part 2) ☐

BIO 488 or RBIO 466 ☐

Chemistry: CHE 100 (if required) ☐

CHE 111 ☐ CHE 112 ☐

CHE 211 ☐ CHE 212 ☐

Physics: See above.

Elective: BIO/CHE 441, CHE 201, CHE 316, or CHE 407 ☐

Electives

Complete electives to reach 123 credits.

Biology Major – Track in Pre-Medicine

Students intending to earn a Bachelor of Science in Biology / Pre-Medicine complete the following courses to meet the scientific literacy and major requirements of the College:

• BIO 101/102 – Biological Science I and II	8 credits
• BIO 206 – Cell and Molecular Biology	4 credits
• BIO 231 – Human Anatomy and Physiology II **or** 301 – General Physiology	4 credits
• BIO 263 – Genetics	4 credits
• BIO 308 – General Microbiology	4 credits
• BIO 315 – Introduction to Scientific Presentations	1 credit
• BIO 440 – Biochemistry I	4 credits
• BIO 444 – Senior Seminar	3 credits
• BIO 488 – Internship or RBIO 466 – Research Biology	3 credits
• Three BIO Electives* (Two must be at the 300 level or higher.)	9 credits
• CHE 111/112 – General Chemistry I and II	8 credits
• CHE 211/212 – Organic Chemistry I and II	8 credits
• PHY 101/102 – General Physics I and II	8 credits
Total:	**68 credits**

*Acceptable BIO electives for the Pre-Medicine track include:

- BIO 225 – Parasitology
- BIO 230 – Human Anatomy and Physiology I
- BIO 250 – Nutrition
- BIO 312 – Theory and Practice in Biotechnology
- BIO 314 – Endocrinology
- BIO 318 – Basic Virology
- BIO 331 – Neuroscience
- BIO 350 – Topics in Biology (select topics only)
- BIO 412 – Topics in Drug Design & Manufacturing
- BIO 420 – Immunology
- BIO 430 – Developmental Biology
- BIO 441 – Biochemistry II
- BIO 499 – Independent Study

  or others with approval of the Department Chair

Other Requirements:

- Students must meet all course prerequisites to enroll in an upper-level course. Students must take MAT 117, MAT 130, or be exempt ***and*** either MAT 118 or MAT 313 to fulfill the Quantitative Literacy requirement or as electives.
- Students must earn a C- or higher in BIO 101 to enroll in BIO 102.
- Students must earn a C- or better in both BIO 101 and BIO 102 to take upper-level Biology courses.
- Students must be admitted to the Department formally to take coursework past BIO 102, CHE 112, and PHY 102.
- Based on SAT scores and high school preparation, some students must complete CHE 100 as part of their major program.
- Students must achieve and maintain a 2.0 QPA or higher in majors-level BIO, CHE, and PHY courses when they have completed 16 or more credits in science courses to remain in and graduate from the Biology/Pre-Medicine major. Transfer students with eight or more credits in science at the time of enrollment will be assessed after eight credits have been earned at Cabrini. Students dropping below a 2.0 may be put on probation or dismissed from the program.
- Students must have a 2.33 QPA or higher to enroll in BIO 488 or RBIO 466.
- No required or related courses in the major may be taken under the pass/fail option.
- Students must complete a minimum of 15 credits in BIO courses at Cabrini to earn a degree from the department.

Biology/Pre-Medicine Student Progress Record

Update this progress record each semester, by checking off each course taken, to ensure you have completed the college and departmental requirements.

General-Education Requirements

Engagements: ECG 100 ☐ ECG 200 ☐ ECG 300 ☐

Explorations: Heritage ☐ Values ☐ Individual & Society ☐ Aesthetics ☐

Literacies:

Information	IST (100 or 125) ☐	
Religious	REL ☐	
Scientific	PHY 101 ☐	PHY 102 ☐
Quantitative	MAT 117 or MAT 130 or EXEMPT ☐	
	MAT 118 or MAT 313 ☐	
Cross Cultural	_____	and _____ (101/102-level)
	or	_____ (102, 201, or EXEMPT)

Other: COL 101 ☐ ENG 100 (if required) ☐ MAT 098/099 (if required) ☐

Major

Biology:

BIO 101 ☐	BIO 102 ☐	BIO 206 ☐	BIO 263 ☐
BIO 231 or 301 ☐	BIO 308 ☐	BIO 315 ☐	BIO 440 ☐
BIO 444 (Part 1) ☐	BIO 444 (Part 2) ☐		
BIO 488 or RBIO 466 ☐			

BIO elective _____

BIO elective _____

BIO elective _____

Chemistry:

CHE 100 (if required) ☐	
CHE 111 ☐	CHE 112 ☐
CHE 211 ☐	CHE 212 ☐

Physics: See above.

Electives

Complete electives to reach 123 credits.

Biology/Pre-Medicine – Accelerated Podiatric Medicine Curriculum

Students intending to earn a Bachelor of Science in Biology/Pre-Medicine at Cabrini College and a Doctor of Podiatric Medicine at Temple University School of Podiatric Medicine (TUSPM) must complete all the Core and General Education courses required by Cabrini College. Students must complete additional credits in Biology and related fields at Cabrini College and the first year podiatric medicine curriculum at Temple University prior to awarding of the B.S. degree.
Please contact Dr. Kimberly Boyd to discuss this option in detail.

Cabrini College General-Education/Major Requirements:

- BIO 101/102 – Biological Science I 8 credits
- BIO 206 – Cell and Molecular Biology 4 credits
- BIO 263 – Genetics 4 credits
- BIO 308 – General Microbiology 4 credits
- BIO 315 – Introduction to Scientific Presentations 1 credit
- CHE 111/112 – General Chemistry I and II 8 credits
- CHE 211/212 – Organic Chemistry I and II 8 credits
- MAT 130 or higher – Calculus I (As Quantitative Literacy or Elective) 4 credits
- PHY 101/102 – General Physics I and II 8 credits

Courses taken at Temple University:

- BIO 301 – General Physiology credit for course #111 – Physiology
- BIO 440 – Biochemistry I credit for course #110 – Biochemistry
- BIO 444 – Senior Seminar credit for course #161 – Research Design
- BIO 488 – Internship credit for course #130 – Podiatric Medicine
- BIO 331 – Neuroscience credit for course #104 – Neuroscience
- BIO Elective credit for course #100 – Histology
- BIO Elective credit for course #102 – General Anatomy

Other Cabrini College Requirements:

The Cabrini College Pre-Medical advisor reserves the right to only support applications for students who have:

- taken all science classes at Cabrini College ***or*** who have received prior approval to take classes off campus from the Pre-Medical advisor
- earned a B- or higher in all required courses plus a 3.33 basic science QPA ***or*** earned no less than a C in all required courses plus a 3.5 basic science QPA
- have no record of academic dishonesty at the College

Articulation Requirements:

- Completion of 90 or more credits at Cabrini College.
- A score of 20 or higher on the Medical College Admissions Test (MCAT) or score above the 45th percentile in all sections of the Graduate Record Exam (GRE).
- A successful interview and evaluation by the admissions committee of TUSPM during fall of junior year
- A composite letter of recommendation from the Cabrini College pre-medical advisor and two additional letters of recommendation from health professionals, including one from a podiatric physician.

Biology/Pre-Medicine – Accelerated Dental Medicine Curriculum

Students intending to earn a 3+4 Bachelor of Science in Biology/Pre-Medicine at Cabrini College and a Doctorate of Dental Medicine (D.M.D.) at Temple University School of Dentistry (TUSD) must complete all the core and distribution courses required by Cabrini College.

Students must complete credits in Biology and related fields at Cabrini College and the first year dental medicine curriculum at Temple University prior to awarding of the B.S. degree.

Please contact Dr. Kimberly Boyd to discuss this option in detail.

Cabrini College General-Education/Major Requirements:

- BIO 101/102 – Biological Science I — 8 credits
- BIO 206 – Cell and Molecular Biology — 4 credits
- BIO 263 – Genetics — 4 credits
- BIO 301 – General Physiology — 4 credits
- BIO 308 – General Microbiology — 4 credits
- BIO 315 – Introduction to Scientific Presentations — 1 credit
- BIO 440 – Biochemistry I — 4 credits
- CHE 111/112 – General Chemistry I and II — 8 credits
- CHE 211/212 – Organic Chemistry I and II — 8 credits
- MAT 130 or higher – Calculus I (as Quantitative Literacy or Elective) — 4 credits
- PHY 101/102 – General Physics I and II — 8 credits

Courses taken at Temple University:

- BIO Elective — credit for course D101 – General and Oral Histology (6 credits)
- BIO Elective — credit for course D202 – Gross Anatomy (4 credits)
- BIO Elective — credit for course D203 – Neuroanatomy (2 credits)

- BIO 444 – Senior Seminar and BIO 488 – Internship — credit for courses in Preventive Dentistry, Restorative Dentistry, Dental Materials, Introduction to Periodontology (16 credits)

Other Cabrini College Requirements:

The Cabrini College Pre-Dental advisor reserves the right to only support applications for students who have:

- taken all science classes at Cabrini College ***or*** who have received prior approval to take classes off campus from the Pre-Dental advisor
- earned a B- or higher in all required courses plus a 3.33 basic science QPA OR earned no less than a C in all required courses plus a 3.5 basic science QPA
- and have no record of academic dishonesty at the College

Articulation Requirements:

- Students must complete 90 or more credits at Cabrini College prior to June 30 of the admission year to TUSD.
- To meet Temple University's requirements, students must earn a 3.2 QPA or higher overall and in science at the time of application and admission to Temple University.
- Formally declared intention to participate in the TUSD-articulation program to the Cabrini College Pre-Dental advisor prior to May 1 of sophomore year.
- Students must complete the Dental Admission Test (DAT) no later than October of their junior year and earn minimum scores as determined by the TUSD. English proficiency is also required as determined by TUSD.
- Students must complete an application and have a successful interview by the admissions committee of TUSD during fall of junior year. TUSD reserves the right to refuse admission to any candidate it feels does not meet the minimum admission standards set forth by the TUSD admissions committee.
- Obtain a composite letter of recommendation from the Cabrini College Pre-Dental advisor with support of two additional Cabrini College Science Department professors.
- Students who cannot complete the Cabrini College requirements in three years may be eligible to participate in the articulation program after completion of their fourth year at Cabrini (5+3 or 4+4 options).

Biology/Pre-Medicine – Accelerated Physician Assistant Curriculum

Students intending to earn a Bachelor of Science in Biology/Pre-Medicine at Cabrini College and a Master of Medical Science in Physician Assistant Studies at Arcadia University through the articulation program must complete all the core, distribution, and major courses required by Cabrini, as well as meet the articulation requirements, some of which are described below.

Admission to the articulation program is competitive and admission is not guaranteed by Cabrini or Arcadia University. Please contact Dr. Kimberly Boyd to discuss this option in detail.

1. Students must be matriculated full-time at Cabrini College for their final four semesters in Biology/Pre-Medicine.

2. Arcadia grants assured admission each year to the four most qualified Cabrini College students who complete the following requirements:
   - Completion of degree requirements in Biology/Pre-Medicine or other acceptable major.
   - Successful completion of M.M.S. prerequisite courses, which include:
     - Six lecture/lab courses in Biology, including anatomy, physiology, and microbiology
     - Four lecture/lab courses in Chemistry, including organic chemistry
     - One course in Psychology; developmental or abnormal are highly recommended
     - One course in Statistics
     - Five courses in Humanities; Ethics is highly recommended.
   - 3.3 QPA overall
   - 3.3 QPA in prerequisite courses, excluding humanities
   - C or better in all prerequisite courses
   - A minimum of 1,700 on the verbal, quantitative, and analytical portions of the GRE, with no single score below 450
   - Knowledge of the profession through a minimum of 500 hours of relevant paid or volunteer work
   - A recommendation from a practicing, licensed physician or PA
   - A recommendation from the Pre-Medical Advisor at Cabrini College
   - Completion of a successful interview with the M.M.S. program director at Arcadia University

Biology Major Track Comparisons

Update this progress record each semester by checking off each course taken to ensure you have completed the college and departmental requirements.

General-Education Requirements

COL 101 ☐ ENG 100* ☐

Engagements: ECG 100 ☐ ECG 200 ☐ ECG 300 ☐

Explorations: Heritage ☐ Values ☐ Individual & Society** ☐ Aesthetics ☐

Literacies:

Information	IST (100 or 125) ☐	
Religious	REL ☐	
Scientific	PHY 101 ☐	PHY 102 ☐
Quantitative	MAT 098 or MAT 099* ☐	
	MAT 117 or MAT 130 or Higher** ☐	
	MAT 118 or MAT 313** ☐	

Cross Cultural / Global Literacy _____and _____*

*If required based on freshman placement results

**SPE 110 is a required core course for the Biology/Secondary-Education Certification degrees.

Biology Major Core Requirements

BIO 101☐ BIO 102 ☐ BIO 206 ☐ BIO 263 ☐ BIO 315 ☐

BIO 444 ☐ BIO 488 or RBIO 466 ☐

CHE 111 ☐ CHE 112 ☐

CHE 211 ☐ CHE 212 ☐

Biology Track Requirements

	Biological Sciences	Molecular Biology/Biotechnology	Pre-Medicine
BIO 231/301	☐		☐
BIO 248			
BIO 308		☐	☐
BIO 312		☐	
BIO 318		☐	
BIO 348	☐		
BIO 420		☐	
BIO 440		☐	☐
BIO 489			
BIO Elective	☐	☐	☐
BIO Elective	☐		☐
BIO Elective	☐		☐
CHE 212		☐	☐

Approved electives vary for each track. Consult the College Catalog or advisor for a list of acceptable electives.

Chemistry Major

The Chemistry program at Cabrini is designed to prepare chemistry majors for successful careers in a variety of industries and professions including the pharmaceutical industry, biotechnology, medicine, academics, secondary education, government labs, as well as other chemistry related fields.

Students seeking a Bachelor of Science degree in Chemistry are required to take PHY 101/102 as their Scientific literacy requirement and must take MAT 130 for their core requirement in mathematics. Additionally, students must take 49–50 credits in Chemistry and related fields to complete the degree.

- CHE 111/112 – General Chemistry I and II — 8 credits
- CHE 201 – Analytical Chemistry — 3 credits
- CHE 211/212 – Organic Chemistry I and II — 8 credits
- CHE 303 – Inorganic Chemistry — 3 credits
- CHE 315 – Introduction to Scientific Presentations — 1 credit
- CHE 401 – Physical Chemistry I ***or*** CHE 402 – Physical Chemistry II — 4 credits
- CHE 407 – Instrumental Analysis — 4 credits
- CHE 440 – Biochemistry I — 4 credits
- CHE 444 – Senior Seminar — 3 credits
- CHE 488 – Internship ***or*** RCHE 466 – Research Chemistry — 4 credits
  Students double majoring in Secondary Education may use SEC 490 in place of internship or research.
- CHE elective* — 3–4 credits
- MAT 131 – Calculus II — 4 credits
- PHY 101/102 – General Physics I and II — 8 credits

Total: 57–58 credits

* Chemistry majors are also required to take one chemistry electives from a selection of courses which includes:

- BIO 441/CHE 441 – Biochemistry II
- CHE 307 – Polymer Chemistry
- CHE 316 – Combinatorial and Computational Chemistry
- CHE 402 – Physical Chemistry II
- CHE 350 – Topics in Chemistry
- CHE 416 – Advanced Organic Chemistry I
- CHE 417 – Advanced Organic Chemistry II
- CHE 418 – Organic Spectroscopy
- ENS/CHE 220 – Environmental Chemistry or others with approval of Department Chair

Through an affiliation with a number of local colleges, students may have to take chemistry courses off-campus that will be included as part of their program of required chemistry courses.

Other Requirements:

- Students must meet all course prerequisites to enroll in an upper-level course.
- Based on SAT scores and high school preparation, some students will be required to complete CHE 100 as part of their major program.
- Students must earn a C- or higher in CHE 111 to enroll in CHE 112.
- Students must earn a C- or better in both CHE 111 and CHE 112 to take upper-level Chemistry courses.
- Students must be accepted into the major to take classes past CHE 112 and PHY 102.
- No required or related courses in the major may be taken under the pass/fail option.
- Students must achieve and maintain a 2.0 QPA or higher in CHE, PHY, and MAT courses once they have completed 16 credits or over in science courses to remain in and graduate from the Chemistry program. Transfer students with eight or more credits in science at the time of enrollment will be assessed after eight credits have been earned at Cabrini College. Students dropping below a 2.0 may be put on departmental probation or dismissed from the program.
- Students must have a 2.33 QPA or higher to enroll in CHE 488 or RCHE 466.

Chemistry Student Progress Record

Update this progress record each semester, by checking off each course taken, to ensure you have completed the college and departmental requirements.

General-Education Requirements

Engagements: ECG 100 ☐ ECG 200 ☐ ECG 300 ☐

Explorations: Heritage ☐ Values ☐ Individual & Society ☐ Aesthetics ☐

Literacies:

Information	IST (100 or 125) ☐	
Religious	REL ☐	
Scientific	PHY 101 ☐	PHY 102 ☐
Quantitative	MAT 130 or EXEMPT ☐	
Cross Cultural	_____	and _____ (101/102-level)
or	_____ (102, 201, or EXEMPT)	

Other: COL 101 ☐ ENG 100 (if required) ☐ MAT 098/099 (if required) ☐

Major

Chemistry:

CHE 100 (if required) ☐		
CHE 111 ☐	CHE 112 ☐	
CHE 201 ☐	CHE 211 ☐	CHE 212 ☐
CHE 303 ☐	CHE 315 ☐	
CHE 401 or 402 ☐	CHE 407 ☐	CHE 440 ☐
CHE 444 (Part 1) ☐	CHE 444 (Part 2) ☐	CHE 488 or RCHE 466 ☐
CHE Elective_____		

Math: MAT 131 ☐

Electives

Complete electives to reach 123 credits.

Pre-Nursing Program

Please note that this program is retiring as of May 2014.

The Pre-Nursing program at Cabrini prepares students to enter a professional nursing program leading to a Bachelor of Science in Nursing. Students generally complete the first two years at Cabrini and complete their final two to three years at a transfer institution.

Each transfer institution has its own unique admissions criteria, so the suggested two-year curriculum at Cabrini is for general purposes only. Students who need remedial coursework (*i.e.*, MAT 098/099) or who fail to earn a “C” or higher in course prerequisites will not be able to complete the outlined curriculum in two years.

- It is the student’s responsibility to identify specific nursing programs, speak with that school’s admission counselor, and determine their specific requirements.
- Cabrini does not have direct-transfer agreements with any nursing program, but does have a non-binding articulation agreement with Thomas Jefferson University. Please note that Jefferson maintains the right to alter their admission requirements at any time.

Please contact Dr. Melinda Harrison to discuss these options and opportunities in detail.

- Pre-Nursing is not a degree-granting major and does not provide any clinical coursework in its curriculum.
- Students must meet the criteria to be admitted to the major/program to take science coursework beyond BIO 102, CHE 112, and PHY 102.
- Regardless of their transfer requirements students must complete COL 101, and should complete ECG 100 and ECG 200 at Cabrini College.

Sample Curriculum

First Year

Fall

BIO 101	4 credits
CHE 111	4 credits
PSY 101	3 credits
ECG 100	3 credits
MAT 117 or higher	3–4 credits
COL 101	1 credit
Total:	15–16 credits

Spring

BIO 250 – Nutrition	3 credits
CHE 112	4 credits
PSY 320	3 credits
MAT 118	3 credits
Elective	3 credits
Total:	16 credits

Second Year

Fall

BIO 230	4 credits
BIO 308	4 credits
PSY 309	3 credits
SOC 215	3 credits
ECG 200	3 credits
Total:	17 credits

Spring

BIO 231	4 credits
Electives	12 credits
Total:	16 credits

- BIO 102 is highly recommended for preparation for upper division BIO courses, but is not required by
- CHE 100 may be required based on SAT scores and high school background.
- CHE 111 cannot be taken without the MAT prerequisite.
- Most institutions will not accept ECG 100 and 200 as an English.

  However, Cabrini students are expected to take Cabrini's general-education requirements.
- Most institutions will only accept grades of "C" or higher and most require a QPA above 3.0.

For information about nursing programs and the field of nursing, visit these resources:

http://www.nursingschools.com

http://www.nlnac.org/Forms/directory_search.htm

http://discovernursing.com

http://www.jefferson.edu/jchp

Pre-Occupational Therapy Program

Please note that this program is retiring as of May 2014.

Beginning January 2007, post-baccalaureate degree entry became the requirement for accredited occupational therapy (OT) programs nationwide. Therefore, there are no accredited baccalaureate programs in occupational therapy.

Cabrini does not have an OT major and does not provide any clinical training, but prerequisite coursework can be completed while earning a baccalaureate degree in another field. Upon graduation, students can apply for acceptance into occupational therapy graduate programs as an entry level master's degree (M.S.O.T) or an entry-level doctoral degree (D.O.T.) in occupational therapy depending on the particular program they are interested in.

Students must therefore complete a baccalaureate degree in a discipline other than occupational therapy and prerequisite coursework before being accepted into M.S.O.T., or D.O.T. graduate programs. Students may select from a variety of majors at Cabrini College, but must complete the prerequisite courses specified by the specific graduate program.

Generally, the prerequisites include an overall minimum GPA 3.2, a B- or higher in all prerequisite courses, completion of two semesters of Anatomy & Physiology, two courses in social sciences, developmental psychology, abnormal psychology or personality theory, statistics (social science based is preferred), and two courses in English.

Other eligibility criteria might include GRE, letters of recommendation, criminal background check, volunteer experience and interview. It is the student's responsibility to identify specific programs and contact their admissions office to clarify specific pre-requisite requirements.

For more information about OT programs and career, see the American Occupational Therapy Association website at www.aota.org. Please contact Dr. Melinda Harrison to discuss options in detail.

Pre-Occupational Therapy is not a degree-granting major and does not provide any clinical coursework in its curriculum.

Students must meet the criteria to be admitted to the major/program to take science coursework beyond

BIO 102, CHE 112, and PHY 102.

Regardless of their transfer requirements students must complete COL 101, and should complete ECG 100 and ECG 200 at Cabrini College.

Jefferson University does have a BS/MOT transfer program. For more information, visit www.jefferson.edu/jchp.

Pre-Pharmacy Program

Please note that this program is retiring as of May 2014.

The Pre-Pharmacy program at Cabrini prepares students to enter a professional pharmacy program leading to a bachelor's degree. Students generally complete the first two years at Cabrini and complete their final two years at a transfer institution. Students who need remedial coursework (*i.e.*, MAT 098/099) or who fail to earn a "C" or higher in course prerequisites will not be able to complete the outlined curriculum in two years.

It is the student's responsibility to identify specific pharmacy programs, speak with that school's admission counselor and determine their specific admissions requirements.

As each transfer institution has its own unique admissions criteria, the suggested two-year curriculum at Cabrini might need to be modified. Please contact Dr. Joseph Smith to discuss this option in detail.

- Pre-Pharmacy is not a degree-granting major and does not provide any clinical coursework in its curriculum.
- Regardless of their transfer requirements students must complete COL 101, and should complete ECG 100 and ECG 200 at Cabrini College.
- Students must meet the criteria to be admitted to the major/program to take science coursework beyond BIO 102, CHE 112, and PHY 102.

Sample Curriculum

First Year

Fall		Spring	
BIO 101	4 credits	BIO 102	4 credits
CHE 111*	4 credits	CHE 112	4 credits
MAT 130	4 credits	IST 125	4 credits
ECG 100	3 credits	PSY 101	3 credits
COL 101	1 credit	MAT 118	3 credits
Total:	16 credits	Total:	18 credits

Second Year

Fall		Spring	
BIO 230	4 credits	BIO 231	4 credits
PHY 101	4 credits	PHY 102	4 credits
CHE 211	4 credits	CHE 212	4 credits
SOC 215	3 credits	Elective	3 credits
ECG 200	3 credits	Elective	3 credits
Total:	18 credits	Total:	18 credits

*CHE 100 may be required based on SAT scores and high school background.

Most institutions will not accept ECG 100 and ECG 200.

Most institutions will only accept grades of "C" or higher and some require a 3.2 QPA overall.

Pre-Physical Therapy Program

Please note that this program is retiring as of May 2014.

The Pre-Physical Therapy program at Cabrini College prepares students to enter a professional physical therapy program leading to a Doctorate degree.

Most physical therapy programs do not accept non-degreed students, therefore it is usually necessary to complete a B.S. degree at Cabrini and take all prerequisite courses before entering a physical therapy program at the graduate level.

Most students elect to pursue a degree in Biology or Exercise Science & Health Promotion. Cabrini College does not offer a physical therapy major and does not offer any clinical coursework. Cabrini College also has a 3+3 articulation agreement with Widener University.

This articulation agreement states that after completion of the first professional year at Widener, a B.S. in Biology is awarded from Cabrini and after completion of the final two professional years a DPT is awarded from Widener. Because of the demands of the 3+3 program, it is recommended only for students with an outstanding academic record in high school and a strong background in science.

Students must have a high school GPA of 3.5 or higher and an SAT (verbal/math) of 1150 or higher (ACT of 27 or higher) to be considered for this accelerated program.

Specific requirements for this and other local physical therapy programs are presented on the following pages. However, schools have the right to change their requirements therefore it is solely the student's responsibility to identify specific programs and speak with their admissions counselors to verify requirements.

For more information about physical therapy programs, see the American Physical Therapy Association website at www.apta.org. Please contact Dr. Melinda Harrison to discuss options in detail.

- Students must meet the criteria to be admitted to the major/program to take science coursework beyond BIO 102, CHE 112, and PHY 102.

- Students may consider taking prerequisite courses at Cabrini and transferring to another institution. Generally, two years are needed to complete requirements to enter most pre-Physical Therapy programs.

- Students who need remedial coursework (*i.e.*, MAT 098/099) or who fail to earn a "C" or higher in course prerequisites will not be able to complete the outlined curriculum in two years.

- Regardless of their transfer requirements students must complete COL 101, and should complete ECG 100 and ECG 200 at Cabrini College.

Secondary-Education Certification

The College does offer a major in Secondary Education and certification in both biology and chemistry.

Students should refer to the College Catalog at www.cabrini.edu/catalog for Secondary-Education major requirements.

Capstone Experiences

While science coursework provides students with content knowledge, technical skills, application skills, and written and oral communication skills, two capstone experiences are part of the biology and chemistry curricula as well.

These courses help students integrate their knowledge, to explore individual areas of interest through research, and to better understand what it is to be a professional scientist. Majors seeking Secondary-Education Certification are exempt from BIO/CHE 488, but must complete SEC 490 – Student Teaching and Practicum in its place. Grades for SEC 490 are not used in the science-major GPA calculation for graduation.

BIO/CHE 444 – Senior Seminar

During their final year, students complete a senior thesis project and participate in a science research seminar series. During the fall semester, students register for BIO/CHE 444 (1.5 credits).

During this semester, students will have weekly meetings with the course advisor, select a topic of interest, select a faculty mentor, and begin library research of peer-reviewed scientific journals.

During the spring semester, students will again register for BIO/CHE 444 (1.5 credits). In this semester, students will meet weekly with a faculty advisor and discuss issues related to research, written and oral communication skills, careers in the sciences (*e.g.*, resume writing, job interviews), and post-graduate education. Students also continue working on their research thesis. The year culminates with a written thesis on their selected topic, a public poster presentation of the work, and an oral defense.

BIO/CHE 488 – Internship or RBIO/RCHE 466 – Research Biology/Chemistry

The second experiential capstone experience is for students to gain practical experience in the workplace.
Students completing BIO/CHE 488 are placed in industry, university research labs, and hospitals, depending on their area of interest and must complete a minimum of 135 hours in the field for the Biology major and 180 hours in the field for the Chemistry major. Students should begin to search/apply for internship positions during their junior year.

Positions may be paid or volunteer, but must be approved by the department before credit will be granted.
The department will attempt to assist students who are unable to obtain a position themselves. Note that successful internship placement is dependent upon the selection criteria of the company, university, or hospital in conjunction with the student's academic performance.

Students will register for BIO/CHE 488 during a semester either after the internship is completed or while the internship is in progress. Students are graded based on a work evaluation from their supervisor, a written summary of their research activities, and an oral presentation of their work.

- Please see the Departmental Internship Handbook, available at www.cabrini.edu/science, for details.

Select students complete RBIO/RCHE 466 and have the opportunity to do research with a Cabrini College Science faculty member. The criteria for selection and requirements of the course are determined by the faculty member and the student must complete an Undergraduate Research Proposal (See pg. 32).

Students may enroll in RBIO/RCHE 466 multiple times. If the course is used to fill the capstone experience requirement, students must complete oral and written presentation requirements. Students should consult their research advisors for details about this requirement. Students may also take the course as a BIO/CHE elective (limit of three credits may be applied to the major requirements) or as a free elective.

The College cannot guarantee internship/research lab placement. In the event that placement is unsuccessful, the student will be required to complete an additional 3-4 credit BIO/CHE elective at the 200-level or higher to substitute for the internship experience.

- *See Cavalier Express Center, www.cabrini.edu/CavalierExpress, for most current forms.*

Honors in the Major

In addition to Latin honors conferred at graduation and completion of the College honors program, students in the Sciences may also apply for honors within the Department.

Earning honors in the major is limited to students with an overall QPA of 3.0 or higher, a science QPA of 3.5 or higher, and to those having been accepted to one of the science honor societies.

Students must also complete an independent research project (three-credit minimum of RBIO/RCHE 466) with a faculty member in the Science Department and present their work at a regional or national conference.

The following application should be submitted to the department chair no later than one semester prior to graduation.

Application for Honors in the Science Department

Name _____

College ID Number _____

Major_____

Track_____

Month and Year of Expected Graduation _____

The following requirements must be met to graduate with Honors in the Department

1. File this application with the Chair of the Science Department.
2. Have a overall QPA of at least 3.00 at the time of graduation.
3. Have a QPA in all majors-level Science courses (BIO, CHE, ENS, PHY; MAT 131 is included for chemistry majors) taken at Cabrini of at least 3.5 at the time of graduation.
4. Complete and give a public presentation (poster or oral) at a conference (other than at Cabrini) about a research project, done in collaboration with or under the supervision of a full-time member of the Science Department.
5. Be a member of the Cabrini chapter of *Beta Beta Beta*, a national biological honor society, or *Gamma Sigma Epsilon*, a national honor society for chemistry majors.

I acknowledge that the filing of this application does not guarantee that I will graduate with Honors in the major, and that to achieve that status, I must meet all the requirements stated above at the time of graduation.

Applicant's Signature _____ Date _____

Department Chair's Signature _____ Date _____

Double Majors

Some students may elect to pursue a double major to gain extensive skills in another field or pursue a unique career path.

Students are suggested to begin courses in their second major as early as possible, but be aware that completing two majors generally requires a student to far exceed the 123-credit graduation minimum and might not allow completion of the degrees within four years.

Because this can also be academically rigorous, it is suggested that only students with strong QPAs attempt a double major. Students may not earn a double degree by completing the requirements of two tracks within a major.

Student double majoring in biology and chemistry are only required to take two capstone courses, one Senior Seminar and one Internship/Research/Student Teaching, not two for each major.

In this case, to meet American Chemistry Society curriculum guidelines, the Senior Seminar project must be biology-based and the Internship / Research / Student Teaching must be chemistry-based.

Minor Requirements

All students are encouraged to consider developing a minor to expand their knowledge in another discipline.
The requirements for all minors are listed within the Cabrini College Catalog, www.cabrini.edu/Catalog.
The Science Department offers minors in biology, chemistry, and environmental science.

Awarding of all Science Department minors requires a minimum of a 2.0 QPA in all required and elective minor courses. Students must take at least two courses not already required in their major to earn a minor in one of these science fields. Students not already a member of the Science Department must meet requirements necessary to be accepted into the Department to take courses past BIO 102, CHE 112, and PHY 102.

Biology Minor Requirements

BIO 101	4 credits	Three additional BIO courses	
BIO 102	4 credits	(200-level +)	9 credits
One BIO lab course (200-level +)	4 credits	**Total:**	**21 credits**

Students must meet all required course prerequisites to enroll.

Students may not use BIO 248 – Biological Application of Earth Science, BIO 444 – Senior Seminar, BIO 488 – Internship, BIO 489 – Curriculum Methods, or RBIO 466 – Research Biology for the minor.

Chemistry Minor Requirements

CHE 111	4 credits	Three additional CHE courses	
CHE 112	4 credits	(200-level +)	9 credits
CHE 211	4 credits	**Total:**	**21 credits**

Students must meet all required course prerequisites to enroll.

Students may not use CHE 444 – Senior Seminar, CHE 488 – Internship, CHE 489 – Curriculum Methods, or RCHE 466 – Undergraduate Research for the minor.

Environmental Science Minor Requirements

BIO 101	4 credits	Select from the following:	6 credits
BIO 102	4 credits	BIO 209 – Field Biology/Costa Rica Sea Turtle Ecology	
BIO 348 – Ecology	4 credits	ENS 320 – Environmental Chemistry	
		PHI 326 – Environmental Ethics	
		ENS 210 – Wetlands Ecology	
		or BIO 211 – Watershed Ecology (NSF course)	
		or other 200-level or higher BIO/ENS courses	
		with approval of Department Chair	
		Total:	**18 credits**

Students must meet all required course prerequisites to enroll.

Students declaring this minor might need to take select courses at an affiliate or other college. Students not declaring this minor in their freshman year might be unable to complete the minor prior to graduation.

Registration Procedures

Registration for Courses

During the summer prior to admission and at the mid-point of each semester, students register for the next semester's courses. Registration materials and dates are mailed several weeks ahead of time.

Prior to the registration period, students should make appointments with their advisors to discuss course selections and fill out a "Registration Roster." Before the meeting, students should make a list of courses they would like to take or that fulfill college requirements. Students might not get their first choice of times or classes, so they should come prepared with several alternates. Students wanting to maintain full-time status must register for a minimum of 12 credits per semester.

Students may take up to 18 credits without special permission. Only upperclass students with a QPA of 3.0 or higher may attempt more than 18 credits and only with permission of their advisor. After meeting with their advisor and obtaining a signature on the roster, students should take the roster to the Registrar's Office or register through CabriniOne at the designated time to complete the process.

Registration preference is based on seniority at the college (*i.e.*, students with senior status (>90 credits) register before students with junior status (60–89.5 credits). The designated registration time will be indicated on registration materials or can be found in the front of the "Class Schedule."

Add/Drop policy

After a student's initial roster is submitted, any changes must be requested using a "Course Add Card" if adding a course only or a "Course Add/Drop" if dropping a course or adding and dropping courses. Students should consult their advisors or the Registrar's Office to obtain and complete these forms. The Add/Drop period usually extends for the first week to week-and-a-half of classes. The specific deadline each semester will be published in the Academic Calendar, available at www.cabrini.edu/AcademicCalendar.

After the deadline, courses can no longer be added. Courses dropped during this time period will not be noted on a student's college transcript.

Withdrawal policy

After the Add/Drop deadline, courses may be dropped by filling out a "Course Withdrawal Card" or filling out the online "Withdrawal Form" prior to the withdrawal deadline published in the Academic Calendar. Courses dropped during this time period will appear on transcripts with a "W" indication. These classes will not be used in calculating QPA or total credits completed.

Taking a Class at Another Institution

Upperclass students may take courses at other two-year or four-year colleges, but should discuss this option with their advisors before registering for the course at another college. Obtain a copy of the course syllabus from the instructor or provide a copy of the course description in the college's catalog. If approved, advisor will fill out and sign an "Approval for Credit Taken at Other Institutions" form.

This form must also be co-signed by a member of the Academic Affairs staff. Although credits earned at another school may be transferred to Cabrini and the credits will count towards the 123-credit graduation minimum, the grade will not be used in calculating QPA. The only exceptions to this are classes taken during the fall or spring semesters at Eastern College, Valley Forge Military Academy, and SEPCHE institutions with which Cabrini has reciprocal agreements.

Students enrolled in any of the Science majors (biology, chemistry) may not take any science courses off campus without prior approval of their advisor or department chair. The only class equivalents that can be taken off-campus at a 100-level are those equivalent to BIO 101/102, CHE 111/112, and PHY 101/102. These courses must be designed for majors, must be four or more credits, and must have a lab component.

Any 200-level or higher course required at Cabrini College must be taken at a 200-level or higher and may not be more than one class level below the equivalent course at Cabrini. Examples include if a student wants to take BIO 230 – Human Anatomy and Physiology off campus to meet graduation requirements, they may not enroll in a 100-level Anatomy and Physiology course at a community college or if they want to take BIO 440 – Biochemistry I off campus, a 200-level biochemistry course cannot be used, but a 300- or 400-level can.

Students enrolled in Pre-Professional programs (Pre-Nursing, Pre-Occupational Therapy, Pre-Pharmacy, Pre-Physical Therapy) that do not intend to graduate from Cabrini College and are just filling course prerequisites must abide by the same rules if they want to transfer specific courses to Cabrini. If the above rules are not followed, students may transfer in the credits as “Science core” only to facilitate receipt of financial aid and to make satisfactory academic progress.

CLEP / DANTE / AP Credit

Students may also earn credit towards graduation through the CLEP, DANTE, or AP programs. Students must earn a grade of 4 or 5 on AP science-based exams to earn credits towards graduation. A list of currently accepted exams can be found in the College Catalog.

Declaring a Major or Minor

Student who indicated a major or minor on their application to the College are not officially admitted into the major/minor until they complete and submit an “Application for Undergraduate Major/Minor” form.

Students should complete this form before sophomore year to be assigned to an appropriate departmental advisor. Forms are available from the Registrar’s Office and must be signed by the Department Chair.

Students must also meet the admission standards of the Department as outlined in this handbook.

Graduation Applications

Finally, an application for graduation is required prior to the completion of degree requirements. Students are informed by mail about deadlines for graduation. “Application for Graduation” forms are available from the Registrar’s Office.

Grading Policies

Grading System

Cabrini College uses the 4.0 grading system to evaluate students' achievements in a course. Each letter grade is assigned a numerical value called quality points as follows:

Letter Grade	Quality Points	Letter Grade	Quality Points
A	4.00	C	2.00
A-	3.67	C-	1.67
B+	3.33	D+	1.33
B	3.00	D	1.00
B-	2.67	F	0.00
C+	2.33		

Quality Point Average (QPA)

QPA is calculated by dividing the total number of credit hours attempted in classes with A–F letter grades into the total number of quality points earned.

To calculate the number of quality points earned for each course, multiply the quality point value for the letter grade earned and multiply it by the number of course credits for that class. For example, a B in a four-credit class earns 3.00 (quality points for a B) x 4 (credits for the class) = 12.00 total quality points.

The following letter grades may be present on transcripts, but are not used in calculating the QPA:

- P (pass)
- IP (in progress)
- NC (no credit)
- AU (audit)
- PH (pass with honors)
- NG (no grade)
- TR (transfer)
- CR (credit)
- I (incomplete)
- NR (not reported)
- W (withdrawn)

Also, students who repeat a class to earn a different grade will only earn credit for taking the course once.
The quality points used to calculate QPA will be based on the last grade received in the course, even if is a lower grade.
Note that transcripts show all attempts at taking a class.

Example of Calculating Overall QPA

Course	Letter Grade	Quality Points	Course Credits	Total Quality Points Earned
BIO 101	B	3.00	4 credits	12.00
CHE 111	A-	3.67	4 credits	14.68
ECG 100	F	0.00	3 credits	0.00
IST 125	W	0.00	0 credits	0.00
SPA 101	C+	2.33	3 credits	6.99
			14 credits	**33.67 quality points**

QPA = 33.67 / 14 = 2.405

Warning Notices

If a student is at risk of earning a D or F grade at the mid-point of the semester (prior to the Withdrawal deadline), instructors for those courses may fill out a “Warning Notice” form that is sent to the student, their advisor, and the Academic Dean. This notice is to make students aware of poor performance in a class and may include instructor’s suggestions for improvement.

Department Grading Standard

Science Department faculty members set and uphold their own grading policies. All policies are clearly stated in the syllabus provided for each course.

Please refer to individual faculty with questions regarding their grading standards and policies.

Departmental Grievance Policy

It is hoped that relationships with the faculty will be academically rewarding, respectful, and fair. However, if a grievance does occur, the following procedures should be employed:

1. Discuss the grievance no later than six weeks after the end of the semester with the faculty member involved and attempt to settle the issue.
2. If the student is not satisfied with this resolution, he or she should lodge a formal complaint with the Department Chair within a two-week period. The student should prepare documentation of the grievance if possible.

   The Chair, faculty member, and student will attempt to resolve the problem.
   If the Chair is the focus of the complaint, the student should proceed directly to step 3.
3. If an acceptable solution cannot be reached after steps 1 and 2 have been completed, the student may lodge a formal, written grievance with the Academic Affairs Office within two weeks.
   The Dean for Academic Affairs or his/her designees will attempt to resolve the issue.
4. If the student is still unsatisfied, the student may appeal the issue to the Academic Grievance Board, which will make the final recommendation for resolution.

Academic Honesty Policy

Academic honesty is expected on all work completed towards academic degrees. Acts of dishonesty include, but are not limited to, cheating, plagiarism, allowing another student to cheat from or copy work, copying work from another student, data fabrication, and misrepresentation for the purpose of making-up an exam or extension of assignment deadlines.

Details of the academic honesty policy and penalties can be found in the Student Handbook and the College Catalog. Each instructor provides additional information about his or her particular policies and penalties in the course syllabus.

In addition to the course-related penalties, faculty may withhold support for a student for admission to medical, graduate, and/or professional school programs.

Departmental Organizations and Societies

Science Club

The Science Club welcomes all Cabrini students with an interest in science. It meets several times each semester. The club sponsors speakers, field trips and parties and has also participated in the hiring of new Science faculty. Fliers announcing meeting times and events are typically posted throughout the Iadarola Center's second and third floor.

Beta Beta Beta

Tri-Beta is the national undergraduate honor society in biology. The Lambda Rho Chapter was chartered at Cabrini in 1974. Biology majors with an overall QPA of 3.0 or greater after completing 3 or more semesters of a 4-year curriculum and a BIO QPA of 3.0 or greater after the completion of 12 credits in BIO courses are eligible for induction as regular members. Associate membership is open to any students who meet these credentials. Dr. Nielsen is the faculty advisor to this society.

Gamma Sigma Epsilon

The Rho Chapter of Gamma Sigma Epsilon, the National Chemistry Honor Society, invites students who excel in the area of chemistry to apply for membership. Active membership of the Chapter is composed of students who have completed a minimum of 16 credit-hours in chemistry and are declared major or minors in the field. Students must have a minimum grade point average of 3.0 in all CHE courses and at least a 3.0 overall grade point average. Biology majors who meet the minimum chemistry credits are also eligible for membership. Gamma Sigma Epsilon's faculty advisor is Dr. Harrison.

Advising

Academic Advising

Academic Advising begins in the summer prior to freshman year when students meet their instructor for COL 101–College Success Seminar. This faculty member serves as advisor until the student formally declares a major.

After declaring a major, students are assigned a full-time faculty advisor in the department based on career interests and goals. Faculty advisors assist with course scheduling, academic progression, and career planning.

Tutoring

The College's Center for Teaching & Learning is dedicated to helping students reach their full academic potential. Support services include peer tutoring, a writing center and a math center, and are available to all students free of charge. Contact the Center at 610-902-8213 to schedule tutoring services or if you would like to serve as a tutor.

Counseling Services

Free counseling, consultation, and psychological services are available on campus to students. Please call 610-902-8566 to schedule an appointment. Campus Ministry (610-902-8225) also offers student support and guidance.

Disability Resource Center

Students with identified physical or learning disabilities are eligible to receive support services from Cabrini's Disability Resource Center. Contact 610-902-8572 for more information.

Career and Post-graduate Education Services

Academic advisors assist students in focusing career interests and guiding students through the process of applying for jobs, graduate school, or tests such as the GREs or MCATs.

BIO/CHE 315 – Introduction to Scientific Presentations and BIO/CHE 444 – Senior Seminar will also address many of these issues formally.

Career guidance is also available through the Center for Career and Professional Development. This office provides individual career counseling and testing to assess interests, skills, values, and experiences, and also to review resumes. The office also contains a career-resource library, alumni connections, and organizes career fairs. Students may visit the Grace Hall office or call Nancy Hutchison at 610-902-8304 to arrange a conference.

Lab Safety Policies

Cabrini College's complete Chemical and Biological Hygiene Plan is available for review at www.cabrini.edu/science.
All students are required to familiarize themselves with standard lab safety practices and complete a lab safety contract in each lab course at the College.

- If a student is breastfeeding, pregnant, or believes she might be pregnant, it is her responsibility to notify the faculty member immediately. Exposure to some chemicals and materials could be harmful.
- If a student has any allergies or chemical sensitivities, it is his or her responsibility to notify the faculty member immediately.
- In both cases, the faculty member, lab safety/chemical hygiene officer (if needed), and student will meet to discuss accommodations for the course.

Failure to comply with safety policies could result in dismissal from a class session and reduction in course grade.

- ***Egregious or repetitive infractions may also result in failure of or dismissal from a course, or even the department and major, without a probationary period.***

Standard Laboratory Safety Practices

1. No student or faculty member will be permitted into any laboratory of the Science Department of Cabrini College without being properly trained in all safety procedures and signing the Cabrini College Safety Contract.
2. No eating, drinking, or smoking is permitted.
3. Pipetting by mouth is prohibited.
4. Storage of food and drink is limited to non-laboratory areas.
5. Cosmetics must not be applied in the labs.
6. Proper hygiene includes frequent hand washing, especially prior to leaving the laboratory.
7. Lab coats or special clothing required in containment areas must be worn and buttoned in the laboratory, and removed when moving outside of the laboratory. At any time, clothing must be worn that covers a substantial portion of the skin. For example, bare midriff clothing, shorts, gym trunks, ripped jeans, and skirts are prohibited.
8. Glass and sharp objects must be disposed of in specially marked containers.
9. Lab benches must be cleaned regularly. In the event of spills or contamination, cleanup is to be done immediately.
10. Animals not involved in the project are not permitted in the laboratories.
11. Long hair must be tied back, and jewelry must be removed before entering the laboratory.
12. Shoes that cover and protect the feet must be worn in the laboratory. Open-toe shoes, high heels, and sandals are strictly forbidden in the laboratory. Any student so dressed will not be permitted to complete the laboratory exercise.
13. Gloves should be worn during any laboratory exercise where skin contact with chemicals is possible.
14. A safety shield must be used when working with highly reactive chemicals and mixtures.
15. Others in the laboratory must be alerted before the lighting of any flames.
16. Assemble laboratory apparatus away from the edge of the laboratory bench.
17. Glassware must be inspected before use, and glassware with obvious flaws, chips, or breaks must be discarded.
18. Laboratory hoods must be used when working with chemicals that are toxic, corrosive, irritating, or flammable.
19. Drawers and cabinets must be closed at all times, except when actually inserting or removing an item.

Student Safety Contract

1. Wear the required safety eye protection (safety glasses) in the laboratory at all times. Contact lenses ***must not*** be worn in the laboratory when chemicals are used.
2. Wear shoes at all times that provide protection to your feet. Sandals and open-top shoes are not permitted in the lab.
3. Long hair must always be tied back. Long hair is a serious fire hazard.
4. Wear clothing which covers most of the body. No belly buttons please.
5. Never eat, drink, chew gum, smoke, or apply make-up in the laboratory. These activities are strictly prohibited.
6. Consider all chemicals to be dangerous (hazardous) unless you are specifically instructed otherwise. Read labels carefully.
7. Never taste chemicals.
8. Never smell (inhale) gases or vapors directly. When you are instructed to report the odor of a chemical, gently waft the vapors toward your nose and smell cautiously as described by instructor.
9. If the chemicals come in contact with your eyes or skin, wash immediately with large amounts of water. ***Call for help while washing***. Contaminated clothing should be removed.
10. Never rub your eyes in lab. Wash your hands with soap and water often, especially after you complete the laboratory experiment.
11. Volatile chemicals that are poisonous, irritating to the skin, or that have unpleasant odors should always be used under the fume hood.
12. Never point a test tube or any other reaction vessel toward yourself or anyone else. Chemicals undergoing reaction may spatter over a large area.
13. Most organic liquids are flammable, as are some gases such as hydrogen. Never use flammable chemicals near a flame or a hot plate.
14. Clean up all broken glass immediately. Similarly, spilled chemicals should be cleaned up immediately. ***Look before leaning on lab bench. Do not place elbow in puddle***.
15. Always pour ***concentrated*** acids in water, never water into acid. Sulfuric acid, for example, releases enough heat to cause spattering. Hot concentrated acids are very corrosive.
16. Carefully observe the safety precautions that are included in the experiments.
17. Always be alert to the possibility of an accident by your neighbors. You could be a victim of their mistakes. Always advise them of any unsafe practices you observe. If necessary, inform your instructor immediately.
18. Always maintain an orderly, businesslike attitude and a clean, orderly working space. Horseplay may get you expelled from the lab.
19. Students ***should never work alone*** in the laboratory. The instructor must always be present.
20. Unauthorized experiments and unauthorized modifications of experiments are strictly prohibited.
21. If you have any doubt about what to do in any set of circumstances, consult your instructor.
22. Always keep laboratory drawers and doors to laboratory desks closed except when you are placing something into or removing something from your drawer or desk. Open doors and drawers obstruct the aisle. Such obstruction could cause serious accidents.
23. Do not return excess chemicals to their original containers.
24. Put paper waste and glass waste in waste containers.
25. Report broken equipment to your instructor immediately.
26. Chemicals are ***never*** to be taken from the laboratory.
27. Locate all safety equipment: fire extinguisher, emergency shower, eye-wash fountain, first aid kit, nearest telephone

FOR STUDENT'S RECORDS

Receipt of Science Department Student Handbook

By signing this document, I acknowledge receipt of the Science Department Student Handbook.

- I agree to read the handbook and take responsibility for understanding its contents.
- I will abide by all policies, procedures, and requirements as outlined in its pages.
- I understand that it is my responsibility to review updated information on an annual basis by referring to handbook updates on the Science Department webpage, www.cabrini.edu/science, or by requesting an updated handbook from the Department Chair.

Student Name (printed) _____

Student Signature _____ Date _____

FOR DEPARTMENTAL RECORDS

Receipt of Science Department Student Handbook

By signing this document, I acknowledge receipt of the Science Department Student Handbook.

- I agree to read the handbook and take responsibility for understanding its contents.
- I will abide by all policies, procedures, and requirements as outlined in its pages.
- I understand that it is my responsibility to review updated information on an annual basis by referring to handbook updates on the Science Department webpage, www.cabrini.edu/science, or by requesting an updated handbook from the Department Chair.

Student Name (printed) _____

Student Signature _____ Date _____