MS IN DATA SCIENCE STUDENT HANDBOOK

ACADEMIC YEAR 2024 – 2025

The Department of Mathematics and Statistics
CI 301; Phone (361) 825-3754

College of Science (COS)
Texas A&M University - Corpus Christi (TAMU-CC)

Updated: July 20, 2024

This handbook is intended to be read in conjunction with the Graduate Catalog: https://catalog.tamucc.edu/graduate/ and the College of Graduate Studies Handbook https://www.tamucc.edu/science/documents/handbooks/math-ms-handbook.pdf

TABLE OF CONTENTS

This handbook is intended to be read in conjunction with the Graduate Catalog: https://catalog.tamucc.edu/graduate/ and the College of Graduate Studies Handbook http://gradcollege.tamucc.edu/current_students/masters_students.html.

SECTION I. MESSAGE FROM THE DEAN/DEPARTMENT CHAIR/PROGRAM COORDINATOR

The Purpose of this Handbook

Welcome to the graduate handbook for the Department of Mathematics and Statistics at the Texas A&M University – Corpus Christi. This handbook is designed to serve as a resource to help with your questions about the graduate program. It is a companion for the catalog of the entry year: http://www.tamucc.edu/academics and in case of any contradiction the catalog of record is the true source of information, as well as the Graduate Studies handbook. The Graduate Studies handbook provides university-wide information relative to student resources, academic policies, financial assistance, graduation and thesis guidelines, including formatting, submission and deadlines: http://gradcollege.tamucc.edu/current_students/masters_students.html.

The sections on the thesis proposal and the project of the Data Science program in this handbook are particularly important; they are not covered in the Graduate Studies Handbook but a big step towards the MS in Data Science.

Program Mission

Texas A&M-Corpus Christi's Data Science program will prepare students to meet the growing state, national, and international needs for highly qualified personnel in the fields of data science. The program objectives underline the interdisciplinarity of data science and the importance of building a strong foundation of data science for our students.

Program Objectives

- Provide strong core training so that graduates can adapt easily to changes and new demands from society and industry.
- Develop an in-depth understanding of the theory and methods in data science and develop students' skills for problem analysis and decision-making.
- Texas A&M-Corpus Christi's Data Science program will prepare students to meet the growing state, national, and international needs for highly qualified personnel in the fields of data science. The program objectives underline the interdisciplinarity of data science and the importance of building a strong foundation of data science for our students.
- Provide strong core training so that graduates can adapt easily to changes and new demands from society and industry.
- Develop an in-depth understanding of the theory and methods in data science and develop students' skills for problem analysis and decision-making.
- Texas A&M-Corpus Christi's Data Science program will prepare students to meet the growing state, national, and international needs for highly qualified personnel in the fields of data science. The program objectives underline the interdisciplinarity of data science and the importance of building a strong foundation of data science for our students.
- Provide strong core training so that graduates can adapt easily to changes and new demands from society and industry.

- Develop an in-depth understanding of the theory and methods in data science and develop students' skills for problem analysis and decision-making.

Program Options

Students enrolled in the Master of Science program with a major in Data Science can opt for either the in-person format or the online equivalent program. The sole distinction between these programs lies in their delivery methods. In each option, a capstone product allows students to focus their coursework on broad applications. Both modalities require the completion of a thesis or project. The thesis starts with a broad foundation, and then encourages a specialized study culminating in a thesis based upon original research, supported by data science and statistics literature. The thesis requirement for the master's degree will allow a person to pursue advanced graduate study, or to obtain employment in most areas that require a detailed knowledge of a specific aspect of data science. The project allows a student to demonstrate a particular ability with an application of data science and statistical methods to new data. The project will be an original work supported by a data science literature review.

This handbook is intended to be read in conjunction with the Graduate Catalog: https://catalog.tamucc.edu/graduate/ and the College of Graduate Studies Handbook http://gradcollege.tamucc.edu/current_students/masters_students.html.

Student Learning Outcomes

Students will:

- Develop advanced data science programming abilities and demonstrate proficiency with data analysis.
- Develop advanced knowledge in a broad range of methods based on data science and use these methods for data management, analysis, and problem-solving.
- Derive advanced theoretical properties of methods involved in data science.
- Develop an advanced ability to build and assess data-based models.
- Develop solid knowledge in a broad range of methods in data science.
- Assess the model used to solve data science tasks.
- Interpret data, extract meaningful information, and assess findings.
- Evaluate the limitations of data science findings.
- Employ cutting edge tools and technologies to analyze data.
- Use data science skills for data management, analysis, and problem-solving.
- Apply modeling and data analysis techniques to the solution of real-world data problems.
- Communicate findings, and effectively present results using data visualization techniques.

A master's degree graduate is expected to possess expertise in focused and independent research. To fulfill this requirement, the MS in Data Science incorporates courses designed to impart research skills and produce a tangible research output. This output can take the form of either a "thesis" or a "project." Throughout this document, references will be made to both as a "thesis/project," and it is important for you to distinguish which you are undertaking.

It is the responsibility of the student to thoroughly read and become acquainted with the information provided in the handbook.

SECTION II. FACULTY & STAFF

Program Faculty:

Department Chair:

Alexey Sadovski, Ph.D., Professor of Mathematics, Office: CI 338, Phone: (361) 825-2477, alexey.sadovski@tamucc.edu. Research Interests: Optimal Control, Probability Theory and Statistics, Stochastic Processes, Operation Research and Decision Making, Optimization, Advanced Mathematical Modeling, Modeling of Natural Systems.

Graduate Faculty:

Celil Ekici, Ph.D., Associate Professor of Mathematics, Office CI 312, Phone (361) 825-3485, celil.ekici@tamucc.edu Research Interests: Data Modeling and Visualization, Mathematical Modeling, Integrated STEM and Data Science Education Connections, Fourier and Functional Analysis

Jose Guardiola, Ph.D., Professor of Statistics, Office: CI 309, Phone: (361) 8255544, jose.guardiola@tamucc.edu. Research Interests: Circular Statistics, Bayesian analysis and Spatial Statistics. Applied biomedical research.

Lei Jin, Ph.D., Professor of Statistics, Office: CI 307, Phone: (361) 825-2099, lei.jin@tamucc.edu. Research Interests: Time series, missing data and applied statistics.

Devanayagam Palaniappan, Ph.D., Professor of Mathematics, Office: EN 211, Phone: (361) 825-2221, devanayagam.palaniappan@tamucc.edu. Research Interests: Solutions of ordinary and partial differential equations, fluid mechanics, elasticity, electro- and magnetostatics, thermal systems and instability, vortex interactions, porous media.

Mallikarjunaiah S. Muddamallappa, Ph.D., Associate Professor of Mathematics, Office: CI 316, Phone: (361) 825-3187, M.Muddamallappa@tamucc.edu. Research Interests: partial differential equations, etc.

Maria Vasilyeva, Ph.D, Assistant Professor of Applied Mathematics, Office CI 340. Phone: (361) 825-2140, Maria.Vasilyeva@tamucc.edu Research Interests: Multiscale multiphysics problems, Heterogeneous media, Numerical methods, Multiscale methods, Upscaling, Machine learning

Zheng Wei, Ph.D., Assistant Professor of Data Science, Office CI 306, Phone: (361) 825-6019. email: Zheng.Wei@tamucc.edu Research interests include: Bayesian statistical methods for data science, big data and analytics; Statistical machine learning methods, Statistical methods for analyzing multiway contingency table, Stochastic Frontier Model for efficiency analysis

Other faculty members may have associate graduate faculty status; please contact the graduate coordinator if you need to know the status of a -faculty member not listed here.

Staff:

Shannon Vo, Academic Advisor III, shannon.vo@tamucc.edu

Melanie Morales, Administrative Assistant, Office: CI 301, Phone: (361) 825-3754, melanie.morales@tamucc.edu

SECTION III. LEARNING OUTCOMES

Program Admission Requirements

In addition to meeting all University requirements for admission to graduate study in degree-seeking status, applicants for the MS degree in Data Science must also submit an essay to the University's Office of Graduate Studies: The essay, 300-500 words in length, should discuss the applicant's educational and professional goals, pertinent work and undergraduate experience, and other factors relating to the chosen option for graduate study. If the applicant has a GPA below 3.0 in undergraduate relevant courses, the essay should specifically address any factors that might have hampered the applicant's undergraduate study. One or more letters of recommendation specifically addressing an applicant's ability to do graduate level study of data science may be submitted to strengthen an application. The letters should be submitted as part of the application at the time of application.

Persons seeking admission to the MS in Data Science should first contact the program faculty and identify a faculty member willing to serve as the graduate advisor.

Applicants are expected to enter the program with adequate academic preparation for their chosen option, as detailed in the degree requirements below. If the graduate committee determines that an applicant's preparation is deficient, the individual will be required to complete course work to remedy these deficiencies. Such course work will be regarded as leveling work and will not count as credit towards the total required for completion of the MS degree in Data Science.

> Applicants for the Data Science program may enter with a BS or an MS with adequate preparation with coursework in data science, mathematics, statistics, and computer science is required (or leveling courses). Specific leveling course work is MATH 1442 Statistics for Life, MATH 3311 Linear Algebra, MATH 3315 Differential Equations, MATH 3342 Applied Probability and Statistics, MATH 3470 Calculus III, and MATH4301 Introduction to Analysis. Students with no computer programming experience may find themselves at a disadvantage in certain courses without an introductory programming course.

Program Admission Deadlines

https://www.tamucc.edu/programs/graduate-programs/data-science-ms.php has all the pertinent information including the deadlines. See also http://gradcollege.tamucc.edu/new_students/ for FAQs on the admission process and international admissions.

Admission Review Process/ Timeline

Once all the documents are complete, they will be forwarded to the Mathematics and Statistics Department, enabling the graduate program coordinator to assess and recommend admission. This process will generally takes about two weeks.

SECTION IV. ACADEMIC PROGRESSION

Program Degree Requirements

Data Science

	Sem. Hrs.
1. Core courses	12
2. Prescribed Elective Courses	12 -15
CAPSTONE COURSES	
3. This option will be 6 hours and non-thesis will be 3 hours	
Thesis Option	
DASC 5994 Proposal Research	3
DASC 5995 – Thesis	3
Non-Thesis Option	
DASC 5997 Capstone Project	3
	Total 30

The Core courses

DASC 5301 – Principles of Data Science **3 sem. hrs.**

DASC 5302 – Data Science and Predictive Analytics **3 sem. hrs.**

DASC 5307- Machine Learning in Data Science **3 sem. hrs.**

or COSC 5308- Machine Learning in Data Science **3 sem. hrs.**

DASC 5323 – Natural System Analysis and Multivariate Statistics **3 sem. hrs.**
or CMSS 6303 Natural Systems Analysis **3 sem. hrs.**

1. Elective courses may be chosen from the following list.

- DASC 5303 - Data Science Computing 3 sem. hrs.
- DASC 5304 – Bayesian Inference in Data Science 3 sem. hrs.
- DASC 5305 – Applied Differential Equations for Data Science 3 sem. hrs.
- DASC 5306- Dynamical System Analysis for Data Science 3 sem. hrs.

- DASC 5308 - Numerical Methods in Data Science 3 sem. hrs.
- DASC 5321 – Geospatial Data Structure 3 sem. hrs.
    - Or GSCS 6321 Geospatial Data Structures
- DASC 5324 – Digital Image Processing 3 sem. hrs.
    - Or COSC 6324 – Digital Image Processing 3 sem. hrs.
- DASC 5325 – Natural Systems Modeling 3 sem. hrs.
    - Or CMSS 6305 – Natural Systems Modeling 3 sem. hrs.
- DASC 5327 – Introduction to Computer Graphs 3 sem. hrs.
- DASC 5329- Scientific Visualization 3 sem. hrs.
- DASC 5331 – Advance Geospatial Computing 3 sem. hrs.
    - Or GSCS 6331 – Advance Geospatial Computing 3 sem. hrs.
- DASC 5336 – Database Management Systems 3 sem. hrs.
    - Or COSC 6336 – Database Management Systems 3 sem. hrs.
- DASC 5337- Data Mining 3 sem. hrs.
- DASC 5340 – Genomics, Proteomics and Bioinformatics 3 sem. hrs.
    - Or BIOL 5340 – Genomics, Proteomics and Bioinformatics 3 sem. hrs.
- DASC 5341 – Statistical Methods and Data Analysis 3 sem. hrs.
    - Or MATH 5341 – Statistical Methods and Data Analysis 3 sem. hrs.
- DASC 5342 – Linear Statistical Models 3 sem. hrs.
    - Or MATH 5342 – Linear Statistical Models 3 sem. hrs.
- DASC 5345 – Computational Methods for Statistics 3 sem. hrs.
    - Or MATH 5345 – Computational Methods for Statistics 3 sem. hrs.
- DASC 5348 - Optimization 3 sem. hrs.
    - Or MATH 5348 - Optimization 3 sem. hrs.
- DASC 5350 – Advance Topics in DBMS 3 sem. hrs.
    - Or COSC 6350 – Advance Topics in DBMS 3 sem. hrs.
- DASC 5352 – Environmental Forecasting 3 sem. hrs.
    - Or CMSS 6352 – Environmental Forecasting 3 sem. hrs.
- DASC 5354 – Artificial Intelligence 3 sem. hrs.
    - Or COSC 6354 – Artificial Intelligence 3 sem. hrs.
- DASC 5355 – Data Communications and Networking 3 sem. hrs.
    - Or COSC 6355 – Data Communications and Networking 3 sem. hrs.
- DASC 5356 – Computational Biology 3 sem. hrs.
- DASC 5365 – Spatial Database Design 3 sem. hrs.
    - Or COSC 6365 – Spatial Database Design 3 sem. hrs.
- DASC 5380 – Data Analytics 3 sem. hrs.
    - Or COSC 6380 – Data Analytics 3 sem. hrs.
- DASC 5383 – Advance Geospatial Analytics 3 sem. hrs.
- DASC 5386 – Remote Sensing and Image Analysis 3 sem. hrs.
    - Or GSEN 6386 – Remote Sensing and Image Analysis 3 sem. hrs.
- Other courses with Department Chair Approval

With prior approval from the Department Chair, a student may select offerings of relevant areas related to the student's interest for a maximum of two graduate courses from outside the Department as electives.

2. Thesis or Project

All students in the Data Science program will take DASC 5994-Proposal Research, to prepare and present a proposal. These courses serve as preparation for either a thesis or project.

A thesis requires students to articulate a data science problem, propose a novel method, and create a comprehensive solution to the problem. On the other hand, a project requires students to demonstrate their ability to tackle a significant practical data science problem, including collecting and analyzing data, performing appropriate analyses, and finding a solution. Students should be adept at communicating both orally and in writing the proposed solution to the data science problem.

Primarily, the thesis option is designed for students planning to pursue a Ph.D., while the project option is tailored for students seeking employment with a Master's degree.

Students working on a thesis will prepare a proposal in DASC 5994. Students working on a project will prepare a project proposal but are not required to take DASC 5994. When a student is within 15 semester hours of graduation, they may form a graduate committee and defend the proposal. Guidelines for writing the thesis, including the required format and style, are available on the Mathematics Department website.

Upon approval of the proposal, the student registers for DASC 5995-Thesis or DASC 5997-Project, as appropriate. The student continues to register for DASC 5995-Thesis or DASC 5997-Project each successive semester (Fall or Spring required, Summer by choice) until the thesis or project is completed.

A student who does not complete a thesis or project in the semester for which they have registered will receive a grade of IP (In Progress). Failure to complete a thesis or project in four long semesters, earning a grade of U, or neglecting to register for DASC 5995-Thesis or DASC 5997-Project in the next semester after receiving a grade of IP will terminate the thesis or project. This will require the entire process to be repeated, starting with the preparation of a new proposal.

Every student in the Data Science program must defend their thesis or project, ordinarily during the final semester. The defense will be administered by the student's graduate committee.

Graduate Advisory Committee

The purpose of the committee is to provide guidance and technical advice throughout the project or thesis research and preparation. The committee chair is the principal source of such guidance. Any preliminary drafts of the manuscript are reviewed by the student and the committee chair. Normally, only the final draft of the manuscript, after the approval of the committee chair, is presented to the full committee. This committee is selected by the student and is composed of three faculty members with at least two, including the chair, from the Department of Mathematics and Statistics at TAMUCC. All members of the committee should have expertise relevant to the project or thesis, but final authority on the content of the thesis or project will lie with the chair. The chair is selected at the start of the student's program, and the full committee is selected within two semesters. Form A: Thesis Advisory Committee Appointment at http://gradcollege.tamucc.edu/contact_us/forms.html needs to be filed with the College of Graduate Studies before the start of the research. Any changes to the committee require that Form D: Thesis Committee Member Change Request form, gets filed with the College of Graduate Studies.

All members of the committee must approve (or sign) the proposal before the student enrolls in DASC-5995 or DASC-5997, as appropriate. If there are any changes to the thesis/project committee membership after the proposal has been signed, the remaining committee members must approve the changes. Corrected thesis proposal cover sheets should be properly filed. The final approval of the thesis by the committee members occurs during the student's presentation of the thesis or project in an oral defense, described later in this document. The committee chairperson is responsible for notifying the department office of the defense by providing an announcement that includes the thesis title and an abstract. All committee members are expected to attend the defense. In extraordinary circumstances, it is acceptable for a committee member to approve the thesis or project based on the provided documents without attending the defense. If a committee member cannot review the written document, they should be replaced as outlined in the previous paragraph.

Proposal

The primary intent of the proposal is to assure that all involved parties understand and agree to the planned thesis or project work. Such an agreement should minimize misunderstanding as to what is required for completion of the thesis or project.

A student will develop a proposal for a thesis during DASC-5994. The proposal will consist of a presentation, a written document and a defense.

- The presentation should be brief and for a data science audience outlining the background of the proposed research, a statement of the problem and a general indication of the analysis and solution.
- The written proposal should be prepared with the advisor and given to the committee a week prior to the defense.

- The student will meet with the committee for questioning and defense of the proposal. The advisor and the students will take notes from the committee about what changes, if any, are needed to ensure that the investigation can be completed as proposed.

The written proposal may follow a specified style format (e. g., APA or other specific journal format) and may contain the following:

A. Cover page--Figure 1 on the next page shows a sample sheet.
B. Abstract--A clear and concise (at most one page) overview of the planned thesis or project activity.
C. Introduction—Introduction of the area and/or issue to be explored, purpose statement and research or guiding questions
D. Related work and justification--A statement describing selected previous work by others in the thesis or project topic. In addition, a short discussion as to why the proposed work should be considered as a significant component leading to the student's receipt of a master's degree in Data Science.
E. Planned actions--A statement of the steps required to finish the work. A timeline should be included.
F. End results intended--A general, but clear, statement of what will be produced.
G. Bibliography – include all sources consulted in generating the proposal.

Formal approval of the proposal is indicated by signatures on the cover page. If a committee chair and student agree that the direction of research is on an appropriate course different from the one proposed the student is encouraged to submit a revised proposal to be approved by the committee. The original proposal is then discarded.

As described in the section on the Sequence of Courses, not maintaining continuous enrollment in the thesis or project course is cause for canceling the original proposal. A new proposal, with approval and filing in the same manner as the first, is needed to continue the research.

Notes:

(1) The proposal is to be submitted on high quality, white, 8 1/2" x 11" paper.
(2) The text of the proposal must be of letter quality type of size 10-12 points.

Below is a **sample** cover page for the thesis proposal:
(Left and top margins *1.5 inches*)

Thesis/Project Title

(*3 blank lines*)

A PROPOSAL for a THESIS/PROJECT in DATA SCIENCE

(*2 blank lines*)

by

(*2 blank lines*)

STUDENT NAME

(*2 inches*)

APPROVED: _____ Date:_____

Dr. ****** *******, Chair

_____

Dr. ****** *******, Member

_____

Dr. ****** *******, Member

_____

Dr. ****** *******, Chair

Department of Mathematics and Statistics

(approx. *2 inches*)

Style: _____

Degree Plan

See the relevant section University Graduate Handbook. The degree plan must be completed before the student has completed 15 credit hours. Please contact the academic advisor in the college (Ronnie Emmanuel) about the degree plan.

Culminating Event/Exit Requirements

The culminating event is the Thesis/Project Defense and subsequent submission of all required forms as well as the successful submission of the thesis/project document.

Notification of Intent to Graduate

Graduation upon completion of the course requirements is NOT automatic. The semester before graduation is anticipated, students should obtain an application from the Office of Admissions and Records by the deadline date indicated in the University Class Schedule. Deadline dates are also available on the Texas A&M University-Corpus Christi website.

SECTION V. COURSE OFFERING SEQUENCE

Data Science:

FALL	SPRING	SUMMER I	SUMMER II
Even years: DASC 5308 Numerical Methods in Data Science DASC 5341 Statistical Methods and Data Analysis Odd years: DASC 5301 – Principles of Data Science DASC 5302 - Data Science and Predictive Analytics	Even years: DASC 5303 Data Science Computing. DASC 5305 Applied Differential Equations for Data Science DASC 5323 – Natural System Analysis and Multivariate Statistics Odd Years: 5342 Linear Statistical Models 5345 Computational Methods for Statistics		
On demand: DASC 5304 – Bayesian Inference on Data Science DASC 5325 – Natural Systems Modeling DASC 5348 – Optimization DASC 5380 – Data Analytics			

SECTION VI. PROGRAM SPECIFIC INFORMATION

Program/College Awards

Every year the Departmental Awards Committee can select an outstanding graduate student from each program track for recognition within the department on a permanent plaque. The thesis advisor or committee members can nominate a student for the Outstanding Graduate Student Award. The nominations should be submitted before the second Friday of March

each year. The committee will select the outstanding graduate student based on academic excellence, research contributions, innovations and creativity, and leadership and initiative.

Conferences to Attend

Attending or presenting at a conference is always encouraged. The university may have some travel funds available for presentations at conferences or subsidize travel to regional conferences.

SECTION VII. REQUIREMENTS THAT EXCEED THE COLLEGE OF GRADUATE STUDIES REQUIREMENTS OR EXAMPLES, E.G., THESIS ABSTRACTS

The Manuscript, Contents and Format

There are two types of manuscripts in the Mathematics Graduate Program at TAMUCC, thesis and project. The two do not differ in style or format requirements, but the project manuscript may predominantly serve as documentation for a data science application.

The thesis must conform to academic and institutional standards. Both documents should follow the guidelines for a thesis given at http://gradcollege.tamucc.edu/current_students/doctoral_dissertation.html. The thesis has to be submitted electronically and documents not following the guidelines will be rejected. A LaTeX thesis template including math_thesis.tex, TAMUCCthesis.sty, math_thesis.bib is available at that site. The template sets the format for the title page, the lists of tables and figures and the references and the page margins. The content of the document should still follow a style (APA or a specific data science journal) that the committee agrees on.

Manuscript Review and Approval

Manuscript Review

When a student is satisfied with a draft copy of the thesis or project manuscript, it is submitted to the committee chair. It is advisable to allow other graduate students and individuals to proofread the draft before submitting it to the committee chair. The student should include documentation of the chosen format style.

The committee chair will critically examine the manuscript for mathematical or curricular content, soundness of reasoning, accuracy, grammar and organization. The committee chair will return the corrected manuscript with suggested changes and request a revised copy. Once revised, it is always advisable to return the corrected copy with the revised copy for the next review. The process of submission of the manuscript and revision will continue until the committee chair is satisfied with all aspects.

Don't be surprised or despondent if the submitted manuscript undergoes several drafts. Even full professors are used to numerous editorial changes when submitting manuscripts for publication. It is important to submit the manuscript to the committee chair in the best possible form, because it is part of the learning process, avoids frustration on the part of the committee chair, and will expedite the process of getting the manuscript accepted in a timely manner. Write concisely and be sure to spell check and grammar check your paper, but do not depend on the computer to make all the proper corrections.

Upon the direction of the committee chair, the student will submit a copy of the approved draft to each graduate committee member, along with documentation of the chosen style format. Each committee member will edit the manuscript. Do not expect next day service on return of the manuscript, so be sure to allow time to revise and resubmit the manuscript to the committee members. If significant changes are required, the student should discuss them with the committee chair. If there are differences in opinions from

committee members, the chair of the committee will determine the final outcome of any concerns.

Approval

Once the draft manuscript is approved by all members of the master's or project's committee, the department or the committee 's chair announces the date of the defense of the thesis or project. For a thesis this is the time to file the Form B: Preliminary Agreement to Schedule the Thesis Defense/Final Examination, which must be filed with the College of Graduate Studies no later than **five (5)** business days prior to defense.

Defense of the Thesis or Project

The defense is a formal presentation of the student's research to an audience of at least the graduate committee, but may also include mathematics faculty, students and the public. The oral/graphic presentation should be approximately 30 minutes long and allow additional time for questions from the audience. After the presentation, the student is given a closed-door examination by the committee. Finally, the committee must meet in a closed-door session before announcing any result of the defense. Form C: Thesis Defense & Written Thesis Report is to be filled for the results.

The student must prepare and submit a formal announcement of the defense to the committee chair for approval at least one week prior to the defense date. Form B: Preliminary Agreement to Schedule the Thesis Defense must be filed. It is the student's responsibility to contact each committee member. All graduate committee members must attend the defense.

The student will be responsible for providing adequate information to the departmental staff so that staff may notify each Mathematics and Statistics faculty member, the Department of Mathematics and Statistics Chair and the Dean of the College of Science. The staff should also arrange a time for the event and reserve the meeting room and appropriate media equipment based on the information from the student. The student must place notices on bulletin boards in appropriate places in the Center for Instruction and the University Library. This notice must be distributed at least one week before the date of the defense. The defense must also be posted on appropriate list-servs. The notice should not exceed one page in length. Graduate students are encouraged to attend as many oral defenses as possible.

Final Deposition of the Manuscript

For the thesis option, the master's committee and the department chair will sign Form C: Dissertation Defense & Written Dissertation Report Form only after the student successfully completes the defense and has made all required changes to the thesis. Making the required changes and getting all signatures will take time that needs to be planned for. Two weeks are recommended. The signed Form C must be submitted to the College of Graduate Studies two weeks before graduation.

Thesis Manuscript. The student must be submitted electronically through ProQuest two weeks before graduation.

Project Manuscript. The student is required to submit an approved electronic manuscript to the chair of their master's committee at least two weeks before graduation.

Publishing Results from a Thesis or Project

The thesis is not, by definition, a "published" work. However, it is anticipated that every student will submit the contents of his or her thesis, revised in an appropriate form, to a scholarly journal for publication.
Under normal circumstances, the student and committee chair will co-author any publication or presentation that results from the thesis research. If other faculty members, professionals or students made significant contribution to the research leading to the manuscript, the students should also list those individuals as co-authors. Both the student and committee chair should agree concerning authorship. To a certain degree, the committee chair and committee have a professional responsibility to assist the student in this process.
The student and committee chairs should make official acknowledgement of any researcher or faculty member if they are not a co-author but

- The student was supported by a grant that was awarded as a result of the researcher/faculty member's authorship.
- The student received some guidance for the researcher/faculty member.

Dissemination rather than publication may be more appropriate for the content of a project. As with the thesis, the primary credits and benefits should be shared by the student and committee chair. Where appropriate, other researchers and faculty should proportionately share in the acknowledgements, benefits and credits from the dissemination.

Thesis/Project, Criteria for Rejection

Any member of the master's thesis/project committee or official representative of the Department of Mathematics and Statistics may reject a thesis or project for any of the following reasons:

- Plagiarism--an attempt by the student to submit another person's work as their own, e.g., including published work without reference.
- Final manuscript describes work that is inconsistent with the approved thesis proposal.
- Final manuscript contains serious content errors. Such errors might include faulty proofs of main theorems or lemmas, unsupported statistical conclusions, fraudulent data, or incorrect computer programs written in support of the thesis.
- Final manuscript contains an excessive number of grammatical and/or spelling errors.
- Final manuscript does not conform to the required format.

SECTION VIII. TIMELINES

l. Overall timeline

Data Science

- With advisor as appropriate DASC 5994 (3 credit hours)
- After DASC 5995 (3 credit hours) or form non-thesis option DASC 5997 (3 credit hours)

Timeline for Thesis or Project Course.

Deadline	**Action**
End of second semester	File degree plan with the College of Graduate Studies and file Form A when forming the master's committee
4 weeks before defense	Give the committee chair a near-final version of the thesis/project
3 weeks before defense	Submit final to chair of committee
2 weeks before defense	Submit final to rest of committee and dept. chair
5 days before defense	File Form B with the College of Graduate Studies and announce the defense to public
Ideally 4 weeks before graduation	Defend project or thesis (and have two weeks to make changes and get signatures)
2 weeks before graduation	File Form C with the College of Graduate Studies and submit the thesis through ProQuest