



Chaminade
University
OF HONOLULU

Course Syllabus

[Chaminade University Honolulu](https://www.chaminade.edu/)

3140 Waialae Avenue - Honolulu, HI 96816

Course Number: STM 602 Course

Course Title: DATA VISUALIZATION AND ANALYTICS FOR INNOVATION AND BUSINESS DEVELOPMENT (3)

Department Name: Management Science, Business Analytics, Computer Information Systems (CIS)

College/School/Division Name: School of Business and Communication

Term: Accelerated Fall 2023 Semester

Course Credits: 3

Class Meeting Days: Online Asynchronous Course

Class Meeting Hours: Online Asynchronous Course

Class Location: Canvas Learning Management System (LMS)

Instructor Name: Eduard “Eddie” Merc, Ph.D., MBA (Please call me Eddie. 😊)

Email: Eduard.Merc@chaminade.edu

Phone: (808) 739-8594 (Google Voice Number)

Office Location: Kieffer 27 Office, SOBC Conference Room

Office Hours: By Appointment Only via E-Mail

Instructor Website: <https://chaminade.edu/business-and-communication/business-faculty/>

Other Professional Contact Information: eduardmerc (Skype) and @EdkoPletko (Twitter)



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.

University Course Catalog Description

Catalog Description: This course presents the fundamentals and advanced features in MS Excel, Tableau, and Power BI to explore the importance of data visualizations in today’s business in today’s fast-changing business world, in which the business analytics has become an important part of competitive strategies. Furthermore, it reviews statistical underpinnings of data presentation and interpretation. Familiarizes

students with the data science lifecycle and explore the use of data to support all aspects of business development. It also includes project-based work on data sets from sectors of particular interest to students' career pathways.

Course Overview

Visual Analytics is the field that combines techniques of interactive information visualization with the use of algorithms and methods of data analytics. Its main goal is the generation of insights that help users in the decision-making process.

Visual Analytics is used in diverse areas that include science, engineering, business, and government. We can find different visual analytics applications in fields such as urban planning, gas explorations, finance, security, natural disasters, health monitoring, among others.

With this course you will learn the theoretical bases of Visual Analytics, as well as some fundamentals of rapid prototyping and practical applications.

The course uses a multidisciplinary approach that aims to help the students learn the skills needed to develop visual analytics projects in real life.

The purpose of the course may be summed up as follows: *to gain a better understanding of the Fundamental elements of visual analytics by using Tableau Software license and delivering effective business reports to create a value in the overall business decision-making process in any type of an organization.*

Dr. Eddie Merc is teaching this course. Canvas is used for this course where you will find various types of assignments. All your weekly homework will be done in Canvas.

Program Learning Objectives (PLOs)

Upon completion of the Science and Technology Innovation concentration, students will be able to:

1. Understand the Science and Technology endeavor through frameworks of the domain sciences, desirable impacts on society and opportunities for business development.
2. Understand local, regional, and national S&T environments and the ecosystem of programs that seek to empower business in this sector.
3. Demonstrate the ability to use advanced data analytics and visualization to support all aspects of business development.
4. Identify each stage on the S&T continuum and design appropriate operational approaches to use cases derived from each of these stages, with particular focus on the process of technology commercialization

Student Learning Outcomes – Service Learning

- To demonstrate an understanding of the connections between academic work and real-life situations.

Course Learning Outcomes (CLOs)

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

- Conduct exploratory data analysis using visualization in MS Excel, Tableau, and MS Power BI Software Environments.
- Use optimization models to solve business challenges and determine the most favorable outcome for an organization.
- Create effective data visualization design by applying knowledge of perception and cognition.
- Apply the fundamental concepts of data visualization to create a mini research project in your field of study.
- Develop a storytelling technique to emphasize the "power of data" in decision making.

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 skill and make it deep
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Olelo 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 ('Olelo No'eau 1430) Education is the standing torch of wisdom
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Olelo No'eau 203) All knowledge is not taught in the same school

Course Website:

<https://chaminade.instructure.com/courses/30391>

Course Prerequisites

Please check Chaminade's Course Catalog for any pre-requisites for this class at: <https://catalog.chaminade.edu/>

Technology and Materials

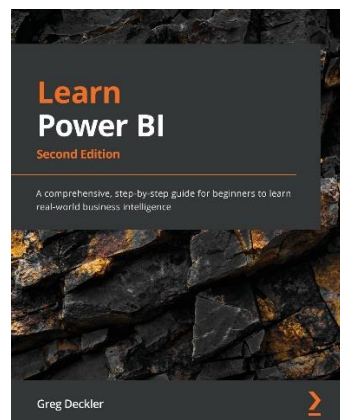
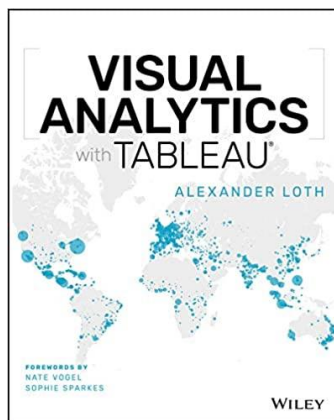
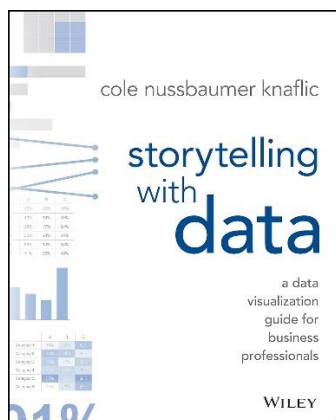
Learning materials will be provided on Canvas. These include PowerPoint files, PDF slides, tutorials, websites, articles, discussion board, Tableau Educational License, MS Office (Excel) and Power BI applications

Required Textbook

- Storytelling with Data: A Data Visualization Guide for Business Professionals 1st Edition by Cole Nussbaumer Knaflic (Author) (Link to purchase: <https://a.co/d/cMTFVSn>)

Recommended Books

- Visual Analytics with Tableau 1st Edition by Alexander Loth (Link to purchase: <https://amzn.to/3ltzk4m>)
- Learn Power BI: A comprehensive, step-by-step guide for beginners to learn real-world business intelligence, 2nd Edition 2nd ed. Edition (Link to purchase: <https://a.co/d/3MOn84p>)



Course Expectations

Your final grade will be based on your performance on content reflection, assignments, professionalism, and active time spent in our online course in Canvas (recording reviews, etc.).

- The average student can expect to spend approximately 5-7 hours per week preparing for this class.
- Active student participation in all required discussions and weekly assignments is required.
- Honest communication with me personally or via e-mail is expected if any unexpected changes occur in your life. Note: In case of class cancelation, you will be notified via Canvas and your Chaminade email.

Computer Proficiency Expectations

Students in this course are expected to be proficient in the following technology areas:

- Canvas LMS
- Chaminade email
- MS Office/Tableau Basics/Fundamentals

Course Attendance Policy

Students are expected to attend daily and log in to Canvas daily to check for course announcements, materials, and assignments. You are encouraged to attend our informal online class sessions in Zoom from time to time to ask questions about the course content or homework. Your attendance in these “office hour” online meetings is not required but highly recommended. I will provide the session recording afterwards for your review.

Behavioral Expectations

In the online classroom, civil discourse must be adhered to both in synchronous live meetings as well as asynchronous discussion rooms and/or interactions whether they are with the instructor or peers. Students should use proper netiquette at all times online.

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.

Assessment

Assessment methods include reflection journal, class assignments, and a final project/presentation. Every effort will be made to return all student work within two-weeks of the due date.

Class assignments are divided into the following groups:

Canvas Content and Homework

- Weekly study materials/handouts
- Journal Reflections, MS Excel/Tableau/Power BI Class Assignments
- Final Individual Project (Visual Analytics)

Grading and Assignments

Class sessions are designed to promote student participation through the discussion of current events in the business world as they relate to the use of quantitative analysis for managerial decision-making processes.

Final Grade Requirements

Grading Distribution

Weekly Reflection Discussions = 200 points

3 Excel/Tableau/Power BI Class Assignments = 600 (3X200 each)

Final Project and Presentation = 200 points

A = 900 or more

B = 800 to 899

C = 700 to 799

D = 600 to 699

F = Below 600

TOTAL Course Points Possible: 1,000 Points

3 Excel/Tableau/Power BI Class Assignments

Each week, students will be reflecting on various topics of the week by watching an assigned video (TED Talks or YouTube Clips) as well as reply to at least 2 other classmate posts to keep our virtual conversation going regarding fundamental and emerging topics in the world of visual analytics.

3 Excel/Tableau/Power BI Class Assignments

Students will complete 3 hands-on class assignments in this class by using Excel Software

(<https://www.microsoft.com/en-us/microsoft-365/excel>), Tableau's free academic software license,

(<https://www.tableau.com/community/academic>), and Power BI Visual Analytics Software

(<https://powerbi.microsoft.com/en-us/downloads/>) This will provide them with deeper knowledge of fundamental elements of Tableau for effective reporting and decision-making analysis.

Final Project and Presentation

The final project consists of a basic visual data analysis in MS Excel or Tableau or MS Power BI, combined with a completed report that will be presented by each student as a formal business presentation to support decision-making process in an organization.

Grading Standards

"A" students do not miss classes during the semester. They read and critically engage all the assigned readings before class on their own, and with classmates and the instructor. All assignments are not only complete but go beyond more than just the minimum requirements. Their assignments are turned in on time or early, exhibit proper style, grammar, and format, are well-organized, integrate strategic planning and targeting, and are written precisely and concisely. They take advantage of all rewrite and extra credit opportunities. These students always keep up with current news events, both locally and globally.

“B” students miss a few classes during the semester. They usually read the assigned readings before class. Their assignments exhibit proper style, grammar, and format, are well-organized, integrate strategic planning and targeting, and are written precisely and concisely. They take advantage of all rewrite and extra credit opportunities. These students usually keep up with current events.

“C” students miss several classes during the semester. They complete the assigned readings before exams. Written assignments and exams usually exhibit proper style and formatting, but do not always integrate strategic planning and targeting, and are not always well organized or written precisely and concisely. All assignments are turned in on time, and most rewrite opportunities are used. These students sometimes keep up with current events.

“D” students miss four or more classes during the semester and skim assigned readings. Assignments and exams usually exhibit proper style and formatting, but they often lack integrated strategic planning and targeting, and are often not well-organized, or written precisely and concisely. Assignments are not always turned in on time and only some rewrite opportunities are used. They don’t keep up with current events.

“F” students fail to attend class consistently, miss exams, written assignments; don’t use rewrite opportunities.

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
- 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

Tutoring 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: 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 (<https://chaminade.edu/advising/kokua-ike/>) 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.

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! 😊

Challenging a Grade on an Individual Assignment

Should a student find at any point during the semester that they wish to challenge a grade they have received on an assignment, they are welcome to do so. Following are the grade challenging guidelines:

- Students must wait 48 hours after receipt of their assignment before challenging the grade
- Grade challenges must be submitted in writing via email, in respectful and professional prose

- Students must articulate, based on the merits of their work (not on circumstances) and the guidelines of the assignment/rubric, why they feel their grade should be amended
- Students have up to 2 weeks to challenge an assignment grade, attempts to challenge a grade after 2 weeks from receiving an assignment back will be automatically forfeited

Students also retain the right to academic grievance for final course grades through standard Chaminade processes should they feel this step is necessary.

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. (Note: Any school-endorsed holidays will be honored.)

Class Schedule (Year: 2023) (subject to change):

Week/Module #	Assignment Title	Due Date
Week/Module 1 (Introduction)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • MS Excel Download and Installation 	Sunday at 11:59PM HST
Week/Module 2 (MS Excel)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • Hands-On Excel Activity Submission (Please check recording) 	Sunday at 11:59PM HST
Week/Module 3 (MS Excel)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • MS Excel Hands-On Assignment #1 Submission (Please check recording) 	Sunday at 11:59PM HST
Week/Module 4 (Tableau)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Storytelling with Data (Chapters 1 and 2) • Weekly Reflection Discussions and Replies (2) • Free Tableau Download and Installation (Academic Version) 	Sunday at 11:59PM HST
Week/Module 5 (Tableau)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Storytelling with Data (Chapters 3, 4, and 5) • Weekly Reflection Discussions and Replies (2) • Hands-On Tableau Activity Submission (Please check recording) 	Sunday at 11:59PM HST

Week/Module 6 (Tableau)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Storytelling with Data (Chapters 6, 7, and 8) • Weekly Reflection Discussions and Replies (2) • Tableau Hands-On Assignment #2 Submission (Please check recording) 	Sunday at 11:59PM HST
Week/Module 7 (MS Power BI)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • MS Power BI Download and Installation 	Sunday at 11:59PM HST
Week/Module 8 (MS Power BI)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • Hands-On Power BI Activity Submission (Please check recording) 	Sunday at 11:59PM HST
Week/Module 9 (MS Power BI)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • MS Excel Hands-On Assignment #3 Submission (Please check recording) 	Sunday at 11:59PM HST
Week/Module 10 (Summary and Final Project Wrap-Up)	Readings/Reflections and Homework Assignments <ul style="list-style-type: none"> • Weekly Recording Review • Assigned Readings and TED Talk Videos • Weekly Reflection Discussions and Replies (2) • The Final Project and Presentation Submission 	Sunday at 11:59PM HST

Aloha from Professor Eddie Merc, Ph.D., MBA, PMP

Course Policies

Late Work Policy

All work in this course will be due at 11:59PM HST every Sunday, at which point online submission boxes will promptly close. Note: For any past due homework submissions, please contact the instructor for approval. Mahalo!

If you find that you are having technical difficulties, please contact the Chaminade IT Helpdesk for issues related to Chaminade technology (helpdesk@chamonade.edu). If you have documentation from the Helpdesk indicating that they have identified a problem with the technology, I will allow you to submit the assignment once a

resolution has been reached at no penalty to you. If students are unsure of their home technology, they should plan to use the computer lab on-campus to submit work in a timely manner.

Grades of "Incomplete"

Incomplete grades are reserved for cases of illnesses and other emergencies that cause a student to be unable to complete the course by the due date. In such cases, the instructor has the option of issuing an "incomplete" grade at the end of the semester. Requests for an "incomplete" must be accompanied by substantive documentation.

Writing Policy

APA Style writing will be used in this class. For more information about this writing style, please visit: <https://apastyle.apa.org/>

Instructor and Student Communication

Questions for this course can be emailed to the instructor at Eduard.Merc@chaminade.edu. Online, in-person and phone conferences can be arranged. Response time will take place up to 24 hours.

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

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, 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).

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.

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 decide 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.

Academic Conduct Policy

From the 2019-2020 Undergraduate Academic Catalog (p. 39):

Any community must have a set of rules and standards of conduct 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. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website.

For further information, please refer to the Student Handbook: <https://chaminade.edu/wp-content/uploads/2019/08/NEW-STUDENT-HANDBOOK-19-20-Final-8.20.19.pdf>

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, 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.

THE FOLLOWING SHOULD BE INCLUDED FOR ONLINE COURSES:

Guidelines for Communication

Email: (examples of email protocol items; you may modify for your course)

Use your Chaminade email account.

Always include a subject line.

Remember that without others being able to see your facial expressions or hear your tone, some comments may be taken in a way you didn't intend. So be careful in wording your emails. Use of emoticons may be helpful in some cases.

Use standard fonts.

Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.

Discussion Groups: (examples of discussion group protocol items; you may modify for your course)

Review discussion threads thoroughly before entering the discussion.

Maintain threads by using the "reply" button rather than starting a new topic.

Be respectful of others' ideas.

Read the comments of others thoroughly before entering your remarks.

Cooperate with group leaders in completing assigned tasks.

Be positive and constructive in group discussions.

Respond in a thoughtful and timely manner.

Chat: (examples of chat protocol items; you may modify for your course)

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.

Miscellaneous Student Notes: