

SYLLABUS



3140 Waiālae Avenue
Honolulu, Hawai'i 96816-1578



1. FACULTY CONTACT INFORMATION

BU-324-01-1 Quantitative Methods in Business

Pearson portal myLab Statistics, ID = **brownlow14390**

Course Home Page on CANVAS <https://chaminade.instructure.com/courses/42757>

Class Schedule:

Dates:	August 25, 2025 – December 12, 2025
Department Name:	School Of Business (SOB)
Course Credits:	Three (3)
Class Meeting Hours:	M W F @10:30 AM –11:20 AM
Location:	SULV 201
Instructor:	Maria Brownlow, Ph.D. Management Science, MIS, Business Analytics/Informatics, Computer Information Systems (CIS)
Office Hours:	MWF Noon – 1:00 PM or by appointment
CUH email:	maria.brownlow@chaminade.edu
Division Phone #:	808-739-8369

CHAMINADE UNIVERSITY MISSION STATEMENT

Chaminade University offers its students an education in a collaborative learning environment that prepares them for life, service, and successful careers. Guided by its Catholic, Marianist and liberal arts educational traditions, Chaminade encourages the development of moral character, personal competencies, and a commitment to build a just and peaceful society. The university offers both the civic and church communities of the Pacific region its academic and intellectual resources in the pursuit of common aims.



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DARE TO LEARN. DARE TO CHANGE

“The future is no longer stable; it has become moving target. No single “right” projection can be deducted from the past behavior. The better approach, I believe, is to accept uncertainty, try to understand it, and make it part of our reasoning. Uncertainty today is not just occasional, temporary deviation from a reasonable predictability; it is a basic structural feature of the business environment.”

SOURCE: Farsighted, How We Make the Decisions That Matter the Most by Steven Johnson. New York Times bestseller.

2. BU324 QUANTITATIVE METHODS IN BUSINESS CATALOG DESCRIPTION

Catalog Description: Each of the business disciplines uses quantitative information in its planning, operations, and performance evaluation. This course introduces students to a variety of methods and tools for using quantitative data effectively: linear programming, Bayes Decision Rules, forecasting, multiple regression, network models, utility measures and inventory models. Offered every semester. Prerequisites: MA 103, BU 224.

3. COURSE OVERVIEW

Many organizations have demonstrated that Quantitative Analysis is an effective competitive tool. When used with well-conceived marketing and financial plans, organizations have made major penetrations into global and other markets.

This course is designed to address the key challenges that have strategic as well as tactical implications, faced by organizations in the service, business, and manufacturing sectors.

Computer-based applications and examples are extensively used in this edition to help students to understand and connect management science with real world business. Successful procedures are applied to problems showing step-by-step “how – to” instructions. The use of application software allows focusing on managing and solving problems and less time on memorizing algorithms.

Business analytics, one of the hottest topics in the business world, makes extensive use of the models in this textbook. A discussion of the business analytics categories is provided, and the relevant management science techniques are placed into the appropriate category.

This course is designed to promote student participation through discussion of current business issues as they relate to the quantitative methods and how they are used in today’s digital organization for managerial decision-making processes.

Methods of Delivery

MyLab is a teaching and learning platform that delivers technology-enhanced learning to reach every student. MyLab delivers content and interactive resources, personalizes learning, and offers flexible course management so that every student is more successful.

This MyLab is new and includes the following key features and interactives:

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- **Simulations:** Decision-making activities that place students in real-world business scenarios and help teach critical thinking and other career readiness skills.
- **Dynamic Study Modules:** An adaptive study tool that help students learn course concepts in an interactive, adaptive way – helping them come to class prepared.
- **Chapter Homework:** Practice assessments that help students accountable for learning key concepts in each chapter before coming to class.
- **Chapter Quizzes:** Assess students' knowledge of key course concepts and textbook material.
- **Case-Based Assignments:** Help students learn from book-specific real-world examples and choose to assess either written responses (manual grading with rubric) or auto-graded.
- **Classroom Response System:** Engage students with Pearson's bring-your-own-device classroom response system, Learning Catalytics.

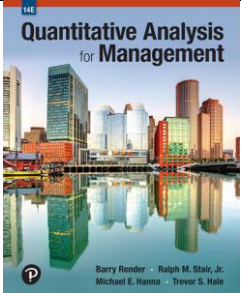

Association to Advance Collegiate Schools of Business (AACSB) Learning Standards

The assessment materials in this MyLab course are aligned to the eight AACSB Learning Standards, which include:

- Written and oral communication
- Ethical understanding and reasoning
- Analytical thinking
- Diverse and multicultural work environments
- Reflective thinking
- Application of knowledge
- Integration of real-world business experiences
- Interpersonal Relations and Teamwork

Use of technology for developing conceptual understanding and analyzing data throughout the course is extensive. All assignments are paperless through use of myLab Management giving students ability to learn the subjects as they do their assignments.

4. TEXTBOOK

	<p>Quantitative Analysis for Management, Barry Render, Ralph M. Stair, Jr., Michael E. Hanna, Trevor S. Hale Pearson 14th Edition, ISBN: 9780135319321</p> <p>How to register to this course, click on .PDF file and follow step-by-step procedure.</p> <p> Student_Registratio n_Handout_brownlov</p>
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1. Table of Content

1. Introduction to Quantitative Analysis

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2. Probability Concepts and Applications
3. Decision Analysis
4. Regression Models
5. Forecasting
6. Inventory Control Models
7. Linear Programming Models: Graphical and Computer Methods
8. Linear Programming Applications
9. Transportation, Assignment, and Network Models
10. Integer Programming, Goal Programming, and Nonlinear Programming
11. Project Management
12. Waiting Lines and Queuing Theory Models
13. Simulation Modeling
14. Markov Analysis
15. Statistical Quality Control

2. Institutional Learning Outcome

1. Written communication
2. Oral communication
3. Critical thinking
4. Information literacy
5. Quantitative reasoning

6. PROGRAM LEARNING OBJECTIVES (PLOs)

Upon completion of the B.A. undergraduate program in Business Administration, students will be able to:

PLOs #	PLOs Description
PLO1	Communicate effectively regarding business related tasks, in both oral and written modes.
PLO2	Select and use the appropriate quantitative tools for decision-making.
PLO3	Undertake analysis, perform tasks, and develop strategies using the central concepts of each functional area of business.
PLO4	Assess and create business strategy appropriate for organizations in specified business environments, including global and domestic markets.
PLO5	Discuss the legal obligations of organizations and the ethical dilemmas they face, along with appropriate frameworks for addressing these dilemmas.
PLO6	Discuss the distinctive features and challenges of conducting business internationally.
PLO7	Serve as an effective individual contributor to a group process and deliverable.
PLO8	Use business skills to promote service, justice and peace within community organizations

7. COURSE LEARNING OUTCOMES (CLOs)

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1. **Differentiate** and illustrate the role of quantitative analysis in supporting business strategies such as reducing costs, increasing production, achieving revenue goals, and growing investments. (Apply/Analyze)
2. **Apply** the scientific approach to managerial decision-making by formulating hypotheses, testing assumptions, and drawing evidence-based conclusions. (Apply)
3. **Identify, evaluate, and justify** the selection of quantitative and qualitative factors when choosing appropriate models for effective decision-making. (Evaluate/Create)

CLOs \ PLOs	PLO 2	PLO 3	PLO 4
	Select and use the appropriate quantitative tools for decision-making.	Undertake analysis, perform tasks, and develop strategies using the central concepts of each functional area of business.	Assess and create business strategy appropriate for organizations in specified business environments, including global and domestic markets.
CLO 1. Differentiate and illustrate the role of quantitative analysis in supporting business strategies such as reducing costs, increasing production, achieving revenue goals, and growing investments. (Apply/Analyze)	X	X	X
CLO 2. Apply the scientific approach to managerial decision-making by formulating hypotheses, testing assumptions, and drawing evidence-based conclusions. (Apply)	X	X	
CLO 3. Identify, evaluate, and justify the selection of quantitative and qualitative factors when choosing appropriate models for effective decision-making. (Evaluate/Create)	X	X	X

8. MARIANIST VALUES

“An education in the *Marianist Tradition* is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and

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development Characteristics of Marianist Universities: Chaminade University of Honolulu, St. Mary's University, University of Dayton, A Resource Paper, published in 1999, Republished in 2006."

1. Educate for formation in faith.

"As higher educational institutions, Marianist universities have kept, along with education in the disciplines, a commitment to the development of the whole person, which includes the dimension of religious faith and its personal appropriation and practice."

2. Provide an integral quality education.

"In the Marianist approach to education, "excellence" includes the whole person, not just the technician or rhetorician. It also includes people with their curricular and extra-curricular experiences, their intellectual and spiritual development, understood and supported best in and through community."

3. Educate in family spirit.

"Marianist educational experience fosters the development of a community characterized by a sense of family spirit that accepts each person with loving respect and draws everyone in the university into the challenge of building community. Community support for scholarship, friendship among faculty, staff and students, and participation in university governance characterize the Marianist University."

4. Educate for service, justice, and peace.

"The Marianist approach to higher education is deeply committed to the common good. The intellectual life itself is undertaken as a form of service in the interest of justice and peace, and the university curriculum is designed to connect the classroom with the wider world. In addition, Marianist universities extend a special concern for the poor and marginalized and promote the dignity, rights, and responsibilities of all peoples."

5. Educate for adaptation and change.

"In the midst of rapid social and technological change, Marianist universities readily adapt and change their methods and structures so that the wisdom of their educational philosophy and spirituality may be transmitted even more fully."

9. NATIVE HAWAIIAN VALUES

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Olelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. **Educate for Formation in Faith (Mana)** E ola au i ke akua ('Olelo No'eau 364) [May I live by God.](#)
2. **Provide an Integral, Quality Education (Na'auao)** Lawe i ka ma'alea a kū'ono'ono ('Olelo No'eau 1957) [Acquire skills and make them deep.](#)

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3. **Educate in Family Spirit ('Ohana)** 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) *Recognize others, be recognized, help others, be helped; such is a family relationship.*
4. **Educate for Service, Justice, and Peace (Aloha)** Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) *Education is the standing torch of wisdom and using it has no boundaries.*
5. **Educate for Adaptation and Change (Aina)** 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) *All knowledge is not taught in the same school.*

Alignment of Learning Outcomes: CLO with Marianist, and Hawaiian Values

	CLO 1	CLO 2	CLO 3
Marianist Values	1, 2	4, 5	5
Native Hawaiian Values	1, 2	2, 4	4, 5

10. ASSESSMENT AND GRADING

Grades will be based on the following assessment tools to improve and evaluate student learning outcomes through: homework, quizzes, tests, end of chapter review questions, and exams.

Tentative Schedule

The course schedule will be provided during Day One kick-off meeting. Schedule is subject to change at the discretion of the instructor based on students' progress. Syllabus is posted on CANVAS Course Web Page on the Pearson myLab Management in Document Sharing folder.

GRADING

Grading is based on the following table shown on the next page:

<p>GRADING YOUR ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> Homework assignments Quizzes & tests Exams Staying on schedule with assignments and class participation → Priceless 	<p>GRADE SCALE:</p> <ul style="list-style-type: none"> A = 90% – 100% B = 80% – 89% C = 70% – 79% D = 60% – 69% F* = 50% – 69% <p>IF* = Incomplete F gives student 30-days to work on missing assignments. Needs a strong</p>
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	<p>justification. Individually decided by instructor, Program Director, and Dean. Student must initiate a request to the course faculty for the incomplete assignment via email.</p>
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Letter grades are given in all courses except those conducted on a credit/no credit basis. Grades are calculated from the student’s assignments, class participation, quizzes, tests, term papers, reports, and exams. They are interpreted as follows:

A	Outstanding scholarship and an unusual degree of intellectual initiative.
B	Superior work done in a consistent and intellectual manner.
C	Average grade showing a competent grasp of subject matter.
D	Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work.
F*	Did not grasp the minimum subject matter, no credit given.
W	Withdrawal before published deadline.
I*	The issuance of an “I” grade is not automatic. At the discretion of the faculty member, a grade of “I” may be assigned to a student who completed a few assignments, but unable finished the homework due to unforeseen circumstances.
IP	In progress, primarily used for thesis completion or practicum completion.
AU	Audit.

Suggestions for Success

Manage your time wisely and stay organized! Learn how to use the required technology. Come to class prepared. Engage in the learning, discussions, and activities that take place in the classroom. Don’t be distracted or distract others. Always do your best! 😊

Learning is never ending process. We learn every day by seeing, solving problems, making mistakes and trying not to repeat them. Student responsibility is discovering your own style of learning. Educators’ responsibility is to create a learning environment that student flourish.

What students need to know about my pedagogy, how to succeed in such an environment?

1. Maintain open an honest communication.
2. You have a question, just ask me, or send me email to maria.brownlow@chaminade.edu
3. This course resides on the Pearson myLab Management portal specifically developed for the textbook.
4. You grade yourself by submitting assignments into myLab Management.

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5. If you obtained a grade that you did not expect and you want to review incorrect answers and re-do them, you are welcome to do this within the next two weeks. *Practice assignments is learning.*
6. I do not deduct points.
7. Exams scheduled during the semester when a section of the logical material is completed.
8. Exams cannot be repeated and must be completed within assigned dates. If unusual circumstances had occurred, and you let me know before the date of the exam, the exam will be rescheduled. Each request to re-do the exam will be considered individually.

Course Expectations

This course is designed to promote student participation through discussions of current business issues as they relate to management decision-making processes. Students will study and apply quantitative techniques to practical issues and decisions faced by management to include global markets. Thus, it is important to know quantitative methods and understand their limitations and assumptions in order to use them appropriately.

Applications, technology, and audio-visual tools will make this course highly interactive and experiential. The undergraduate course will be taught, as follows:

- ✓ **Lectures** supported by PowerPoint presentations.
- ✓ **Case Studies** will be presented in the classroom to illustrate concepts and develop critical thinking skills and approaches to real-life business issues.
- ✓ **Case Studies** also will be assigned to student teams to develop team skills; each student will have an opportunity to make a case resolution presentation.
- ✓ **Supplementary materials** and handouts will be provided to students to aid in understanding quantitative concepts.
- ✓ **In-class exercises** comprised of challenging questions will be presented and the handling of resolutions and certain quantitative techniques will be discussed in order to provide an overall approach for the concepts presented.
- ✓ **Chapter handouts** will be made available to students; these handouts will be used by students to follow the lectures, Power Point presentations and for note taking purposes. These handouts can be used for exam preparation.

Recommended Learning Strategies:

1. Chapter Assignments must be read prior to each class. Students familiar with chapter materials will more effectively participate in class by being prepared to offer critical comments and pose thoughtful questions.
2. Complete self-tests after each chapter to reinforce the understanding of presented concepts.

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3. Take tests and quizzes after each chapter to reinforce the learning material.
4. Deliver assigned homework on time.
5. Contribute to and participate in team projects. You will learn to become a confident public speaker and improve your presentation skills.
6. Participate in classroom discussions and ask questions.
7. Review supplementary materials in preparation for midterm and final exams.
8. Complete and return the final exam, as scheduled.

Course Attendance Policy

Students are expected to attend daily and log in to Pearson daily to check for course announcements, materials, and assignments. Class begins on time. Excessive lateness will be counted as an absence from class. Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any unexcused absence of two consecutive weeks or more may result in being withdrawn from the course by the instructor.

Behavioral Expectations

You are expected to conduct yourself in a manner compatible with the college's function as an institute of higher learning. To uphold this principle in the face-to-face in the classroom, no cell phones, or "side conversations" that disrupt the learning process or interfere with the primary activity are allowed. Laptop computers may be used for taking notes or engaging in class activities. Please refrain from surfing the Internet, or using your computer for anything other than classwork. Lastly, please silence your cell phones before entering class. **Students should use proper etiquette at all times.**

Every student has the right to a respectful learning environment. In order to provide this right, students must take individual responsibility to conduct themselves in a mature and appropriate manner. I appreciate your serious approach to education. Thank you in advance!

11. CREDIT HOUR POLICY

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in 45 hours of engagement. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, 10-week term, or equivalent amount of work over a different amount of time. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit.

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading,

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research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

How This Course Meets the Credit Hour Policy:

1. Seat time: 50 minutes MWF= 150 minutes weekly X 15 weeks = 2,250 minutes or 37.5 hours

2. Time Spent on Key Assessments:

- Individual/Group Discussions = 10 hours establishing synergy, studying, researching and writing discussion summaries + 5 hours reading, replying, and sharing own weekly reflections = 15 hours.
- Weekly Modules (quizzes and MS Excel problem sets) = 15 hours reading, studying, researching and practicing calculations + 20.5 hours actual weekly module homework submissions= 35.5 hours.
- Midterm and Finals = 8 hours studying and 2 hours during finals + 8 hours studying = 18 hours.

3. Homework (Reading, QM Homework, Business Article Research): 29 hours about 2 additional hours each week.

TOTAL: 135 hours of learning per student per this class/per semester

12. ACADEMIC HONESTY AND TITLE IX COMPLIANCE

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism, in addition to more obvious dishonesty.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of Academic Division and may include an "F" grade for the work in question, an "F" grade for the course, suspension or dismissal from the University.

For the most up to date information, please refer to the Academic Honesty Policy

<https://catalog.chaminade.edu/generalinformation/academicaffairs/policies/academichonestyon>

the Chaminade University Catalog website.

Title IX and Nondiscrimination Statement

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity and mutual respect and is free of all

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forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator.

Nondiscrimination Policy & Notice of Nondiscrimination

Chaminade University of Honolulu does not discriminate on the basis of sex and prohibits sex Discrimination in any education program or activity that it operates, as required by Title IX and its regulations, including in admission and employment. Inquiries about Title IX may be referred to the University's Title IX Coordinator, the U.S. Department of Education's Office for Civil Rights, or both and contact information may be found at the Chaminade University Title IX Office Contact Information and Confidential Resources website

<https://chaminade.edu/compliance/contact-information/>.

On-campus Confidential Resources may also be found here at CAMPUS CONFIDENTIAL RESOURCES
<https://chaminade.edu/compliance/contact-information/>

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at:

<https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/>.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the Campus Incident Report form

https://cm.maxient.com/reportingform.php?ChaminadeUniv&layout_id=0.

Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates. The NOTICE of NONDISCRIMINATION can be found here: Notice of Non-discrimination

<https://chaminade.edu/compliance/title-ix-nondiscrimination-policy/>

Student with Disabilities Statement

Chaminade University of Honolulu offers accommodations for all actively enrolled students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2–3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

13. CHAMINADE UNIVERSITY POLICIES

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Writing Policy

In writing papers, use MLA or APA writing recommendations (preferred MS Word, Calibri #12).

Instructor and Student Communication

Questions for this course can be emailed to the instructor at maria.brownlow@chaminade.edu, in-person, and phone conferences can be arranged. Response time to emails will take place up to 24 hours. Office hours are MWF Noon – 02:00 PM in Kieffer room #28.

Email Guidelines:

- **Use your Chaminade email account** for communication. CANVAS email is proprietary, internal to CANVAS, and cannot be saved in Gmail and MS OUTLOOK.
- **Always include a subject line. Always include your course ID**, for example, BU-324-01-1.
- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. Use of emoticons might be helpful in some cases.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.

Cell phones, tablets, and laptops

Out of consideration for your classmates, please set your cell phone to silent mode during class. Students are encouraged to bring laptops or tablets to class as the instructor will assign online activities and readings that will require the use of a laptop or tablet. Laptops and tablets should not be misused, such as checking distracting websites. Use your best judgment and respect your classmates and instructor.

See <https://catalog.chaminade.edu/> for more detailed information about Chaminade University Policies.

<https://catalog.chaminade.edu/generalinformation/>

Below are some important links to the students' services:

Counseling Services

<https://catalog.chaminade.edu/generalinformation/studentaffairs/counselingservices>

Students' Conduct

<https://catalog.chaminade.edu/generalinformation/studentaffairs/studentconduct>

Emergency Information

24-Hour Chaminade University Emergency Information Hotline (808) 739-7499; (833) 739-7499; chaminade.edu/emergency

Library:

Supply a link to the Chaminade library, www.chaminade.edu/library

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Technical Support:

CANVAS Technical Support is **1-877-251-6615**

Technical Assistance for Canvas Users:

Search for help on specific topics at help.instructure.com

[Chat lives with Canvas Support 24/7/365](#)

Watch this [video to get you started](#) with online guides and tutorials.

Contact the Chaminade IT Helpdesk for technical issues:

helpdesk@chaminade.edu or call 808-735-4855

24-Hour Chaminade University Campus Security (808) 735-4792

Emergency Info Hotline

(808) 739-7499

(833) 739-7499

Emergency Assistance

Dial 911