



## **DISTINCTION IN RESEARCH**

### **DISTINCTION IN RESEARCH DESCRIPTION:**

The Distinction in Research is an optional research path that recognizes a high level of engagement by a medical student in research. The Distinction path is designed to provide opportunities for medical students who seek higher levels of research experience than would normally be available through a single summer research experience. Working under the direction of a Burrell College faculty member, the Distinction path provides an intensive supervised research experience that mentors students in the process of designing, conducting, and disseminating research in a biomedical, clinical, community, or educational setting. Distinction in Research is achieved through the participation in summer research during the summer of the student's 1<sup>st</sup> and/or 2<sup>nd</sup> year, and through a repeated series of non-clinical research electives during the 3<sup>rd</sup> and/or 4<sup>th</sup> years. Students who successfully complete the Distinction requirements will receive a Doctor of Osteopathic Medicine degree with a Distinction in Research annotation on her/his academic record.

### **1. DISTINCTION PATHWAY REQUIREMENTS**

#### **a. ELIGIBILITY**

The Distinction in Research is a selective admissions opportunity based on academic performance at the Burrell College of Osteopathic Medicine (i.e., Burrell College or College). Admission requirements for the the Distinction in Research are as follows:

- Applicants must be in good academic standing in the College with no course failures at the time of acceptance into the program.
- Applicants must be ranked in top 25<sup>th</sup> percentile of their College class.
- Applicants must have a College approved faculty research mentor identified at the time of application.

Requirements for continuation in the Distinction in Research are as follows:

- Participants must remain in the top 50<sup>th</sup> percentile of her/his class with no course failures or other disciplinary actions.
- Participants must successfully complete the COMLEX Level 1 exam on first attempt. Students failing to pass the COMLEX Level 1 exam will be withdrawn from the Distinction pathway so that they may focus on their osteopathic medicine program requirements.
- Participants must successfully complete the COMLEX Level 2C and Level 2P examinations on first attempts. Students failing to pass the COMLEX Level 2C or 2P exams will be

withdrawn from the Distinction pathway so that they may focus on their osteopathic medicine program requirements.

- Make satisfactory progress towards completion of the Distinction in Research as evidenced by advisory committee reports.

## 2. APPLICATION PROCESS

The application process for the Distinction in Research opens on January 15 and closes on March 15 of each academic year. Application materials are submitted to the Office of Research & Sponsored Programs via an online application process. Application materials will include:

- Personal statement (1 page maximum)
- Brief description of research project, written with mentor (1 page maximum)
- Burrell College transcript
- Applicant's Biographical sketch
- Letter of support from a Burrell College faculty research mentor
- Current curriculum vitae of Burrell College faculty research mentor

Complete applications will be reviewed by the Research Advisory Council and students informed of acceptance in writing by April 15.

## 3. PROGRAM REQUIREMENTS

Successful completion of the Distinction in Research will require enrollment in Summer Research Directed Study at the end of year 1 and completion of additional research electives during year 3 and 4. In addition students will be required to complete instruction in Responsible Conduct of Research, develop and defend a formal research proposal, present research findings in a formal research setting, and submit a final paper detailing the research project and findings. Specific details regarding program requirements are provided in the following sections.

- Summer Research Directed Study: The Summer Research Directed Study (OMXXXX) course is a supervised research experience elective for medical students interested in pursuing research during the summer and aims to provide medical students with an introduction to research under the supervision and mentorship of a College faculty member. The course is offered only during the summer and is worth 6 credit hours. Although some studies may require students to conduct research during the academic year, any research conducted during the academic year will be viewed as an extracurricular activity and not count towards the requirements of the Summer Research Directed Study.
- Research Electives: Students pursuing the Distinction in Research are required to complete research elective rotations during their third and fourth years of study. These rotations will be taken as Non-Clinical Research Electives (OM8100).
- Student Advisory Committee: An advisory committee must be assembled to monitor the progress of the student research. The advisory committee will consist of the College Research Faculty Mentor plus two additional members of the College faculty with appropriate expertise. Students should consult with their research mentor in selecting the two additional committee members from the College faculty. On rare occasions, students may petition to add a non-College faculty member as a fourth member of the advisory

committee. The petition will be reviewed by and require approval of the Research Advisory Council. The committee will meet with the student no less than one time per semester to monitor student progress. The Student Advisory Committee is also responsible for final review and approval of the final paper. The Student Advisory Committee must be appointed prior to the end of the fall semester of year 2.

- D. Formal Research Proposal: Students, in consultation with their research mentor, shall develop a brief research proposal describing the research that they will conduct. The formal research proposal should not exceed 2 single-spaced pages (excluding references) in length and include the following components:
- a. Statement of Research Problem
  - b. Background & Significance
  - c. Contemplated Approach to Research Problem
  - d. Selected References

The student will submit the Formal Research Proposal to the Student Advisory Committee and successfully defend the research proposal at a convened meeting of the Student Advisory Committee. Upon acceptance of the proposal, the Student Advisory Committee will notify the Office of Research & Sponsored Programs.

- E. Responsible Conduct of Research:

Responsible Conduct of Research (RCR) is defined as “the practice of scientific investigation with integrity” and is designed to promote awareness and application of professional standards and ethical principles in all activities related to research and scholarly activity. The College RCR program is a tiered program that encompasses four major areas: Planning Research, Conducting Research, Reporting and Reviewing Research, and Research Misconduct. The College believes that RCR for both faculty and students is critical for excellence in research, essential for training future scientists, and an inherent responsibility of researchers to promote public trust, in science.

The RCR program will employ a combination of electronic and face-to-face training to help College faculty and medical students develop a meaningful understanding for the ethical practice of research. Faculty and medical students who participate in the Summer Research Experience and engage in a College sponsored project must complete the RCR training. The goals of the RCR training is to educate researchers and trainees in critical areas of responsible and ethical research, and to encourage the use of responsible research practices. While there are no specific details for the instruction in responsible conduct of research, the following topics have been incorporated as part of the College educational training component of RCR:

- a. Planning Research
  - i. Protection of Human Subjects
  - ii. Biosafety, Biohazardous Agents, and Recombinant DNA
  - iii. Conflicts of Interest
- b. Conducting Research
  - i. Data Management Practices
  - ii. Mentor and Trainee Responsibilities

- iii. Collaborative Research
- c. Reporting and Reviewing Research
  - i. Authorship and Publication
  - ii. Peer Review
- d. Research Misconduct

**4. MENTOR REQUIREMENTS:**

Students will work under the supervision and mentorship of College faculty who will serve as the student’s mentor for the Distinction in Research. Eligible faculty mentors shall be Regular Faculty, Affiliate Faculty, and Adjunct Faculty as defined in the “Bylaws of the Burrell College of Osteopathic Medicine, Article III: Faculty”. The mentor’s area of specialty should be connected to the student’s area of interest and the research topic. Mentors are expected to provide a mentoring plan that fosters the development and progress of the student. Students will formulate their research question, design and implement their research plan in consultation with and under the guidance of their faculty mentor. The mentor will provide progress updates on the student each semester.

**5. FINAL RESEARCH REPORT:**

The final research report is an independent work written by the candidate for the Distinction in Research with guidance from the mentor and advisory committee. The final research report shall conform to one of two acceptable formats as detailed below. Option 1 follows the traditional arrangement of introduction, methods, and etc., and is generally preferred for students that have written one article describing their work. Option 2 is designed for students that have written multiple closely related papers, which have already been accepted, or are under review, or are being prepared for publication. This format allows each paper to serve as its own chapter.

The final report must be submitted to the Office of Research and Sponsored Programs at least 4 calendar weeks in advance of commencement as both a paper and an electronic document in PDF format. The paper document will be bound by ORSP and provided to the College library to become part of the library permanent holdings. Electronic and bound copies are made available to the general public through a joint effort of the ORSP and the College library. Access to reports containing intellectual property (IP) will be restricted until the embargo period expires or one (1) year after submission of the report, whichever comes first.

**A. Organization of the Final Research Report:**

The final research report shall be a substantive formal document that completely describes the work completed for the Distinction in Research. The student may choose one of two format options for the final report.

- **Option 1** is a comprehensive structured format that includes the following sections in the body of the report:
  - Abstract
  - Introduction

- Research Methods
  - Results
  - Discussion and Conclusions
  - References Cited
- **Option 2** is designed for students who have written one or more full manuscripts for journal subscription on her/his approved research topic. In such instances, the final research report will include the following sections in the body of the report:
    - Abstract
    - Introduction
    - Full Manuscripts (Each manuscript will be included as a chapter)
    - Discussion and Conclusions
    - References Cited

**B. Style and Mechanics of the Final Research Report:**

- The style of the final research report shall conform to the American Medical Association Manual of Style: A Guide for Authors and Editors, 11<sup>th</sup> Edition, Oxford University Press 2020.
- Margins (all pages must adhere to the following)
  - Left – 1.5 inch
  - Right – 1.0 inch
  - Top – 1.0 inch
  - Bottom – 1.0 inch
- Page Numbers
  - Bottom Center – Arabic numbers, 0.5 inch from bottom of paper (some pages are counted but not numbered)

**C. Components of the Final Research Report** (Sample Pages are provided in Appendix I)

- Title Page
  - The title should be informative and succinct. The title is limited to 160 characters including spacing between words.
- Copyright Page
  - The author may choose to copyright her/his work.
  - This is optional.
  - This page may be included to acknowledge legal rights associated with copyright,
  - Page Layout
    1. The copyright will be centered at the bottom of the page in the following format:
      - a. Copyright 20XX, Jayne J. Johnson
- Approval Page
  - The approval page indicates the acceptance of the final report by the advisory committee and Office of Research & Sponsored Programs.
- Permission Page

- This page grants permission for the final report to be permanently placed in the College library holdings and made available for public access.
- Acknowledgements
  - This is an optional page that the author may choose to include to acknowledge individuals who provided input or assistance that the author deemed essential to the completion of the research
- Dedication
  - This is an optional page.
- Abstract
  - The abstract is a short summary of the work. The abstract should be limited to a single page.
- Chapters
- References

**SEMINAR PRESENTATION FORMAT:**

For the fulfillment of Distinction in Research, students must present their research to College faculty, staff, students, and general public in an openly advertised seminar setting. The presentation must be generated using appropriate audiovisual tools and projected onto the screen for audience viewing. The presentation should last 40-50 minutes. Questions from the audience are allowed following the presentation.

Appendix I  
Sample Pages

Red typeface is informational and should not be included on the final document

*Page layout instructions: 2" top margin, 1.5" left margin, 1" right margin, 1" bottom margin. The text is centered on the page*

EFFECTS OF OSTEOPATHIC MANIPULATIVE THERAPY ON PAIN MANAGEMENT  
FOLLOWING TRAUMATIC SPINAL INJURY  
**(Title should be all caps and single spaced if longer than one line)**

by

Jayne J, Johnson

A Final Research Report

Submitted to the Faculty  
of the  
Burrell College of Osteopathic Medicine  
in partial fulfillment of the requirements

Distinction in Research

May XX, 20XX

**Month and year of actual graduation**

*(This page is counted, but not numbered)*

*Copyright page. This is an optional page. Information about how to register a copyright can be obtained at: <https://www.copyright.gov/registration>*

Copyright 20XX Jayne J. Johnson

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Version 1.0

APPROVED BY CURRICULUM COMMITTEE May 27, 2020

This Final Research Report, submitted by [YOUR FULL NAME] in partial fulfillment of the requirements for the Distinction in Research from the Burrell College of Osteopathic Medicine, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

\_\_\_\_\_  
Name of Chairperson                      Signature                      Date

\_\_\_\_\_  
Name of Committee Member                      Signature                      Date

\_\_\_\_\_  
Name of Committee Member                      Signature                      Date

\_\_\_\_\_  
Director of Student Research                      Signature                      Date

\_\_\_\_\_  
Assistant Dean for Research                      Signature                      Date

\_\_\_\_\_  
Dean and Chief Academic Officer                      Signature                      Date

## PERMISSION

[This page provides permission for the final report to be made publicly available through the College library]

### Effects Of Osteopathic Manipulative Therapy On Pain Management Following Traumatic Spinal Injury

In presenting this final research report in partial fulfillment of the requirements for the Distinction in Research from the Burrell College of Osteopathic Medicine, I agree that the College Library shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the faculty who supervised my research or, in her (or his) absence, by the Director of Student Research or the Assistant Dean for Research. It is understood that any copying or publication or other use of this report for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the Burrell College of Osteopathic Medicine in any scholarly use which may be made of any material in my final research report.

Typed Name : \_\_\_\_\_

Date: \_\_\_\_\_

## ACKNOWLEDGMENTS

Use this space to acknowledge individuals or entities that contributed to the work. This is an optional page.

**Dedication Page:**

This is an optional page should the author choose to dedicate the report. The dedication should be centered on the page, vertically and horizontally. No other text should be on this page,

For all the incredible people who helped me along on this journey

## TABLE OF CONTENTS

Instructions for creating a table of contents is available on the MS Word Help pages

	PAGE
1. LIST OF FIGURES .....	X
2. LIST OF TABLES.....	X
3. ABSTRACT.....	X

## LIST OF FIGURES

Provide complete list of all figures in the report that includes, the Figure number, caption, and page number, Each figure should occupy a full standalone page and be inserted as the next page after the figure is discussed in the text.

		PAGE
Figure 1:	Schematic representation of the experimental design	XX
Figure 2:	XXXXX	XX
Figure 3:	XXXXX	XX

## LIST OF TABLES

Provide complete list of all tables in the report that includes, the table number, table title, and page number. Each table should occupy a full standalone page and be inserted as the next page after the table is discussed in the text.

		PAGE
Table 1:	Demographics of the Research Subjects	XX
Table 2:	XXXXX	XX
Table 3:	XXXXX	XX

## ABSTRACT

The abstract is a short summary of the work. The abstract should be limited to a single page and presented in three parts consisting of a statement of the research problem, a short description of the approach to the problem including methods used, and the conclusion(s) of the research. An abstract length limited to one page is recommended.

Chapter Pages: Each chapter should be designated with a chapter page that has the chapter number and title centered on the page. The text of the chapter begins on the next page.

## CHAPTER 1

### INTRODUCTION

## REFERENCES

*References or Literature Cited. A complete list of references cited in the AMA style. List references numerically in the order by which they were cited in the text. Single-space within citations and double-spaces between citations. (Cite references parenthetically in the text if a work is not yet accepted for publication or is a personal communication.)*

Example:

1. Sacks O. *Uncle Tungsten*. New York, NY: Alfred A Knopf; 200
2. Galanter M, ed. *Services Research in the Era of Managed Care*. New York, NY: Kluwer Academic/Plenum; 2001.
3. XXXXXXXX