***MASTER OF SCIENCE IN FORENSIC SCIENCE***

## Brand Marks

***GRADUATE RESEARCH MANUAL***

## **SECTION I: THE MSFS RESEARCH MANUAL**

The MSFS program requires a major research project that can be completed in one or two semesters. Students who choose to complete their research project in one semester are required to complete the required 6 hours of capstone units through a 160 hour internship plus their research project. This manual is a tool developed to provide MSFS graduate students with the necessary information to organize and produce a research project suitable for publication and to prepare the student to present their research as a poster or power point presentation. This project is governed by the MSFS program and is consistent with FEPAC standards.

This manual offers guidance on MSFS requirements related to the student’s research advisory committee, and the formatting, typing, printing and arranging the manuscript. Graduate students and their advisors must adhere to the standards outlined in this manual and are responsible for understanding these requirements. Therefore, it is imperative that students be very familiar with and adhere to CURRENT rules and requirements as stipulated in this manual. Students should read the guidelines thoroughly and completely, follow directions, and ask questions if in doubt about specific procedures, rules and manuscript requirements.

**SECTION II: ROLES AND RESPONSIBILITIES**

A graduate research project should constitute a contribution to the field of forensic science knowledge even if the basic idea for a research is an expansion of existing research. The master's research project must demonstrate the ability to clearly define a worthwhile problem, conduct thorough investigation, organize and logically present data, and draw defensible conclusions. The roles and responsibilities of the research student and committee are:

1. The student is exclusively responsible for correcting all errors--typographic, format, spelling, grammar, and syntax -- as well as for substantive content.

2. The faculty mentor and committee members are responsible for determining whether the finished version meets required standards for content, writing and consistency in disciplinary style.

3. The faculty mentor and committee members evaluate the document to ensure compliance with the procedural and formatting requirements stipulated in this MSFS Research Project guidelines manual. Projects that do not follow the guidelines will need to be corrected by the student before they can receive final approval from the research committee and faculty mentor.

**Student**

The graduate student bears primary responsibility for the research project from the inception of the idea through the preparation of the final document and seminar presentation of the project. The student is responsible for ensuring that the submitted work meets accepted standards of usage for scholarly writing, including grammar, spelling and punctuation. Thorough proofreading of a submitted copy, at any stage of the process, is the responsibility of the student. The student must become familiar with all relevant rules and requirements detailed in this manual.

**Faculty Mentor**

The faculty mentor assumes major responsibility of working directly with the research student throughout all phases of the research project. S/he is the student's main consultant, advisor and advocate. Potential members of the Research Committee should be reviewed by the faculty mentor with the goal of maximizing available expertise related to the research question.

The faculty mentor challenges the candidate to anticipate theoretical, practical and methodological complications that are likely to be encountered. All aspects of the research topic and research questions will be thoroughly discussed and debated with the student to determine ways of addressing theoretical and methodological problems. The student is expected to submit drafts of the research proposal and the developing manuscript itself to the faculty mentor for editorial feedback. The quality of the research is a direct reflection of standards established by the discipline and enforced by the faculty mentor. When the student seeks consultation from another member of the Committee during the development of the research questions and method, the faculty mentor should be either present or the student should discuss the meeting immediately after with the faculty mentor. This procedure will protect the student from inconsistent guidance and incompatible recommendations. If contradictory information is being given to the student, the program director may be required to take steps to resolve the inconsistencies.

The faculty mentor conducts the proposal and presentation meetings. General expectations and procedures will be discussed with the student prior to a presenting their research in a seminar environment. The student is required to present the contents of the written proposal to the Committee during FRSC 797 Seminar in Forensic Science, followed by questions from Committee members. The student will be required to successfully complete FRSC 797 in order to enroll into FRSC 880 and to proceed with their research project.

**MSFS Research Committee Members**

MSFS Research Committee members are responsible for thorough review of the research document. At least three committee members are required for the oversight and evaluation of the research project and the presentation of same. At least one of the evaluators will be from outside of the department and program. This may include retired faculty or experts in the field from off campus. Faculty members from other departments may be considered, especially for interdisciplinary breadth or special expertise or experience. In the event that the student and faculty mentor determine that successful completion of the project requires the specialized expertise of a professional or clinician, the faculty mentor or program director may make such an appointment. The professional’s affiliation and credentials must be identified on the evaluation form.

**SECTION III: Preparing the Research Report & Presentation**

**PROCEDURAL STEPS**

1.The process should begin with the student meeting with a MSFS faculty member to discuss the research idea and the faculty expertise needed to assist the student in completing the project.

2. After discussion with a faculty member, a faculty mentor is assigned and a research committee is selected. The student must present a first draft (typically in the form of a power point) research proposal for review by the Committee members. Any changes will be noted and returned to the student within one month of its submission. A corrected final draft will then be submitted for Committee approval. This will then serve as their research contract between the student and their faculty mentor and the project is formally initiated. Once the committee has granted approval, the student should begin moving forward with their project to ensure that they will complete it as defined in their timeline.

3. The MSFS research proposal will continue through completion with the student and assigned faculty mentor. The switching of faculty mentors during the project is problematic for the success of the student, and is greatly discouraged. Any changing of faculty mentor must be approved by the program director.

4. Once the student has received formal approval of the Committee the student must obtain a special permission from their mentor to register for research credits in the fall, spring and/or summer semesters. Students have the opportunity to spread their research over two semesters for 6 units but this requires permission from the program director and faculty mentor.

5. Students must also be aware that there is a 7-year time limit on the completion of master’s graduate programs. This time limit includes all coursework, transfer courses, and research completion.

6. Students will meet regularly with their faculty mentor to discuss project progress. Students should also stay aware of ALL deadlines established by their mentor for review and submission of the research project as well as formal submission of a graduation application.

7. A final draft of the research project report and presentation should be distributed to the Committee Members for final review **four weeks prior to the official end of the semester** (final exam week) in which the student intends to graduate. (The student’s research mentor may decide if this should be a paper copy or electronic.) At the time of distribution, the student should also meet with the faculty mentor and department seminar coordinator to establish a date and time for the oral presentation and defense of the research project.

8. When a student is required to make changes to the report or presentation as stipulated by the Committee or faculty mentor, s/he should allow at least one week (7 days) to make necessary changes. This will provide ample time for a final check for content, formatting, typing and page numbering errors thus avoiding delays that could compromise the student’s ability to graduate in the designated semester.

**9. Intellectual Property and Copyright Information-**If the research contains information identified as proprietary in nature and/or relevant to patent application, the student must contact the faculty mentor for detailed information.

**SECTION IV: Research Report and ARRANGEMENT OF PAGES**

The MSFS program requires that the student follow a format/style required by the Journal of Forensic Sciences. *The below is taken directly from the Journal of Forensic Sciences (information for Authors) website.*

**Type and Fonts**-Type should not be larger than 12-point. The following fonts are acceptable: **Times New Roman, Arial and Courier**

**Print should be letter-quality preferably.** As much as possible, use word processing techniques for any special symbols, lines, boxes, or other printing. If there are any lines or symbols that cannot be produced using word processing symbols, insert them with black ink that has adequate photographic reproduction quality. Use a ruler for any drawn lines and a fine-point pen for symbols inserted in the printed text. Be sure the size of the written symbols is in proportion with the printed characters. If any of these manual methods are used, the page must be scanned and added to the electronic document.

**Margins**

Use consistent margins throughout the manuscript.

Left margin -- Must be at least 1-½ inches to allow for any possible future binding.

Top margin -- Allow one inch above the top of the letters in the first line of type, and at least three-quarters of an inch above the top of the page number. It is suggested that on pages which begin with a major heading (such as a chapter), allow two inches for a top margin.

**Right and bottom margins** -- Should be at least one inch.

Adjust the text to not leave less than isolated two lines at the top of a new page or above the bottom margin except for the final page of a chapter, a table, or an illustration.

**Page Numbering**-Beginning with the first page of the text and continuing to the end of the manuscript number pages in sequence with **Arabic numerals,** starting with 1. Count all pages and number them. Do not insert numbers such as "106a" or leave uncounted pages.

Position page numbers uniformly at the bottom of the page, center. Even if a page has text/table/graph/diagram filling the page and printed sideways (for landscape orientation), the page number should still be in the same position and alignment as on a regular page. This may require manually typing or positioning the page number.

**Line Spacing-**Double-space the main body of the text. Single space headings that are longer than one line. You should single space within footnotes or endnotes, bibliography entries, long quotations, and tables.

**Headings and Subheadings-** Use the same font size for headings as used in the body of the text. Double space, not quadruple space, after the last line of the title before beginning the text. Double space, not quadruple space, before and double space after all subheadings.

**References Cited in the Text -**Arrange notes or other methods of reference citation in a definite and consistent order and style according to the discipline style approved by the forensic mentor. If using footnotes, they should be placed at the bottom of the page within the designated margins. Footnotes should be separated from the text with a horizontal line 2 inches long. Allow sufficient space during typing so that an entire footnote can be placed on the page on which it begins. Single-space the notes themselves and double-space between them.

**Abstract**-The abstract should provide the reader with an overview of the problem, methodology, and conclusion in concise, specific, and informative language. **The abstract text for a research project report must adhere to a strict 150-word limit and must be complete on one page.** The heading "ABSTRACT" is centered without punctuation two inches from the top of the page. Two lines below this heading the title appears as written on the title page. The author's name is centered and placed two lines below the title. The text of the abstract begins two lines below the author's name and should also be double-spaced.

**TEXT PAGES-**

**a. Headings**

The report needs to be carefully organized to reflect a logical development of the research project. Many, but not all, are organized under five rather distinct headings. Often (but not required), the major sections of the work are:

* INTRODUCTION,
* LITERATURE REVIEW,
* METHODS AND MATERIALS,
* RESULTS,
* DISCUSSION
* BIBLIOGRAPHY

**b. Spacing and Indentation of text, series, and block quotations**

The text is double-spaced and a new paragraph begins five spaces from the left margin. Use only left-only justified margins. A numbered, lettered, or bulleted series is indented from the left margin or both the left and right margins. Block quotations are also indented from both the left and right margins. In addition, block quotations are single-spaced.

**c. Bibliography**-The last section of the research project report is the bibliography. Since nearly all research projects make use of other works, either in direct quotation or by reference, this section is normally required. The format/style used must be consistent with that required by the Journal of Forensic Sciences.

At the end of every thesis/dissertation, there should be one blank white page with no page number.

**Final reminders before turning in the final report…..**

Did you….

\_\_\_\_consistently use the appropriate style stipulated by the Program/Department?

\_\_\_\_check to be sure pages in the report are numbered appropriately,

sequentially and located on the page as instructed in the guidelines?

\_\_\_\_verify page numbering for Chapters/Major Headings in the Table of Contents is consistent with pages in the document?

\_\_\_\_make appropriate margin adjustments for each page as instructed in this

manual?

\_\_\_\_ follow margination guidelines consistently for footnotes, tables, figures, illustrations and photographs?

\_\_\_\_ use the correct font size?

\_\_\_\_ follow the line spacing guidelines identified in this manual?

\_\_\_\_ check for typing and grammatical errors?

\_\_\_\_ make all the corrections stipulated by your Committee and/or faculty mentor?