CATHOLIC POLYTECHNIC UNIVERSITY

500 S. Louise St., Glendale, CA 91205
Office: 424-242-2373

www.catholicpolytechnic.org

CATALOG OF COURSES
September 1, 2025 to September 1, 2026
Edited 2025

TABLE OF CONTENTS

NOTICES TO PROSPECTIVE STUDENTS

Catalog Review

As a prospective student, you are encouraged to review this catalog prior to signing an enrollment agreement. You are also encouraged to review the School Performance Fact Sheet, which must be provided to you prior to signing an enrollment agreement.

Provisional Approval

This institution is provisionally approved by the California Bureau for Private Postsecondary Education to offer degree programs. Approval does not imply endorsement. To continue to offer this degree program, this institution must meet the following requirements:

- Become institutionally accredited by an accrediting agency recognized by the United States Department of Education, with the scope of the accreditation covering at least one degree program•
- Achieve accreditation candidacy or pre-accreditation, as defined in regulations, by December 21, 2025, and full accreditation by December 21, 2028.

If this institution stops pursuing accreditation, it must:

- Stop all enrollment in its degree programs, and
- Provide a teach-out to finish the educational program or provide a refund.

An institution that fails to comply with accreditation requirements by the required dates shall have its approval to offer degree programs automatically suspended

Institutional Representative Initials:_____ Student Initials:_____

Date: _____ Date:_____

GENERAL INFORMATION

Institutional Mission Statement

The Mission of Catholic Polytechnic University is to advance the evangelical mission of the Catholic Church entrusted to her by Christ through the formation of scientists, engineers, and technology leaders with expertise in business, communications, and theology, for the greater glory of God.

Institutional Vision Statement

Catholic Polytechnic University (in the Los Angeles area) combines a deep quest for scientific, technology, engineering, and business expertise with the enduring truths of the Catholic faith. The primary goal of Catholic Polytechnic is top job placement in business and polytechnic careers. The aim would be to place Catholic Polytechnic graduates in business, science or technology career-driven jobs or graduate schools. Catholic Polytechnic outcomes would include critical thinking and writing skills; understanding and appreciation of Catholic theology and a deepening of faith; business skills; general knowledge of several polytechnic fields; and expertise in at least one polytechnic field.

Institutional Location and Contact Information

All instruction is provided online or at the address below:
500 S. Louise St.
Glendale, CA 91205
The office phone number is 424-242-2373.
The website is www.catholicpolytechnic.org.

Accreditation

This institution is not accredited by an accrediting agency recognized by the United States Department of Education. These programs do not lead to licensure in California or other states. A degree program that is unaccredited or from an unaccredited institution is not recognized for some employment positions, including but not limited to, positions with the State of California. A student enrolled in an unaccredited institution is not eligible for federal financial aid.

Approval to Operate

This institution is a private institution and it is approved to operate by the Bureau of Private Postsecondary Education. Approval to operate means compliance with state standards as set forth in the CEC and 5, CCR. Approval does not imply endorsement.

ADMISSIONS INFORMATION

Admission Requirements – Undergraduate Degree Program

- Student must have earned a High School Diploma or GED
- Student must pay all applicable fees, as per the current published fee schedule at the time of the signing or entering into an enrollment contract, or make other arrangements acceptable to the school.
- This institution does not award credit for satisfactory completion of CLEP or other comparable examinations.
- This institution does not award credit for experiential learning.
- This institution has not entered into an articulation or transfer agreement with any other institution.

Admission Requirements – Graduate Degree Program

- Student must have earned a Bachelor Degree from an institution approved by the Bureau or previously approved by a predecessor agency of the Bureau; or an accredited institution in the United States or Canada; or other state approved institution that documents that the institution at which the student earned his or her degree is equivalent to an institution that is approved by the Bureau; or an institution outside the United States or Canada and in addition provides a comprehensive evaluation of the degree performed by a foreign credential evaluation service that is a member of the National Association of Credential Evaluation Services (NACES).
- Student must have been awarded a Bachelor degree with a grade of 3.0 or higher.
- Student may be required to take prerequisite bridge courses concurrently with the Masters degree courses if they lack the required background knowledge.
- Student must pay all applicable fees, as per the current published fee schedule at the time of the signing or entering into an enrollment contract, or make other arrangements acceptable to the school.
- This institution does not award credit for satisfactory completion of CLEP or other comparable examinations.
- This institution does not award credit for experiential learning.
- This institution has not entered into an articulation or transfer agreement with any other institution.

Competencies

Students must have the following competencies:

- Ability to access course and program material on the Internet;
- Ability to correspond with college staff, faculty, and students through email and the Internet.

Orientation Materials

First-time students at Catholic Polytechnic University are provided with orientation materials to assist them with getting started on their first online course. The orientation materials introduce the University's policies and procedures, the online platform, the standards for academic conduct in the online environment, and some tips and practices for being successful in the distance-learning format.

International Students

Students who are not citizens or permanent residents of the United States are welcome to apply for admission to Catholic Polytechnic University and must follow the above 3 steps to admission. Please, note that VISA services are not provided nor will the institution vouch for student status. Catholic Polytechnic University cannot issue I-20 documentation to allow international students to enter the US on student visas. Further, please, note the following:

Transcripts in languages other than English must be accompanied by a certified translation. If students request credit transfer from foreign institutions, transcripts for comparable University-level courses completed in a country other than the United States must be evaluated by an outside credential evaluation company before they are submitted to Catholic Polytechnic University. The National Association of Credential Evaluation Services (www.naces.org) members are acceptable sources for foreign credential evaluation and translation services. International applicants whose native language is not English, except those who have completed their high school or Associate degree at a nationally or regionally accredited U.S. high school or University, must submit evidence of English proficiency. (See English Proficiency)

Language of Instruction - Visa Services - Language Proficiency

- Instructions will be provided in the English language.
- No visa related services are offered.
- For a student whose high school or equivalent coursework was not completed in English, and for whom English was not a primary language, we will seek a score of 500 on a paper-based TOEFL test or a score of 70 on the internet-based test. The TOEFL requirement does not apply to students who have received their high school diploma or the equivalent at an academic institution which has provided the instruction in the English language. Similarly, the TOEFL requirement does not apply to students who have completed coursework, in English, at the University level.

POLICIES AND PROCEDURES

Grades and Standards for Student Achievement

Grading System Standard

Evaluation of student achievement will be based on meeting the objectives for each program.

Grade Point Average (GPA)

Grade reports are issued to students at the completion of each program. Grades are based on the quality of work as shown by written tests and projects as indicated on the curriculum. The grading scale is as follows:

Letter Grade	Point Range
A	94-100
A-	90-93
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	0-59

The minimum passing grade is a C. The minimum allowable grade point average to maintain satisfactory progress is a B, or 3.0.

In calculating a student's grade point average, the following policy applies:

A	4 Grade Points	A-	3.67 Grade Points
B+	3.33 Grade points	B	3 Grade Points
B-	2.67 Grade Points	C+	2.33 Grade Points
C	2 Grade Points	C-	1.67 Grade points
D+	1.33 Grade Points	D	1 Grade Point
D-	0.67 Grade Points	F	0.00 Grade Points

If the student has not completed the coursework and earned a grade at the end of the course, the instructor may issue one of the following grades.

I Incomplete If the course has not been completed, the instructor may grant an I on a two-month extension of the term, at no additional tuition cost, when the student is making satisfactory progress and the instructor believes that an extension of time will permit satisfactory completion. At the end of this period, a final grade must be recorded.

W Withdraw The student may withdraw from any course before the end of the term. At the end of the term, the instructor may withdraw the student from the course and issue a W when the instructor believes the student's progress is insufficient to warrant an extension. A student who withdraws or is administratively withdrawn must retake the course and is responsible for a new tuition payment for that course of study.

Attendance - Classroom Instruction

The University has a mandatory Class Attendance Policy which calls for students to attend a minimum of 70% of class lecture sessions in a course or be administratively withdrawn from the course. An absence for any reason, except emergencies or a compelling reason beyond the student's control, counts towards the maximum 30% absence allowed. Individual faculty members are free to adopt an alternate procedure for monitoring attendance, provided that it is at least as restrictive of the school's policy. Each faculty member shall announce his/her policy regarding attendance at the first two or three class sessions of each semester. Professors may, at their sole discretion, refuse to allow a student to sign an attendance sheet, or request that a signature be voided if the student is not in attendance for a sufficient portion of the class.

Students are responsible for maintaining records of their attendance for each class. Once a student has reached the mid-point of allowable absences, the administrative office will issue a warning letter listing the number of days and dates that were missed. If the student questions the accuracy of the warning letter, students have 10 days to notify the administration to seek resolution of the matter.

Attendance - Online Instruction

This institution's policy on attendance is based on the premise that regular communication between the teacher and the student and, also, among students themselves, has significant value in the learning process. To assure this timely communication, your instructor will respond to each of your assignment submissions or exam submissions within 10 days. To further assure this timely communication, you must respond to each of your instructor's inquiries within 10 days as well. If a student is enrolled in an online course, the student must demonstrate regular and substantive interaction with the instructor. Regular and substantive interaction is defined as completing one of the following academically related activities once a week in order to be marked as having attended and actively participating:

- Post to the course discussion board substantive comments relevant to the subject
- Substantive exchanges with the instructor about course content, concepts, and assignments
- Submit a graded unit assignment or exercise
- Attempt a pre-final exam or final exam
- Submit a final project

Logging into a course and clicking on resources will not count as having participated. Reading discussion boards, and reading or viewing course resources, though academically important, are not measured or counted as student attendance.

Online students who do not engage through one of the five activities for seven consecutive (7) calendar days will be withdrawn from Catholic Polytechnic University.

Student Enrollment and Orientation

Students complete enrollment online. During the enrollment process, the admissions staff member will provide each student with a guided tour of the LMS. After completing their enrollment process, all students receive their individual learning management system credentials via email, and are also provided in that email with the following orientation video which explains with images how to navigate the LMS and make the best use of the system:
https://community.canvaslms.com/t5/Video-Guide/tkb-p/videos

Cancellations

The student shall have the right to cancel the agreement and receive a refund of charges paid through attendance at the first-class session or the seventh day after enrollment, whichever is later. Cancellation is effective on the date written notice of cancellation is sent. The institution shall make the refund as per the calculation consistent with the California Code of Regulations. If the institution delivered the first lesson and materials before an effective cancellation notice was received, the institution shall make a full refund within 45 days after the student's return of the materials.

Withdrawals

A withdrawal may be effectuated by the student's written notice to the school administrative office, 500 S. Louise St., Glendale, CA 91205, or email to info@catholicpolytechnic.org or by the student's conduct, including, but not necessarily limited to, a student's lack of attendance.

The institution shall issue a refund for unearned institutional charges if the student cancels an enrollment agreement or withdraws during a period of attendance. The refund policy for students who have completed 60 percent or less of the period of attendance shall be a pro rata refund. The institution shall pay or credit refunds within 45 days of a student's cancellation or withdrawal.

Refunds

A pro rata refund pursuant to section 94910(c) or 94920(d) or 94927 of the code shall be no less than the total amount owed by the student for the portion of the educational program provided subtracted from the amount paid by the student calculated as follows:
The amount owed equals the daily charge for the program (total institutional charge, divided by the number of days or hours in the program), multiplied by the number of days the student attended, or was scheduled to attend, prior to withdrawal.

No refunds are due once the student has received 60% of the clock hours of instruction in any given period of attendance. For purposes of determining a refund, a student shall be considered to have withdrawn from an

educational program when he or she withdraws or is deemed withdrawn in accordance with the withdrawal policy stated in this institution's catalog.
If an institution has collected money from a student for transmittal on the student's behalf to a third party for a bond, library usage, or fees for a license, application, or examination and the institution has not paid the money to the third party at the time of the student's withdrawal or cancellation, the institution shall refund the money to the student within 45 days of the student's withdrawal or cancellation.

If the student has received federal student financial aid funds, the student is entitled to a refund of monies not paid from federal student financial aid program funds.
This institution shall refund any credit balance on the student's account within 45 days after the date of the student's completion of, or withdrawal from, the educational program in which the student was enrolled.

Probation and Dismissal

The Chief Academic Officer may place a student on academic probation if the student is not making satisfactory academic progress as per this institution's published policy. The student's grade point average will be monitored at the end of each enrollment period as the grades are posted. Should the student's GPA fall below that required for graduation, a student may be placed on academic probation. This will result in a formal advisory, which will be sent to the student by mail, explaining the reason for the probation. If the student wishes to appeal the formal advisory, the student is to submit a written request for an administrative academic review to the school main campus: Catholic Polytechnic University, 500 S. Louise St., Glendale, CA 91205. After the completion of the currently enrolled term, the student will have two additional terms to bring his or her grade point average up to or exceeding the minimum standard of the institution. Thereafter, the student's failure to achieve satisfactory academic progress may result in dismissal from the program. The Chief Academic Officer will offer assistance in locating a suitable tutor, should such service be requested by the student. Any student seeking a tutor is financially responsible for the cost of all such tutoring.

Violations of the Harassment or Discrimination Policy of this institution will become part of the student's record. Depending on the severity and/or frequency of the violation(s), the Faculty may take disciplinary action, including administrative withdrawal from the University. A student who has become subject to disciplinary action may submit an appeal to the Chief Academic Officer per the University's Grievances policy.

Leave of Absence

Should circumstances be such that a leave of absence is to be requested, a student must submit an application for a leave of absence to the main campus: Catholic Polytechnic University, 500 S. Louise St., Glendale, CA 91205. The written notice must contain a statement of the nature of the request. At the discretion of the Chief Academic Officer, a leave may be granted for a reasonable time, as warranted by the circumstances. If a student repeatedly resorts to the use of a leave of absence, and if such applications show a pattern of delays, or should the issuance of a leave of absence be such that it would significantly interfere with the planned completion of a

program of study, the Chief Academic Officer may, in his/her sole discretion, dismiss a student from the program and issue the appropriate refunds as may be required.

Academic Freedom

The institution is committed to assuring full academic freedom to all faculty. Confident in the qualifications and expertise of its faculty members, the University encourages its faculty members to exercise their individual judgments regarding the content of the assigned courses, organization of topics and instructional methods, providing only that these judgments are made within the context of the course descriptions as currently published, and providing that the instructional methods are those official sanctioned by the institution, methods for which the institution has received oversight approval.

The institution encourages instructors and students to engage in discussion and dialog. Students and faculty members alike are encouraged to freely express views, however controversial, as long as they believe it would advance understanding in their specialized discipline or sub-disciplines.

Privacy Act

It is this institution's intent to carefully follow the rules applicable under the Family Education Rights and Privacy Act. It is our intent to protect the privacy of a student's financial, academic and other school records. We will not release such information to any individual without having first received the student's written request to do so, or unless otherwise required by law.

Student Conduct

Students are expected to behave professionally and respectfully at all times. Students are subject to dismissal for any inappropriate or unethical conduct or for any act of academic dishonesty. Students are expected to dress and act accordingly while attending this institution. At the discretion of the school administration a student may be dismissed from school for reasons including, but not limited to:

- Coming to class in an intoxicated or drugged state.
- Possession of drugs (including marijuana) or alcohol on campus.
- Possession of a weapon on campus.
- Behavior creating a safety hazard to other person(s).
- Disobedient or disrespectful behavior to other students, an administrator or instructor.
- Stealing or damaging the property of another.

Any students found to have engaged in such conduct will be asked to leave the premises immediately. Disciplinary action will be determined by the Chief Executive Officer of this institution and such determination will be made within10 days after meeting with both the chair of the department in which the student is enrolled and the student in question.

Student Records

Student records for all students are kept for five years. Transcripts are kept permanently. Students may inspect and review their educational records. To do so, a student should submit a written request identifying the specific information to be reviewed. Should a student find, upon review, that records that are inaccurate or misleading, the student may request that errors be corrected. In the event that a difference of opinion exists regarding the existence of errors, a student may ask that a meeting be held to resolve the matter. Each student's file will contain student's records including a copy of the signed enrollment agreement, school performance fact sheet, diploma granted, transcript of grades earned, high school diploma or GED, copies of all documents signed by the student including contract, instruments of indebtedness and document related to financial aid, leave of absence documents, financial ledger, refund information as applicable, complaints received from the student or student advisories related to academic progress. Transcripts will only be released to the student upon receipt of a written request bearing the student's live signature.

Nondiscrimination

This institution is committed to providing equal opportunities to all applicants to programs and to all applicants for employment. Therefore, no discrimination shall occur in any program or activity of this institution, including activities related to the solicitation of students or employees on the basis of race, color, religion, religious beliefs, national origin, sex, sexual orientation, marital status, pregnancy, age, disability, veteran’s status, or any other classification that precludes a person from consideration as an individual. Please direct any inquiries regarding this policy, if any, to the Chief Operations Officer who is assigned the responsibility for assuring that this policy is followed.

Sexual Harassment

This institution is committed to providing a work environment that is free of discrimination, intimidation and harassment. In keeping with this commitment, we believe that it is necessary to affirmatively confront this subject and express our strong disapproval of sexual harassment. No one associated with this institution may engage in verbal abuse of a sexual nature; use sexually degrading or graphic words to describe an individual or an individual’s body; or display sexually suggestive objects or pictures at any facility or other venue associated with this institution. Students are responsible for conducting themselves in a manner consistent with the spirit and intent of this policy.

DISTANCE EDUCATION POLICIES AND PROCEDURES

Distance Education Delivery Method

Catholic Polytechnic University uses the Canvas learning management system (LMS) and Microsoft Office. Students are required to watch the "Canvas Overview for Students" Youtube video, at https://www.youtube.com/watch?v=PVfkFD45hL0 https://www.youtube.com/@canvasstudenttutorials8303

Additionally, all CathPoly instructors will provide a walkthrough of the LMS system during the first day of instruction. Students requiring technical assistance with Canvas can send an email to ithelp@catholicpolytechnic.org. The response time for support is generally the same day.

Appropriateness of Distance Education Delivery Method

The curriculum itself lends itself to online teaching and learning. The institution covers the broad subjects of English, History, Mathematics, Business, Theology, Philosophy, Computer Science, and Electrical Engineering. All of these subjects may be taught using a combination of synchronous and asynchronous online lectures, discussions, assignments, and virtual student-instructor interaction.
As mandated by 5 CCR section 71715(d)(3); the institution's programs and materials are current, well-organized, designed by faculty competent in distance education techniques and delivered using readily available, reliable technology. The faculty, each member of which is highly-qualified in their field and current in it, ensures that the courses are completely compatible with distance education. Each instructor has organized their course well: every class meets at specific times on specific days for online lectures and discussions, assignments are due periodically online, and all student information is recorded duly online.

Student Readiness and Skills Assessment with Distance Education

Instructors at Catholic Polytechnic make use of online exams, projects, papers, and presentations. Every course taught through distance education requires the same level of academic excellence from students as courses taught through residential education require. The students, after being closely observed and taught by diligent instructors who are proficient in their fields, will be assessed periodically. Their grades will be reported at midterms and finals and all academic data will be stored in the institution's Student Information System to track degree progress with accuracy. Fourthly, every student is guaranteed online and academic support, upon request, by their instructors and the administrators at Catholic Polytechnic University. The institution confirms its compliance with ADA/Section 508 accessibility standards.

Instructional Interaction with Distance Education

The institution ensures both the reality and quality of instructional interaction, or student-instructor interaction. Instructors at Catholic Polytechnic University maintain frequent communication with students via email and Canvas Free for Teachers, specifying their response times in their syllabus for full clarity, and/or offer virtual office hours on a recurring basis.

Distance Education Identity Verification

This institution verifies the identities of students who participate in online coursework, ensuring that the person who completes coursework and receives academic credit is the same person who enrolled in the institution. Verification methods may include secure log-in and close monitoring by instructors.

Distance Education Attendance Tracking

Instructors will record student attendance at every course meeting and report the information to the administrative staff, after which it will be stored securely in the institutional Student Information System.

Distance Education Response Time

Instructors will evaluate student submissions and student's lessons, projects or dissertations will be returned within ten days from the date of receipt of such items.

Technology Requirements

For students, the following system configuration and software are recommended:

- Platforms: Mac OS X 10.2 or higher or Windows XP or higher;
- Hardware: 256 Mb RAM, CD-ROM, and 1 Gb free disk space;
- Productivity Software: Microsoft Word, PowerPoint, and Excel 2003 or higher; Adobe Reader 8.0 or higher;
- Web Browser: Firefox 3.0 or higher, Internet Explorer 8.0 or higher, Safari 4.0 or higher, or Chrome;
- Networking: 56k dialup modem, DSL, or Cable modem;
- Email: Outlook, Outlook Express, Mac Mail, Eudora, Entourage, or Yahoo/Hotmail/Gmail.

The following are recommended for optimal performance:

- Productivity Software: Microsoft Word, PowerPoint, and Excel 2007 or higher;
- Networking: Broadband Internet connection (DSL, cable, or other).

Technical Support for Student and Faculty

Faculty members who intend to teach their courses remotely using Canvas are required to have experience in conveying training via a distance learning format. For those instructors who are unfamiliar with the Canvas or Microsoft Teams platform, our administration will provide a series of YouTube tutorials as a means of introduction to the platform and its capabilities (YouTube: @EdTechClassroom). Once instructors have reviewed these starting-point LMS tutorials, they will meet with administration to discuss their plan for building their course in the LMS, and receive guidance and support from administration as they might require.

Students may always reach out to their instructors directly or to school staff for any issues they may experience with the LMS. For times when a student might not be able to get immediate attention, it is recommended that they visit https://community.canvaslms.com/t5/Canvas-Video-Shorts/tkb-p/canvas_video_shorts and search their issue there. If no resolution can be found, students are encouraged to follow up with faculty and/or staff at the earliest opportunity during regular school hours.

Distance Education Student Conduct and Netiquette

Students are expected to behave professionally and respectfully at all times. During online meetings, students are expected to assume a professional appearance on camera. In all written communication, students should avoid sarcasm, capital letters, and any other tendencies which can be easily misinterpreted without verbal cues. Students are subject to dismissal for any inappropriate or unethical conduct or for any act of academic dishonesty.

Any students found to have engaged in such conduct will be asked to leave. Disciplinary action will be determined by the Chief Executive Officer of this institution and such determination will be made within 10 days after meeting with both the chair of the department in which the student is enrolled and the student in question.

Best Practices for Distance Education Learning

The institution recommends that students establish a personal routine for time management success, foster communicative relationships with professors and peers, take active notes to ensure engagement during online meetings, and designate a study space at home. Implementing these strategies can greatly increase the likelihood of academic success.

PROGRAMS OF STUDY

BACHELOR OF SCIENCE IN COMPUTER SCIENCE - UNDERGRADUATE PROGRAM

Undergraduate Program Description

The B.S. in C.S. program at Catholic Polytechnic University introduces programming, computer theory, computing problems and solutions and the design of computer systems, accompanied with a strong humanities core. The BS program includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.

Undergraduate Program Objectives

The primary goal of the B.S. in C.S. curriculum is to introduce and instill computer science concepts that are commensurate with undergraduate-level coursework, where theories and practice are introduced and woven together. Students are not expected to have previous technical skills in order to enter this computer science program.

Undergraduate Program Clock Hours

This program is 120 semester units / 510 clock hours in length. No externship or internship is required. Students are evaluated through written assessments, midterms, and final exams.

Undergraduate Graduation Requirements

To receive a Bachelor of Science in Computer Science degree, a student must satisfy requirements related to semester credits, grade point average, program of study, and courses. Students who have met all requirements for graduation, should submit an application for graduation to the Chief Academic Officer.

To obtain the Bachelor of Science in Computer Science degree, a student must:

- Earn a minimum of 120 semester credits.
- Maintain an institutional GPA of 2.5 (on a 4.0 system).
- Earn a minimum course grade of 2.0 (on a 4.0 system) for each course in the program.
- Complete an internship.

No Final Exam is required.

Undergraduate Program Occupational Outcomes

Graduates of this program are prepared for employment in occupations such as:

- Computer and Information Research Scientist: SOC 15-1221

Undergraduate Courses Offered

Title: ENG 100 – English Composition

3 Semester units, 45 clock hours

General Education

Description

Effective essay writing is essential for undergraduate and graduate coursework. This course covers the basics of academic writing and essay composition. The lesson topics provide foundational concepts of writing structure, organization and cohesiveness.

Title: ENG 101 – Technical Writing
3 Semester units, 45 clock hours
General Education
Description
Computer Science (CS) professionals need to improve their applied communication skills (written, visual and oral). This course is targeted on assisting students learn how to design and present technical CS related documents for professional or lay audiences. The class will instruct students on how to read and analyze technical texts as well as. Assignments include job application materials, instructions, genre analyses, and proposals, and may incorporate recent research, projects in related technical courses, and/or professional client-based projects. A major focus will be technical publications at conferences and in professional journals.

Title: HIST 100 – American Origins
3 Semester units, 45 clock hours
General Education
Description
A survey of American history from the first Native people to the Civil War. Through lectures and close reading of primary sources students will learn about the ideas and conflicts that shaped the founding of the United States of America.

Title: HIST 101 – Government & 'Economics
3 Semester units, 45 clock hours
General Education
Description
Develop a holistic understanding of key concepts of national governance, state governance, regulatory regimes, alternative economic structures, macro-economics, micro-economics and decision sciences.

Title: MATH 100 – Calculus I
3 Semester units, 45 clock hours
Description
This is a two-course sequence in the differential and integral calculus of functions of one independent variable. Topics include the basic analytic geometry of graphs of functions, and their limits, integrals, and derivatives, including the Fundamental Theorem of Calculus. Also, some applications of the integral, like arc length and volumes of solids with rotational symmetry, are discussed. Applications to computer science will be a focus of this course, as this sequence of courses is designed to meet the needs of students in this discipline.

Title: MATH 101 – Calculus II
3 Semester units, 45 clock hours
Description
This is the second of a two-course sequence in the differential and integral calculus of functions of one independent variable. Topics include the basic and advanced techniques of integration, analytic geometry of graphs of functions, and their limits, integrals and derivatives, including the Fundamental Theorem of Calculus. Also, some applications of the integral, like arc length and volumes of solids with rotational symmetry, are discussed. Applications to computer science will be a focus of this course, as this sequence of courses is designed to meet the needs of students in this discipline.

Title: MATH 200 – Linear Algebra
3 Semester units, 45 clock hours
Description
This is an undergraduate course in linear algebra for students of computer science. Linear algebra is the study of linear systems of equations, vector spaces, and linear transformations. Solving systems of linear equations is a basic tool of many mathematical procedures used for solving problems in science and engineering.

Title: MATH 201 – Discrete Mathematics
3 Semester units, 45 clock hours
Description
This course covers widely applicable mathematical tools for computer science, including topics from logic, set theory, combinatorics, number theory, probability theory, and graph theory. It includes practice in reasoning formally and proving theorems. At the semester's conclusion, the successful student will be able to.
“Discrete” is being used to distinguish from “continuous” mathematics, which might be another name for calculus. In calculus, we study intervals, functions, curves, surfaces, arbitrarily small distances, and other concepts related to real numbers. In discrete mathematics, we use the integers almost exclusively; we consider lots of finite sets, and we look at different ways to organize and measure information (“structures”).

Title: MATH 300 – Statistics
3 Semester units, 45 clock hours
Description
The use of statistics develops analytical and critical thinking skills that can be applied to various real-world situations. This course covers topics including probability theory, the use of statistics to summarize data and the use of inferential statistics to analyze data using hypothesis testing.

Title: BUS 100 – Introduction to Business & Finance
3 Semester units, 45 clock hours

Description

Introduces terminology and application of fundamental business principles as found in organizational, national, and international forums. This course examines the relationship of economic systems, governance, regulations, and law upon business operations. It surveys the concepts of career development, business ownership, finance and accounting, economics, marketing, management, human resources, regulations, and ethics.

Title: BUS 200 – Project Management
3 Semester units, 45 clock hours
Description

Introduction to Project Management will teach students how to organize projects and maximize the probability of successful delivery within budget, schedule, and scope constraints. Students will be able to successfully select appropriate methodologies and technologies, understand industry best practices. Students who complete the course will have developed a comprehensive toolkit of technical and leadership skills to successfully execute many types of projects.

Title: THEO 100 – Theology I (Old/New Testament)
3 Semester units, 45 clock hours
General Education
Description

This course introduces students to the history, doctrines, and truth of the Catholic Church. Students will learn the synthesis of reason and revelation, discovering the ways in which the human mind searches for God, and the ways in which God has revealed Himself in creation and history.

Title: THEO 101 – Introduction to Philosophy
3 Semester units, 45 clock hours
General Education
Description

This course introduces students to the study of philosophy, covering the topics of ethics, logic and language, metaphysics, theory of knowledge, philosophy of religion, and political philosophy. Some of the questions may include: “What is the good life?” “What is right and wrong, and how do we know?” “What is knowledge and what are its sources?” “Is it possible that we know nothing at all?” “Does God exist?” “Could we ever know?” “What is the mind?” “What is justice?” “What is the basic nature of reality?” The course emphasizes developing critical reasoning skills, fluency in expressing ideas, and relating the topics to larger culture and contemporary issues.

Title: THEO 200 – Catholic Apologetics
3 Semester units, 45 clock hours
General Education

Description

This course provides a broad overview of the fundamentals of Catholic apologetics (i.e., reasoned defenses of the Catholic faith). The first half of the course focuses on the practice of apologetics in secular and/or atheistic contexts, covering philosophical arguments for the existence of God, the complementary relationship between faith, reason, and science, and responses to the problem of evil. The second of the course turns to the practice of apologetics in an ecumenical context, covering questions related to the relationship between the bible and tradition, the Real Presence in the Eucharist, and the apostolic succession, among others. The course aims to provide a foundation that students can later build upon to respond to more complex questions and objections.

Title: THEO 201 – Moral Theology
3 Semester units, 45 clock hours
General Education
Description

Introduce students to concepts, principles and practices of Catholic moral theology. After an overview of the field of theology—it's objects and method—students will engage with the larger moral tradition of the Catholic Church, it's understanding of the nature and end of man in light of philosophical reason and supernatural revelation.

Title: PHIL 200 – Philosophy & Logic
3 Semester units, 45 clock hours
General Education
Description

This course introduces students to the study of philosophy, covering the topics of ethics, logic and language, metaphysics, theory of knowledge, philosophy of religion, and political philosophy. Some of the questions may include: "What is the good life?" "What is right and wrong, and how do we know?" "What is knowledge and what are its sources?" "Is it possible that we know nothing at all?" "Does God exist?" "Could we ever know?" "What is the mind?" "What is justice?" "What is the basic nature of reality?" The course emphasizes developing critical reasoning skills, fluency in expressing ideas, and relating the topics to larger culture and contemporary issues.

Title: CS 100 – Introduction to Programming
3 Semester units, 45 clock hours
Description

This is the first semester of the basic course in Programming. It will provide instruction in an introduction to programming using the Java programming language. We will explore common computational problem-solving techniques useful to computer scientists, but also to anyone who has large data sets, repetitive processes or other needs for computation. No prior programming experience is assumed, although students should know the basics of using a computer (e.g., using a web browser and a text editor) and should be comfortable with math

through Algebra 1. Students with significant prior programming experience should consider skipping CS100, with CS Department approval, and go straight to CS101, with the instructor's permission.

Title: CS 101 – Introduction to Programming II
3 Semester units, 45 clock hours
Description
This is the second semester of the basic course in Programming. This course is a continuation of CS100. While CS100 focused on control issues (loops, conditionals, methods, parameter passing, etc), CS101 focuses on data issues. Topics include: abstract data types (ADTs), lists, stacks, queues, linked lists, binary trees, recursion, interfaces, inheritance, and encapsulation. The course also introduces the notion of complexity and performance trade-offs in examining classic algorithms such as sorting and searching and classic data structures such as lists, sets, and maps. The course will include a mixture of data structure implementation and using components from the Java Collections Framework.

Title: CS 200 – Programming Languages
3 Semester units, 45 clock hours
Description
This is an introductory course in Programming Languages. This course is a survey of programming languages and paradigms. We will focus on the design of programming languages and compare and contrast different language families including imperative, object-oriented, functional, and logic paradigms. Topics include syntax, context-free grammars, parsing, semantics, abstract representations of programming processes and structures, memory management, and exceptions. Students will be expected to submit a short (10-page) paper on a topic approved by the instructor and present the paper in a 15-minute talk.

Title: CS 220 – Algorithms
3 Semester units, 45 clock hours
Description
This is an entry-level course in Algorithms. It will provide an introduction to Algorithms and it will cover algorithm design techniques (“divide-and-conquer,” dynamic programming, "greedy" algorithms, etc.), analysis techniques (including big-O notation, recurrence relations), useful data structures (including heaps, search trees, adjacency lists), efficient algorithms for a variety of problems, and NP-completeness.

Title: CS 230 – Computer Architecture
3 Semester units, 45 clock hours
Description
This is a foundational course in Computer Architecture. This course is intended to be an introduction to computer architecture and design. Students will be introduced to the conceptual design of a basic microprocessor, along with assembly and C programming. It starts with an overview of trends in computer

design and performance, and then introduces fundamental concepts such as binary numbers, binary arithmetic, and representing information as well as instructions. The second half of the course focuses on fundamentals of computer hardware design, starting with transistors and logic gates, progressing through basic combinational and sequential components (including arithmetic circuits, state machines, memories, etc.), culminating in the conceptual design of a full but basic CPU (a mini MIPS processor). The course ends with a brief overview of some of the more advanced topics, such as pipelining and cache memory.

Title: CS 310 – Database Programming
3 Semester units, 45 clock hours
Description
This is a basic course in Database Programming. It will provide instruction in both fundamental principles and user-centric methodologies for effective database design. The course will be driven by design activities conducted for a semester-long project. It will begin with a description of data flow through organizations based on tasks and operations. Then, abstraction of metadata using data modeling will be covered. Subsequently, requirements-specification will be taught, and students will generate their project descriptions based on in-depth analysis of design problems. This will be followed up with discussions on the relational model and translation of data models to schemata. Next, the focus will shift to hands-on design tasks involving queries, forms, and report generation. After a prototype design is implemented, students will perform small-scale evaluation of the system. Following this, students will learn about life-cycle issues and database maintenance. The final part of the course will concentrate on advanced database systems.

Title: CS 320 – Complexity Analysis
3 Semester units, 45 clock hours
Description
This is an introductory course in Complexity Analysis. The course introduces the basics of computational complexity analysis and various algorithm design paradigms. The goal is to provide students with solid foundations to deal with a wide variety of computational problems, and to provide a thorough knowledge of the most common algorithms and data structures.

Title: CS 330 – Computer Network
3 Semester units, 45 clock hours
Description
This is an introductory course in Computer Networks. It will provide an introduction to computer networks, with a special focus on the Internet, architecture and protocols. The emphasis will be on the basic performance and engineering tradeoffs in the design and implementation of computer networks. To make the issues more concrete, the class includes several multi-week projects requiring significant design and implementation. Besides the theoretical foundations, students acquire practical experience via exposure to exemplar versions of real Internet protocols.

Title: CS 340 – Software Engineering
3 Semester units, 45 clock hours
Description
This course will study a collection of methods which embody an "engineering" approach to the development of computer software. We will discuss the nature of software and software projects, software development models, software process maturity, project planning, management, and communication. We will study methods for analysis, design, testing, and implementation of large, complex software systems. We will inquire into the various perspectives on software quality -- what it means, how to measure it, how to improve it. The major work of the course is a group project.

Title: CS 350 – Operating Systems
3 Semester units, 45 clock hours
Description
This is a basic course in Operating Systems. The operating system provides a recognizable, user-friendly, and effective interface between user programs and the various components of computer hardware on which they run. The operating system is responsible for organizing resources (e.g., hard disks and digital drives, networks, and processors) to be shared, providing a range of services needed by many various programs (e.g., file service, the method of starting or stopping required processes, and access to the output devices), and coordinating individual programs so they can work with one another.

Title: EE 300 – Circuit Design
3 Semester units, 45 clock hours
Description
This is an aggressive upper division course in Circuit Design. The course introduces the fundamentals of circuit abstraction. Topics quickly reviewed include: resistive elements and networks; independent and dependent sources; switches and MOS transistors; digital abstraction; amplifiers; energy storage elements; dynamics of first- and second-order networks; design in the time and frequency domains; and analog and digital circuits and applications, digital system design and implementation; simulation, and implementation in Field Programmable Gate Arrays; timing analyses. Also focuses on Digital Computing design and operation. Much of the lab work will involve the use of PicoBlaze soft processor cores.

Title: EE 310 – Digital Logic
3 Semester units, 45 clock hours
Description
This is a basic course in Digital Logic. In this course, you will learn how at a higher level of abstraction, to solve problems in engineering and sciences by conceptualizing computer programs. The course will cover number representation and Boolean Algebra. There will be a focus on combinational circuit analysis and design. Also

discussed will be K-map and tabulation methods, as well as multiplexers, decoders, adders/subtractors and PLD devices. Sequential circuit analysis and design, registers, counters, and recognizers will be introduced and explained.

Title: CS 370 – Scientific Computing
3 Semester units, 45 clock hours
Elective
Description
This is an upper division course on Scientific Computing. In this course, you will learn how to solve problems in engineering and sciences by writing computer programs. To this end, you will learn general concepts about how to design programming solutions to problems and gain experience implementing these solutions in two commonly used programming languages: FORTRAN, C and MATLAB. The treatment of the language will be focused on its features utility in doing science. A passing familiarity with the language is assumed. Each programming language has a scope of problems for which it is best suited. We will begin by learning the C programming language–a powerful high-performance language that is very portable (works on many different computers) and affords the programmer a great deal of flexibility and access to hardware. General concepts for computing will be developed using C. The second part of the course will focus on the use of MATLAB–a programming language that is used extensively in engineering and sciences. MATLAB provides all the power, adaptability, and programmability of high-level languages (e.g., C, Fortran), but it adds two capabilities, which are essential for modern scientific computing: interactivity and graphics.

Title: CS 371 – Introduction to Web Design
3 Semester units, 45 clock hours
Elective
Description
This is an upper division course on Introduction to Web Design, Hands-on course in designing and developing World Wide Web pages using HTML (HyperText Markup Language) and CSS (Cascading Style Sheets). The course will cover HTML tags for text, images, links, lists, simple layouts, complex layouts, tables, frames, style, internal style sheets, and external style sheets. Basic issues in using graphics on the Web will also be covered.

Title: CS 372 – Human Computer Interactions / UX
3 Semester units, 45 clock hours
Elective
Description
It is critical that computer scientists realize that a major factor in the success of any product they develop is the user experience. The course introduces students to the foundations of human factors including applied theories that can be applied to digital design. User Experience, the practical application of these human factors principles is the focus of the course, including topics such as UI design, accessibility, and user research. Students are

introduced to the fundamentals of human-computer interaction and user experience through the lens of Catholic teaching including Catholic Social Doctrine.

Title: CS 405 – Capstone I
3 Semester units, 45 clock hours
Description
This is where your education is made manifest. Showing what your new skills, this course will give you an opportunity to take a software project from start to finish. The instructor will be engaged in several roles in this course: the monitor for course work, an advisor, and the user for your projects. As a member of a three-person software development team, you will gather requirements from the user, propose a development plan, and then begin to implement the work. Over the course of the term you will be submitting periodic progress reports to show what you have accomplished. At the end of the term, you will submit a final report and demonstrate your software. The student should anticipate around 100 hours total investment in the project for this course, the bulk of which will be in coding and documenting the project software. Some of the students will be more capable programmers, some excellent visionaries, and yet others good at documentation. As in your professional life, your success will be in identifying who can contribute what most effectively and ensuring they are given the authority and responsibility to make this happen. Issues of equitable work efforts will need to be identified, confronted and resolved. A student would be well advised to communicate *forthrightly and in a timely manner* to keep all the team apprised of mutual efforts. The presence of weaknesses in these communications has doomed many efforts to failure.
This will be a two term, Fall and Spring Project and the two terms will be graded independently.

Title: CS 411 – Capstone II
3 Semester units, 45 clock hours
Description
This is where your education is made manifest. Showing your new skills, this course will give you an opportunity to take a software project from start to finish. The instructor will be engaged in several roles in this course: the monitor for course work, an advisor, and the user for your projects. As a member of a three-person software development team, you will gather requirements from the user, propose a development plan, and then begin to implement the work. Over the course of the term, you will be submitting periodic progress reports to show what you have accomplished. At the end of the term, you will submit a final report and demonstrate your software. The student should anticipate around 100 hours total investment in the project for this course, the bulk of which will be in coding and documenting the project software. Some of the students will be more capable programmers, some excellent visionaries, and yet others good at documentation. As in your professional life, your success will be in identifying who can contribute what most effectively and ensuring they are given the authority and responsibility to make this happen. Issues of equitable work efforts will need to be identified, confronted and resolved. A student would be well advised to communicate *forthrightly and in a timely manner*

to keep all the team apprised of mutual efforts. The presence of weaknesses in these communications has doomed many efforts to failure.
This will be a two-term, Fall and Spring Project, and the two terms will be graded independently.

Title: CS 420 – Computer Graphics
3 Semester units, 45 clock hours
Description
This class is presented in a way in which the students will be introduced to the basics of computer graphics, including how to define objects with vertices and meshes, how to write basic shaders, lighting and shading, projections, transformations in 3D, and texture mapping. Assignments will be done using JavaScript and WebGL, and will build on each other. Labs will cover implementation of technologies taught in lectures.

Title: CS 430 – Cybersecurity
3 Semester units, 45 clock hours
Description
This course provides the students with an introduction to the field of cybersecurity. Students begin with an introduction to the fundamental definitions, principles, and concepts of cybersecurity. Topics include: confidentiality, integrity and availability, threat vulnerability and risk, offensive security and defensive security, security policies, cyber law, network topologies, cryptography, and risk analysis. In the second part of the course, students will learn from the latest threats, and their defenses by discussing and analyzing examples in the industry. It is crucial for students to understand how cyber attacks are perpetrated, and the best practices for preventing and responding to them. Students will gain a deeper, technical understanding of cybersecurity, the Internet's common and emerging vulnerabilities, and techniques for the addressing those vulnerabilities.

Title: CS 440 – Artificial Intelligence
3 Semester units, 45 clock hours
Description
This is an upper division course on Artificial Intelligence, the course begins by describing what the latest generation of artificial intelligence techniques can actually do. After an introduction of some basic concepts and techniques, the course illustrates both the potential and current limitations of these techniques with examples from a variety of applications. We spend some time on understanding the strengths and weaknesses of human decision-making and learning, specifically in combination with AI systems and on ethical and policy implications of new AI capabilities. Exercises will include hands-on application of basic AI techniques as well as selection of appropriate technologies for a given problem and anticipation of design implications. In a final project, groups of students will participate in the creation of an AI-based application.

Title: CS 470 – Web Application Programming
3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on Web Application Programming. This course is an introduction to programming for the World Wide Web. The course focus will be on the relationship between clients and servers, briefly how the internet works, and how web pages are constructed using several technologies. Things to be covered will include HTML & CSS, PHP, web architecture and structure, SQL, Object Relational Mapper (Active Record pattern), dynamic pages, JavaScript, introduction to building a front-end application. Each of these topics can have great depth but our time is short, so we'll concentrate on exposure over mastery. Topics not covered due to time but advised to learn in the future: security, deployment, scalability, front-end state management.

Title: CS 471 – Compilers

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on Compilers. It will focus on the theory and practice behind various phases of automatic translators (compilers) for higher level programming languages such as: scanners, parsers, semantic analysis, code generation, register allocation, and instruction selection. The course is designed to prepare the student to engineer and build key phases of a compiler. It will cover historical, current, and anticipated future developments.

Title: CS 472 – Data Science

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on Data Science. The course is introductory-level and provides an overview of Data Science, covering a broad selection of key challenges in and methodologies for working with distributed and big data. Topics to be covered include data collection, integration, management, modeling, analysis, visualization, prediction and informed decision making, as well as data security and data privacy. This introductory course is integrative across the core disciplines of Data Science, including databases, data warehousing, statistics, data mining, data visualization, high performance computing, cloud computing, and business intelligence. Professional skills, such as communication, presentation, and storytelling with data, will be fostered. Students will acquire a working knowledge of data science through hands-on projects and case studies in a variety of business, engineering, social sciences, or life sciences domains. Issues of ethics, leadership, and teamwork are highlighted.

Title: CS 473 – Web Server Security

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on Web Server Security. This involves the security of websites and web applications. The principles of application security are applied primarily to the Internet and Web systems. An overview of web applications will be the first topic for this course. This will be followed by an introduction to web application security and its relationship to network security. Web Application Security (WAS) scanners and testing will be explained and defined. Tips on securing web applications will also be studied in this course..

Title: CS 474 – Information Retrieval

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on data retrieval which is the process through which a computer system can respond to a user's query for text-based information on a specific topic. This Data Retrieval was one of the first and remains one of the most important problems in the domain of natural language processing (NLP). Web search is the application of information retrieval techniques to the largest corpus of text anywhere — the web — and it is the context where many people interact with Data Retrieval systems most frequently.

Title: CS 475 – Cloud Computing

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course in Cloud Computing. This course covers the fundamentals of building IT infrastructure in the Cloud, using AWS as an example (with other examples from Google Cloud and Microsoft Azure). Throughout the course, students will explore case studies that showcase how some customers have designed their infrastructures and the strategies and services that they have implemented. Finally, this course provides opportunities for students to build a variety of infrastructures through a guided, hands-on approach.

Title: CS 476 – Parallel Programming

3 Semester units, 45 clock hours

Elective

Description

This is an upper division course on parallel programming and it will cover the associated topic of distributed computing, focusing on programming issues common to both sub-disciplines. There will be a deep focus on shared memory parallel architectures and programming, distributed memory, message-passing data-parallel architectures, and programming.

Title: CS 480 – Undergraduate Research I

3 Semester units, 45 clock hours
Elective
Description
This class is an independent research effort, so it is critical that the researcher be responsible for reporting goals, effort, results and publications assiduously. Concomitantly, the Professor monitoring must assist the undergraduate in both identifying and then organizing the research effort, focusing on correct and comprehensive communications. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher.

Title: CS 481 – Undergraduate Research II
3 Semester units, 45 clock hours
Elective
Description
This class is an independent research effort, so it is critical that the researcher be responsible for reporting goals, effort, results and publications assiduously. Concomitantly, the Professor monitoring must assist the undergraduate in both identifying and then organizing the research effort, focusing on correct and comprehensive communications. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher.

Title: CS 490 – Internship I
3 Semester units, 45 clock hours
Elective
Description
The internship experience gives students an opportunity to integrate theory and practice by working in a supervised setting. Consultation and reporting to the faculty advisor guides the student's experience to maximize learning.

Title: CS 491 – Internship II
3 Semester units, 45 clock hours
Elective
Description
The internship experience gives students an opportunity to integrate theory and practice by working in a supervised setting. Consultation and reporting to the faculty advisor guides the student's experience to maximize learning.

MASTER OF SCIENCE IN COMPUTER SCIENCE - GRADUATE PROGRAM

Graduate Program Description

An M.S. in C.S. program at Catholic Polytechnic University emphasizes depth of studies on computer theory, computing problems and solutions and the design of computer systems. The M.S. program includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.

Graduate Program Objectives

The primary goal of the M.S. in C.S. curriculum is to inculcate an advanced computer science concept that is commensurate with graduate-level coursework, where theories and practice are balanced. Graduate students are expected to have a technical undergraduate degree or demonstration of adequate skill set to take on the rigor of a graduate computer science program.

Graduate Program Clock Hours

This program is 36 semester units / 540 clock hours in length. An internship is required. Students are evaluated through written assessments, midterms, and final exams. With a full-time course load of 12 units per semester (four 3-unit courses), students will graduate in three trimesters.

Graduate Program Graduation Requirements

To receive a Master of Science in Computer Science degree, a student must satisfy requirements related to semester credits, grade point average, program of study, and courses. Students who have met all requirements for graduation, should submit an application for graduation to the Chief Academic Officer.

To obtain the Masters of Business Administration degree, a student must:

- Earn a minimum of 36 semester credits.
- Maintain an institutional GPA of 3.0 (on a 4.0 system).
- Earn a minimum course grade of 2.0 (on a 4.0 system) for each course in the program
- Complete an internship.

No Final Exam is required.

Graduate Program Occupational Outcomes

Graduates of this program are prepared for employment in occupations such as:

- Computer and Information Research Scientist: SOC 15-1221

Graduate Courses Offered

Courses Offered

Title: CS500 – Programming Languages Theory

4 Semester units, 60 clock hours

Description

This advanced course covers many of the concepts underlying the design, definition, implementation and use of modern programming languages. The basic concepts and their properties are described with mathematical rigor. It will emphasize formal techniques to study a variety of programming language paradigms, including functional, imperative, concurrent, and object-oriented programming. The formal investigations are complemented by programming assignments that illustrate how to use and implement languages with radically different models of computation, rigorous survey of the theoretical basis for the design, definition, and implementation of programming languages, and of systems for specifying and proving program behavior. Both imperative programming and functional programming are covered, as well as the ways of integrating these aspects into more general languages.

Title: CS510 – Database Systems
3 Semester units, 45 clock hours
Elective

Description

This course covers the fundamental concepts of database systems. Topics include data models (ER, relational, and others); query languages (relational algebra, SQL, and others); implementation techniques of database management systems (index structures, concurrency control, recovery, and query processing); management of semi-structured and complex data; distributed and NoSQL databases.

Title: CS520 – Advanced Algorithms
3 Semester units, 45 clock hours

Description

This advanced course covers the requirement for efficient algorithms which arises in nearly every facet of computer science. However, the type of problem to be solved, the notion of which algorithms are "efficient," and even the model of computation, can vary widely from implementation to implementation. In this advanced class in algorithms, many of the techniques that apply broadly in the design of efficient algorithms will be surveyed, and their application in a wide range of application domains and computational models will be studied. The goal is for the student to be exposed to a broad rather than deep experience. The plan is to touch upon the areas listed in the course schedule.

Title:CS530 – Advanced Computer Architecture
3 Semester units, 45 clock hours

Description

This course provides a strong foundation for students to understand computer architecture (i.e., the single-core, multi-core, and accelerator) and to apply these insights and principles to future computer designs. The course is structured around the three primary building blocks of general-purpose computing systems: processors, memories, and networks. Topics include instruction set architecture; single-cycle, FSM, and pipelined processor

microarchitecture; direct-mapped vs. set-associative cache memories; memory protection, translation, and virtualization; FSM and pipelined cache microarchitecture; cache optimizations; and integrating processors, memories, and networks. The course will also cover advanced topics including superscalar execution, out-of-order execution, register renaming, memory disambiguation, branch prediction, and speculative execution; multithreaded, VLIW, and SIMD processors; and memory synchronization, consistency, and coherence.

Title: CS540 – Principles of Artificial Intelligence
4 Semester units, 60 clock hours
Description
Principles of Artificial Intelligence provides a solid grounding in the practice of modeling, engineering and evaluation that form the basis of emerging technologies for AI. These methods are essential for further advances in AI. It addresses a more focused and practical issue: the need for software design, implementation and evaluation change in programs to take real-world data as input and take real-world actions as output. It is ostensibly difficult to carve small and interesting paradigms out of real life and solve them in a constrained way, the way you would carve up the problems induced in typical computer programs and write separate modules to handle them. This course addresses the high order relevance to the real world, no matter how constrained, which brings with it a range of perspectives and challenges to which AI research responds, and which this course addresses.

Title: CS550 – Advanced Operating Systems
4 Semester units, 60 clock hours
Elective
Description
This is an advanced course in Operating Systems. The students should be graduate students or upper division students with the instructor's permission. This course exposes students to the operating systems as a research field and study operating systems, and more broadly computer systems in general, from a design point of view. We will examine the genesis and theoretical underpinnings of different systems in both important historical context and recent research developments. In addition to teaching various system techniques, the objectives of the course also include helping students learn academic skills appropriate to graduate students. About 60% of the course will be devoted to abstracting underlying concepts and techniques, and the about 40% will be on more manifested current topics in modern operating systems and distributed systems.

Title: CS560 – Principles of Cybersecurity
4 Semester units, 60 clock hours
Elective
Description

This is an advanced course in current and emerging technical challenges in cyber security as the field continues to evolve. Future developments in the industry and research advances will dictate specific areas of emphasis foe the course. This course is part of the graduate degree program. This course provides a study of past, current and future threats in cyber security, while the discipline continues to evolve. There is a discussion of more than just secure programming. The material expands the student's ability to outline organized and pervasive practices for managing systems operations and software standards. This course presents current developments in the industry and it surveys research advances in Cybersecurity and new tactics in Cybercrime.

Title: CS570 – Web Application Development
4 Semester units, 60 clock hours
Elective
Description
This is an advanced course in the analytically advanced study of the underpinnings of Web Application Development. It is assumed the student will have become familiar with the elements of web design and programming and is preparing to develop a more sophisticated, theory-based mastery of this pervasive discipline. CS570 provides students with knowledge and practice of designing and developing large complex web applications, e.g., large enterprise software systems in web-based environment. Students will focus on the analysis of the uses of advanced software frameworks for web development and learn to evaluated and teach them in practice. A number of techniques will be introduced and discussed relating to the latest web technologies and frameworks, as well as the impact of future emerging technologies that will alter the current paradigms of Web Application Programming.

Title: CS571 – Funding and Research
3 Semester units, 45 clock hours
Elective
Description
This is an advanced course covering all of the major skills needed to properly conceive a research program, seek funding for it, staff it appropriately, manage it effectively and be familiar with legal and university policy mandates that must be followed.

Title: CS572 – Data Science Principles
3 Semester units, 45 clock hours
Elective
Description
This is an advanced course that explores the application of data science techniques to unstructured, real-world datasets including social media and geo-referenced sources. The course will focus on techniques and approaches to extract information relevant for experts and non-experts. It explores foundational concepts in data management, processing, statistical computing, and dynamic visualization using modern programming tools

and agile web-services. Concepts, ideas, and protocols are illustrated through examples of real observational, simulated and research-derived datasets.

Title: CS573 – Parallel Architecture and Coding
4 Semester units, 60 clock hours
Elective
Description
This is an advanced course in the field of modern computer architecture design stressing speedup and parallel processing techniques. The course is a comprehensive study of parallel processing techniques and their applications from basic concepts to state-of-the-art parallel computer systems. Topics to be covered in this course include the following: First, the need for parallel processing and the limitations of uni-processors are introduced. Next, a substantial overview and basic concepts of parallel processing and their impact on computer architecture are introduced. This will include major parallel processing paradigms such as pipelining, superscalar, superpipeline, vector processing, multithreading, multi-core, multiprocessing, multicomputing, and massively parallel processing. We then the architectural support for parallel processing is then addressed, *e.g.* 1) parallel memory organization and design; 2) cache design; 3) cache coherence strategies; 4) shared-memory versus distributed memory systems; 5) symmetric multiprocessors (SMPs), distributed-shared memory (DSM) multiprocessors, multicomputers, and distributed systems; 6) processor design (RISC, superscalar, superpipeline, multithreading, multi-core processors, and speculative computing designs); 7) communication subsystem; 8) computer networks, routing algorithms and protocols, flow control, reliable communication; 9) emerging technologies (such as optical computing, optical interconnection networks, optical memories); 10) parallel algorithm design and parallel programming and software requirements.

Title: CS574 – Emerging Technology: Practical Applications, Security Considerations, Potential Disruptions
3 Semester units, 45 clock hours
Elective
Description
In an era defined by rapid technological change and global uncertainty, this graduate seminar explores how emerging and disruptive technologies are reshaping national security, strategic competition, and institutional adaptation. Designed for students eager to engage critically with the forces transforming modern warfare and statecraft, the course invites you to explore the intersection of innovation, risk, and global power dynamics in the 21st century.
Through dynamic discussions, debates, writing, and presentations, you will grapple with core concepts such as technological emergence, disruption, strategic advantage, and the evolving nature of victory and conflict - and the Church's role in society. Anchored by four key lenses—ethics, theory, history, and future-casting—you'll assess both the promise and peril of technologies like Generative AI, drones, autonomous systems, additive manufacturing, cyber capabilities, and beyond.

Set against the backdrop of a rapidly shifting global strategic environment, this course equips students with the intellectual tools to think and act strategically, question assumptions, and anticipate how technological change will shape the future of national and international security. Whether you aspire to lead, research, or advise in the defense and policy spheres, this course will challenge and inspire you to think critically about the next frontier of security and strategy.

Title: CS620 – Advanced Computer Graphics
4 Semester units, 70 clock hours
Elective
Description
This graduate-level course will provide graduate students a comprehensive knowledge on computer graphics concepts, theories, algorithms, techniques, and applications for modeling, simulation, rendering, animation, human-computer interactions, and other key elements of visual computing. This course will demonstrate the significance of advanced tools and graphics algorithms in visual computer graphics. It will also utilize a "hands-on" approach to implementation. A series of advanced computer graphics topics will also be addressed if possible.

Title: CS630 – Networking Theory
4 Semester units, 60 clock hours
Elective
Description
This is a graduate-level course in Networking Theory. The past few years have seen a remarkable growth in the global network infrastructure. The Internet has grown from a research curiosity to something we all take for granted. The course will cover how this network infrastructure does work, What the design principles are upon which it is based, and how those principles are applied in practice. The course will examine the approaches by which the Interne can t be made to work better.

Title: CS671 – Compiler Fundamentals
3 Semester units, 45 clock hours
Elective
Description
Understanding and being able to analyze and evaluate compilers is a sine qua non for both academic pursuits and programming code management. This is an advanced course in advanced topics in scalar optimization and code generation for optimizing compilers. Students should gain a working knowledge of conceptual theory, best practice algorithms and proven techniques. The course will focus on how to best translate source code from a high-level programming language to a lower-level language, but will do this by employing different modes of traditional scientific communication modes. A Paper and a Presentation will both be major elements of this course of study.

Title: CS672 – Performance Modeling
3 Semester units, 45 clock hours
Elective
Description
This graduate-level course of study provides an introduction to the tools and techniques needed to construct and analyze performance models of systems such as computer systems and communication networks. The course covers discrete and continuous time Markov chain models, queues in isolation, queuing in networks, and approximate techniques. Several in-depth modeling case studies will be drawn from the areas of computer architecture, parallel and distributed systems, and networks.

Title: CS673 – Data Mining
4 Semester units, 60 clock hours
Elective
Description
This is a graduate-level course in Data Mining. It is Data mining is a foundational piece of the data analytics skill set. At a high level, it allows the analyst to discover patterns in data, and transform it into a usable product. The course will teach data mining algorithms for analyzing very large data sets. It will have an applied focus, in that it is meant for preparing students to utilize topics in data mining to solve real world problems. The work will include study of data mining and machine learning algorithms for analyzing very large data sets.

Title: CS674 – Graph Theory
4 Semester units, 60 clock hours
Elective
Description
This is a graduate course on Spectral Graph Theory and related topics. It is taught in the style of a math class, and will cover a bunch of theorems, a few algorithms, and many open problems. The other goals are to present material that is useful and to introduce fundamental concepts. You could think of this as a course in "Advanced Linear Algebra with examples from Graph Theory." Most lectures will cover some essential element of Linear Algebra or Spectral Theory. Students have found that almost every research question addresses somehow relates back to material covered in this course.

Title: CS680 – Graduate Research I
4 Semester units, unlimited clock hours
Elective
Description
This advanced class is focused on increasing the deep understanding of the research processes to serve as the mentor for junior researchers and as instructors for student researchers. This class is an independent research

effort, so it is critical that the researcher be responsible for reporting goals, effort, results and publications assiduously. Concomitantly, the Professor monitoring must assist the graduate student in understanding all the facets of the research effort, focusing on how to foster better communications among researchers. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher.

Title: CS681 – Graduate Research II
4 Semester units, unlimited clock hours
Elective
Description
This advanced class is focused on increasing the deep understanding of the research processes to serve as the mentor for junior researchers and as instructors for student researchers. This class is an independent research effort, so it is critical that the researcher be responsible for reporting goals, effort, results and publications assiduously. Concomitantly, the Professor monitoring must assist the graduate student in understanding all the facets of the research effort, focusing on how to foster better communications in researchers. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher.

Title: CS690 – Thesis I
4 Semester units, unlimited clock hours
Elective
Description
This class is an independent research effort and the progress of the candidate through the entire Thesis research goals, the proposal for the research, the various levels of assessment by advisors and committees and the preparation of the final document required for the advanced degree. It is critical that the researcher be in constant contact with and attentive to the direction from the advisor. The granting University process is dominant, but there should be an increasing awareness of varying steps at different Universities. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher, but the major goal, of course, will be producing a piece of work that will be acceptable to the academic community, especially the students committee.

Title: CS691 – Thesis II
4 Semester units, unlimited clock hours
Elective
Description
This class is an independent research effort and the progress of the candidate through the entire Thesis research goals, the proposal for the research, the various levels of assessment by advisors and committees and the preparation of the final document required for the advanced degree. It is critical that the researcher be in

constant contact with and attentive to the direction from the advisor. The granting University process is dominant, but there should be an increasing awareness of varying steps at different Universities. Special attention should be paid to ethical safeguards to ensure sufficient relevant effort is expended to justify the four semester units to be credited to the student researcher, but the major goal, of course, will be producing a piece of work that will be acceptable to the academic community, especially the students committee.

Eligibility For Licensure

None of the educational services offered lead to occupations that require licensure.

FACULTY AND STAFF

Faculty and Qualifications

Marcus Birkenkrahe mbirkenkrahe@catholicpolytechnic.org
Professor
Dipl.-Phys., University of Hamburg, Germany
Dr. rer. nat., Inst. Theor. Physics, University of Hamburg, Germany
Associate Professor, Lyon College, Arkansas, USA
15 years of teaching at university level

Katherine Carlman kcarlman@catholicpolytechnic.org
Professor
B.A. University of Connecticut
M.A. Trinity College, Connecticut
M.S. National Security Intelligence Analysis, University of New Hampshire
24 years of teaching at college/university level

Megan Conkle mconkle@catholicpolytechnic.org
Professor
B.S. Computer Science, California State University, Fullerton
M.S. Computer Science, California State University, Fullerton
22 years of industry experience in aerospace and defense at Raytheon/RTX
10 years of open source developer/maintainer experience, including with the KDE Project

Jacqueline Curiel jcuriel@catholicpolytechnic.org
Professor
B.A. Psychology, California State University at Los Angeles
M.A. Psychology. University of Notre Dame
Ph.D. Psychology, University of Notre Dame

Dan Davis ddavis@catholicpolytechnic.org
Professor
B.A. Psychology, Univ of Colorado
J.D. School of Law Univ. of Colorado
5 years undergraduate & graduate classroom experience in multiple topics
30 years' experience computer science research

Joseph Freymann jfreymann@catholicpolytechnic.org
Professor

B.A. Computer Science, Franciscan University of Steubenville
M.A. Philosophy, Pontifical Athenaeum Regina Apostolorum
M.A. Theology, Holy Apostles College and Seminary
17 years as Teacher and Network Administrator at St. Monica Academy
Author of Summa Apologetica, mobile app developer (Appologetics)

Peter McNally pmcnally@catholicpolytechnic.org
Professor
B.S. Northeastern University
M.S. Rensselaer Polytechnic Institute
8 years teaching at the university level

Eric A. Nielsen, MHA, CISSP, C|CISO, CCSP, HCISPP, CAP, CRISC, Security+, CISA
enielsen@didcs.com
Professor
B.S. Business Administration, Creighton University
Masters of Health Administration – Leadership & Management, University of La Verne
13+ years of tech/cybersecurity experience; owns a company that designs cybersecurity curriculum for universities.

Jennifer Nolan jnolan@catholicpolytechnic.org
Professor
B.S. Psychology, Loyola Marymount University
M.S. Social Science, University of CA, Irvine
Ph.D. Psychology, Dept. of Cognitive Science, University of CA, Irvine
25 years of teaching/research/clinical work at university level

Jerome Placido jplacido@catholicpolytechnic.org
Professor
B.S. Computer Science, UC Riverside
M.S. Psychology, Divine Mercy University
10+ years of working with and building cloud-based enterprise applications

Christopher Plance cplance@catholicpolytechnic.org
Professor
B.S. in Kinesiology, Westmont College
M.A. in Theology (Franciscan University)
Th.D. in Theology (candidate)

Professor of Applied Evangelization (John Paul the Great Catholic University; 2014-2015)

Skyler Reidy sreidy@catholicpolytechnic.org
Professor
B.A.in American Studies and in History, College of William & Mary
M.A. in American History, College of William & Mary, Williamsburg, Virginia, spring 2013
Ph.D. in History, University of Southern California
6 years teaching at the university level

Tim Shaler tshaler@catholicpolytechnic.org
Professor
B.S. Business Administration, Pepperdine University
M.A. Russian, Eurasian and Eastern European Studies, University of Chicago
M.B.A. Finance and International Business, University of Chicago, Graduate School of Business
Senior finance professional with 30 years of finance and financial investment portfolio management experience.

David Sonnier dsonnier@catholicpolytechnic.org
Professor
B.S. Engineering, United States Military Academy
MS Computer Science, Georgia Institute of Technology
Lieutenant Colonel, Retired, US Army
25 years of teaching, research, administrative work at the college level

Michael Stefanini mstefanini@catholicpolytechnic.org
Professor
B.S. Rensselaer Polytechnic Institute
M.S. Rensselaer Polytechnic Institute
20 years' experience lecturing and designing training programs (Caltech's Jet Propulsion Laboratory)

Andrew Whiskeyman awhiskeyman@catholicpolytechnic.org
Professor
B.A. English, University of Connecticut
M.A. Military Operational Art and Science, Air Command and Staff College
M.Phil. Military Strategy, School of Advanced Air and Space Studies
Ph.D. Military Strategy, Air University
10 years of teaching/research work at university level

Administrative Staff / Leadership and Qualifications

Jennifer Nolan jnolan@catholicpolytechnic.org
President
B.S. Psychology, Loyola Marymount University
M.S. Social Science, University of CA, Irvine
Ph.D. Psychology, Dept. of Cognitive Science, University of CA, Irvine
25 years of teaching/research/clinical work at university level

Angel Adame-Sanchez aadamesanchez@catholicpolytechnic.org
Registrar

Angela Crowell acrowell@catholicpolytechnic.org
Executive Assistant
B.A. Humanities, John Paul the Great Catholic University

TUITION AND FEES

Fee Schedule

All fees are subject to change from time to time, without notice.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

- Tuition ($220/semester unit) $26,400
- Registration Fee (nonrefundable) $50
- STRF Fee (nonrefundable) $0 ($0 cents per $1,000 of institutional charges)

Other fees (per semester)

- $400 Textbooks (estimated cost x8)
- $50 Re-registration fee for each semester (x7)

Total Charges for a Current Period of Attendance $3,550.00

Estimated Total Charges for the Entire Educational Program $30,075.00

MASTER OF SCIENCE IN COMPUTER SCIENCE

- Tuition ($220/semester unit) $7,920
- Registration Fee (nonrefundable) $50
- STRF Fee (nonrefundable) $0 ($0 cents per $1,000 of institutional charges)

Other fees (per semester)

- $400 Textbooks (estimated cost x4)
- $50 Re-registration fee for each semester (x3)

Total Charges for a Current Period of Attendance $2,230.00

Estimated Total Charges for the Entire Educational Program $9,795.00

Other fees

- $30 returned payment or insufficient funds fee
- $75 commencement fee
- $25 late payment fee
- $195 International Transcript Evaluation Fee (if applicable) (nonrefundable)

Other fees

- $30 returned payment or insufficient funds fee.
- $75 commencement fee
- $25 late payment fee
- $195 Transcript Eval. Fee (if applicable) (nonrefundable)

2025 Full Tuition Scholarship Fee Schedule

Due to generous donors, Catholic Polytechnic is offering full tuition scholarships. Therefore, tuition is reduced to $0 for both the undergraduate and graduate programs in the year of 2025.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

- Tuition ($0/semester unit) $0
- Registration Fee (nonrefundable) $50
- STRF Fee (nonrefundable) $0 ($0 cents per $1,000 of institutional charges)

Other fees (per semester)

- $400 Textbooks (estimated cost x8)
- $50 Re-registration fee for each semester (x7)

Total Charges for a Current Period of Attendance $450.00

Estimated Total Charges for the Entire Educational Program $3,600.00

MASTER OF SCIENCE IN COMPUTER SCIENCE

- Tuition ($0/semester unit) $0
- Registration Fee (nonrefundable) $50
- STRF Fee (nonrefundable) $0 ($0 cents per $1,000 of institutional charges)

Other fees (per semester)

- $400 Textbooks (estimated cost x4)
- $50 Re-registration fee for each semester (x3)

Total Charges for a Current Period of Attendance $450.00

Estimated Total Charges for the Entire Educational Program $1,800.00

Other fees

- $30 returned payment or insufficient funds fee
- $75 commencement fee
- $25 late payment fee
- $195 International Transcript Evaluation Fee (if applicable) (nonrefundable)

Other fees

- $30 returned payment or insufficient funds fee.
- $75 commencement fee
- $25 late payment fee
- $195 Transcript Eval. Fee (if applicable) (nonrefundable)

Student Tuition Recovery Fund

The State of California established the Student Tuition Recovery Fund (STRF) to relieve or mitigate economic loss suffered by a student in an educational program at a qualifying institution, who is or was a California resident while enrolled, or was enrolled in a residency program, if the student enrolled in the institution, prepaid tuition, and suffered an economic loss. Unless relieved of the obligation to do so, you must pay the state-imposed assessment for the STRF, or it must be paid on your behalf, if you are a student in an educational program, who is a California resident, or are enrolled in a residency program, and prepay all or part of your tuition. You are not eligible for protection from the STRF and you are not required to pay the STRF assessment, if you are not a California resident, or are not enrolled in a residency program.
It is important that you keep copies of your enrollment agreement, financial aid documents, receipts, or any other information that documents the amount paid to the school. Questions regarding the STRF may be directed to the Bureau for Private Postsecondary Education, 1747 N. Market Ave. Suite 225, Sacramento, CA 95834, (916) 574-8900 or (888) 370-7589.

To be eligible for STRF, you must be a California resident or are enrolled in a residency program, prepaid tuition, paid or deemed to have paid the STRF assessment, and suffered an economic loss as a result of any of the following:

1. The institution, a location of the institution, or an educational program offered by the institution was closed or discontinued, and you did not choose to participate in a teach-out plan approved by the Bureau or did not complete a chosen teach-out plan approved by the Bureau.
2. You were enrolled at an institution or a location of the institution within the 120-day period before the closure of the institution or location of the institution, or were enrolled in an educational program within the 120-day period before the program was discontinued.
3. You were enrolled at an institution or a location of the institution more than 120 days before the closure of the institution or location of the institution, in an educational program offered by the institution as to which the Bureau determined there was a significant decline in the quality or value of the program more than 120 days before closure.
4. The institution has been ordered to pay a refund by the Bureau but has failed to do so.
5. The institution has failed to pay or reimburse loan proceeds under a federal student loan program as required by law, or has failed to pay or reimburse proceeds received by the institution in excess of tuition and other costs.
6. You have been awarded restitution, a refund, or other monetary award by an arbitrator or court, based on a violation of this chapter by an institution or representative of an institution, but have been unable to collect the award from the institution.
7. You sought legal counsel that resulted in the cancellation of one or more of your student loans and have an invoice for services rendered and evidence of the cancellation of the student loan or loans.

To qualify for STRF reimbursement, the application must be received within four (4) years from the date of the action or event that made the student eligible for recovery from STRF.

A student whose loan is revived by a loan holder or debt collector after a period of noncollection may, at any time, file a written application for recovery from STRF for the debt that would have otherwise been eligible for recovery. If it has been more than four (4) years since the action or event that made the student eligible, the student must have filed a written application for recovery within the original four (4) year period, unless the period has been extended by another act of law.
However, no claim can be paid to any student without a social security number or a taxpayer identification number.

State and Federal Financial Aid

This school does not participate in either State or Federal financial aid programs, nor does it provide financial aid directly to its students. A student enrolled in an unaccredited institution is not eligible for federal financial aid programs.

If a student obtains a loan to pay for an educational program, the student will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund, and that, if the student has received federal student financial aid funds, the student is entitled to a refund of the monies not paid from federal student financial aid program funds.

Other Financial Aid

The institution does provide financial aid directly to its students in the form of a monthly payment plan. No interest is charged, however late fees apply for late payments two or more days delinquent. Students who fall one month behind in their tuition payments are subject to disenrollment for a minimum of 6 months or until the previous balance is paid in full and/or student's training may be terminated until the start of the next program at the discretion of the Chief Academic Officer.

Loans

If a student obtains a loan to pay for an educational program, the student will have to repay the full amount of the loan plus interest, less the amount of any refund, and that, if the student receives federal student financial aid funds, the student is entitled to a refund of the moneys not paid from federal financial aid funds.

ACADEMIC CALENDAR

2025	
Solemnity of the Blessed Virgin Mary, holy day of obligation	Fri, Aug 15
Labor Day	Mon, Sep 1
Week 1	Mon, Sep 15
Week 2	Mon, Sep 22
Week 3	Mon, Sep 29
Week 4	Mon, Oct 6
Week 5	Mon, Oct 13
Week 6	Mon, Oct 20
Week 7	Mon, Oct 27
All Saints Day	Sat, Nov 1
Week 8	Mon, Nov 3
Week 9	Mon, Nov 10
Veteran's Day	Tue, Nov 11
Week 10	Mon, Nov 17
Thanksgiving Week break	Mon, Nov 24
Thanksgiving	Thu, Nov 27
Week 11	Mon, Dec 1
Immaculate Conception of Mary, holy day of obligation	Mon, Dec 8
Week 12	Mon, Dec 8

Week 13	Mon, Dec 15	
Christmas Break	Mon, Dec 22 to	(Jan 4, 26)
Christmas	Thu, Dec 25	

2026

Christmas Break	(Dec 22, 25) to	Sun, Jan 4
Solemnity of Mary, Mother of God, holy day of obligation	Thu, Jan 1	
Week 14	Mon, Jan 5	
Week 15: Finals	Mon, Jan 12 to	Fri, Jan 16
Semester Break	Mon, Jan 19 to	Fri, Jan 23
Martin Luther King Jr. Day	Mon, Jan 19	
Week 1	Mon, Jan 26	
Week 2	Mon, Feb 2	
Week 3	Mon, Feb 9	
Week 4	Mon, Feb 16	
Week 5	Mon, Feb 23	
Week 6	Mon, Mar 2	
Week 7	Mon, Mar 9	
Week 8	Mon, Mar 16	
Week 9	Mon, Mar 23	
Memorial Day	Mon, Mar 30	
Week 10	Mon, Mar 30	

☐	Holy Thursday	Thu, Apr 2
☐	Good Friday: No School	Fri, Apr 3
☐	Holy Saturday	Sat, Apr 4
☐	Easter	Sun, Apr 5
☐	Week 11	Mon, Apr 6
☐	Week 12	Mon, Apr 13
☐	Week 13	Mon, Apr 20
☐	Week 14	Mon, Apr 27
☐	Week 15: Finals	Mon, May 4 to Fri, May 8
☐	Semester Break	Mon, May 11 to Fri, May 15
☐	Solemnity of the Ascension of the Lord, holy day of obligation	Thu, May 14
☐	Week 1	Mon, May 18
☐	Week 2	Mon, May 25
☐	Week 3	Mon, Jun 1
☐	Week 4	Mon, Jun 8
☐	Week 5	Mon, Jun 15
☐	Week 6	Mon, Jun 22
☐	Week 7	Mon, Jun 29
☐	Independence Day	Sat, Jul 4
☐	Week 8	Mon, Jul 6

☐	Week 9	Mon, Jul 13
☐	Week 10	Mon, Jul 20
☐	Week 11	Mon, Jul 27
☐	Week 12	Mon, Aug 3
☐	Week 13	Mon, Aug 10
☐	Solemnity of the Blessed Virgin Mary, holy day of obligation	Sat, Aug 15
☐	Week 14	Mon, Aug 17
☐	Week 15: Finals	Mon, Aug 24 to Fri, Aug 28
☐	Semester Break	Mon, Aug 31 to Fri, Sep 4
☐	Labor Day	Mon, Sep 7
	Week 1	Mon, Sep 7

RESOURCES AND FACILITIES

Student Services

This institution does not provide campus orientations, airport reception services, housing assistance or other services. Further, this institution maintains a focus on the delivery of educational services. Should a student encounter personal problems which interfere with his or her ability to complete coursework, this institution will provide assistance in identifying appropriate professional assistance in the student's local community but does not offer personal counseling assistance.

Placement Services

This institution does not provide placement assistance.

Housing Information

This institution has no responsibility to find or assist a student in funding housing.
This institution does not operate dormitories or other housing facilities. This institution does not provide assistance nor does it have any responsibility to assist students in finding housing. Housing in the immediate area is available in one- and two-story walkup and garden apartments. Monthly rent for a studio unit is approximately $1,800 a month. (www.apartmentguide.com)

Description of On-Site Resources & Facilities

The school is located on the campus of Holy Family Catholic Church in Glendale, CA. The BVM Faith Formation building holds our office and classrooms. The school facility consists of an administrative building with 1 office, 2 classrooms, chemistry labs, a library, gym, event hall, music and dance rooms, outdoor seating, and basketball courts. The administrative offices are equipped with personal computers and standard peripherals. There are two computer science classrooms, which are each 800 square feet. Both classrooms are equipped with whiteboard, projector, screen, desks and chairs.

Library

We offer two library options for students:
An in-person library is available located at 500 S. Louise St., Glendale, CA 91205. This library provides books, journals, periodicals and other materials that supplement the programs offered by the institution. Further, the library provides an area for students to work individually or in small groups on homework assignments or projects.

- To access the "in person" library, it will be available by appointment only.
- To access the online library, students will be emailed a login and password for the library after they have been successfully enrolled in a program of study.

Catholic Polytechnic University (CPU) will also provide its students with online access to a global array of full-text, scholarly journals, books, newspapers, and historical archives. The primary source of this access is

provided by EBSCO Information Services, a world-wide leader in content and technology products for libraries of all kinds. CPU's online library will be centered around the following EBSCO products:

- Academic Search Premier. This is EBSCO's leading multidisciplinary research database, which provides online access to over 2,200 active, full-text journals. Additionally, Academic Search Premier includes access to over 4,300 Open Access journals, which have undergone rigorous curation by EBSCO's team of bibliographers. The retail value of this content is more than $2.5M.
- eBook Academic Collection. This is EBSCO's largest multidisciplinary book, which includes more than 205,000 titles covering a large selection of academic subjects. Additionally, this Collection features e-books from leading publishers and university presses. All e-books in this Collection are available with unlimited user access, and new titles are added regularly to the collection at no additional cost.
- Newspaper Collection. EBSCO's Newspaper Collection provides cover-to-cover full text for more than 200 national (U.S.) and international newspapers and more than 300 regional (U.S.) newspapers. Additionally, this Collection offers television and radio news transcripts from major networks.
- Historical Digital Archives. EBSCO commitment to teaching critical thinking skills is manifested in its Historical Digital Archive. This Collection replicates the experience of browsing and reading original archive material. One of the key elements of this Collection is the Atla Historical Monographs Collection, an archive of religious and theological literature from the late 13th century to 1922. The collection covers diverse religious topics and includes many volumes in Aramaic, Arabic, Greek and Hebrew, which aligns to CPU's foundational mission.
- EBSCO host: Access to the content described above, as well as other online content acquired by CPU, will be provided through EBSCO's intuitive and extensible platform, called EBSCOhost. EBSCOhost serves both new and experienced users. Additionally, it recognizes when users are accessing the site from a smartphone or tablet and will display a mobile-friendly version.

While EBSCO's content and technology form the core of CPU's digital library, the Institution will also provide its students with access to content from aggregators such ProQuest, JSTOR, and Elsevier, as well as a myriad of society and university press publishers, such as the American Chemical Society, Oxford University Press, and the University of Chicago Press. Since most Computer Science reference resources are online, students are encouraged to access the free resource for CS students, https://www.freetechbooks.com/, which has over 1200 open access online Computer Science books, textbooks, and lecture notes.

Librarian Services

The Catholic Polytechnic University reference librarian can be reached for questions and access to further resources by contacting librarian@catholicpolytechnic.org.

LEGAL AND CONSUMER INFORMATION

Student Rights and Responsibilities

The institution affirms the right of all students to:

- Receive accurate information about programs, policies, and fees prior to enrollment.
- Be taught by qualified, current instructors and evaluated fairly.
- Access their academic records and request corrections of errors.
- Operate with freedom from discrimination and sexual harassment
- Submit complaints and/or grievances according to established procedures without fear of reprisal.
- Withdraw from the institution according to established procedures.

In turn, students are expected to follow the guidelines outlined in "Student Conduct" and/or "Distance Education Student Conduct and Netiquette." Other information about student rights and responsibilities may be found throughout this catalog.

Complaint and Grievance Procedure

Most problems or complaints that students may have with the school or its administrators can be resolved through a personal meeting with the student's instructor or a counselor. If, however, this action does not resolve the matter to the satisfaction of the student, he/she may submit a written complaint to the main campus: Catholic Polytechnic University, 500 S. Louise St., Glendale, CA 91205. The written complaint must contain a statement of the nature of the problem, the date the problem occurred, the names of the individuals involved, copies of documents if any, which contain information regarding the problem, evidence demonstrating that the institution's complaint procedure was properly followed, and the student's signature. The student can expect to receive a written response within ten business days. Student rights are set forth at various places in this catalog. Contact the school director if you require additional information.

A student or any member of the public may also file a complaint about this institution with the Bureau for Private Postsecondary Education by calling (888) 370-7589 or by completing a complaint form, which can be obtained on the bureau's Internet Web site www.bppe.ca.gov.

Catalog Updates and Publications

The policy of this institution is to update the official school catalog annually, in September of each year. Annual updates may be made by the use of supplements or inserts accompanying the catalog. If changes in educational programs, educational services, procedures, or policies required to be included in the catalog by statute or regulation are implemented before the issuance of the annually updated catalog, those changes shall be reflected at the time they are made in supplements or inserts accompanying the catalog.
This institution makes its current catalog and current program brochures available to the public at no charge. Individuals who wish to obtain a copy can make arrangements by simply calling the school's office.

Transferability of Credits and Credentials

The transferability of credits you earn at Catholic Polytechnic University is at the complete discretion of an institution to which you may seek to transfer. Acceptance of the degree you earn in the program is also at the complete discretion of the institution to which you may seek to transfer. If the credits or degree that you earn at this institution are not accepted at the institution to which you seek to transfer, you may be required to repeat some or all of your coursework at that institution. For this reason, you should make certain that your attendance at this institution will meet your educational goals. This may include contacting an institution to which you may seek to transfer after attending Catholic Polytechnic University to determine if your credits or degree will transfer.

This institution is a private institution approved to operate by the California Bureau for Private Postsecondary Education. (BPPE) Approval to operate means the institution is compliant with minimum standards contained in the California Private Postsecondary Education Act of 2009 (as amended) and Division 7.5 of title 5 of the California code of Regulations.

Bankruptcy

This institution has not had a pending petition in bankruptcy, is not operating as a debtor in possession and has not filed a bankruptcy petition within the preceding five years nor has had a petition in bankruptcy filed against it within the preceding five years that resulted in reorganization under chapter 11 of the United States Bankruptcy Code.

The Office of Student Assistance and Relief

A student or any member of the public may file a complaint about this institution with the Bureau for Private Postsecondary Education by calling (888) 370-7589 or by completing a complaint form, which can be obtained on the bureau's internet website at www.bppe.ca.gov.

BPPE Contact Information

Any questions a student may have regarding this catalog that have not been satisfactorily answered by the institution may be directed to the Bureau for Private Postsecondary Education at 1747 N. Market Ave., Suite 225, Sacramento, CA 95834, P.O. Box 980818, West Sacramento, CA 95798, www.bppe.ca.gov, toll free telephone number (888) 370-7589 Fax (916) 263-1897.

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