

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.

Spring 2023 Semester
January 09 – May 05, 2023
BU-224-01-1 Applied Business Statistics

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.” ¹

1. FACULTY CONTACT INFORMATION

Maria Brownlow, Ph.D.:	Management Science, Business Strategy, Business Analytics/Informatics, Computer Information Systems (CIS)
Program Advisor:	Maria Brownlow
Division:	School of Business & Communication (SOBC)
Email:	maria.brownlow@chaminde.edu
Office Phone #:	808-739-8337
Administrative Assistant to Dean:	Linda Lau
Division Phone #:	808-739-8369
Class Schedule:	MWF at 08:30 – 09:20 AM room SULV201
Office Hours:	Noon – 01:00 PM MWF at Kieffer Room 28 or by appointment

¹ Farsighted. How We Make the Decisions that Matter the Most” by Steven Johnson, New York Times best-selling author

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2. COURSE INTRODUCTION AND OVERVIEW

Statistics is used every day in our lives – from purchasing a car (blue book review) to a new cancer treatment that became available passing medical trial. We make our investment decisions based on the technical analysis of the company stock over period. Statistics influences and shapes the world around us. Think about current economic crisis in Greece or how decisions of the European Union affect the rest of the world economy. It is statistics using Excel illustrates the relationship between statistics and our world with a variety of decisions we made daily even we do not realize this fact.

Using every day simple tool like Excel, an abstract theory becomes reality. Additional tools such as DDXL, and STATDISK can be used to enhance students' learning. Think what would happen to statistical process control that is out of the control and more outliers begin to appear without management knowledge.

Intro to Probability and Statistics course is designed to understand statistical tools in research and practice. This course places strong emphasis on understanding concepts of statistics. Topics are presented with illustrative examples, identification of required assumptions, and underlying theory is discussed during interactive lecture and videos.

Excel is used for calculations as a technology tool and instructions are provided along with typical displays of results. Results are reviewed and concluding with interpretation. In some cases, such as examples involving formulas and graphs—detailed instructions are presented so that Excel can be used effectively in all applications, instead of those relating only to statistics. Students enter professional careers with a solid knowledge and skills that are required.

The objective of this course is to present the fundamental concepts in a consistent and straightforward way so that students understand the need to master them. Achieving statistical thinking skills has always been an important challenge of mastering statistics. This course puts strong emphasis on understanding concepts of statistics and explaining and interpreting results. Without this skill the knowledge of numbers is useless – and it would be right to ask a question “So what?” Instead of blindly accepting and using formulas, we better have some understanding why and how they work, what does it mean?

This course is a building step to acquire knowledge and skills to conduct data modeling. Such vast data analysis is further used in business intelligence to make smart and effective decisions. We live in projects-oriented economy where strategic modeling to predict behavior leads to efficient use of limited resources, including funds.

What is a critical thinking in statistics so that we avoid “GIGO” (garbage in, garbage out) results? Instead of blindly using formulas and procedures, students must think carefully about the context of the data, the source of the data, the method used in data collection, the conclusions reached, and the practical implications. Common sense to think critically about data and statistics and do not misuse them is one of the goals of this course.

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The course topics are organized into five parts, as described in this textbook:

1. **Chapter 1 - 3:** Introduces statistics and describe, explore, and compare data. Summarizing and graphing data correctly “speaks better than words” allowing students to identify bad graphs that might be technically correct but misleading. It is important to understand how graphs misleading. These chapters explain some fundamental tools used in the statistical methods.
2. **Chapter 4 - 6:** Introduces and describes concept of probability and probability distributions. Sound understanding concept of probability values constitute the underlying foundation on which the methods of inferential statistics are built.

Major activities of inferential statistics are:

- use sample data to estimate values of population parameters such as a population proportion or population mean, and
 - test hypotheses or claims made about population parameters
3. **Chapter 7 - 9:** These chapters focus on the use of sample data to estimate a population parameter and introduce the basic methods for testing claims or hypotheses that have been made about a population parameter.
 4. **Chapter 10:** In this chapter students learn methods for determining whether correlation or association between two variables exists and whether the correlation is linear. For linear correlations, students identify an equation that best fits the data and use that equation to predict the value of one variable given the value of the other variable.

In this chapter, methods for analyzing differences between predicted values and actual values are presented. In addition, methods for identifying linear equations for correlations among three or more variables are discussed. In conclusion, some basic methods for developing a mathematical model that can be used to describe nonlinear correlations between two variables, is presented.

Chapter 14: Students will learn that important characteristic of data is a changing pattern over time. Statistical process control deals with this issue. The main objective of this chapter is to learn how to construct and interpret control charts that can be used to monitor changing characteristics of data over time. That knowledge will better prepare students for work with businesses trying to improve the quality of their goods and services.

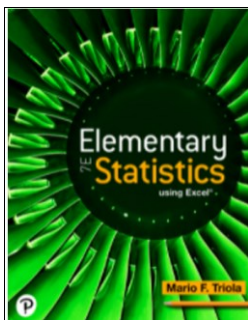
Use of technology for developing conceptual understanding and analyzing data throughout the course is extensive. All assignments are paperless through use of myLab Statistics giving students ability to learn the subjects as they do their assignments (homework, quizzes, tests, and exams) via help tools included in myLab Statistics.²

² Textbook: [Mario F. Triola “Elementary Statistics using Excel”](#)

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3. CATALOG DESCRIPTION

The course introduces students to the use of statistical information for business decision-making. Topics include summary measures, frequency distributions, probability, sampling, statistical inference, and simple regression. Emphasis is given to the interpretation and meaning of statistical information. Offered every semester. Prerequisites: MA 103.



Textbook: **Mario F. Triola "Elementary Statistics using Excel," Seventh Edition**, Pearson, Prentice Hall, Inc., **Textbook ONLY**, (Unbound (Saleable))
ISBN-13: 9780136937432

Minimum Requirements:

MyLab Statistics with Pearson eText – 18 weeks Standalone Access Card -- for Elementary Statistics Using Excel, 6th Edition; Format: Access Code Card
ISBN-13: 9780136961888

4. INSTITUTIONAL LEARNING OUTCOME

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

5. BUSINESS ADMINISTRATION PROGRAM LEARNING OUTCOMES (PLO)

UPON COMPLETION OF THE B.A. UNDERGRADUATE PROGRAM IN BUSINESS ADMINISTRATION, STUDENTS WILL BE ABLE TO:

1. **Communicate** effectively regarding business related tasks, in both oral and written modes.
2. **Select** and use the appropriate quantitative tools for decision-making.
3. **Undertake** analysis, perform tasks, and develop strategies using the central concepts of each functional area of business.
4. **Assess** and create business strategy appropriate for organizations in specified business environments, including global and domestic markets.
5. **Discuss** the legal obligations of organizations and the ethical dilemmas they face, along with appropriate frameworks for addressing these dilemmas.
6. **Discuss** the distinctive features and challenges of conducting business internationally.
7. **Serve** as an effective individual contributor to a group process and deliverable
8. **Use** business skills to promote service, justice, and peace within community organizations.³

³ <https://chaminade.edu/business-and-communication/business-administration/>

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6. COURSE LEARNING OUTCOMES (CLO).

At conclusion of the course, students will be able to:

1. **Use** statistical knowledge and soft skills to support management decision-making process in real business cases (analysis).
2. **Demonstrate** statistical literacy and develop statistical thinking skills to use in practice and research (application).
3. **Apply** statistical expertise how to use statistical knowledge in business and in research through conceptual understanding the science of statistics (analysis).
4. **Choose** statistical knowledge to understand big data, interpret it scientifically and deduce it for the public through use of real data and its interpretation (evaluation).

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

	CLO 1	CLO 2	CLO 3	CLO4
Marianist Values	2	2	5	4
Native Hawaiian Values	2	3	5	3
Program Learning Outcomes (PLO)	2	3	3, 4	4, 5

7. 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 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

This class represents one component of your education at Chaminade University of Honolulu. 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 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

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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.”

8. 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.](#)

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2. **Provide an Integral, Quality Education (Na’auao)** Lawe i ka ma’alea a kū’ono’ono (‘Ōlelo No’eau 1957) *Acquire skills and make it deep.*

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.*

9. ASSESSMENT AND GRADING

Grades will be based on the following assessment tools to improve and evaluate student learning outcomes through:

1. Homework, quizzes, tests, and exams.
2. Flow Cart Animation, ending with questions to evaluate comprehension of concepts and definitions.
3. End of Chapter review questions.

TENTATIVE SCHEDULE

Course schedule will be provided during a Day One kick-off meeting. Schedule is subject to change at the discretion of the instructor based on students’ progress. Syllabus and Course Schedule is posted on the Pearson myLAB Statistics in Document Sharing folder.

GRADING

Grading will be based on the following table:

GRADING YOUR ACCOMPLISHMENTS:	GRADE SCALE:
Homework assignments	A = 90% – 100%
Quizzes & tests	B = 80% – 89%
Exams	C = 70% – 79%
Staying on schedule with assignments Priceless	D = 60% – 69%
	F* = 50% – 99%

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	<p>IF* = "Incomplete F" gives student 30 days to work on missing assignments. Needs a very strong justification. "IF" will be Individually decided by instructor and/or the Program Director along with a consolation with student.</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:

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- A → Outstanding scholarship and an unusual degree of intellectual initiative
- B → Superior work done in a consistent and intellectual manner
- C → Average grade indicating a competent grasp of subject matter
- D → Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work
- F* → Failed to grasp the minimum subject matter; no credit given
- W → Withdrawal before published deadline
- I → The issuing 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 was unable finished the homework due to unforeseen circumstances.
- IP → In progress; primarily used for thesis completion or practicum completion
- AU → Audit
- CR/NC → Credit/N

Learning is never ending process. We learn every day by observing, solving problems, making mistakes and try not to repeat them. Student responsibility is discovering your own style of learning. Educators' responsibility is to crate learning environment that student flourish.

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

1. Maintain open communication.
2. You have a question, just ask me.
3. The statistics course resides on the Pearson myLAB Statistics portal specifically developed for the textbook.
4. You grade yourself by submitting assignments into myLAB Statistics.
5. If you obtained a grade that you did not expect and you want review incorrect answers and re-do them, you are welcome to do this within next two weeks. Practice is learning.
6. I do not deduct points.

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7. We do not have final exam. However, we have exams during semester, which are logically scheduled based on the covered material.
8. Exams cannot be repeated and must be completed within assigned dates. If unusual circumstances had occurred, and you notify me before the date of the exam, exam will be rescheduled. Each request to re-do exam will be considered individually.

9. UNIVERSITY POLICIES

TITLE IX COMPLIANCE

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

Undergraduate Catalog, 2022-2023 Academic Year

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

Student Conduct Policy

Campus life is a unique situation requiring the full cooperation of each individual. For many, Chaminade is not only a school, but a home and a place of work as well. That makes it a community environment in which the actions of one student may directly affect other students.

Therefore, each person must exercise a high degree of responsibility. Any community must have standards of conduct and rules by which it operates. At Chaminade, these standards are outlined so as to reflect both the Catholic, Marianist values of the institution and to honor and respect students as responsible adults.

All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students' rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University's jurisdiction from the time of their admission until their enrollment has been formally terminated.

SYLLBUS

Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website under Student Life. For further information, please refer to the Chaminade Catalogue.

Student Health

In the overall scope of student development, health care is a vital element for physical development and well-being. Because Chaminade University does not have a health center on campus, we offer free alternative means of transportation for residence students to and from several local public clinics and area hospitals.

Chaminade supports health requirements that complement the goals of maintaining a healthy, safe campus. These requirements are based upon laws of the State of Hawaii and therefore are strictly enforced. Failure to comply will result in being prohibited from registering for classes and/or moving into residence halls.

Tutoring Services and Writing Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua 'Ike:

<https://chaminade.edu/student-success/kokua-ike/> Center for Student Learning in a variety of subjects (including, but are not limited to: biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check Kōkua 'Ike's website for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click Account – Notifications – TutorMe. For more information, please contact Kōkua 'Ike at tutoring@chaminade.edu or 808-739-8305.

Writing Policy

Offer specifics about your policy on formatting, e.g., use of MLA or APA.

Instructor and Student Communication

Questions for this course can be emailed to the instructor at maria.brownlow@chaminade.edu. Online, in-person and phone **808-739-8337** conferences can be arranged. Response time will take place up to within 24 hours or earlier.

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.

Disability Access

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If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from Kōkua 'Ike: Center for Student Learning by the end of week three of the class, in order for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Kōkua 'Ike Coordinator at (808) 739-8305 for further information (ada@chaminade.edu).

Attendance Policy

The following attendance policy is from the 2019-2020 Academic Catalog (p. 54-55). Faculty members should also check with their divisions for division-specific guidelines. Students are expected to regularly attend all courses for which they are registered.

Student should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address, calling the instructor's campus extension, or by leaving a message with the instructor's division office. It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade.

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, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades. Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu Tutor Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

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.

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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, research, online discussion, online quizzes, or exams; instruction, collaborative group work, internships, laboratory work, practice, studio work, and preparation of papers, presentations, or other forms of assessment.

This policy is in accordance with federal regulations and regional accrediting agencies. Schedule Include a schedule for all class meetings which includes dates and topics to be covered. You may also want to include readings, assignments, and holidays or non-instructional days.

Chat online:

Introduce yourself to others in the chat session. Be polite. Choose words carefully. Do not use derogatory statements. Be concise in responding to others in the chat session. Be constructive in your comments.

Discussion Groups:

1. Review discussion threads thoroughly before entering the discussion.
2. Maintain threads by using the “reply” button rather than starting a new topic.
3. Be respectful of others’ ideas.
4. Read the comments of others thoroughly before entering your remarks.
5. Cooperate with group leaders in completing assigned tasks.
6. Be positive and constructive in group discussions.
7. Respond in a thoughtful and timely manner.

Classroom Policies

While each instructor has their own policies regarding classroom conduct and requirements, the following University policies apply to all classes:

- Smoking and alcoholic beverages are prohibited in all classrooms, whether or not class is in session.
- No pets are allowed in class. Exceptions will be made in the case of a seeing-eye dog.
- Radio, CD players, headsets, televisions, and other personal audiovisual equipment not pertinent to the class are prohibited during class.
- Cellular telephone use is also prohibited during class except in extenuating circumstances approved in advance by the professor.
- The use of any camera or video devices while in class, restrooms, locker rooms, or in any situation not normally considered public or where users of the facility may expect privacy is prohibited. Such devices shall include but are not limited to those in mobile telephones,

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computers, electronic organizers, or other more surreptitious equipment, and which are capable of capturing either still or moving image.

- A dress code requiring footwear and appropriate attire, to be worn in classrooms, as well as in the library, cafeteria, and administrative offices. No beachwear is allowed. Laboratories have additional requirements. Please note that it is the instructor's sole prerogative to determine whether a student is.
- In a fit condition to perform classroom work (e.g., is not under the influence of alcohol or drugs, and is not sleeping).
- Working on assignments for that particular class (rather than working on projects for other classes or engaging in activity unrelated to schoolwork).
- Distracting other students as to impair the learning environment.

If the instructor finds a student in violation of any of these provisions, or the policies outlines in the course syllabus, he or she may require the student to leave the classroom and may subsequently mark the student absent, which could eventually affect the student's final grade. Failure on the part of the student to honor the instructor's request to leave the classroom may result in removal of the student by the University security personnel and initiation of the University disciplinary process.

Communicable Disease Policy

<https://www.cdc.gov/>

Residence Life: (808) 739-4648

Dean of Students: (808) 735-4710

Drug – Free Workplace & Campus Policy

Student Handbook, on page # 43

Library:

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

Privacy and Confidentiality

See Catalog, page #50

Here are a few important items "You Need to Know:"

24-Hour Chaminade University **Emergency Information Hotline (808) 739 - 7499; (833) 739 - 7499**

University Emergency Information webpage: <https://chaminade.edu/emergency/>

Technical Support:

Technical Assistance for Canvas Users:

- Search for help on specific topics or get tips in Canvas Students
- Live chat with Canvas Support for students
- Canvas Support Hotline for students: +1-833-209-6111



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- Watch this video to get you started
- Online tutorials: click on "Students" role to access tutorials

Contact the Chaminade **IT Helpdesk** for technical issues:
helpdesk@chaminade.edu or call **(808) 735-4855**

Use of Technology to Harass

No student may, under any circumstances, use technology to harass any other person.