M.S. IN SKIN BIOLOGY AND DERMATOLOGICAL SCIENCES (HYBRID)

Admission Requirements

1. A bachelor's degree from an accredited institution must be conferred before the intended start date.

2. A cumulative grade point average (GPA) of 3.0 or above is required for candidates with bachelor's or Master's degrees. GPA is not required for candidates with MD or PhD degree.

3. A GRE general test or MCAT score is recommended but not required.

4. English proficiency requirement: Test of English as a Foreign Language (TOEFL*)* score of 80 for the internet based test (iBT), or 550 for the paper based test (PBT); or 6.5 on the IELTS (International English Language Testing System); or 125 on the Duolingo English Test (DET) is required for those candidates who graduated from foreign institutes.

5. A personal statement, including past experience and future career goals, is required as part of the application.

6. Three to five letters of recommendation from research or clinical mentors or teachers.

Curriculum Requirements Non-Thesis Track

Code	Title	Credit Hours
Core Requirements		
DER 600	Cutaneous Biochemistry, Cell Biology and Genetics (This course may be waived) [1]	0-3
DER 601	Introduction to Dermatology	1
DER 603	Skin Biology and Pathophysiology [2]	3
DER 605	Microbiology and Immunology of the Skin [2]	3
DER 606	Dermato-epidemiology	2
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 611	Visualizing the Skin	2
DER 612	Grant Writing	1
DER 613	Techniques in Skin Research [3]	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 622	Introduction to Dermatopathology	1
DER 623	Techniques in Skin Research- II [4]	1
DER 631	Advances in Dermatology	1
DER 632	Advances in Dermatology	1
DER 633	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
DER 642	Frontiers in Sciences	1
DER 643	Frontiers in Sciences	1
Total Credit Hours		**30-33**

1 To request a waiver, contact the Program Director.
2 Prerequisite: DER600 (to request a waiver, contact the Program Director).
3 Prerequisite: DER603
4 Prerequisite: DER613

Curriculum Requirements Thesis Track

Code	Title	Credit Hours
Core Requirements		
DER 600	Cutaneous Biochemistry, Cell Biology and Genetics (This course may be waived) [1]	0-3
DER 601	Introduction to Dermatology	1
DER 603	Skin Biology and Pathophysiology [2]	3
DER 605	Microbiology and Immunology of the Skin [2]	3
DER 606	Dermato-epidemiology	2
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 611	Visualizing the Skin	2
DER 612	Grant Writing	1
DER 613	Techniques in Skin Research [3]	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 622	Introduction to Dermatopathology	1
DER 623	Techniques in Skin Research- II [4]	1
DER 631	Advances in Dermatology	1
DER 632	Advances in Dermatology	1
DER 633	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
DER 642	Frontiers in Sciences	1
DER 643	Frontiers in Sciences	1
Research Rotation		**1**
Take 1 credit of Research Rotation - course depends upon the semester taken:		
Fall - DER 661		
Spring DER 662		
Summer - DER 663		
Research Thesis		
DER 808	Research Thesis	6-7
Total Credit Hours		**37-41**

1. To request a waiver, contact the Program Director.
2. Prerequisite: DER600 (to request a waiver, contact the Program Director)
3. Prerequisite: DER603
4. Prerequisite: DER613

Plan of Study (Non-Thesis Track)

*Students who need to take DER 600 should take it in Summer Session B prior to Year One Fall.

Year One		
Fall		**Credit Hours**
DER 601	Introduction to Dermatology	1
DER 603	Skin Biology and Pathophysiology	3
DER 605	Microbiology and Immunology of the Skin	3
DER 606	Dermato-epidemiology	2
DER 631	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
	Credit Hours	**11**

Spring		
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 613	Techniques in Skin Research	1
DER 622	Introduction to Dermatopathology	1
DER 632	Advances in Dermatology	1
DER 642	Frontiers in Sciences	1
	Credit Hours	**11**
Summer I		
DER 600	Cutaneous Biochemistry, Cell Biology and Genetics This course may be waived.	3
	Credit Hours	**3**
Summer II		
DER 611	Visualizing the Skin	2
DER 612	Grant Writing	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 623	Techniques in Skin Research- II	1
DER 633	Advances in Dermatology	1
DER 643	Frontiers in Sciences	1
	Credit Hours	**8**
	Total Credit Hours	**33**

Plan of Study (Thesis Track)

*Students who need to take DER 600 should take it in Summer Session B prior to Year One Fall.

Year One		
Fall		**Credit Hours**
DER 601	Introduction to Dermatology	1
DER 603	Skin Biology and Pathophysiology	3
DER 605	Microbiology and Immunology of the Skin	3
DER 606	Dermato-epidemiology	2
DER 631	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
DER 808	Research Thesis	1
	Credit Hours	**12**
Spring		
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 613	Techniques in Skin Research	1
DER 622	Introduction to Dermatopathology	1
DER 632	Advances in Dermatology	1
DER 642	Frontiers in Sciences	1
DER 808	Research Thesis	1
	Credit Hours	**12**
Summer I		
DER 600	Cutaneous Biochemistry, Cell Biology and Genetics This course may be waived.	3
	Credit Hours	**3**
Summer II		
DER 611	Visualizing the Skin	2

DER 612	Grant Writing	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 623	Techniques in Skin Research- II	1
DER 633	Advances in Dermatology	1
DER 643	Frontiers in Sciences	1
DER 663	Research Rotation	1
	Credit Hours	**9**
Year Two		
Fall		
DER 808	Research Thesis	1
	Credit Hours	**1**
Spring		
DER 808	Research Thesis	1
	Credit Hours	**1**
Summer		
DER 808	Research Thesis	1
	Credit Hours	**1**
	Total Credit Hours	**39**

Mission

Our mission is to foster future generations of skin scientists, physician scientists and industrial leaders in skin sciences, skin care as well as skin related drug and device development.

Goals

In alignment with the university's strategic vision, the Goals of the programs are:

- Train Master's students in a focused knowledge area of Skin Biology and Dermatological Science; and
- Train Master's students in requisite research and research management skills,

Student Learning Outcomes

- Students will demonstrate advanced foundational knowledge of dermatological sciences, as well as research skills in skin biology.
- Students will demonstrate their ability to engage and synthesize the regulatory and innovative competencies in the delivery of Dermatology healthcare.
- Students will demonstrate their basic knowledge to identify and evaluate the disorders and diseases of dermatology and its biological processes.

DER 600. Cutaneous Biochemistry, Cell Biology and Genetics. 3 Credit Hours.
This course is designed to provide students with a fundamental understanding of the genes, structure and functions of human skin. The course will bring students to integrated sciences of human skin, relating to its three core subjects, in biochemistry, cellular and molecular biology, and genetics. The course will encompass comprehensive discussions of related topics, such as, cellular and molecular structure of the skin, genes and gene regulation, biochemical reactions, metabolism, and genetic processes that transmit biological information and regulation.
Components: LEC.
Grading: GRD.
Typically Offered: Fall & Summer.

DER 601. Introduction to Dermatology. 1 Credit Hour.
The aim of the course is to familiarize participants with the basic subject of dermatology and the most common terminology. Students will be introduced to the subject of dermatology, subspecialties in dermatology, structure of the skin (basic anatomy and physiology), terminology (primary and secondary cutaneous lesions), and examples of the most common dermatological conditions.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 603. Skin Biology and Pathophysiology. 3 Credit Hours.
This course helps students to understand the fundamental concepts on and connection between structure and function of the skin. The course will include biology of major skin cell types of keratinocytes, fibroblasts, endothelial cells, melanocytes and Langerhans cells. It will cover biology of skin metabolism, skin appendages, skin matrix, cutaneous vasculature, neuroendocrine system and major processes required for cutaneous barrier function during normal and pathophysiological states. Molecular and cellular mechanisms of cutaneous wound healing, matrix remodeling, tissue regeneration and skin ageing will be also included into coursework.
Prerequisite: DER600 (to request waiver, contact the Program Director).
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 605. Microbiology and Immunology of the Skin. 3 Credit Hours.
This course covers skin microbiota and immune components of the skin in healthy and disordered states. The microbiology will cover bacterial species that cause most common skin infections such as Staphylococcus aureus (folliculitis, impetigo, abscesses, pyoderma, toxic-shock syndrome, staphylococcal scalded skin syndrome, wound infections); Streptococcus pyogenes (impetigo, erysipelas, cellulitis, necrotizing fasciitis, rheumatic fever, scarlet fever, wound infections), and Corynebacterium spp. (wound infections), etc. The bacterial biofilms and their importance in skin infections will also be addressed. The skin hosts the same immunocompetent cell types found throughout the body -T cells, B cells, macrophages, eosinophils, neutrophils, etc. -as well as its own skin-specific subpopulations-Langerhans cells, keratinocytes, and dermal dendrocytes. The second part of the course will cover the biology of immunology of the skin in normal functioning and underlying both intradermal allergic reactions and skin-specific autoimmune disorders (alopecia areata, vitiligo, psoriasis), as well as the standard treatments for each. Further, this course addresses unique immune environments within the skin, such as the immune privilege of the hair follicle, and wound infection.
Pre-Requisite DER 600 (to request a waiver, contact the Program Director).
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 606. Dermato-epidemiology. 2 Credit Hours.
Students will be introduced to the emerging discipline in skin epidemiology or Dermatoepidemiology, to obtain an overview of incidence rates and time trends of skin disorders in the US and in the world, learn biostatistical tools in data analysis including descriptive statistics, hypothesis testing, analysis of variance, and regression analysis. Students gain an appreciation for disparity in the disease outcomes among populations and various barriers contributing to current disparity. Students will also learn about various state and national registries for skin cancer and some other skin disorders available for database research.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 607. Dermatopharmacology. 2 Credit Hours.
This course familiarizes students with the mechanisms of drug action, FDA-indications, off-label uses, safety and efficacy, side effects and necessary monitoring and important drug interactions relevant to topical and systemic medications used in dermatology. The course covers skin barrier and transdermal drug delivery (structure of the skin barrier, factors affecting the skin barrier, strategies to enhance transdermal drug delivery), major drugs used in dermatology including glucocorticosteroids, retinoids, antimicrobials, immunomodulators, agents used in oncology, hormonal therapy, other systemic medications (antimalarials, colchicine, dapsone, leukotriene inhibitors, antihistamines, thalidomide) and topic medications.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 608. Photobiology and Photomedicine. 1 Credit Hour.
This course explores the fundamental concepts of photobiology, phototherapy, and laser/light-based medicine as they relate to skin biology and dermatology. Students will examine the physical principles of ultraviolet (UV) radiation, visible and infrared light, and medical lasers, with emphasis on their interactions with skin chromophores and biological pathways. The course covers traditional phototherapy modalities including UVB, Excimer laser, UVA, PUVA (psoralen + UVA), photopheresis, and photodynamic therapy, as well as modern applications of lasers and energy-based devices in dermatology (vascular lasers, resurfacing lasers, and non-ablative technologies). Treatment protocols, mechanisms of action, clinical indications, adverse effects, and complication management will be addressed in detail. Students will also engage with the future directions of photomedicine, including novel light-based technologies, translational research, and the role of lasers in both therapeutic and aesthetic dermatology. Coursework integrates scientific foundations with practical and clinical applications through readings, discussions, assignments, and group presentations.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 609. Skin Carcinogenesis. 2 Credit Hours.
This course considers the etiology, pathophysiology, epidemiology, types, prognosis and various treatment of the most common types of skin cancers will be covered. Skin cancer is by far the most common type of cancer affecting the humans. More than 50% of all the cancers combined are skin cancers. The most common skin cancer is Basal Cell Carcinoma (BCC). The second most common type is Squamous Cell Carcinoma. One of the most serious form of skin cancer is Melanoma. There are other types of skin cancers that affect us. One in 5 Americans develop skin cancer during their lifetime.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 610. Clinical Skin Diseases. 2 Credit Hours.
This course gives students a clinical overview of the common skin disorders encountered by society. It discusses the most common skin diseases such as acne, seborrheic dermatitis, and xerosis, with an emphasis on pathogenesis, and current research in these conditions. Older treatments will be compared to newer treatments with respect to efficacy as well as cost to patients.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 611. Visualizing the Skin. 2 Credit Hours.
This course covers basic and advanced techniques of visual examination and digital photography of the skin and hair. Topics include macrophotography of the skin and scalp, dermatoscopy, processing of biopsies for histology, routine and special histological staining, microscopy with regular and special lights, immunohistochemistry and immunofluorescence, and recent advances of non-invasive methods of visualizing the skin in depth such as optical coherence tomography and in vivo confocal microscopy.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 612. Grant & Scientific Proposal Writing. 1 Credit Hour.
The course presents approaches and important aspects of preparation of some major grant applications including government funding from National Institute of Health (NIH) such as Research grants (R formats) for academia and Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants for industries and grants from Department of Defense. Major sources, tools and policies for grant application and management will be discussed. Students will be provided with hands-on training and experience and are expected to build individual components and complete a short grant proposal through a series of assignments and discussions in class. The writing strategies taught in this course are broadly applicable to grant applications, industry research proposals, internal funding requests, translational project pitches and other data-driven scientific communications.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 613. Techniques in Skin Research. 1 Credit Hour.
This course will cover different areas of research techniques employed in studying skin biology/ pathophysiology that span from in vitro cell based assays, ex vivo skin or reconstructed skin equivalents to in vivo animal models to study skin biology and skin diseases, and will integrate various molecular, cellular and tissue based methods. The course will balance multiple teaching methods from traditional didactics to individual and group “hands-on” laboratory experience and training. Its main approach will be using skin specimen (human or animal) as a major source and starting point. It will follow progression from simple methods (cell-based) to more complex (organotypic and tissue-based techniques) to in vivo animal models in pre-clinical trials. The course will also cover high throughput approaches in skin genomics, genetics and proteomics, and use and analysis of big data as well.
Prerequisite: DER 603.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 614. Innovation in Dermatology. 1 Credit Hour.
The aim of this course is to familiarize the participants with the tools of innovation. It will cover the strategic processes of how to ideate, formulate, innovate and push through new ideas-from concept to implementation. This course will also cover the issues related to patent and how to protect the intellectual property.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 615. Dermatology Health Care Delivery. 1 Credit Hour.
This course prepares students for positions of leadership in skin care and skin health-related industrials and organizations. The course focuses on the educational needs of professionals already fully employed in the health care industry, as well as those aspiring to careers in the field. The course considers practical administrative skills as well as broad strategic and theoretical perspectives to students who wish to expand their knowledge of management and administration as applied to the skin care industry, with emphasizes in the development of business; technical, administrative, and leadership concepts as they apply to the clinical practice and skin care industry. TeleHealth, TeleDermatology and Clinical Outreach will also be discussed. This course considers the topics on the development of business, technical, administrative, and leadership concepts as they apply to the health care industry. Students will consider issues pertaining to animal use and protection and human subject in research, regulatory requirements and allied issues.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 622. Introduction to Dermatopathology. 1 Credit Hour.
This course is the continuation of the course DER 603 Skin Biology and Pathophysiology. The aim of the course is to give students a general introduction to clinical histopathology in common skin disorders. The course will familiarize students with basic terms of histopathological changes in skin tissue, basic characteristic pattern recognitions, clinic-pathologic correlations, and histopathologic features of common skin diseases.
Prerequisite: DER 603.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 623. Techniques in Skin Research- II. 1 Credit Hour.
This course is the continuation of the course DER 613 Techniques in Skin Research-I. It will teach students how to approach and solve research problems with different strategies and methods. Various research models specific to skin research will be discussed including angiogenesis, aging, cancer, endocrinology, hair, itching and sensation, wound repair and tissue regeneration, therapeutic research in drug transdermal and systemic deliveries, and clinical skin disease research and therapeutic trials as well. Students will also consider issues pertaining to animal use and protection and human subject in research and allied issues.
Prerequisite: DER 613.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 631. Advances in Dermatology. 1 Credit Hour.
This hour-long seminar course is held in conjunction with Dermatology Grand Rounds, which will be the basis of this course. The purpose is to help students to keep up with advances in investigative dermatological research and patient care. The lectures are delivered by Dermatology full time faculty, voluntary faculty, visiting dermatologists/investigators, and physicians and investigators from related disciplines at the University of Miami. This series covers various aspects of skin biology, dermatology, and related disciplines.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 632. Advances in Dermatology. 1 Credit Hour.
This hour-long seminar course is held in conjunction with Dermatology Grand Rounds, which will be the basis of this course. The purpose is to help students to keep up to date in advances in investigative dermatological research and patient care. The lectures are delivered by Dermatology full time faculty, voluntary faculty, visiting dermatologists/investigators, and physicians and investigators from related disciplines at the University of Miami. This series covers various aspects of skin biology, dermatology, and related disciplines.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 633. Advances in Dermatology. 1 Credit Hour.
This hour-long seminar course is held in conjunction with Dermatology Grand Rounds, which will be the basis of this course. The purpose is to help students to keep up to date in advances in investigative dermatological research and patient care. The lectures are delivered by Dermatology full time faculty, voluntary faculty, visiting dermatologists/investigators, and physicians and investigators from related disciplines at the University of Miami. This series covers various aspects of skin biology, dermatology, and related disciplines.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 641. Frontiers in Sciences. 1 Credit Hour.
This course will be in conjunction with Dermatology Journal Clubs. Students will participate in the presentation, discussion and critiques of the publications in peer-reviewed journals in both basic sciences and clinical aspects, not limited to the field of dermatology, with emphasis in translational research and research applications. In addition, this course will be run in conjunction with Dermatology Research Conferences. It will provide the most recent updates on various aspects of 'dermatological sciences ranging from molecular mechanisms of normal skin regeneration and repair to pathologies such as impaired healing disorders and skin cancer. Faculty, fellows and students from each research laboratory will present their research discoveries. Each MS thesis track student will be required to present their own research projects during their thesis period.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

DER 642. Frontiers in Sciences. 1 Credit Hour.
This course will be in conjunction with Dermatology Journal Clubs. Students will participate in the presentation, discussion and critiques of the publications in peer-reviewed journals in both basic sciences and clinical aspects, not limited to the field of dermatology, with emphasis in translational research and research applications. In addition, this course will be run in conjunction with Dermatology Research Conferences. It will provide the most recent updates on various aspects of dermatological sciences ranging from molecular mechanisms of normal skin regeneration and repair to pathologies such as impaired healing disorders and skin cancer. Faculty, fellows and students from each research laboratory will present their research discoveries. Each MS thesis track student will be required to present their own research projects during their thesis period.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

DER 643. Frontiers in Sciences. 1 Credit Hour.
This course will be in conjunction with Dermatology Journal Clubs. Students will participate in the presentation, discussion and critiques of the publications in peer-reviewed journals in both basic sciences and clinical aspects, not limited to the field of dermatology, with emphasis in translational research and research applications. In addition, this course will be run in conjunction with Dermatology Research Conferences. It will provide the most recent updates on various aspects of dermatological sciences ranging from molecular mechanisms of normal skin regeneration and repair to pathologies such as impaired healing disorders and skin cancer. Faculty, fellows, and students from each research laboratory will present their research discoveries. Each MS thesis track student will be required to present their own research projects during their thesis period.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

DER 661. Research Rotation. 1 Credit Hour.
This elective course will be offered in all three semesters in the first year only for students enrolled in the hybrid MS-SBDS program. Thesis Path students will elect to take this course during the first year. Students will rotate through 1-3 research labs to explore a variety of potential research topics. Thesis path students are required to take at least 1 lab rotation (1 credit) by the end of the 3rd semester. Non-thesis path students will have the option to take this elective course as an opportunity to get hands-on experience in laboratory research and learn research techniques.
Components: LAB.
Grading: GRD.
Typically Offered: Fall.

DER 662. Research Rotation. 1 Credit Hour.
This elective course will be offered in all three semesters in the first year only for students enrolled in the hybrid MS-SBDS program. Thesis Path students will elect to take this course during the first year. Students will rotate through 1-3 research labs to explore a variety of potential research topics. Thesis path students are required to take at least 1 lab rotation (1 credit) by the end of the 3rd semester. Non-thesis path students will have the option to take this elective course as an opportunity to get hands-on experience in laboratory research and learn research techniques.
Components: LAB.
Grading: GRD.
Typically Offered: Spring.

DER 663. Research Rotation. 1 Credit Hour.
This elective course will be offered in all three semesters in the first year only for students enrolled in the hybrid MS-SBDS program. Thesis Path students will elect to take this course during the first year. Students will rotate through 1-3 research labs to explore a variety of potential research topics. Thesis path students are required to take at least 1 lab rotation (1 credit) by the end of the 3rd semester. Non-thesis path students will have the option to take this elective course as an opportunity to get hands-on experience in laboratory research and learn research techniques.
Components: LAB.
Grading: GRD.
Typically Offered: Summer.

DER 670. Dermatology Clinical Shadowing. 1-3 Credit Hours.
This course will consist of shadowing with a clinical faculty dermatologist in clinics in the Department of Dermatology and Cutaneous Surgery at the University of Miami (minimum 2-3 hours per week for each credit hour). It is offered in the fall, spring, and summer semesters only for students enrolled in the hybrid MS-SBDS program. This course is for students who are interested in clinical dermatology or medicine. It will give students firsthand experience in clinical dermatology. Students will be rigorously monitored for progress by clinical faculty mentors. Students will be required to write a case report or present a case report at the end of the semester.
Prerequisite: DER 601.
Components: CLN.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

DER 808. Research Thesis. 1-6 Credit Hours.
Students on the Research Thesis track are required to complete 6 research thesis credits. Students are required to conduct thesis research on campus in person in the research laboratories with faculty mentors in the Department of Dermatology and Cutaneous Surgery. Students should discuss with their thesis mentor their research topic, thesis committee, and expectations. A thesis requires an oral defense and a written paper evaluated and approved by the thesis committee convened for that purpose. The student should distribute the written thesis paper to the thesis committee for preliminary approval at least 10 days prior to the oral defense. The oral defense is open to the university community and the public. The written paper should be of quality for peer-reviewed publication as a first author or a co-author. The length of the Research Thesis track is usually 26 months, which includes the required 33-credit lecture courses in the first 14 months, and a dedicated year of thesis research including the oral defense and written thesis paper.
Components: THE.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.