THE OFFICE OF ACADEMIC AFFAIRS

Graduate Learning Outcomes

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DIVISION OF ARTS AND HUMANITIES

1. Listed Alphabetically

African-American and African Studies – M.A.

LEARNING OUTCOMES:

1. Students will become acquainted with the professional environment of the discipline within the department and university.
2. Students will demonstrate a knowledge of sources, concepts and methodologies in their field of study.

African American & African Studies – Ph.D.

LEARNING OUTCOMES:

1. Students will become acquainted with the professional environment of the discipline locally, regionally and nationally throughout their tenure in the program.
2. Students can express themselves critically and clearly in their area of specialization, demonstrates both breadth and depth of knowledge in chosen area of specialization.
3. We expect students to demonstrate excellence of teaching in introduction-level courses in African American and African Studies.
4. Students should demonstrate the ability to undertake independent and original research.

Art Education – M.A.

LEARNING OUTCOMES:

1. Use critical thinking, evidence-based principles and current information to analyze situations, issues, and problems impacting contemporary art education theory and practice.
2. Connect art education theories to pedagogy and practices in particular teaching settings, including schools, museums, and/or community spaces.
3. Develop and implement curriculum and assessment based on big ideas and essential questions.
4. Develop and implement culturally relevant pedagogy and safe learning environments for multicultural communities of students.
5. Research and improve teaching practices through critical reflection, data collection and analysis, and risk taking.

Arts Administration, Education & Policy – Ph.D.

LEARNING OUTCOMES:

1. Use critical thinking, evidence-based principles and current information to analyze situations, issues, and problems impacting contemporary theories and practices in arts administration, education and/or policy.
2. Demonstrate an understanding of a broad range of theories relative to the field and specialize in and apply at least one theoretical framework.
3. Demonstrate an understanding of a broad range of research methodologies relative to the field and specialize in and apply at least one research methodology.
4. Articulate an integration and expansive understanding of arts policy, administration, and education through multiple modes of communication, which might include papers, conference presentations, classroom teaching, artmaking and performance, and publication.
5. Develop, plan, implement, and defend an individual research study relevant to contemporary issues in arts education, cultural policy, and/or arts administration.

Arts Policy and Administration – M.A.

LEARNING OUTCOMES:

1. To understand the issues, problems and policy interventions impacting the contemporary arts and cultural sector.
2. To understand the purpose, function, and professional decision making in arts and cultural organizations.
3. To understand the professional role and responsibilities of the artist and the cultural worker in society.
4. To practice creative & critical thinking, opportunity recognition and innovative practice in various arts & cultural environments.

Comparative Studies – M.A.

LEARNING OUTCOMES:

1. Understand comparative approaches to the study of culture.
2. Conduct research in their fields of interest.
3. Complete a thesis that reflects an original approach to the object of study.
4. Cultivate skills in interdisciplinary research.
5. Engage with cultural difference and social justice through a program of study, teaching, and research.
6. Present research at professional conferences.
7. Teaching-related goals develop effective teaching practices in lower level courses.

Comparative Studies – Ph.D.

LEARNING OUTCOMES:

1. Provide curriculum and advising that encourages theoretical and methodological innovation and rigor.
2. Facilitate development of advanced research projects in students' fields of interest.
3. Support completion of interdisciplinary dissertation project that makes original scholarly contributions to relevant fields.
4. Provide support for presentations at academic conferences.
5. Encourage and facilitate publications in scholarly venues.
6. Facilitate program of study, teaching, and research that reflects engagement with cultural differences and social justice.
7. Enhance teaching skills.
8. Provide opportunities to teach in fields defined in candidacy exams.

Dance – M.F.A.

LEARNING OUTCOMES:

1. MOVEMENT PRACTICE: MFA students develop expertise in contemporary, ballet, and/or other dance forms, attaining physical, cultural, and aesthetic perspectives in preparation for careers in performance, choreography, administration, and/or education.
2. CREATIVE PROCESS and RESEARCH: MFA students engage in a variety of creative practice-based research, locating their artistic vision at the forefront of the field of contemporary dance, and articulate individual artistic visions in both verbal and written formats.
3. PROFESSIONAL SKILLS: MFA students strengthen professional development skills, including interpersonal and organizational administration, discipline, confidence, and problem-solving techniques in order to assume leadership positions in dance academia, public policy, or the private sector.
4. THEORETICAL INQUIRY: MFA students demonstrate a command of relevant dance literature and scholarship.

Dance – Ph.D.

LEARNING OUTCOMES:

1. INDEPENDENT RESEARCH: PhD students locate their research activities in the context of current practices in the field of dance, and are able to articulate their research trajectory in verbal and written platforms. PhD students will innovate within the field of Dance Studies, producing research that is situated in cultural, political, historical, and/or aesthetic frameworks of movement, corporeality, and dance.
2. PROFESSIONAL SKILLS: PhD students strengthen professional development skills, including interpersonal and organizational administration, discipline, confidence, and problem-solving techniques in order to assume leadership positions in dance academia, public policy, or the private sector.
3. THEORETICAL INQUIRY: PhD students will demonstrate a command of relevant dance literature and scholarship.

Design – M.A.

LEARNING OUTCOMES:

1. No Outcomes Reported.

Design – M.F.A.

LEARNING OUTCOMES:

1. Explore how making influences new design processes and design outcomes.
2. Utilize visualization processes and visual analysis as products for inquiry.
3. Apply design making and design thinking to contemporary challenges

East Asian Language and Literature – M.A.

LEARNING OUTCOMES:

1. Students demonstrate a broad knowledge of the language, linguistics, and literatures of China or Japan.
2. Students demonstrate a foundation in, and an ability to engage critically with, the discourse and scholarship on Chinese or Japanese language, language pedagogy, linguistics and/or literature.
3. Students demonstrate advanced Chinese or Japanese language skills in the student's specialization.
4. Students demonstrate the ability to engage in scholarship on a targeted subject and to substantiate and defend an original scholarly argument, both orally and in writing.
5. Students demonstrate an ability to engage critically with the discourse and scholarship on Chinese or Japanese language, language pedagogy, linguistics and/or literature, whichever is/are her/his area(s) of focused study.

East Asian Language and Literature – Ph.D.

LEARNING OUTCOMES:

1. Students demonstrate both a breadth and depth of knowledge in the specific area of their specialization.
2. Students demonstrate the ability to engage critically with the scholarship and theory of the field and discipline.
3. Students demonstrate the ability to undertake independent research (archival, experimental, hermeneutic, or field work) and to engage in the original and critical interpretation of scholarship, of cultural texts, and of empirical data.
4. Students demonstrate the ability to develop, substantiate, and defend an original scholarly argument, both in writing and orally.

East Asian Studies (Interdisciplinary Masters) – M.A.

LEARNING OUTCOMES:

1. Students must demonstrate a broad knowledge of the society, culture and histories of China, Korea and/or Japan.
2. Students must demonstrate both a breadth and depth of knowledge in the specific area of the student's specialization.
3. Students must demonstrate a foundation in, and an ability to engage critically with, the discourse and scholarship on Chinese, Korean and/or Japanese society, culture, and history, including methods and theory (as appropriate).
4. At minimum, and depending on the student's specialization, students must demonstrate third-year competence in Chinese, Korean or Japanese language skills; native speakers of an EA language must demonstrate this competence in a second EA language.
5. Students must demonstrate the ability to engage in scholarship on a targeted subject and to substantiate and defend an original scholarly argument, both orally and in writing.

English – M.A.

LEARNING OUTCOMES:

1. English MA/PhD graduates will demonstrate familiarity with the geographical, linguistic, and historical variety of literary, cultural, and rhetorical expression in English. They will also demonstrate familiarity with current theoretical questions and institutional issues in the discipline of English studies.
2. Each English MA/PhD graduate will demonstrate in-depth knowledge of a major field within the broad discipline of English studies as well as similar knowledge of at least one secondary field. The major field will correspond to one of the main categories that the MLA Job Information List uses to organize faculty job openings.
3. English MA/PhD graduates will produce scholarly work suitable for professional conference presentation, academic publication (print or digital), applications for grants, awards, and fellowships, and other forms of professional discourse that fit their post-graduate plans.
4. Within 6 years of entering the program, English MA/PhD graduates will produce and defend a book-length scholarly dissertation (or digital equivalent) that asserts an original argument that furthers knowledge in the student's major field. The dissertation is characterized by clarity of organization, persuasive writing, and original, salient research into relevant primary, secondary, and theoretical contexts.
5. English MA/PhD graduates will demonstrate pedagogical understanding and effective teaching practices that qualify them to teach undergraduate courses in writing and other areas of English studies at colleges and universities.

English – M.F.A.

LEARNING OUTCOMES:

1. English MFA graduates will demonstrate the knowledge and skills of contemporary literary practice within their chosen genre of literary fiction, nonfiction, or poetry that are necessary to write creative works of high artistic merit. Graduates will also show familiarity with literary publishing and the historical variety of rhetorical, literary, linguistic, and cultural expression in English.
2. MFA graduates produce and defend a book-length creative document that is characterized by its originality and excellence of expression.
3. English MFA graduates will engage in professional activities appropriate to their post-graduate plans. These activities include editorial positions on OSU's literary journal and its two related book prizes (in cooperation with the books' publisher, the Ohio State University Press), conference presentations, talks, readings, and/or applications for grants, awards, and fellowships. Students will also demonstrate their training in how successfully to publish their work and in the processes of editing and publishing of new literature in digital, print, and other media.
4. English MFA graduates will demonstrate pedagogical understanding and effective teaching practices that qualify them to teach undergraduate courses in writing and other areas of English studies at colleges and universities.

English – Ph.D.

LEARNING OUTCOMES:

1. English MA/PhD graduates will demonstrate familiarity with the geographical, linguistic, and historical variety of literary, cultural, and rhetorical expression in English. They will also demonstrate familiarity with current theoretical questions and institutional issues in the discipline of English studies.
2. Each English MA/PhD graduate will demonstrate in-depth knowledge of a major field within the broad discipline of English studies as well as similar knowledge of at least one secondary field. The major field will correspond to one of the main categories that the MLA Job Information List uses to organize faculty job openings.
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5. English MA/PhD graduates will demonstrate pedagogical understanding and effective teaching practices that qualify them to teach undergraduate courses in writing and other areas of English studies at colleges and universities.

French & Italian – Ph.D.

LEARNING OUTCOMES:

1. Students will demonstrate advanced proficiency in listening, speaking, reading, and writing in the French language.
2. Students will become competitive on the job market for Research 1 institutions as well as other types of institutions through innovative coursework and a wide range of experiences in professional development opportunities, and service offered by our program.
3. Students will demonstrate the ability to express themselves critically and clearly in their area of specialization demonstrating both depth and breadth of knowledge in their chosen area of specialty. They will gain the analytical tools and research skills necessary to conceive, create, and publish significant and original research in their area of specialization.
4. Students will demonstrate breadth of knowledge in a variety of areas through their ability to express themselves critically in a broad range of texts/research from different areas of French/Francophone studies and second language acquisition, making them competitive on the job market for different types of teaching positions.
5. Students will be prepared to demonstrate excellence in teaching in a variety of areas including language and different areas of French/Francophone studies.

Germanic Languages & Literature – M.A.

LEARNING OUTCOMES:

1. M.A. graduates in German Studies will have a broad knowledge of German Studies' subject areas (the MA reading list) and advanced knowledge in one area (the MA paper).
2. M.A. graduates in German Studies will be able to develop and analyze research questions and apply their knowledge to investigate them.
3. M.A. graduates in German Studies will be able to present ideas in their subject areas clearly, cogently and persuasively in speaking and in writing (in English or in German).
4. M.A. graduates in German Studies will be able to use the German language effectively on the intermediate/advanced level (B2/C1-level; TestDaF level four), in speaking, reading, listening, and writing.
5. M.A. graduates in German Studies will be able to teach introductory level German language and culture effectively.
6. M.A. graduates in German Studies will have effective professional skills, including oral and written communication, leadership, independence, and teamwork, all performed in an ethical manner.

Germanic Languages & Literature – Ph.D.

LEARNING OUTCOMES:

1. Ph.D. graduates in German Studies will have an extensive and thorough knowledge of one of the specialized areas of German Studies, and advanced knowledge in one or two secondary areas.
2. Ph.D. graduates in German Studies will be able to develop and analyze research questions and apply their knowledge to investigate them, thereby advancing knowledge through creative scholarship.
3. Ph.D. graduates in German Studies will be able to present their research in their subject areas clearly, cogently and persuasively in speaking and in writing (in English or in German).
4. Ph.D. graduates in German Studies will be able to use the German language effectively on the intermediate/advanced level (B2/C1-level; TestDaF level four), in speaking, reading, listening, and writing.
5. Ph.D. graduates in German Studies will be able to teach at all levels of the German Studies Curriculum effectively (introductory level German language & advanced language and culture classes).
6. Ph.D. graduates in German Studies will have effective professional skills including oral and written communication, leadership, independence, and teamwork, all performed in an ethical manner.

Greek and Latin – M.A.

LEARNING OUTCOMES:

1. Students demonstrate the ability to read ancient Greek and Latin texts in the original at an intermediate level of competence (approximately 75% correct translation of sight passages).
2. Students teach introductory and mid-level ancient Greek and Latin to undergraduate College students as well as at present the literatures, cultures, and history of Greece and Rome to them in survey courses.
3. Students gain familiarity with the resources for the study of the ancient world and the modes of scholarly discourse along with the ability to define research theses and construct critical arguments regarding various aspects of ancient literature.

Greek and Latin – Ph.D.

LEARNING OUTCOMES:

1. Students demonstrate the ability to read ancient Greek and Latin texts in the original at an intermediate level of competence (approximately 75% correct translation of sight passages).
2. Students teach introductory and mid-level ancient Greek and Latin to undergraduate College students as well as at present the literatures, cultures, and history of Greece and Rome to them in survey courses.
3. Students gain familiarity with the resources for the study of the ancient world and the modes of scholarly discourse along with the ability to define research theses and construct critical arguments regarding various aspects of ancient literature.

History – M.A.

LEARNING OUTCOMES:

1. History MA graduates will be able to conduct high quality, primary source based research as evidenced by their MA seminar paper and MA exam.
2. MA graduates of History will attain marked ability, scholarship and research skills in a broad field of historical learning. This will be evidenced by their 7000 course work in at least two different historical fields; review of advisor of student progress with annual review; self-reported student learning outcomes in annual review; completion of MA seminar paper and MA exam.
3. MA graduates of History will train to demonstrate competence and proficiency in pedagogy and classroom instruction as evidenced by (1) successful completion of pedagogy course (7905).
4. MA graduates of History will prepare to become professionals in the discipline as evidenced by (1) successful completion of a course concerning pedagogy and grant-writing (7905), (2) workshop opportunities to explore a wide range of professional career options.

History – Ph.D.

LEARNING OUTCOMES:

1. PhD graduates of History will attain marked ability, scholarship and research skills in a broad field of historical learning. This will be evidenced by their (1) qualifying examinations assessing depth and breadth of knowledge in one major and two minor fields; (2) review of advisor of student progress with annual review; and (3) self-reported student learning outcomes in annual review.
2. PhD graduates of History will be able to conduct high quality, primary source based research as evidenced by (1) preparation and defense of PhD dissertation prospectus; (2) preparation and completion of PhD dissertation; (3) critical reading of PhD dissertation by committee of graduate faculty; (4) completion of dissertation defense.
3. PhD graduates of History will train to demonstrate competence and proficiency in pedagogy and classroom instruction as evidenced by (1) successful completion of pedagogy course (7905) and (2) evaluation of teaching effectiveness by SEI assessment and advisor review.
4. PhD graduates of History will prepare to become professionals in the discipline as evidenced by (1) successful completion of courses concerning professionalization (7905 and 7910), (2) opportunities to participate in departmental governance, including Graduate Student Advisory Council and search committees, (3) workshop opportunities to explore a wide range of professional career options; (4) departmental graduate placement workshop opportunities.

History of Art – M.A.

LEARNING OUTCOMES:

1. Students should acquire a broad knowledge of art history, as well as of the field's theoretical and historical foundations.
2. Students should hone their visual-analytic skills, as well as their critical thinking and writing abilities.
3. Students should begin to develop the knowledge and skills necessary to be effective teachers at the collegiate level, most especially of introductory art history courses.

History of Art – Ph.D.

LEARNING OUTCOMES:

1. Students should acquire a deep knowledge of art history, as well as of the field's theoretical and historical foundations.
2. Students should perfect their visual-analytic skills, as well as their critical thinking and writing abilities.
3. Students should acquire the knowledge and skills necessary to be effective teachers at the collegiate level.
4. Students should demonstrate their ability to conduct original research, and to engage productively in the broad and ever-shifting philosophical, scholarly, and institutional debates that determine the structure and content of the discipline.

Italian – Ph.D.

LEARNING OUTCOMES:

1. Students will be competitive candidates on the job market for Research 1 and 2 institutions and Liberal Arts Colleges through innovative coursework and a wide range of experiences in research, teaching, and service offered by our program.
2. Students entering the program without and approved M.A. will demonstrate a command of Italian cultural production from the Thirteenth Century to the New Millennium.
3. Students will gain the analytical tools and research skills necessary to conceive, create, and publish original and significant research in their chosen fields of Italian Studies.
4. Students will be trained to become effective post-secondary teachers of Italian language, literature and culture through workshops, observations, apprenticeships, the opportunity to teach a variety courses, and the creation of at least three syllabi.

Latin American Studies – M.A.

LEARNING OUTCOMES:

1. Students GAIN IN-DEPTH KNOWLEDGE OF LATIN AMERICA in two areas of concentration developed by individual students in consultation with his/her advisor and other faculty members.
2. Students think critically about the theories and research approaches related to Latin America in their field.
3. Students gain methodological tools of at least one discipline to carry out independent research in an ethical manner.
4. Students pursue interdisciplinary inquiries about Latin America that cut across disciplinary fields..

Linguistics – M.A.

LEARNING OUTCOMES:

1. The M.A. program in Linguistics aims to provide students with training that strengthens their qualifications for entry to a PhD program in Linguistics or for comparable professional advancement in other careers. A student in the program will have articulated a personal goal in keeping with this general aim and will have developed a course plan and research proposal relevant to that goal.
2. When a student completes our MA program, s/he will have taken graduate-level courses to gain a broad understanding of phonology, syntax, and at least two other core areas of linguistics, thus giving him/her some breadth in the field at large.
3. A graduate of our MA program will have developed sufficiently specialized expertise in one or more area(s) of linguistics to be able to complete an independent primary research project in the chosen area(s) of expertise and to write an MA thesis or major publishable research paper reporting the research.

Linguistics – Ph.D.

LEARNING OUTCOMES:

1. Students will understand the fundamental principles in four core areas of linguistics: phonetics, syntax, phonology and semantics. Students will also explore the fundamentals of at least two specialization areas, drawing from: synchronic and diachronic variation, language and cognition, and building and analyzing language corpora.
2. Students will demonstrate the ability to conduct and present original and meaningful research in the field of linguistics by writing a dissertation and defending it in an oral exam.
3. Students will articulate their initial research direction and choose their academic advisor(s) during their first year of study.
4. Students will demonstrate a breadth of understanding of the rich diversity of linguistic phenomena across human languages, to be able to judge how broadly any research results and models apply. As part of acquiring this breadth, students will either complete advanced linguistics coursework on a language other than their native language(s) or conduct linguistics research on such a language.
5. Students will enter candidacy prepared to conduct their dissertation research by (1) successfully completing a written exam demonstrating their competence and understanding of their specialization(s) and (2) defending their written exam orally. An initial version of the dissertation proposal will be provided as part of the exam, discussed at the oral defense, and subsequently revised to provide a detailed plan for the dissertation research.
6. Students will demonstrate (1) deep expertise in at least two areas within the field, and (2) ability to conduct effective and creative research in these areas. Such expertise includes skills for effective dissemination of research results, and so students will present two research projects both as conference-style presentations and as publication-quality research papers.

Modern Greek – M.A.

LEARNING OUTCOMES:

1. Students cultivate an appreciation of Greek literature (in the original and translation) and culture.
2. Students develop proficiency in the Greek language.
3. Students foster an understanding of the Hellenic diaspora and develop an global awareness of the interaction of societies.

Modern Greek – Ph.D.

LEARNING OUTCOMES:

1. Students cultivate an appreciation of Greek literature (in the original and translation) and culture.
2. Students develop proficiency in the Greek language.
3. Students foster an understanding of the Hellenic diaspora and develop an global awareness of the interaction of societies.

Music – M.A.

LEARNING OUTCOMES:

1. Students achieve an understanding of the relationships among musical specializations such as performance, historical and theoretical analysis, composition, pedagogy, musicology, and ethnomusicology.
2. Students develop skills in composition, performance, or production that results in contributions to the body of knowledge and practice of music.
3. Students develop an understanding of the pedagogy for achieving optimum performance practice on a primary and/or secondary musical instrument or voice.
4. Students gain teaching methodology, innovations, and multi-disciplinary concepts as they relate to a choral, elementary, and/or instrumental music specialist.
5. Students acquire a rigorous foundation in traditional theoretical studies and analysis of musical structures.
6. Students are able to orally communicate their discipline clearly and effectively to members of the academic community.

Music – M.M.

LEARNING OUTCOMES:

1. Students acquire skills in all aspects of music making - creating, performing, and conducting.
2. Students engage in scholarly inquiry that includes such areas as music theory, pedagogy, acoustics, physiology, psychology, and humanities.
3. Students demonstrate intermediate proficiency in violin, viola, cello, string bass, flute, oboe, clarinet, saxophone, bassoon, trumpet, horn, trombone, tuba, percussion, harp, voice, or piano.
4. Students acquire and demonstrate performance skills by participating in numerous and diverse ensembles, including choirs, bands, orchestra, opera theater, and chamber music ensembles.
5. Students acquire an understanding of the repertory in their major performance area and the ability to perform from a cross-section of that repertory.
6. Students are able to orally communicate their discipline clearly and effectively to members of the academic community.

Music – Ph.D.

LEARNING OUTCOMES:

1. Students acquire research skills that allow them to function independently as scholars in the field of music.
2. Students engage in scholarly inquiry that includes such areas as music education, musicology, ethnomusicology, music theory, pedagogy, acoustics, physiology, psychology, anthropology, and other humanistic studies.
3. Students acquire and demonstrate performance skills by studying applied music lessons and/or by participating in numerous and diverse ensembles, including choirs, bands, orchestra, opera theater, and chamber music ensembles.
4. Students are able to orally communicate their discipline clearly and effectively to members of the academic community.

Music – M.A. & Ph.D.

LEARNING OUTCOMES:

1. Students acquire skills in all aspects of music making - creating, performing, and conducting.
2. Students engage in scholarly inquiry that includes such areas as music theory, pedagogy, acoustics, physiology, psychology, and humanities.
3. Students are able to orally communicate their discipline clearly and effectively to members of the academic community.

Near Eastern Languages & Cultures – M.A.

LEARNING OUTCOMES:

1. Students build their language skills to be able to proceed on to the PhD or to work effectively in the international arena.
2. Students develop research specializations in a specific area of inquiry and demonstrate that they can communicate their expertise through writing an MA thesis or a series of research papers/examinations.
3. Students demonstrate research competence in one other language besides English and their primary NELC language.
4. Students develop effective teaching practices in lower level courses.

Near Eastern Languages & Cultures – Ph.D.

LEARNING OUTCOMES:

1. Students acquire theoretical and methodological skills necessary for innovative research in Near Eastern languages and cultures and related fields.
2. Students demonstrate their intellectual rigor by producing original research in their chosen area(s) of expertise.
3. Students present their original research at academic conferences and in scholarly journals in their field(s).
4. Students demonstrate a high level of language skill in at least one Middle Eastern language.
5. Students develop a working knowledge of their fields through teaching.

Philosophy – M.A.

LEARNING OUTCOMES:

1. Students demonstrate broad knowledge of the problems and current across various subfields of philosophy and in-depth knowledge of and the ability critically to engage with issues central to a specific area of concentration.
2. Students demonstrate an ability to pursue original research in a chosen area of competence.

Philosophy – Ph.D.

LEARNING OUTCOMES:

1. Students demonstrate ability to write and speak effectively to both professional and student audiences about issues in their fields of specialization and competence.
2. Students demonstrate in-depth knowledge of and the ability to engage critically with issues central to at least one philosophical area of specialization as well as demonstrating broad knowledge of the problems and research across several sub-fields of philosophy.
3. Students acquire and demonstrate pedagogical skills.
4. Students conduct original, substantial, and publishable research in their chosen areas or specialization.

Portuguese – M.A.

LEARNING OUTCOMES:

1. To train students to design and teach language, literature, and culture courses in Portuguese at the college level.
2. To provide students with the theoretical knowledge and methodological skills necessary for successful research in the literatures and cultures of the Portuguese-speaking world.
3. To help students develop a research specialization within or between the different historical periods and geographical regions that comprise the literatures and cultures of the Portuguese-speaking world (Portugal, Brazil, Lusophone Africa, Lusophone Asia), while fostering an understanding of their connection to other geographical areas, including Spain and Spanish America.

Portuguese – Ph.D.

LEARNING OUTCOMES:

1. Students should demonstrate the critical thinking and analytical skills necessary to formulate sophisticated, well-organized, and well-supported arguments both orally and in writing.
2. Students should be independent researchers.
3. Students should offer an original contribution to their field of specialization through their 2nd year research paper and/or dissertation.
4. Students should demonstrate the theoretical knowledge and methodological skills necessary for successful research in their selected major and minor fields.

Slavic & East European Literatures & Cultures – M.A.

LEARNING OUTCOMES:

1. The objective of the M.A. in Slavic Literature, Film, and Cultural Studies is to prepare students for both teaching and research in the areas of Russian culture, film, and literature.
2. M.A. students gain a thorough grounding in/appreciation of major works, currents, and concepts in Russian literature and cultural history so that they will have the necessary background to conduct new research in the field.
3. M.A. students develop analytic skills by examining current and past theoretical approaches to literary and cultural texts so that they will be able to apply the concepts and methods to new research.
4. M.A. students become familiar with major professional institutions, genres, conventions, and requirements so that they will be able to give effective presentations of their research at conferences and publish articles in peer-reviewed venues.
5. M.A. students train in pedagogical methods to teach both language and literature/culture classes at the postsecondary level. They will gain an appreciation of the structure and/or history of Russian to inform their language teaching.
6. M.A. students gain appreciation of the structure or history of Russian and other Slavic language, which informs their teaching.

Slavic & East European Literatures & Cultures – Ph.D.

LEARNING OUTCOMES:

1. The objective of the Ph.D. in Slavic Literature, Film and Cultural Studies is to prepare students for both teaching and research in the areas of Slavic culture, film, and literature.
2. Ph.D. students develop a professional-level grounding in major works, currents, and concepts in literature, film, and cultural history to the necessary background to conduct research and teach on the post-secondary level.
3. Ph.D. students develop analytic skills by examining current and past theoretical approaches so that they can apply the concepts and methods to new research. They use this preparation to present papers and submit works for publication.
4. Ph.D. students become familiar with major professional institutions, genres, conventions, and requirements so that they can give effective presentations and publish articles in peer-reviewed journals.
5. Ph.D. students gain at least an elementary knowledge of a Slavic or East European language other than Russian. They develop analytic skills by examining major issues in the literature or film of a Slavic/East European culture other than Russian.
6. Ph.D. students train in pedagogical methods to teach language, literature, and culture classes at the postsecondary level.
7. Ph.D. students gain appreciation of the structure or history of Russian and other Slavic language, which informs their teaching.

Slavic & East European Studies – M.A.

LEARNING OUTCOMES:

1. M.A. students will demonstrate a comprehensive, interdisciplinary knowledge of Eastern Europe and a full appreciation of cultural, political, and social issues of East European and Eurasian societies measured be advanced coursework and the completion of the M.A. exam or M.A. thesis.
2. M.A. students will graduate with proficiency in one or two East European/Eurasian languages. For their primary language, students will achieve at least an Intermediate Mid on the Oral Proficiency Interview (OPI) and a Novice High for their second language.
3. By the time they graduate, M.A. students specializing in Slavic and East European Studies will be familiar with the major professional institutions and job sectors related to the field and able to articulate themselves orally and in writing in the job interview process.
4. To apply their area studies knowledge gained in the classroom, 60% of MA students will either study abroad or intern abroad.
5.

Spanish-Hispanic Linguistics – M.A.

LEARNING OUTCOMES:

1. To provide students with the tools for the critical analysis of literature and culture or linguistics and for carrying out research in the fields of literary and cultural studies or linguistics.
2. To help students develop the skills to formulate well-organized, well-supported arguments both orally and in the form of academic papers, using stylistically effective Spanish.
3. To acquaint students with the vocabulary associated with literary and cultural or linguistic analyses in Spanish and the analytical resources of diverse approaches and theories.
4. To train students to teach Spanish and/or Portuguese language courses.
5. To provide students with in-depth knowledge in two areas of Spanish and Spanish American literatures and cultures or Hispanic Linguistics.
6. To acquaint students with other areas that comprise the field of Iberian and Latin American literatures and cultures and Hispanic Linguistics.
7. To provide students with a basis for future study and research in literature and culture or linguistics for those who qualify for and choose to enter a PhD program.

Spanish-Hispanic Linguistics – Ph.D.

LEARNING OUTCOMES:

1. Students should demonstrate the critical thinking and analytical skills necessary to formulate sophisticated, well-organized, and well-supported arguments both orally and in writing.
2. Students should be independent researchers.
3. Students should offer an original contribution to their field of specialization through their 2nd year research paper and/or dissertation.
4. Students should demonstrate the theoretical knowledge and methodological skills necessary for successful research in their selected major and minor fields.

Spanish Literatures and Cultures – M.A.

LEARNING OUTCOMES:

1. To provide students with the tools for the critical analysis of literature and culture or linguistics and for carrying out research in the fields of literary and cultural studies or linguistics.
2. To help students develop the skills to formulate well-organized, well-supported arguments both orally and in the form of academic papers, using stylistically effective Spanish.
3. To acquaint students with the vocabulary associated with literary and cultural or linguistic analyses in Spanish and the analytical resources of diverse approaches and theories.
4. To train students to teach Spanish and/or Portuguese language courses.
5. To provide students with in-depth knowledge in two areas of Spanish and Spanish American literatures and cultures or Hispanic Linguistics.
6. To acquaint students with other areas that comprise the field of Iberian and Latin American literatures and cultures and Hispanic Linguistics.
7. To provide students with a basis for future study and research in literature and culture or linguistics for those who qualify for and choose to enter a PhD program.

Spanish Literatures and Cultures – Ph.D.

LEARNING OUTCOMES:

1. Students should demonstrate the critical thinking and analytical skills necessary to formulate sophisticated, well-organized, and well-supported arguments both orally and in writing.
2. Students should be independent researchers.
3. To undertake original research and present the findings in a dissertation.
4. Students should demonstrate the theoretical knowledge and methodological skills necessary for successful research in their selected major and minor fields.

Theatre – M.A.

LEARNING OUTCOMES:

1. By a thorough understanding and comprehension of theatre history, literature and criticism, research methods, and writing.
2. By applying and analyzing knowledge students will develop advanced skills in theatre history, literature and criticism, writing and teaching.
3. Through engaging in classwork, research, seminar, conferences, productions and guest artist residencies students will display effective communication, personal and cultural sensitivity, independence and interdependence, teamwork, and leadership.

Theatre – Ph.D.

LEARNING OUTCOMES:

1. By a thorough understanding and comprehension of theatre history, literature and criticism, research methods, writing, and in a production area of focus, such as acting, directing, new work development or dramaturgy.
2. By applying and analyzing knowledge students will develop advanced skills in theatre history, literature and criticism, teaching, and in a production area of focus, such as acting, directing, new work development or dramaturgy.
3. Through engaging in classwork, research, seminar, conferences, productions and guest artist residencies students will display effective communication, personal and cultural sensitivity, independence and interdependence, teamwork, and leadership.

Theatre – Acting – M.F.A.

LEARNING OUTCOMES:

1. By a thorough understanding and comprehension of elements of acting, voice, movement, text analysis, research methods, playwriting, acting for the camera, video editing, directing, performer generation of new works creation, outreach & engagement and entrepreneurialism.
2. By applying and analyzing knowledge students will develop advanced skills in acting, directing, creation of new works, teaching and entrepreneurialism.
3. Through engaging in classwork, research, new work development, productions and guest artist residencies students will display working as an ensemble, teamwork, leadership, personal and cultural sensitivity, independence and interdependence, and generosity of spirit.

Theatre – Design – M.F.A.

LEARNING OUTCOMES:

1. By a thorough understanding and comprehension of elements of scenic design, costume design, lighting design, script analysis, research methods and production implementation.
2. By applying and analyzing knowledge students will develop advanced skills in scenic design, costume design, lighting design, teaching, and production implementation.
3. Through engaging in classwork, research, productions and guest artist residencies students will display effective communication, teamwork, leadership, personal and cultural sensitivity, independence and interdependence.

Visual Art – M.F.A.

LEARNING OUTCOMES:

1. Students in the Department of Art MFA program will conduct independent, studio and project based creative research and inquiry in a wide variety of traditional and non-traditional visual arts disciplines.
2. Students in the Department of Art MFA program will develop the intellectual, verbal and writing skills necessary to articulate the relation of their work to contemporary contexts and historical developments in the visual arts.
3. Students in the Department of Art MFA program will explore an array of social, professional and business models to support their cultivation of fruitful lives and rewarding careers as practicing visual artists within a culturally diverse global dynamic.

Women's, Gender & Sexuality Studies – M.A.

LEARNING OUTCOMES:

1. Think critically about gender and women's issues.
2. Pursue interdisciplinary inquiries about gender and to pose questions that cut across disciplinary fields.
3. Perform women's studies research: develop an argument, organize data and evidence for that argument, and express ideas in writing.
4. Become successful teachers and scholars in the field of women's studies and develop and implement their own teaching plans and scholarship.

Women's, Gender & Sexuality Studies – Ph.D.

LEARNING OUTCOMES:

1. Think critically about gender and women's issues.
2. Student will be able to pursue interdisciplinary inquiries about gender and to pose questions that cut across disciplinary fields.
3. Perform women's studies research: develop an argument, organize data and evidence for that argument, and express ideas in writing.
4. Become successful teachers and scholars in the field of women's studies and develop and implement their own teaching plans and scholarship.

DIVISION OF NATURAL AND MATHEMATICAL SCIENCES

1. Listed Alphabetically

Astronomy – M.S.

LEARNING OUTCOMES:

1. Astronomy graduate students acquire basic mastery of the breadth of the field.
2. Astronomy graduate students develop powerful analytical skills and problem-solving skills.
3. Astronomy graduate students acquire a broad suite of research competencies that enable them to function as independent researchers.
4. Astronomy graduate students develop deep expertise in at least one subspecialty by carrying out research projects under the direction of faculty mentors.
5. Astronomy graduate students are able to communicate effectively the findings of astrophysical research, including their own.

Astronomy – Ph.D.

LEARNING OUTCOMES:

1. Astronomy graduate students acquire basic mastery of the breadth of the field.
2. Astronomy graduate students develop powerful analytical skills and problem-solving skills.
3. Astronomy graduate students acquire a broad suite of research competencies that enable them to function as independent researchers.
4. Astronomy graduate students develop deep expertise in at least one subspecialty by carrying out research projects under the direction of faculty mentors.
5. Astronomy graduate students are able to communicate effectively the findings of astrophysical research, including their own.
6. Astronomy doctoral students conduct high-level cutting-edge research as evidenced by publications, particularly in referred journals, and by presentations in a variety of professional venues.

Biochemistry – M.S.

LEARNING OUTCOMES:

1. Instructional Communication
2. Devise a hypothesis, develop research strategy, execute research.
3. Retrieve information from the chemical literature and are able to communicate understanding of literature.
4. Understand and meet professional expectations for laboratory safety and ethical conduct.

OSU Biochemistry Program – Ph.D.

LEARNING OUTCOMES:

1. Articulate scientific concepts, methods, results, and conclusions effectively to peers, practitioners, and the public, in oral and written form.
2. Evaluate scientific work critically, by analyzing, synthesizing and applying scientific knowledge.
3. Demonstrate a broad foundational knowledge of the field of biochemistry.
4. Demonstrate in-depth knowledge of areas of specialization, including the current status of the field and what remains to be learned.
5. Conduct research safely, responsibly and professionally, in accord with the ethical standards and best practices of the profession.
6. Conduct meaningful scientific inquiry leading to new knowledge in the field, including devising and testing hypotheses, mastering required methods and techniques, and interpreting research data.

Chemical Physics – M.S.

LEARNING OUTCOMES:

1. Provide a foundation for performing independent research in the area of Chemical Physics. Students will obtain fundamental knowledge of the field mainly through graduate coursework offered by the Chemistry Department, the Physics Department and the Chemical Physics Program. They will develop problem solving skills and analytical thinking. Students will also develop the ability to communicate scientific issues and results.
2. Conduct original research. Students will learn to acquire new knowledge and techniques through apprenticeship to more senior graduate students, postdocs, and the faculty in initial exploratory research. They will become more familiar with the latest developments in their field and broaden their knowledge.
3. Master the skills required for careers in science. Students will complete a research project and communicate these results. This will involve completing an independent or collaborative research project. They will demonstrate written communication skills with clear expository writing in reports a M.S. thesis. They will develop oral communication skills by presentation of independent research to different levels of audiences.

Chemical Physics – Ph.D.

LEARNING OUTCOMES:

1. Provide a foundation for performing independent research in the area of Chemical Physics. Students will master fundamental knowledge of the field mainly through graduate coursework offered by the Chemistry Department, the Physics Department and the Chemical Physics Program. They will also develop the problem solving skills and analytical thinking required to perform high quality research. This learning goal will be met through apprenticeship to more senior graduate students, postdocs, and the faculty in initial exploratory research. Students will also develop the ability to communicate scientific issues and results through practice written and oral presentations.
2. Conduct original research. Students will learn to acquire new knowledge and techniques to solve problems as they arise, build strength and depth via collaboration and become familiar with the latest developments in their field.
3. Master the skills required for careers in science. They will complete independent and collaborative research projects. They will master written communication skills with clear expository writing in journal papers and a Ph.D. dissertation. They will master oral communication skills by presentation of independent research to different levels of audiences.

Chemistry – M.S.

LEARNING OUTCOMES:

1. Students can demonstrate an ability to explain scientific theories, literature, and develop understanding in people in an educational setting.
2. Retrieve information from the chemical literature and are able to communicate understanding of literature.
3. Devise a hypothesis, develop research strategy, execute research.
4. Understand and meet professional expectations for laboratory safety and ethical conduct.

Chemistry – Ph.D.

LEARNING OUTCOMES:

1. Students can demonstrate an ability to explain scientific theories, literature, and develop understanding in people in an educational setting.
2. Devise a hypothesis, develop research strategy, execute research.
3. Retrieve information from the chemical literature and are able to communicate understanding of literature.
4. Understand and meet professional expectations for laboratory safety and ethical conduct and dissemination of research.

Earth Sciences – M.S.

LEARNING OUTCOMES:

1. Earth Sciences M.S.s use a broad knowledge of and the skills to explain the dynamic physical, chemical, and biological processes of the Earth and its history.
2. Earth Sciences M.S.s conduct original research in one or more Earth Sciences sub disciplines and publish these results in scientific journals.
3. Earth Sciences M.S.s effectively communicate orally and in writing the concepts of the Earth Sciences to professional and lay audiences.
4. Earth Sciences M.S.s are prepared for career paths in government, industry, or education.

Earth Sciences – Ph.D.

LEARNING OUTCOMES:

1. Earth Sciences Ph.D.s use a deep knowledge of and the skills to explain the dynamic physical, chemical, and biological processes of the Earth and its history.
2. Earth Sciences Ph.D.s design and conduct original research in one or more Earth Sciences sub disciplines and publish these results in scientific journals.
3. Earth Sciences Ph.D.s effectively communicate orally and in writing the concepts of the Earth Sciences to professional and lay audiences.
4. Earth Sciences Ph.D.s are prepared for career paths in academia, government, industry, or education.

Evolution, Ecology & Organismal Biology – M.S.

LEARNING OUTCOMES:

1. Attain an advanced understanding of the processes that underlie evolution, and with their manifestation in the natural world.
2. Attain an advanced understanding of ecological concepts, methods of study, and the interactions among organisms and between organisms and their environment.
3. Attain an advanced understanding of organismal diversity and functioning at all levels, from the molecular and cellular to the whole organism, and will understand the interplay between organismal functioning and ecological and evolutionary processes.
4. Be able to conduct original research in an area of interest in which they frame one or more hypotheses, defend those ideas, generate testable predictions, gather and analyze data, and communicate their results in written form. This includes understanding and following ethical standards of research conduct.
5. Be able to use mathematical and statistical concepts, computer modeling and computers as these topics relate to biology and the student's area of study.
6. Demonstrate knowledge of the theoretical framework of evolution, ecology and organismal biology and understand science as a process, including the history of science as it relates to these three disciplines within biology.
7. Demonstrate familiarity with current issues in biology, especially those that have significant ethical and societal implications, and be able to communicate scientific concepts and processes.

Evolution, Ecology & Organismal Biology – Ph.D.

LEARNING OUTCOMES:

1. Attain an advanced understanding of the processes that underlie evolution, and with their manifestation in the natural world.
2. Attain an advanced understanding of ecological concepts, methods of study, and the interactions among organisms and between organisms and their environment.
3. Attain an advanced understanding of organismal diversity and functioning at all levels, from the molecular and cellular to the whole organism, and will understand the interplay between organismal functioning and ecological and evolutionary processes.
4. Be able to work as independent researchers by learning to conduct substantial original research. This includes the ability to communicate the results of research in written form following standards in the field and verbally to peer audiences. This includes understanding and following ethical standards of research conduct.
5. Be able to use mathematical and statistical concepts; computer modeling and computers as these topics relate to biology and the student's area of study.
6. Demonstrate knowledge of the theoretical framework of evolution, ecology and organismal biology and understand science as a process, including the history of science as it relates to these three disciplines within biology. This includes mastery of the literature and methods within their field of study.
7. Demonstrate familiarity with current issues in biology, especially those that have significant ethical and societal implications, and will be able to communicate scientific concepts and processes.

Mathematical Sciences – M.M.S.

LEARNING OUTCOMES:

1. Graduates should have a strong background and maturity in focus areas of mathematics, and the ability to apply mathematical knowledge and skills to the respective specialization.
2. Graduates are able to work collaboratively in interdisciplinary settings.
3. Graduates are skilled in synthesizing scientific results, writing research reports and communicating mathematics cross-disciplinarily.
4. Graduates are well positioned to enter professions and doctoral programs that emphasize interdisciplinary work in the respective area of specialization.

Mathematics – Ph.D.

LEARNING OUTCOMES:

1. Proficiency in core subjects of Real Analysis and Abstract Algebra.
2. Attain knowledge & problem solving skills in broad set of core areas as expected of faculty at major math departments.
3. Attain scholarship & research skills in specialized field of math at level of professional research. Engage in independent research.

Microbiology – M.S.

LEARNING OUTCOMES:

1. MS graduates of Microbiology should be able to demonstrate a broad base of knowledge in several areas, including microbial physiology, genetics, biochemistry, and pathogenesis.
2. MS graduates of Microbiology should be able to demonstrate in-depth knowledge in an area of interest.
3. MS graduates of Microbiology should be able to effectively communicate science through oral and written presentations to both scientific and general audiences.

Microbiology – Ph.D.

LEARNING OUTCOMES:

1. PhD graduates of Microbiology should be able to demonstrate a broad base of knowledge in several areas, including microbial physiology, genetics, biochemistry, and pathogenesis.
2. PhD graduates of Microbiology should be able to demonstrate in-depth knowledge in an area of interest.
3. PhD graduates of Microbiology should be able to make an original and substantial contribution to the field, as indicated by at least one first-author publication.
4. PhD graduates of Microbiology should be able to effectively communicate science through oral and written presentations to both scientific and general audiences.

Molecular, Cellular, and Developmental Biology – M.S.

LEARNING OUTCOMES:

1. Students will become familiar with research enquiry and with the oral communication skills necessary to disseminate research results.
2. Students will demonstrate foundational knowledge in the molecular, cellular, and developmental biology disciplines, as well as the closely related fields of biochemistry and genetics.
3. Students will develop the ability to conduct novel, independent research that advances knowledge in the field. This includes mastering the essential literature, methods, and techniques in a self-selected area of specialization, as well as developing critical analysis skills necessary to evaluate data.

Molecular Genetics – M.S.

LEARNING OUTCOMES:

1. Demonstrate a broad base of knowledge in several areas, including genetics, cell biology, molecular biology and developmental biology.
2. Demonstrate a deep understanding of an area of special interest.
3. Effectively communicate research findings via oral and written presentations to audiences of specialists in the field as well as broader scientific audiences.

Molecular Genetics – Ph.D.

LEARNING OUTCOMES:

1. Demonstrate a broad base of knowledge in several areas, including genetics, cell biology, molecular biology and developmental biology.
2. Demonstrate a deep understanding of an area of special interest.
3. Effectively communicate research findings via oral and written presentations to audiences of specialists in the field as well as broader scientific audiences.
4. Make original and substantial contributions to their field that are presented in peer-reviewed publications and the Ph.D. thesis.

Physics – M.S.

LEARNING OUTCOMES:

1. Provide basic foundation for teaching physics up to the introductory undergraduate level, functioning as a researcher in a team environment, and/or as preparation for Ph.D. studies, by acquiring basic fundamental knowledge of the field, developing the problem solving skills and analytical thinking required to begin research, and developing good written and oral communication skills. This learning goal will be met mainly through advanced undergraduate and introductory graduate physics coursework, apprenticeship to more senior graduate students, postdocs, and professors in initial exploratory research, and through practice written and oral presentations.
2. Engage in and conduct research. In the process students will start to learn to collaborate with other researchers, and learn to acquire necessary new knowledge and techniques to solve problems as they arise, and continue to improve written and oral communication skills by completion of a written and an oral exam.

Physics – Ph.D.

LEARNING OUTCOMES:

1. Provide a foundation for functioning as independent researchers and teachers in physics, by mastering fundamental knowledge of the field, developing the problem solving skills and analytical thinking required to begin research, and developing good written and oral communication skills. This learning goal will be met mainly through graduate physics coursework, apprenticeship to more senior graduate students, postdocs, and professors in initial exploratory research, and through practice written and oral presentations.
2. Engage in and conduct original research. In the process students will learn to collaborate with other researchers, learn to acquire necessary new knowledge and techniques to solve problems as they arise, increase understanding by mentoring others, and continue to improve written and oral communication skills.
3. Master the skills required for careers in basic and applied research and/or teaching. This will involve completing independent and collaborative research projects, mastering written communication skills with clear expository writing in journal papers and thesis, and oral communication skills by presentation of independent research to different levels of audiences.

Statistics – M.A.S.

LEARNING OUTCOMES:

1. Understand the basic elements of the statistical theory that underlie statistical methods, especially for linear models and design of experiments.
2. Understand a broad range of statistical methods used in statistical analyses of continuous and categorical data.
3. Understand the assumptions required to perform a standard statistical analysis of subject matter data.
4. Appreciate the roles of uncertainty and variability in the collection and analysis of data.
5. Consult with non-statisticians to help them design and implement statistical procedures to collect and analyze data.

Statistics – M.S.

LEARNING OUTCOMES:

1. Understand the statistical theory that underlies statistical methods.
2. Understand the major approaches to estimation and inference for statistical models.
3. Appreciate the mathematical foundations of statistical theory.
4. Understand the role of a statistical model in the analysis of data.
5. Consult with non-statisticians to help design and implement statistical procedures to collect and analyze data.

Statistics – Ph.D.

LEARNING OUTCOMES:

1. Formulate and evaluate statistical models that are appropriate for analyzing data obtained from subject-matter research studies.
2. Identify when existing statistical methodology is inappropriate for answering research questions and analyzing new types of data.
3. Use statistical theory to develop and evaluate new methodology for data analysis when existing methods are not appropriate.
4. Conduct thorough literature reviews to summarize and evaluate the state of statistical science in specialized research areas.
5. Critique general scientific research articles and assess the appropriateness of the statistical theory, methodology, and/or applications involved.
6. Communicate effectively the role of statistical theory and methods in data analysis to professional and lay audiences.

DIVISION OF SOCIAL AND BEHAVIORAL SCIENCES

1. Listed Alphabetically

Anthropology – M.A.

LEARNING OUTCOMES:

1. Mastery of the basic anthropological theories, concepts, methods, and problems, and comprehension of the current state of knowledge in the major subfields of anthropology: archaeology, biological, and cultural anthropology that provide a holistic understanding of the human condition. This is achieved through coursework (required courses in the three sub-disciplines, methods and writing courses), mentoring from graduate advisors, and participation in international and national anthropology conferences.
2. To master the basic skills (e.g. quantitative methods, qualitative methods, data collection, data analysis, writing and language proficiency) required to conduct original anthropological research and successfully matriculate into a Ph.D. program. This is achieved through coursework and the preparation of the Master's Thesis under the supervision of graduate faculty. A successful MA thesis demonstrates competence in the collection and/or analysis of data, the ability to place the data within the known literature, and mastery of theoretical frameworks/debates relevant to the research topic.
3. Professionalization in the discipline that enhances interaction with colleagues within and outside the department. This is achieved by encouraging students to undertake collaborative, multidisciplinary field work and research projects and present the results of their research at national and international conferences in anthropology and related fields.

Anthropology – Ph.D.

LEARNING OUTCOMES:

1. Acquisition of knowledge and skills to design and conduct original research in anthropology. This is achieved through:
    - advanced coursework that provides further depth and breadth of knowledge beyond the MA which is needed to develop expertise in the candidate's research areas
    - collaboration with senior and peer researchers
    - faculty-guided grant proposal preparation for organizations such as the National Science Foundation and Wenner-Gren Foundation, as well as other extramural and intramural funding sources
    - faculty-guided research design, planning, implementation, data collection and analysis and write-up of an original independent research project (i.e. the dissertation)
2. Preparation to secure a position and teach anthropology at a post-secondary institution. This is achieved through:
    - coursework in all sub-disciplines of anthropology
    - teaching experience as a Graduate Teaching Assistant (GTA)
    - faculty guidance in the publication of original research results in peer-reviewed journals or books and dissemination of findings via webpages and other media outlets
    - faculty mentoring in the preparation of the CV, cover letter, research and teaching statement and job interviewing skills
3. Professionalization in the discipline. This is achieved through:
    - attendance and presentation of research at national and international professional conferences
    - publication of research results in peer-reviewed journals, books, on-line media outlets or other venues.

Atmospheric Sciences – M.S.

LEARNING OUTCOMES:

1. Students receive a broad academic introduction to the field of atmospheric sciences at the graduate level.
2. Successful MA students identify a research problem relevant to the discipline of atmospheric sciences, and can marshal the conceptual and methodological tools needed to address it.
3. Successful completion of two required seminar classes allows the student to develop advanced, in-depth training in atmospheric research and analysis in the topical areas of the seminars.
4. Students are well positioned to continue on to the PhD or to enter the non-academic job market.
5. Student will be able to efficiently present information and interact with an audience in academic/professional and instructional settings.
6. Student has aided in teaching a course, and can communicate well with students.

Atmospheric Sciences – Ph.D.

LEARNING OUTCOMES:

1. Students can communicate their research and its significance through different media to a variety of audiences.
2. Graduates can carry a research project from the design phase to conference presentation and publication.
3. The student has contributed or has the potential to contribute to the development of methodologies within the discipline.
4. Graduates of the program are independent scholars with intellectual curiosity, possessing a plan for a longer-term research program.
5. Students hold a broad understanding of atmospheric sciences and in-depth knowledge of their field.
6. A successful student demonstrates mastery of a set of methods that is appropriate to student's intellectual field and career goals, and recognizes/articulates the relationship between methods and research design.
7. Students are positioned to apply for academic and/or non-academic jobs.
8. Students understand the ethical implications of their chosen methodologies, conduct and present research responsibly.
9. The student has had opportunities to participate in field or lab courses and/or service learning courses.
10. The student has had experience teaching, designing at least a portion of a course, and can communicate well with students.

Audiology – D.A.

LEARNING OUTCOMES:

1. Students shall achieve the knowledge and skills needed for entry-level practice in audiology, with an emphasis on the scientific underpinnings of the discipline.
2. Students shall meet the academic and practicum requirements needed for licensure in audiology from the state of Ohio and certification from the American Speech-Language-Hearing Association and/or the American Board of Audiology.
3. Students shall develop the knowledge and skills needed to provide effective clinical services in an ethical, professional and culturally sensitive manner.
4. Students shall build on individual strengths through elective options tailored to meet each student's academic, research and professional goals.
5. Students shall develop the knowledge and skills needed to foster an appreciation for the research base of the discipline and a commitment to life-long professional learning.

Communication – M.A.

LEARNING OUTCOMES:

1. Assessment of student theses by advisory committee at time of final exam.
2. Upon graduation, knowing where our MA graduates are going, either into PhD programs or professional jobs.
3. Constant evaluation of teaching instruction by graduate students.

Communication – Ph.D.

LEARNING OUTCOMES:

1. Graduates of our program will have a strong publication record.
2. The true measure of the success of our doctoral students is their job placement upon graduation.
3. Ensure our graduate students are providing quality teaching instruction.
4. Request that program graduates tell us what we did well, and what if anything needs improvement.

Economics – M.A.

LEARNING OUTCOMES:

1. Our M.A. curriculum is embedded in the first-year core curriculum of our Economics Ph.D. program; students obtain the M.A. in Economics en route to their Ph.D. The M.A. program goal is to attain proficiency in core concepts and methods, and to develop the breadth of knowledge and research perspective, in microeconomics, macroeconomics and econometrics. Below we list four curriculum goals; relevant courses in our M.A. program are accordingly classified as basic, core, intermediate and advanced.
2. To obtain the breadth of core knowledge in microeconomics, macroeconomics and econometrics.
3. To attain technical proficiency in order to analyze, manipulate, interpret and apply advanced models in the core areas of microeconomics, macroeconomics and econometrics; and to communicate economic ideas, issues and analyses.
4. To master core concepts and methods that are central to the major aspects of, and the latest developments in, microeconomics, macroeconomics and econometrics.
5. To comprehend advanced research material, and to gain a perspective for identifying areas of potential innovation and application, in microeconomics, macroeconomics and econometrics.
6. It is the norm of our discipline that an M.A. program is embedded in a Ph.D. program; the first-year core curriculum of the Ph.D. program constitutes the course requirements for the M.A. program. We do not have separate M.A. admissions; students obtain their M.A. en route to their Ph.D. or when they separate after successfully completing the first-year core Ph.D. curriculum. The academic goal of an M.A. program in economics is to enable students' proficiency in core concepts and methods of microeconomics, macroeconomics and econometrics.

Economics – Ph.D.

LEARNING OUTCOMES:

1. To produce Ph.D. students capable of making original contributions in economics research, quality teaching at colleges and universities, providing professional service to organizations in need of advanced expertise in economics, and upholding the academic and professional norms of conduct.
2. To master the knowledge in core microeconomics, macroeconomics and econometrics; to attain advanced expertise in at least two major fields of specialization; and to acquire a breadth of knowledge in economic empirics and institutions.
3. To attain technical proficiency to work with advanced models in microeconomics, macroeconomics and econometrics, to attain technical proficiency to innovate models or analysis in chosen fields of specialization, and to attain proficiency in communicating economic ideas, issues and analysis.
4. To obtain conceptual and methodological perspectives in microeconomics, macroeconomics and econometrics; to be able to identify issues and problems that are central to economic science.
5. To comprehend the latest advances in general economics; to identify interesting and solvable original research agendas in fields of specialization; and to make innovative contributions in economics, economic policy research, and economics education.
6. A pragmatic measure of a given Ph.D. program's effectiveness is its placement record. We strive to place 4-5 new Ph.D.'s as tenure track assistant professors at Tier 1 Research Universities every year, and to place at least one at one of the top 25 institutions every five years. Our Ph.D. program also strives to produce students capable of quality teaching at colleges and universities. To improve our Graduate Teaching Associates' instructional proficiency, Director of Graduate Studies (DGS) and Director of Undergraduate Studies systematically evaluate and recommend remedies on individual and group bases; we actively coordinate our GTA training program with the University Center for the Advancement of Teaching (UCAT).

Geography – M.A.

LEARNING OUTCOMES:

1. Successful MA students identify a research problem relevant to the discipline of geography, and can marshal the conceptual and methodological tools needed to address it.
2. Students are prepared to continue on to the PhD or to seek employment in private or public sector.
3. Students receive a broad introduction to their prospective specialty field in academic geography at the graduate level.
4. Successful completion of two seminar classes allows the student to develop advanced, in-depth training in theoretical geography in their narrow research field.
5. Students demonstrate awareness of the ethical implications of their research and responsible research practice.
6. A successful student begins applying a set of methods that is appropriate to student's intellectual field and career goals.
7. Students understand the ethical implications of their chosen methodologies and conduct research responsibly.
8. The student has aided in teaching a course, and can communicate well with students.
9. The student has had opportunities to participate in field courses and/or service learning courses.
10. The student can work with diverse students and learning styles.
11. Students understand the rights and responsibilities of a college teacher mentor.
12. Students are positioned to continue on to the PhD or to enter the non-academic job market.
13. The student knows how to ask for guidance on an ongoing basis and seek appropriate mentoring.
14. Students have developed skills necessary for their career including public speaking, time management, and collegiality.
15. Student will have had opportunity to participate in the publication and funding process.

Geography – Ph.D.

LEARNING OUTCOMES:

1. Graduates of the program are independent scholars with intellectual curiosity, possessing a plan for a longer-term research program.
2. Students hold a broad understanding of geography and in-depth knowledge of their field.
3. Students understand how their work fits within a community of scholars or collaborators in geography and beyond.
4. Students demonstrate awareness of the ethical implications of their research and responsible research practice.
5. Students can carry a research project from the design phase to conference presentation and publication, and know how to seek appropriate funding.
6. Students can communicate their research and its significance to a variety of audiences, as appropriate.
7. A successful student demonstrates mastery of a set of methods that is appropriate to student's intellectual field and career goals, and recognizes/articulates the relationship between methods and research design.
8. The student contributes to the development of methodologies within the discipline and is positioned to continue that development in future research.
9. This mastery can encompass such skills as field experience, data or theory generation, qualitative and/or quantitative research methods, computer programming languages and GIS.
10. Students understand the ethical implications of their chosen methodologies and conduct research responsibly.
11. A PhD in Geography understands the role of pedagogy in geographic education.
12. These skills are directly applicable to college-level teaching and also a variety of other professional endeavors.
13. The student has had experience teaching, designing a course, and can communicate well with students.
14. The student has had opportunities to participate in field courses and/or service learning courses.
15. The student is positioned to be an effective mentor of students at multiple levels.
16. The student can work with diverse students and learning styles.
17. Students understand the rights and responsibilities of a college teacher and mentor.
18. Students understand the complexity of the professional environment in the academy and beyond.
19. Students are positioned to apply for academic and/or non-academic jobs.
20. Students will develop the capacity to continue their education throughout their careers.
21. The student knows how to ask for guidance on an ongoing basis and seek appropriate mentoring.
22. Professionalization includes skills necessary for the student's career in geography, including public speaking, scholarly independence, time management, professional networks, peer reviews of teaching and research, collegiality, and the publication and funding process.
23. In preparation for academic careers, students will develop knowledge of the promotion and tenure process at a variety of institutions, and the university system broadly.

Political Science – M.A.

LEARNING OUTCOMES:

1. No Outcomes Reported.

Political Science – Ph.D.

LEARNING OUTCOMES:

1. Demonstrate in-depth knowledge of one major concentration in the field, and competency in one or two other minor areas of concentration, and/or interdisciplinary affiliations.
2. Demonstrate advanced research skills, including broad knowledge of a range of critical and theoretical approaches relevant to their field of research.
3. Make original and substantial contributions to the field.
4. Follow ethical guidelines for work in the field.
5. Demonstrate effective teaching skills.

Psychology – M.A.

LEARNING OUTCOMES:

1. Know and understand the core questions, major theoretical approaches and empirical findings in one of seven areas of Psychology: Behavioral Neuroscience, Cognitive, Clinical, Developmental, Intellectual and Development Disabilities, Quantitative, of Social.
2. Develop critical thinking skills needed to evaluate and generate high impact research.
3. Effectively communicate research findings in both oral and written form.
4. Attain research skills necessary to conduct scientific studies in an area of Psychology.
5. Understand and appreciate ethical issues related to research in Psychology.

Psychology – Ph.D.

LEARNING OUTCOMES:

1. Know and understand the core questions, major theoretical approaches and empirical findings in one of seven areas of Psychology: Behavioral Neuroscience, Cognitive, Clinical, Developmental, Intellectual and Development Disabilities, Quantitative, of Social.
2. Attain research skills and expertise in an area of Psychology.
3. Acquire teaching experience and expertise.
4. Effectively communicate research findings in both oral and written form.
5. Understand and appreciate ethical issues related to research in Psychology.
6. Develop skills in psychological assessment and therapy (clinical program).

Sociology– M.A.

LEARNING OUTCOMES:

1. Students will learn sociological knowledge in substantive areas of the discipline related to core areas of sociology and students' research interests.
2. Students will acquire skills associated with a range of research methods used in sociology.
3. Students will design and conduct a high-quality, original MA-level research project, and write and defend a potentially-publishable MA thesis paper based on it.
4. Students will begin to engage in professional activities such as attending research conferences and developing research papers for publication.

Sociology – Ph.D.

LEARNING OUTCOMES:

1. Students will learn sociological knowledge in substantive areas of the discipline related to core areas of sociology and their own research interests.
2. Students will acquire advanced skills associated with a range of research methods used in sociology.
3. Students will design and conduct a high-quality, original dissertation research project, and write and defend a dissertation that is potentially publishable either as a series of research papers or as a research monograph.
4. Students will engage in professional activities such as attending and presenting work at research conferences, publication of research, and preparation of dissertation research grants.
5. Students will acquire strong teaching skills, including the ability to design and teach their own courses, through appointments as Graduate Teaching Assistants.

Speech and Hearing Science – M.A.

LEARNING OUTCOMES:

1. To guide students to achieve the knowledge and skills needed for entry-level practice in speech-language pathology, with an emphasis on the scientific underpinnings of the discipline.
2. To ensure that students surpass the academic and practicum requirements needed for licensure from the state of Ohio, certification from the American Speech-Language-Hearing Association, and teacher certification from the Ohio Department of Education.
3. Students shall develop the knowledge and skills needed to provide effective clinical services in an ethical, professional and culturally sensitive manner.
4. Students will build on individual strengths through elective options in the curriculum tailored to meet each student's academic, research and professional goals.
5. Students will develop the depth of knowledge needed to foster life-long learning throughout the course of their professional careers.

Speech and Hearing Science – Ph.D.

LEARNING OUTCOMES:

1. To demonstrate knowledge of basic research tools through successful completion of related coursework and as evidenced by active engagement in research design.
2. To demonstrate expertise in one or more specific areas of speech and hearing science, as evidenced by successful completion of a written and oral comprehensive examination.
3. To demonstrate the ability to execute high-quality research, as evidenced by the results of experiments and projects, publications, and technical presentations.
4. To demonstrate the independent ability to execute research as demonstrated by successful completion and defense of the dissertation.

Speech Language Pathology – M.A.

LEARNING OUTCOMES:

1. Evidence that students are successfully applying clinical knowledge of the scientific basis of speech-language pathology practice (Standard IV-A), of basic processes across the lifespan in normal and abnormal development (Standard IV-B), of disorders and differences related to articulation, fluency, swallowing, etc. (Standard IV-C) and of methods of prevention, assessment and intervention related to communication and swallowing disorders (Standard IV-D)
2. Evidence that students are successfully demonstrating skills critical for effective speech-language pathology practice related to communication and swallowing disorders in the areas of (1) evaluation, (2) intervention, and (3) interaction and personal qualities. (See Standard V-B of the 2014/revised 2016 ASHA certification Standards in SLP attachment)
3. Students successfully demonstrate effective communication concerning communication, swallowing and/or their disorders.

Fisher College of Business

BY PROGRAM:

Alphabetical

Accounting – M.Acc.

LEARNING OUTCOMES:

1. Graduates will be competent in and able to apply the basic technical and institutional knowledge of the discipline of accounting.
2. Graduates will understand the conceptual foundations of accounting and be able to engage in rigorous critical thinking.
3. Graduates will demonstrate competence in general communication skills and analytical reasoning.
4. Graduates will understand the ethical responsibilities of an accounting professional.

THE OFFICE OF ACADEMIC AFFAIRS

Accounting and Management Information Systems – Ph.D.

LEARNING OUTCOMES:

1. AMIS Ph.D. graduates will master the core knowledge and research tools in accounting and/or MIS.
2. AMIS Ph.D. graduates will master the knowledge in two external fields of study.
3. Ph.D. graduates demonstrate capacity to produce research papers that: (i) constitute significant contributions in their major field of study; and (ii) that are publishable in high quality, peer-reviewed academic journals.
4. Ph.D. graduates are prepared to effectively teach undergraduate and graduate students at high-quality, research-focused colleges and universities.
5. Ph.D. graduates obtain first faculty positions at high-quality, research-focused colleges and universities.

Business Administration – M.B.A.

LEARNING OUTCOMES:

1. Graduates are able to apply their knowledge & skills to solve business problems.
2. Graduates have a global perspective and an awareness of how cultural differences impact business.
3. Graduates are able to work and lead effectively in a team-based environment.
4. Graduates demonstrate professional deportment, self-awareness, leadership, polish and effective communication skills.

Business Administration – Ph.D.

LEARNING OUTCOMES:

1. Ph.D. graduates in all programs master the core knowledge and research tools in their major field of study.
2. Where applicable, Ph.D. graduates also master the basic knowledge in a minor field of study. In addition, PhD. Graduates in Labor & Human Resources demonstrate breadth of knowledge.
3. Ph.D. graduates demonstrate capacity to produce research papers that: (i) constitute significant contributions in their major field of study; (ii) and that are publishable in high-quality, peer-reviewed academic journals.
4. Ph.D. graduates are prepared to effectively teach undergraduate and graduate students in the curriculum at high quality, research-focused colleges and universities.
5. Ph.D. graduates place at high-quality, research-focused colleges and universities.

Business Logistics Engineering – M.B.L.E.

LEARNING OUTCOMES:

1. MBLE students will master core knowledge in the areas of logistics strategy, logistics management and logistics engineering.
2. MBLE students will be able to solve complex logistics problems.
3. MBLE students will be able to work in teams.
4. MBLE students will demonstrate effective communications skills.

Executive Master of Business Administration

LEARNING OUTCOMES:

1. Graduates are able to apply their knowledge & skills to solve business problems.
2. Graduates have a global perspective and an awareness of how cultural differences impact business.
3. Graduates are able to work and lead effectively in a team-based environment.
4. Graduates demonstrate professional deportment, self-awareness, leadership, polish and effective communication skills.

Human Resource Management – M.H.R.M.

LEARNING OUTCOMES:

1. Graduates develop strong analytical skills that can be immediately applied for effective HRM decision making and problem solving.
2. Graduates develop strong leadership skills to be used to guide the client through appropriate HRM strategies.
3. Graduates master various functional areas of MHR.
4. Graduates acquire a working understanding of the business context that guides effective human resources decision making.

Labor and Human Resources – Ph.D.

LEARNING OUTCOMES:

1. Ph.D. graduates in all programs master the core knowledge and research tools in their major field of study.
2. Where applicable, Ph.D. graduates also master the basic knowledge in a minor field of study. In addition, PhD. Graduates in Labor & Human Resources demonstrate breadth of knowledge.
3. Ph.D. graduates demonstrate capacity to produce research papers that: (i) constitute significant contributions in their major field of study; (ii) and that are publishable in high-quality, peer-reviewed academic journals.
4. Ph.D. graduates are prepared to effectively teach undergraduate and graduate students in the curriculum at high quality, research-focused colleges and universities.
5. Ph.D. graduates place at high-quality, research-focused colleges and universities.

Master of Business Operational Excellence

LEARNING OUTCOMES:

1. Graduates will demonstrate the ability to implement what they have learned.
2. Graduates will be able to use the tools of value stream management (Define, Measure, Analyze, Improve, Control and Impact value streams).
3. Graduates will be prepared to manage continuous improvement and waste reduction programs in service, office, or manufacturing settings.
4. Graduates will develop Communications, Creativity and Leadership skills to engage employees, communicate successfully, build capacity for continuous improvement, and succeed in organizations that strive for operational excellence.

MBA for Working Professionals

LEARNING OUTCOMES:

1. Graduates are able to apply their knowledge & skills to solve business problems.
2. Graduates have a global perspective and an awareness of how cultural differences impact business.
3. Graduates are able to work and lead effectively in a team-based environment.
4. Graduates demonstrate professional deportment, self-awareness, leadership, polish and effective communication skills.

Specialized Master of Business – Finance

LEARNING OUTCOMES:

1. Graduates acquire basic knowledge in the areas of accounting/financial analysis, statistics/data analysis, economics, and teamwork and leadership.
2. Graduates demonstrate in-depth knowledge of Finance by being exposed to leading edge research in that field and in its practical applications and develop a global perspective of developments in the field.
3. With ethical awareness and using critical thinking, students will apply core knowledge to solve problems.
4. Graduates demonstrate professional deportment and effective oral and written communication skills.

Specialized Master of Business – Logistics

LEARNING OUTCOMES:

1. Graduates will acquire basic knowledge of Accounting, Business Management, Process Improvement, and Supply Chain concepts as they apply to Logistics operations.
2. Graduates will gain in-depth knowledge of Logistics by being exposed to leading edge academic research and best business practices while developing a global perspective of the field.
3. Graduates will apply advanced Logistics concepts and methods to analyze and solve practical problems to increase the efficiency and effectiveness of operations.
4. Graduates will be prepared to lead administrative and operational functions within a Logistics setting.

Specialized Master of Business – Marketing

LEARNING OUTCOMES:

1. Graduates acquire basic knowledge in the areas of accounting/financial analysis, statistics/data analysis, economics, and teamwork and leadership.
2. Graduates demonstrate in-depth knowledge of Marketing by being exposed to leading edge research in that field and in its practical applications and develop a global perspective of developments in the field.
3. With ethical awareness and using critical thinking, students will apply core knowledge to solve problems.
4. Graduates demonstrate professional deportment and effective oral and written communication skills.

College of Dentistry

BY PROGRAM:

Alphabetical

Dental Hygiene – M.D.H.

LEARNING OUTCOMES:

1. Demonstrate the ability to assume a dental hygiene faculty position.
2. Identify, analyze, and evaluate the role of dental hygiene education in higher education and healthcare.
3. Examine the responsibilities of the dental hygiene program director and administrators.
4. Select program development models to meet specific program objectives.
5. Employ basic managerial, administrative, interpersonal, and human relations skills in a team-based environment.
6. Apply leadership skills, theories, and principles in interactions with groups and organizations to enhance innovation and change.
7. Develop strategies to motivate others for collaborative problem-solving, decision making, and evaluation.
8. Demonstrate team-building, negotiation, and conflict management skills.
9. Promote high standards of personal and organizational integrity, honesty, and respect for all people and communities.
10. Apply the research process to an identified problem.
11. Demonstrate professional writing and presentation skills in the dissemination of research findings.
12. Conduct a comprehensive systematic literature search relevant to a specific topic and critically evaluate the evidence gathered.
13. Analyze and interpret quantitative and qualitative data from the research literature to guide problem-solving and evidence-based decision making.

Dentistry – D.D.S.

LEARNING OUTCOMES:

1. Competent in patient assessment and treatment planning within the scope of general dentistry.
2. Competent in health promotion and disease prevention within the scope of general dentistry.
3. Competent to provide care and treatment of oral problems within the scope of general dentistry.
4. Competent to evaluate the outcomes of treatment and identify necessary strategies for maintaining optimum oral health.
5. Competent in providing oral health care within the scope of general dentistry to patients in all stages of life and of assessing the treatment needs of patients with special needs.
6. Competent in the application of biomedical science knowledge in the delivery of patient care.
7. Competent to access, critically appraise, apply, and communicate scientific and lay literature as it relates to providing evidence-based patient care.
8. Competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care.
9. Competent in applying legal and regulatory concepts related to the provision and/or support of oral health care services.
10. Competent in the application of the principles of ethical decision making and professional responsibility.
11. Able to demonstrate the ability to provide patient-centered care.
12. Competent in the use of critical thinking and problem-solving, including their use in the comprehensive care of patients, scientific inquiry and research methodology.
13. Able to demonstrate the ability to self-assess, including the development of professional competencies and the demonstration of professional values and capacities associated with self-directed, lifelong learning.
14. Competent in the application of the fundamental principles of behavioral sciences as they pertain to patient-centered approaches for promoting, improving and maintaining oral health.
15. Competent in managing a diverse patient population and have the interpersonal and communications skills to function successfully in a multicultural work environment.
16. Competent in applying the basic principles and philosophies of practice management, models of oral health care delivery, and how to function successfully as the leader of the oral health care team.

Dentistry – M.S.

LEARNING OUTCOMES:

1. Graduate students of the MS program in Dentistry will be able to conduct high-quality research that advances knowledge in biomedical science or clinical therapy. As part of this effort, the students will be capable of accessing and evaluating pertinent scientific literature and comprehend the current state of their fields of study as assessed by successful defense of their theses.
2. Graduate students of the MS program in Dentistry will be able to discuss or write about discipline-specific issues to students, peers, other health care professionals and the public. Specifically, they will be able to present scholarship related to their thesis in both written and oral formats to a broad audience including their thesis committee as assessed by the preparation and successful defense of their theses.
3. Graduate students of the MS program in Dentistry will be able to critically evaluate the scientific literature as well as research outcomes with respect to levels of evidence, research design and statistical methods. Students will be able to integrate these analytical skills with discipline-specific knowledge to help solve complex issues related to their fields of study as assessed by the preparation and successful defense of their theses.
4. Graduate students of the MS program in Dentistry will learn to understand and apply professional values and ethics for responsible conduct of their research, as assessed through the submission of their research proposal and successfully obtaining approval for the proposal by the Institutional Review Board, the Institutional Biosafety Committee, the Institutional Animal Use and Care Committee or other adjudicating body.

Oral Biology – Ph.D.

LEARNING OUTCOMES:

1. Graduate students in Oral Biology should understand the current and historical theories, concepts, and models of the disciplines they pursue under their mentors. These disciplines include microbiology, immunology, bone, muscle, taste, pain, and neuroscience. They should be able to access and evaluate literature and understand the major issues in the current state of their fields. In addition, students should be able to understand and appropriately use the methods and techniques in their fields of study.
2. Graduate students in Oral Biology should be able to write and speak about the current issues of their disciplines to peers, practitioners, and the public. They should be able to articulate and demonstrate knowledge of their disciplines and present scholarship to professionals. They should be able to construct their own NIH-style grant application before passing candidacy examination.
3. Graduate students in Oral Biology should be able to identify and understand critical issues in their disciplines. They should be able to challenge and evaluate information, as well as synthesize and integrate knowledge in their disciplines.
4. Graduate students in Oral Biology should understand and exhibit the professional standards for responsible conduct of research and understand the values and ethics of practicing the profession in society.
5. Graduate students in Oral Biology should be able to apply knowledge in their discipline to solve sophisticated problems related to oral science and medicine and to troubleshoot technical difficulties required to solve these problems.

College of Education and Human Ecology

BY PROGRAM:

Alphabetical

Consumer Sciences – M.S.

LEARNING OUTCOMES:

1. Masters students will demonstrate knowledge of fundamental concepts and research methods in the defined area of study.
2. Masters students will demonstrate capacity to pursue independent, original research.
3. Masters students will demonstrate commitment to high standards for professional behavior and practice.

Consumer Sciences – Ph.D.

LEARNING OUTCOMES:

1. Doctoral degree candidates will demonstrate mastery of disciplinary knowledge and research methodology.
2. Doctoral degree candidates will demonstrate proficiency in conducting and disseminating impactful research.
3. Doctoral degree candidates will demonstrate commitment to the highest ethical standards for research and scholarly conduct as contributing members of their profession.

Education: Policy and Leadership – M.A.

LEARNING OUTCOMES:

1. Students will have a broad understanding of current debates about education on the local, national, and international levels.
2. Students will be aware of the cultural and historical context of education.
3. Students will be able to evaluate and apply educational research, in one or more specialty areas.
4. Students will be prepared for PhD programs in education.

Education: Policy and Leadership – M.Ed.

LEARNING OUTCOMES:

1. Candidates can comprehend and apply core theory and research in educational administration that serves as a foundation for practice.
2. Candidates can effectively and ethically establish and maintain collaborative relationships in professional settings.
3. Candidates can demonstrate an ability to use action research to facilitate change in educational-related organizations.
4. Candidates can critically evaluate research and apply scientific methodology to analysis of empirical data.
5. Candidates can comprehend and value human diversity in professional settings.
6. Candidates can value and demonstrate attitudes essential for continual learning and scholarly inquiry.

Education: Policy and Leadership – Ph.D.

LEARNING OUTCOMES:

1. Students will have a broad understanding of current debates about education on the local, national, and international levels.
2. Students will be aware of the social and historical context of educational policy and practice.
3. Students will be prepared to engage in high-level research, in one or more specialty areas, that contributes to educational understanding, sound policy, and effective leadership.
4. Students will have the experiences necessary to succeed in professional careers related to education. This includes experiences in teaching, conference presentations, grant activity, and publishing.

Education: Teaching and Learning – Ed.S.

LEARNING OUTCOMES:

1. No Outcomes Reported.

Education: Teaching and Learning – M.A.

LEARNING OUTCOMES:

1. Demonstrates ability to interpret and apply theory, research and practice to current problems of education.

Education: Teaching and Learning – M.Ed.

LEARNING OUTCOMES:

1. Instruct standards based subject matter using subject-specific pedagogy.
2. Apply knowledge of varied students' needs.
3. Apply research and theory regarding pedagogical choices.
4. Make data driven decisions regarding next steps of instruction, and reflect upon the effectiveness of instruction on student learning.

Education: Teaching and Learning – Ph.D.

LEARNING OUTCOMES:

1. Student demonstrates advanced understanding of the theoretical foundations, research, related content, and pedagogical knowledge in their area of specialization.

Educational Studies – Ed.D.

LEARNING OUTCOMES:

1. Upon completion of the degree, students will be able to apply research to the solution of problems important to their field.
2. Upon completion of the degree, students will possess the skills and knowledge necessary evaluate and apply the results of research to important problems in their fields.
3. Upon completion of the degree, students will possess the knowledge and experience that would enable them to demonstrate knowledge of the theories, methodologies, or techniques appropriate to the needs and individual differences of their clients, students, or constituents.
4. Upon completion of the degree, students will possess the knowledge base that would enable them to demonstrate knowledge of the basic concepts, theories, and principles that comprise the foundations of their fields of study.

Educational Studies – Ed.S.

LEARNING OUTCOMES:

1. Develop and apply data-based decision-making and accountability when implementing direct and indirect school psychological services.
2. Develop and apply consultation and collaboration skills when implementing direct and indirect school psychological services.
3. Develop and apply interventions and instructional support to promote the development of academic skills when implementing direct and indirect school psychological services.
4. Develop and apply interventions and mental health services to develop social and life skills when implementing direct and indirect school psychological services.
5. Develop and apply school-wide practices to promote learning when implementing direct and indirect school psychological services.
6. Develop and apply preventive and responsive services when implementing direct and indirect school psychological services.
7. Develop and apply family school collaboration services when implementing direct and indirect school psychological services.
8. Develop and apply skills associated with embracing diversity in development and learning when implementing direct and indirect school psychological services.
9. Develop and apply research and program evaluation skills when implementing direct and indirect school psychological services.
10. Become knowledgeable and apply legal ethical and professional practices when implementing direct and indirect school psychological services.

Educational Studies – M.A.

LEARNING OUTCOMES:

1. Upon completion of the degree, students will be effective consumers of research and will be able to evaluate and apply research to their field.
2. Upon completion of the degree, students will possess skills, knowledge, and the historical background necessary to be proficient in their fields or seek advance degrees.
3. Upon completion of the degree, students will be able to identify the basic concepts, theories, and principles that comprise the foundations of their fields of study.

Educational Studies – Ph.D.

LEARNING OUTCOMES:

1. Upon completion of the degree, students will be able to conduct independent research.
2. Upon completion of the degree, students will possess the skills and knowledge necessary evaluate and apply the results of research to important problems in their fields.
3. Upon completion of the degree, students will possess the knowledge and experience that would enable them to demonstrate knowledge of the theories, methodologies, or techniques appropriate to the needs and individual differences of their clients, students, or constituents.
4. Upon completion of the degree, students will possess the knowledge base that would enable them to demonstrate knowledge of the basic concepts, theories, and principles that comprise the foundations of their fields of study.

Human Development and Family Science – M.S.

LEARNING OUTCOMES:

1. MS graduates of HDFS will be able to employ critical thinking, evidence-based principles, and current scholarly literature to analyze the most pressing issues affecting individuals, families, and communities.
2. MS graduates of HDFS will demonstrate the ability to engage critically with the scholarship and theory of the multiple disciplines that inform our understanding of individuals, families, and communities.
3. MS graduates of HDFS will demonstrate the ability to compile, organize, and interpret scientific data using quantitative and/or qualitative research methods.
4. MS graduates of HDFS will effectively communicate the results of their research in oral and written forms, and to professional and lay audiences.

Human Development and Family Science – Ph.D.

LEARNING OUTCOMES:

1. PhD graduates of HDFS will be able to employ critical thinking, evidence-based principles, and current scholarly literature to analyze the most pressing issues affecting individuals, families, and communities.
2. PhD graduates of HDFS will demonstrate the ability to engage critically with the scholarship and theory of the multiple disciplines that inform our understanding of individuals, families, and communities.
3. PhD graduates of HDFS will demonstrate the ability to compile, organize, and interpret scientific data using quantitative and/or qualitative research methods.
4. PhD graduates of HDFS will effectively communicate the results of their research in oral and written forms, and to professional and lay audiences.
5. PhD graduates of HDFS will demonstrate the ability to design and conduct research that makes an original, creative, and significant contribution to our understanding of individuals, families, and communities.
6. PhD graduates of HDFS will exhibit strong professional skills, including the ability to effectively collaborate with others and to conduct and disseminate research in an ethical manner.
7. PhD graduates of HDFS will demonstrate effective skills in undergraduate teaching and potential for graduate teaching and undergrad/grad research mentorship.

Human Nutrition – M.S.

LEARNING OUTCOMES:

1. Students will use critical thinking, evidence-based principles, and current information to analyze situations, issues and problems.
2. Students will engage in the ethical conduct of research.
3. Students will communicate effectively both orally and in writing.
4. Students will apply the scientific method, including comprehension of the literature, study design, and research methods, to specific research questions.
5. Students will demonstrate skills in assessing the nutritional status of humans and in planning surveillance or intervention programs for optimal health.
6. Students will demonstrate comprehension of physical, biological, social and behavioral sciences and apply these scientific principles to the study of nutrition.
7. Students will demonstrate in-depth knowledge of digestion, absorption, metabolism and functions of nutrients, and other bioactive dietary compounds at the whole body, cellular and molecular levels.
8. Students will demonstrate comprehension of the relationship between nutrition and the occurrence and management of disease.

Human Nutrition – Ph.D.

LEARNING OUTCOMES:

1. No Reported Outcomes.

Kinesiology – M.S.

LEARNING OUTCOMES:

1. Critically evaluate and synthesize the literature within the profession.
2. Identify problems within the profession.
3. Develop and/or apply evidence based solutions to the identified problems.
4. Demonstrate the evaluation of professional practice or programs.
5. Engage in professional development activities within the profession.

Kinesiology – Ph.D.

LEARNING OUTCOMES:

1. Demonstrate knowledge and application of a variety of effective instructional approaches.
2. Apply a reflective cycle to further improve instructional effectiveness.
3. Critically evaluate research findings.
4. Analyze data using appropriate and rigorous technique.
5. Select current primary informational resources used in research area.
6. Deliver or report research/project findings to scientific and/or general audiences in written and oral forms.
7. Design scientifically rigorous studies.
8. Formulate research questions and/or hypothesis.
9. Critically review and evaluate professional literature.
10. Compose a grant to support a research proposal.
11. Create a proposal to garner resources to support professional activities.

College of Engineering

BY PROGRAM:

Alphabetical

Aeronautical & Astronautical Engineering – M.S.

LEARNING OUTCOMES:

1. Graduates with the Master of Science degree will be attractive candidates for employment in the aerospace industry.
2. Graduates with the Master of Science degree with appropriate aptitude will be attracted to undertake the doctoral program in aerospace engineering.
3. Graduates with the Master of Science degree will be informed and involved members of their communities, and responsible engineering professionals.
4. Graduates with the Master of Science degree will attain an in-depth understanding of the basics of aerospace engineering.
5. Graduates with the Master of Science degree will attain an ability to work on multi-disciplinary teams.
6. Graduates with the Master of Science degree will attain an ability to identify, formulate, and solve engineering problems.
7. Graduates with the Master of Science degree will attain an understanding of professional, ethical, security and social issues and responsibilities, particularly as they relate to aerospace engineering.
8. Graduates with the Master of Science degree will attain an ability to communicate effectively with a range of audiences.
9. Graduates with the Master of Science degree will attain an understanding of contemporary issues, particularly related to aerospace engineering.
10. Graduates with the Master of Science degree will attain an ability to use the techniques, skills and modern engineering tools necessary for practice as an aerospace engineering professional.
11. Graduates with the Master of Science degree will attain an ability to apply mathematical foundations and algorithmic principles in the solution of engineering problems.
12. Graduates with the Master of Science degree will attain experience in the performance of research.

Aeronautical & Astronautical Engineering – Ph.D.

LEARNING OUTCOMES:

1. Graduates with the Doctor of Philosophy degree will be attractive candidates for employment performing research in aerospace engineering in industry or in an academic position at an educational institution.
2. Graduates with the Doctor of Philosophy degree will be informed and involved members of their communities, and responsible engineering professionals.
3. Graduates with the Doctor of Philosophy degree will attain an in-depth understanding of aerospace engineering.
4. Graduates with the Doctor of Philosophy degree will attain an ability to perform high quality research.
5. Graduates with the Doctor of Philosophy degree will attain an ability to teach.
6. Graduates with the Doctor of Philosophy degree will attain an ability to work on multi-disciplinary teams.
7. Graduates with the Doctor of Philosophy degree will attain an ability to identify, formulate, and solve engineering problems.
8. Graduates with the Doctor of Philosophy degree will attain an understanding of professional, ethical, security and social issues and responsibilities, particularly as they relate to aerospace engineering.
9. Graduates with the Doctor of Philosophy degree will attain an ability to communicate effectively with a range of audiences.
10. Graduates with the Doctor of Philosophy degree will attain a recognition of the need for, and an ability to engage in life-long learning and continuing professional development.
11. Graduates with the Doctor of Philosophy degree will attain an understanding of contemporary issues, particularly related to aerospace engineering.
12. Graduates with the Doctor of Philosophy degree will attain an ability to use the techniques, skills and modern engineering tools necessary for practice as an aerospace engineering professional.
13. Graduates with the Doctor of Philosophy degree will attain an ability to apply mathematical foundations and algorithmic principles in the solution of engineering problems.

Architecture – M.A.H.R.

LEARNING OUTCOMES:

1. As a professional program the primary goal of the curriculum is to situate the disciplinary role of the architect within a broad cultural context and to prepare future architects for the demands of operating in a complex global society.
2. Thus students will develop an understanding of architecture as a cultural profession. They will develop an understanding of architecture's position within and relationship to other aesthetic discourses and develop an appreciation of the ways these relate to society as a whole.
3. Students will develop an understanding of the histories and theories of aesthetic development of the arts and develop an appreciation for architecture's position within that history as reflected in different cultural contexts.
4. Students will develop the ability to situate architecture within the context of larger cultural flows including developments in the sciences and other technical fields which lead to changes within their own discourse. They will gain a basic understanding of the ways in which these have interacted with the discipline over time.
5. Students will gain extensive ability in building abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts.
6. Students will develop expertise in formal systems and methods of organizing spatial relationships in order to communicate ideas of architectural meaning.
7. Students will develop the facility to engage in a wide range of media used to think about architecture including writing, investigative skills, speaking, drawing, model making and digital design and fabrication.
8. Students will develop the ability to comprehend the technical aspects of design, systems and materials, and be able to apply that comprehension to architectural services.
9. Students will develop knowledge of integrated building practices and the technical skills of building construction.
10. Students will develop an understanding of methods of working with other trades and disciplines in the building industry.
11. Students will develop an appreciation of the role of technical skills in the implementation of design decisions and the impact of such decisions on the environment.
12. Students will develop an understanding of ideas of the landscape and cities in order to appreciate the complex interchange between architecture and its varying contexts.
13. Students will gain an understanding of the ways in which architects manage, advocate, and act legally, ethically and critically for the good of the client, society and the public.
14. Students will develop practice skills that include collaboration, business, and leadership skills.
15. Students will develop a basic understanding of the codes and laws by which the discipline is regulated and in which it operates in order to prepare for their period of apprenticeship.

Biomedical Engineering – M.S.

LEARNING OUTCOMES:

1. Demonstrate a broad understanding of the technical skills need for practice in biomedical engineering.
2. Conduct research in biomedical engineering field (thesis MS only).
3. Effectively communicate concepts in the field to professional and lay audiences.
4. Follow ethical guidelines in this field.

Biomedical Engineering – Ph.D.

LEARNING OUTCOMES:

1. Make an original contribution to the field and demonstrate in-depth knowledge and expertise in their specific area of biomedical engineering.
2. Demonstrate the broad knowledge required for conducting research in biomedical engineering.
3. Effectively communicate the impact of research findings to professional and lay audiences in both written and oral formats.
4. Follow ethical guidelines for conducting research in this field.

Chemical Engineering – M.S.

LEARNING OUTCOMES:

1. Conduct research in chemical and biomolecular engineering (thesis MS only).
2. Communicate research results and/or concepts through written and oral formats.
3. Demonstrate a commitment to safe and ethical chemical research through adherence to best safety practices and academic integrity in research.
4. Demonstrate a mastery of advanced Chemical Engineering concepts through graduate level coursework and exams.

Chemical Engineering – Ph.D.

LEARNING OUTCOMES:

1. Develop the capability to identify, pose, and solve research problems.
2. Communication research results through written and oral formats.
3. Demonstrate a commitment to safe and ethical chemical research through adherence to best safety practices and academic integrity in research.
4. Demonstrate an understanding of the broader contexts and impacts of dissertation research through oral and written communication in referred journals, presentations, and oral examinations.
5. Demonstrate a mastery of advanced Chemical Engineering concepts through graduate level coursework and exams.
6. Demonstrate the ability to work well in teams and in a mentoring role to undergraduates and junior students.

City and Regional Planning – M.C.R.P.

LEARNING OUTCOMES:

1. Students would be able to comprehend and discriminate among the goals that an individual, group, community and organization holds when considering the future including the values of justice, equity, and fairness. Have the ability to advocate for an interest on behalf or with a group in the community.
2. Students would be able to describe how global issues have local impact and understand how local plans can contribute to global problems, such as climate change.
3. Students would be able to understand the historical and contemporary analysis of global and American urbanization, and have the ability to identify tools to preserve history in cities and regions.
4. Students would demonstrate the ability to prepare pragmatic policy analysis and write policies and laws to influence city and regional form and use.
5. Students would be able to utilize tools and methods to understand and plan for cities and regions to provide more humane, equitable, sustainable, and efficient urban futures.
6. Students would be able to communicate visually, orally, and in writing. Have the ability to prepare plans in print and multimedia format.
7. Students would be able to understand and respect the interdisciplinary nature of planning through taking courses both in planning and allied disciplines, and be able to collaborate in interdisciplinary teams.
8. Students will have refined their personal skills allowing them to thrive in a professional planning office setting.
9. Students would be able to understand collaborative methods and be able to apply them in a professional context, including the ability to work in interdisciplinary teams, collaborate with clients, the public, and work teams. Have the ability to negotiate conflicts and understand the perspective of diverse stakeholders.

City and Regional Planning – Ph.D.

LEARNING OUTCOMES:

1. Doctoral students will interact with their peers and enhance their presentation skills by participating in scholarly conferences.
2. Percent of new PhDs in jobs. The goal is having 50% of new graduates in research and teaching related jobs.
3. Each PhD student will have at least one publication (published or accepted for publication) while a student. This outcome will be measured every three years. Graduating PhDs in this period will be the basis for measurement.
4. Students who complete our doctoral program should be able to conduct original research to answer innovative questions in City & Regional Planning.

Civil Engineering – M.S.

LEARNING OUTCOMES:

1. Students will obtain focused research and investigative abilities using laboratory, computational, or experimental techniques and testing facilities, or large empirical data sets.

Civil Engineering – Ph.D.

LEARNING OUTCOMES:

1. Students will obtain focused research and investigative abilities using laboratory, computational, or experimental techniques and testing facilities, or large empirical data sets.

Computer Science & Engineering – M.S.

LEARNING OUTCOMES:

1. Students will be able to make effective oral and written presentations of technical material related to their specific interest in computing.
2. Contribute to the advancement of knowledge in the field by solving original problems and/or performing insightful analysis of systems or techniques.

Computer Science & Engineering – Ph.D.

LEARNING OUTCOMES:

1. Student makes advancement of the state-of-the-art in the field of Computer Science and Engineering by solving an original problem.
2. Students will be able to make effective oral and written presentations of technical material related to their specific interest in computing.
3. Contribute to the advancement of knowledge in the field by solving original problems and/or performing insightful analysis of systems or techniques.

Electrical and Computer Engineering – M.S.

LEARNING OUTCOMES:

1. MS graduates in Electrical and Computer engineering will have a broad knowledge of ECE subject areas and advanced knowledge in one or two areas.
2. MS-project track (non-thesis option) graduates in Electrical and Computer engineering will be able to analyze engineering problems and apply their knowledge to solve them. MS-research track (thesis option) graduates in Electrical and Computer engineering will be able to analyze research-oriented engineering problems and apply their knowledge to solve them.
3. MS graduates in Electrical and Computer engineering will have effective professional skills including oral and written communication, leadership, independence and teamwork all performed in an ethical manner.

Electrical and Computer Engineering – Ph.D.

LEARNING OUTCOMES:

1. Ph.D. graduates in Electrical and Computer engineering will have an extensive knowledge in and a thorough understanding of one of the specialized areas of ECE and competency in a second area.
2. Ph.D. graduates in Electrical and Computer engineering will be able to identify, formulate, analyze and solve research problems, thereby advancing knowledge through creative scholarship.
3. Ph.D. graduates in Electrical and Computer engineering will have effective professional skills including oral and written communication, leadership, independence and teamwork aptitude, all performed in an ethical manner.

Engineering Education– Ph.D.

LEARNING OUTCOMES:

1. Research with attention to inclusion of multiple perspectives and demographics so that research outcomes are more universally relevant.
2. Educate with attention to inclusion of multiple perspectives and demographics so that every student has the opportunity to learn.
3. Engage critical issues in the field with attention to inclusion of multiple perspectives and demographics.

Food, Agriculture and Biological Engineering – M.S.

LEARNING OUTCOMES:

1. Communicate their findings to scientific community.
2. Conduct a project in their subject matter area.
3. Conduct a research project in their subject matter area.
4. Develop a proposal in their area of research.
5. Evaluate scientific papers in their subject matter area.
6. Participate in the peer review process and evaluate proposals in a panel setting.
7. Write scientific documents in their subject matter area.

Food, Agriculture and Biological Engineering – Ph.D.

LEARNING OUTCOMES:

1. Communicate their findings to scientific community.
2. Conduct a research project in their subject matter area.
3. Develop a proposal in their area of research.
4. Evaluate scientific papers in their subject matter area.
5. Participate in the peer review process and evaluate proposals in a panel setting.
6. Write scientific documents in their subject matter area.

Geodetic Science – Ph.D.

LEARNING OUTCOMES:

1. Geodetic Science Ph.D. graduates acquire and use a deep knowledge of the advanced tools and techniques of spatial data capture, statistical adjustment of spatial data, spatial data integration, and information presentation (as a map or other geovisualization).
2. Geodetic Science Ph.D. graduates use, develop, and advance a deep knowledge of the mathematical and physical models of Earth processes to explain the geophysics and the geodynamic phenomena that underlie observations.
3. Geodetic Science Ph.D. graduates design and conduct original research in one or more Geodetic Science disciplines and publish these results in scientific journals.
4. Geodetic Science Ph.D. graduates effectively communicate orally and in writing the concepts of Geodetic Science to professional and lay audiences.
5. Geodetic Science Ph.D. graduates are prepared for career paths in academia, government, industry, or education.

Industrial and Systems Engineering – M.S.

LEARNING OUTCOMES:

1. Can competently apply what they have learned in the program towards the solution of current Industrial & Systems engineering problems.
2. Students can effectively communicate orally and in writing.
3. Are familiar with the current state of knowledge in their chosen field of study.

Industrial and Systems Engineering – Ph.D.

LEARNING OUTCOMES:

1. Can effectively communicate and disseminate research findings orally and in writing.
2. Have demonstrated an ability to effectively conduct research that has advanced the field of industrial and systems engineering.
3. Have demonstrated their ability to review and synthesize prior research in their chosen field of study.

Landscape Architecture – M.L.A.

LEARNING OUTCOMES:

1. Agility in techniques of landscape architectural design, planning, and representation at varying scales.
2. Facility in formulating and substantiating a critical perspective encompassing historical precedent, cultural context, and contemporary themes such as urbanization, land vacancy, and food security.
3. Ethical, ecological, and aesthetic grounding as a responsible professional or academic in the discipline of landscape planning and design.
4. Adeptness with the evaluation, representation, conceptualization and manipulation of plants, soils, and water.
5. Ability to engage with diverse social and physical environments and understand practice in a larger theoretical, cultural, and historical context.
6. Motivation to pursue research and innovative practices, and contribute original content to the discipline and its related fields.

Materials Science and Engineering – M.S.

LEARNING OUTCOMES:

1. MSE students will communicate effectively in spoken form.
2. MSE Students will communicate effectively in written form.

Materials Science and Engineering – Ph.D.

LEARNING OUTCOMES:

1. The PhD program in MSE will prepare students to communicate effectively in spoken form.
2. The PhD program in MSE will prepare students to communicate effectively in written form.

Mechanical Engineering – M.S.

LEARNING OUTCOMES:

1. Graduates with the Master of Science degree will be able to demonstrate an in-depth understanding of the basic topics in mechanical engineering.
2. Graduates with the Master of Science degree will be able to demonstrate the ability to use common tools and techniques in mechanical engineering.
3. Graduates with the Master of Science degree will be able to demonstrate the ability to create and perform independent research on an original, novel topic in mechanical engineering.
4. Graduates with the Master of Science degree will attain an ability to communicate effectively with a range of audiences.
5. Graduates with the Master of Science degree will be able to demonstrate an understanding of current societal issues, particularly related to mechanical engineering.
6. Graduates with the Master of Science degree will be informed and involved members of their communities, and responsible engineering professionals.
7. Graduates with the Master of Science degree will be able to demonstrate an understanding of ethically responsible practices in mechanical engineering.
8. Graduates with the Master of Science degree will be able to demonstrate the ability to function as part of a research team.
9. Graduates with the Master of Science degree will be able to demonstrate the qualifications to be attractive candidates to pursue a doctoral degree in mechanical engineering.
10. Graduates with the Master of Science degree will be able to demonstrate the qualifications to be hired in industry or a research facility.

Mechanical Engineering – Ph.D.

LEARNING OUTCOMES:

1. Graduates with the Doctoral degree will demonstrate an in-depth understanding of the basic topics in mechanical engineering.
2. Graduates with the Doctoral degree will demonstrate an in-depth understanding of the advanced topics in mechanical engineering.
3. Graduates with the Doctoral degree will demonstrate the ability to use common tools and techniques in mechanical engineering.
4. Graduates with the Doctoral degree will demonstrate the ability to create and perform independent research on an original, novel topic in mechanical engineering.
5. Graduates with the Doctoral degree will demonstrate effective written communication skills.
6. Graduates with the Doctoral degree will demonstrate effective oral communication skills.
7. Graduates with the Doctoral degree will demonstrate an understanding of current societal issues.
8. Graduates with the Doctoral degree will demonstrate an understanding of ethically responsible practices in mechanical engineering.
9. Graduates with the Doctoral degree will demonstrate the ability to serve as a STEM ambassador though outreach activities.
10. Graduates with the Doctoral degree will demonstrate the ability to function as part of a research team.
11. Graduates with the Doctoral degree will demonstrate the qualifications to be hired in industry or a research facility.
12. Graduates with the Doctoral degree will demonstrate the qualifications to be hired in academia.

Nuclear Engineering – M.S.

LEARNING OUTCOMES:

1. Graduates with the Master of Science degree will attain an in-depth understanding of the basic topics of nuclear engineering.
2. Graduates with the Master of Science degree will attain an ability to use the techniques, skills and modern engineering tools necessary for practice as a nuclear engineering professional.
3. Graduates with the Master of Science degree will be able to demonstrate the ability to create and perform independent research on an original, novel topic in nuclear engineering.
4. Graduates with the Master of Science degree will attain an ability to communicate effectively with a range of audiences.
5. Graduates with the Master of Science degree will be able to demonstrate an understanding of current societal issues, particularly related to nuclear engineering.
6. Graduates with the Master of Science degree will be informed and involved members of their communities, and responsible engineering professionals.
7. Graduates with the Master of Science degree will attain an understanding of professional, ethical, security and social issues and responsibilities, particularly as they relate to nuclear engineering.
8. Graduates with the Master of Science degree will attain an ability to work on multi-disciplinary teams.
9. Graduates with the Master of Science degree will be able to demonstrate the qualifications to be attractive candidates to pursue a doctoral degree in nuclear engineering.
10. Graduates with the Master of Science degree will be attractive candidates for employment in industry or a research facility.

Nuclear Engineering – Ph.D.

LEARNING OUTCOMES:

1. Graduates with the Doctoral degree will demonstrate an in-depth understanding of the basic topics in nuclear engineering.
2. Graduates with the Doctoral degree will demonstrate an in-depth understanding of the advanced topics in nuclear engineering.
3. Graduates with the Doctoral degree will demonstrate the ability to use common tools and techniques in nuclear engineering.
4. Graduates with the Doctoral degree will demonstrate the ability to create and perform independent research on an original, novel topic in nuclear engineering.
5. Graduates with the Doctoral degree will demonstrate effective written communication skills.
6. Graduates with the Doctoral degree will demonstrate effective oral communication skills.
7. Graduates with the Doctoral degree will demonstrate an understanding of current societal issues.
8. Graduates with the Doctoral degree will demonstrate an understanding of ethically responsible practices in nuclear engineering.
9. Graduates with the Doctoral degree will demonstrate the ability to serve as a STEM ambassador though outreach activities.
10. Graduates with the Doctoral degree will demonstrate the ability to function as part of a research team.
11. Graduates with the Doctoral degree will demonstrate the qualifications to be hired in industry or a research facility.
12. Graduates with the Doctoral degree will demonstrate the qualifications to be hired in academia.

Welding Engineering – M.S.

LEARNING OUTCOMES:

1. WELDENG students will communicate effectively in spoken form.
2. WELDENG Students will communicate effectively in written form.

Welding Engineering – Ph.D.

LEARNING OUTCOMES:

1. The PhD program in WELDENG will prepare students to communicate effectively in spoken form.
2. The PhD program in WELDENG will prepare students to communicate effectively in written form.

College of Food, Agricultural, and Environmental Science

BY PROGRAM:

Alphabetical

Agricultural and Extension Education, Distance Learning – M.S.

LEARNING OUTCOMES:

1. 1.1: Review history, important principles, and theoretical frameworks that guide AEE.
2. 1.2: Interpret the role of AEE in addressing current and emerging societal issues.
3. 1.3: Formulates position to support selected graduate program subject for exploration/investigation that impacts education, communication and leadership.
4. 2.1: Design quality plans for programs in AEE.
5. 2.2: Examine appropriate evaluation strategies in AEE.
6. 3.1: Report and summarize disciplinary information in writing.
7. 3.2: Report and summarize disciplinary information in orally.
8. 3.3: Actively listen to questions and answer them directly.
9. 4.1: Examine characteristics of quality research in Agricultural and Extension Education.
10. 4.2: Evaluate research in Agricultural and Extension Education.

Agricultural, Environmental, and Development Economics – M.S.

LEARNING OUTCOMES:

1. To able to apply modern economic theory to analyze problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
2. To be able to apply modern econometric and computational methods to analyze problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
3. To contribute to the solution of real-world problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
4. To be able to communicate economic research findings and their policy implications effectively in visual, oral, and written form, to both lay and professional audiences.

Agricultural, Environmental, and Development Economics – Ph.D.

LEARNING OUTCOMES:

1. To able to apply modern economic theory to analyze problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
2. To be able to apply modern econometric and computational methods to analyze problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
3. To contribute to the solution of real-world problems affecting human economic welfare, particularly problems associated with agriculture, the environment, and economic development.
4. To be able to communicate economic research findings and their policy implications effectively in visual, oral, and written form, to both lay and professional audiences.

Agricultural and Extension Education – M.Ed.

LEARNING OUTCOMES:

1. Articulate a professional philosophy based on the history and foundations of the discipline at an intermediate level.
2. Identify trends, practices, and key leaders at an intermediate level through analysis and synthesis of the literature.
3. Develop quality programs based on assessed needs and appropriate planning models and conduct formative and summative evaluations at an intermediate level.
4. Model effective communication at the intermediate level through learning and delivery systems.
5. Describe, read, and interpret characteristics of quality research in the discipline at a beginning and intermediate level.

Agricultural and Extension Education – M.S.

LEARNING OUTCOMES:

1. Articulate a professional philosophy based on the history and foundations of the discipline at an intermediate level.
2. Identify trends, practices, and key leaders at an intermediate level through analysis and synthesis of the literature.
3. Develop quality programs based on assessed needs and appropriate planning models and conduct formative and summative evaluations at an intermediate level.
4. Model effective communication at the intermediate level through learning and delivery systems.
5. Describe, read, and interpret characteristics of quality research in the discipline at a beginning and intermediate level.
6. Implement high quality research in the discipline at a beginning and intermediate level through thesis and empirical efforts.

Agricultural and Extension Education – Ph.D.

LEARNING OUTCOMES:

1. Articulate a professional philosophy based on the history and foundations of the discipline at an advanced level.
2. Identify trends, practices, and key leaders at an advanced level through analysis and synthesis of the literature.
3. Develop quality programs based on assessed needs and appropriate planning models and conduct formative and summative evaluations at an advanced level.
4. Model effective communication at the advanced level through learning and delivery systems.
5. Describe, read, and interpret characteristics of quality research in the discipline at an advanced level.
6. Implement high quality research in the discipline at an advanced level through dissertation and empirical efforts.

Animal Sciences – M.A.S.

LEARNING OUTCOMES:

1. Comprehend principles of animal structure and function from cellular through organismal complexity.
2. Integrate breadth and depth of knowledge within the discipline.
3. Analyze knowledge base as to how respective area of study relates to the use of animals for scientific advancement.
4. Evaluate knowledge base as to how respective area of study relates to the use of animals for scientific advancement.
5. Analyze literature to enhance knowledge base in area of study.
6. Synthesize literature to enhance knowledge base in area of study.
7. Evaluate literature to enhance knowledge base in area of study.
8. Evaluate current knowledge base.
9. Communicate knowledge to peers and the scientific community.
10. Practice professionalism in the pursuit of scientific endeavors.
11. Identify the role of ethical values in scholarly and professional activities.
12. Practice ethical values.

Animal Sciences – M.S.

LEARNING OUTCOMES:

1. Describe information related to cell and organism structure and function.
2. Discuss information related to cell and organism structure and function.
3. Recognition of molecular/cellular technology available to assess structure and function.
4. Describe experimental hypotheses.
5. Illustrate appropriate data analyses.
6. Appraise data/findings.
7. Summarize literature to enhance knowledge base in area of study for project proposal development.
8. Interpret previous literature to effectively support research presented in the thesis.
9. Communicate knowledge orally to peers and the scientific community.
10. Communicate knowledge to peers and the scientific community in a written format in a format acceptable for journal submission.
11. Develop teaching skills through development and/or presentation of course or outreach material or service as a teaching assistant or in outreach endeavors.
12. Consider and practice ethical values while conducting scientific endeavors.
13. Consider and recognize the value of one's research to the advancement of society.

Animal Sciences – Ph.D.

LEARNING OUTCOMES:

1. Apply information related to cell and organism structure and function.
2. Synthesize information related to cell and organism structure and function.
3. Applying or understanding of molecular/cellular technology to assess structure and function.
4. Develop experimental hypotheses.
5. Conduct appropriate data analyses.
6. Interpret data/findings.
7. Critically analyze literature to enhance knowledge base in area of study for project proposal development.
8. Synthesize previous literature to effectively support research presented in the dissertation.
9. Communicate knowledge orally to peers and the scientific community.
10. Communicate knowledge to peers and the scientific community in a written format that will be assessed by a critical peer review.
11. Develop teaching skills through development and/or presentation of course or outreach material or service as a teaching assistant or in outreach endeavors.
12. Consider and Practice ethical values while conducting scientific endeavors.
13. Consider and recognize the value of one's research to the advancement of society.

Applied Economics – M.A.E.

LEARNING OUTCOMES:

1. The purpose of this master's degree program is to train, in applied economics, those seeking professional careers in business, government agencies, international agencies, research institutions and nongovernmental organizations.
2. To obtain a bread1th of knowledge in applied microeconomics, applied macroeconomics, and applied econometrics.
3. To attain the technical proficiency to analyze, manipulate, and interpret data in order to apply econometric techniques to problems that arise in various professional contexts; to attain the intellectual proficiency necessary to discuss and communicate economic ideas, issues, and analyses in various professional contexts.
4. To learn core economic concepts and methods in order to understand the incentives and behaviors of economic agents, and how these agents interact in a modern economy; to understand how policy and institutions influence individuals, organizations and markets.
5. To appreciate academic writing in economics, to comprehend professional research material in applied economics, and to gain the ability to identify areas of potential application of economic and econometric analysis.

Entomology – M.S.

LEARNING OUTCOMES:

1. Analyze data from scientific experiments.
2. Explain the similarities between insects and other organisms at the molecular and cellular levels.
3. Explain the differences between insects and other organisms at the organ and organismal levels.
4. Explain the ecological roles of insects at the population, community, ecosystem, and biosphere levels.
5. Demonstrate thorough grounding in and ability to apply an ethical framework for all professional activities.
6. Critically examine policy and management decisions based on the impact of insects on people, the planet, and profits.
7. Interpret results of scientific experiments.
8. Present research orally and in writing at a professional level, adjusted appropriately for a variety of audiences.
9. Provide informed critiques of primary scientific literature.
10. Describe, explain, and model system-level interconnections from molecular to biosphere levels.
11. Analyze threats and/or ecosystem services of a variety of specific insects.

Entomology – Ph.D.

LEARNING OUTCOMES:

1. Analyze data from scientific experiments.
2. Demonstrate thorough grounding in and ability to apply an ethical framework for all scientific activities.
3. Conduct sound scientific experiments.
4. Provide informed critiques of primary scientific literature.
5. Design viable scientific experiments.
6. Explain the differences between insects and other organisms at the organ and organismal levels.
7. Explain the ecological roles of insects at the population, community, ecosystem, and biosphere levels.
8. Synthesize the current knowledge of a range of entomologically-related and cross-disciplinary topics.
9. Critically examine policy and management decisions based on the impact of insects on people, the planet, and profits.
10. Interpret results of scientific experiments.
11. Present research orally and in writing at a professional level, adjusted appropriately for a variety of audiences.
12. Describe, explain, and model system-level interconnections from molecular to biosphere levels.
13. Analyze threats and/or ecosystem services of a variety of specific insects.
14. Explain the similarities between insects and other organisms at the molecular and cellular levels.

Environment and Natural Resources – M.E.N.R.

LEARNING OUTCOMES:

1. Develop depth of knowledge in ENR field of study.
2. Develop depth of knowledge in ENR field of study relevant to student-identified professional practice goal.
3. Develop professional skills related to ENR field of professional practice.
4. Interact with ENR professionals from diverse backgrounds.
5. Obtain experience working directly with ENR agency or organization through in-career internship, paid internship, or volunteer experience.
6. Develop fundamental understanding of the ecological foundations of ENR problems and issues.
7. Develop understanding of legal framework that defines the responsibilities of ENR agencies and organizations.
8. Develop fundamental understanding of the social science foundations of ENR issues and potential responses.

Environment and Natural Resources – M.S.

LEARNING OUTCOMES:

1. Communicate ENR area of specialization research to interdisciplinary academic audiences.
2. Demonstrate ability to analyze data to address research objectives and/or hypotheses.
3. Demonstrate ability to formulate research objectives and/or hypotheses to address a central research question.
4. Demonstrate ability to interpret research results to address research objectives and/or hypotheses within the context of prior literature.
5. Demonstrate competency in academic writing in ENR area of specialization.
6. Demonstrate knowledge of data collection methods to address research objectives and/or hypotheses.
7. Develop mastery of relevant concepts, theories, and methodologies specific to the student's area of specialization.
8. Develop original, independent research study that will make a contribution to ENR area of specialization.
9. Mentored and supported as develop scientific and professional skills.
10. Integrate, apply, and critique knowledge from research literature.
11. Interact effectively with scientific peers.
12. Present thesis and related research findings to broader academic and professional communities relevant to ENR area of specialization.
13. Understand contributions of different scientific disciplines to ENR research questions.

Environment and Natural Resources – Ph.D.

LEARNING OUTCOMES:

1. Communicate dissertation research topic and findings to interdisciplinary academic audiences.
2. Communicate knowledge of ENR Area of Specialization to interdisciplinary academic audiences.
3. Communicate mastery of content within ENR Area of Specialization to academic audiences.
4. Demonstrate ability to analyze data to address research objectives and/or hypotheses.
5. Demonstrate ability to formulate research objectives and/or hypotheses to address a central research question.
6. Demonstrate ability to interpret research results to address research objectives and/or hypotheses within the context of prior literature.
7. Demonstrate competency in academic writing in ENR area of specialization.
8. Demonstrate knowledge of data collection methods to address research objectives and/or hypotheses.
9. Demonstrate scientific literacy in ENR area of specialization in preparation for dissertation research.
10. Develop mastery of relevant concepts, theories, and methodologies specific to the student's area of specialization.
11. Develop original, independent research project that will make a contribution to ENR area of specialization.
12. Mentored and supported as develop scientific and professional skills.
13. Integrate, apply, and critique knowledge from research literature.
14. Interact effectively with scientific peers.
15. Present dissertation and related research findings to broader academic and professional communities relevant to ENR area of specialization.
16. Understand contributions of different scientific disciplines to ENR research questions.

Environmental Science – M.S.

LEARNING OUTCOMES:

1. Demonstrate an understanding of major global environmental problems and how the biological, physical, and social sciences, and environmental engineering contribute to the interdisciplinary study of these problems.
2. Demonstrate in-depth understanding of one area of expertise within environmental sciences, including the ability to, analyze, synthesize, and apply research to aid in the understanding of the complexity and interconnectedness of environmental problems and their solutions.
3. Conduct original, environmental science research that may involve modeling, laboratory, field-based experiments, and/or field research.
4. Collaborate effectively as an environmental scientist in interdisciplinary project planning and research efforts that engage multiple stakeholders.
5. Communicate environmental science theories, research and findings effectively in publications and oral presentations.

Environmental Science – Ph.D.

LEARNING OUTCOMES:

1. Demonstrate an understanding of major global environmental problems and how the biological, physical, and social sciences, and environmental engineering contribute to the interdisciplinary study of these problems.
2. Demonstrate in-depth understanding of one area of expertise within environmental sciences, including the ability to, analyze, synthesize, and apply research to aid in the understanding of the complexity and interconnectedness of environmental problems and their solutions.
3. Conduct original, environmental science research that may involve modeling, laboratory, field-based experiments, and/or field research.
4. Collaborate effectively as an environmental scientist in interdisciplinary project planning and research efforts that engage multiple stakeholders.
5. Communicate environmental science theories, research and findings effectively in publications and oral presentations.

Food Science and Technology – M.S.

LEARNING OUTCOMES:

1. Defend research findings.
2. Demonstrate knowledge of core competencies of chemistry, microbiology and process engineering enabling the multi-disciplinary study of food.
3. Exhibit effective oral presentation skills.
4. Show effective written communication skills.
5. Examine and apply information in chemistry, microbiology and process engineering.
6. Prepare an in depth review of the literature related to the research problem.
7. Solve a defined research problem.
8. Utilize information in the literature to help explain research findings.

Food Science and Technology – Ph.D.

LEARNING OUTCOMES:

1. Analyze and apply information in chemistry, microbiology and process engineering.
2. Appraise literature and prepare an in depth review related to the dissertation problem.
3. Defend research findings.
4. Demonstrate knowledge of core competencies of chemistry, microbiology and process engineering enabling the multi-disciplinary study of food.
5. Exhibit effective oral presentation skills.
6. Show effective written communication skills.
7. Identify and solve a defined research problem.
8. Interpret and apply information in the literature to help explain research findings.

Horticulture and Crop Science – M.S.

LEARNING OUTCOMES:

1. Develop original, sound scientific experiments.
2. Analyze and interpret the results of experiments.
3. Critique scientific information.
4. Integrate and apply knowledge from various sources.
5. Be engaged/employed professionally within one year of graduation.
6. Interact with scientists from diverse backgrounds.
7. Be engaged/involved with interactive learning events.
8. Demonstrate competency in proposal writing.
9. Present experimental results in oral or poster form to a diverse audience.
10. Demonstrate competency at reporting experimental results in writing.
11. Manage program details.
12. Mentor undergraduate students.
13. Prepare and complete graduate program documents in a timely manner.

Horticulture and Crop Science – Ph.D.

LEARNING OUTCOMES:

1. Develop original, sound scientific experiments.
2. Analyze and interpret the results of experiments.
3. Critique scientific information.
4. Integrate and apply knowledge from various sources.
5. Be engaged/employed professionally within one year of graduation.
6. Interact with scientists from diverse backgrounds.
7. Be engaged/involved with interactive learning events.
8. Use appropriate form of communication effectively at a professional level.
9. Present experimental results in oral or poster form to a diverse audience.
10. Demonstrate competency at reporting experimental results in writing.
11. Manage program details.
12. Mentor undergraduate students.
13. Prepare and complete graduate program documents in a timely manner.

Plant Health Management – M.P.H.M.

LEARNING OUTCOMES:

1. Compare and contrast the effects of pathogens and pests on plant health.
2. Conduct scholarly or professional plant health management activities in an ethical manner.
3. Construct an integrated plant health management project.
4. Select current primary informational resources used in plant health management associated project area.
5. Deliver/report plant health management project findings to scientific and general audiences in written and oral forms.
6. Demonstrate ability to critically evaluate findings in plant health management.
7. Demonstrate problem- solving skills in plant health management.
8. Evaluate integrated plant health management strategies.
9. Examine pathogens and pests that impact agricultural, urban, and natural ecosystems.

Plant Pathology – M.S.

LEARNING OUTCOMES:

1. Analyze plant pathology research data using appropriate measures and techniques.
2. Collect plant pathology research information in an organized and timely manner.
3. Conduct scholarly or professional plant pathology activities in an ethical manner.
4. Demonstrate ability to critically evaluate research findings in plant pathology.
5. Deliver/report plant pathology research/project findings to scientific and general audiences in written and oral forms.
6. Design plant pathology research experiments using good laboratory/field/computer.
7. Diagnose plant diseases using classical and modern techniques.
8. Evaluate integrated plant disease management strategies.
9. Examine the biology, ecology, and epidemiology of the major pathogen groups (fungi, oomycetes, bacteria, viruses, and nematodes).
10. Examine how plant pathogens will impact the future of global agriculture and society.
11. Formulate hypotheses on a central plant pathology research question.
12. Prepare and defend thesis/project of original plant pathology research.
13. Demonstrate problem-solving skills in plant pathology.
14. Research how to design agricultural research projects and analyze data using appropriate statistical measures and techniques.
15. Review significant historical events, global and social issues, principles, and practices of plant pathology.
16. Select current primary informational resources used in plant pathology associated research area.
17. Test plant pathology research hypotheses following good research practices.

Plant Pathology – Ph.D.

LEARNING OUTCOMES:

1. Demonstrate ability to critically evaluate research findings in plant pathology.
2. Demonstrate problem- solving skills in plant pathology.
3. Select current primary informational resources used in plant pathology associated research area.
4. Deliver/Report plant pathology research/project findings to scientific and general audiences in written and oral forms.
5. Prepare and defend thesis/project of original plant pathology research.
6. Formulate hypotheses on a central plant pathology research question.
7. Design plant pathology research experiments using good laboratory/field/computer practices and standard operating procedures.
8. Test plant pathology research hypotheses following good research practices.
9. Collect plant pathology research information in an organized and timely manner.
10. Analyze plant pathology research data using appropriate measures and techniques.
11. Conduct scholarly or professional plant pathology activities in an ethical manner.
12. Review significant historical events, global and social issues, principles, and practices of plant pathology.
13. Examine how plant pathogens will impact the future of global agriculture and society.
14. Research how to design agricultural research projects and analyze data using appropriate statistical measures and techniques.
15. Examine the biology, ecology, and epidemiology of the major pathogen groups (fungi, oomycetes, bacteria, viruses, and nematodes).
16. Diagnose plant diseases using classical and modern techniques.
17. Evaluate integrated plant disease management strategies.
18. Construct an integrated plant disease management program.
19. Examine the basic tenets and application of genetic and genome-based studies as they relate to plant pathology.
20. Evaluate pathogen-induced changes in plant anatomy and physiology that affect the pathogen directly or indirectly.
21. Determine how plant diseases develop temporally and spatially in populations using simple mathematical models.
22. Evaluate good teaching strategies.
23. Design high quality curriculum materials.
24. Practice delivering clear instruction in a classroom or extension setting following the highest professional and ethical standards.

Rural Sociology – M.S.

LEARNING OUTCOMES:

1. Students will develop understanding of concepts and theories in rural sociology, and learn how to pursue scholarly research in the field and apply their knowledge and technical skills to related problems.
2. Students will develop in depth knowledge in either the sociology of agriculture, environment and natural resources and/or social change and development.
3. Students will rigorously familiarize themselves with literature relevant to their thesis research topic.
4. Students will identify questions that can be realistically pursued as a master's thesis.
5. Students will design and carry out appropriate studies or experiments to address their master's thesis research questions.
6. Students will analyze the results of their master's thesis studies or experiments, and incorporate those results into a coherent master's thesis.
7. Students will develop effective skills to communicate rural sociological research orally and in writing.

Rural Sociology – Ph.D.

LEARNING OUTCOMES:

1. Students will expand their knowledge and understanding of the sociology of agriculture, environment, and natural resources and/or social change and development beyond that expected of master's students.
2. Students will demonstrate their ability to focus their knowledge and skills on significant research topics or problems, and to make a contribution to the body of theory associated with those topics or problems.
3. Specifically, students will make an original contribution to the body of knowledge in their field, formulate research questions that probe the limits of what is known, and identify major issues involved.
4. Students will develop a thorough understanding of the relevant theory bases and methodologies.
5. Students will demonstrate creativity in research design and critical rigor in analyzing and discussing findings.
6. Students will demonstrate ability to pursue independent scholarly research.
7. Students will develop effective skills to communicate rural sociological research orally and in writing.

The Graduate School

BY PROGRAM:

Alphabetical

Biophysics – Ph.D.

LEARNING OUTCOMES:

1. Ph.D. students of Biophysics will be able to conduct high-quality research as evidenced by their doctoral dissertation and publications in high-quality research journals.
2. Ph.D. students of Biophysics will be able to write grant applications for extramural funding as evidenced by obtaining doctoral fellowship awards or travel awards to attend national or international conferences.
3. Ph.D. students of Biophysics will be able to present their research to a broad audience as evidenced by scientific presentations at program seminars, campus symposia, and national or international meetings.
4. Ph.D. students of Biophysics will be equipped and marketable for employment in postdoctoral, academic, and industrial research or teaching positions.

Neuroscience – Ph.D.

LEARNING OUTCOMES:

1. Students who complete our doctoral program should be able to conduct research to answer novel questions in the field of neuroscience.
2. Students will be able to write a dissertation using scientific writing principles.

Molecular, Cellular, and Developmental Biology – Ph.D.

LEARNING OUTCOMES:

1. Students will become familiar with research enquiry and with the oral communication skills necessary to disseminate research results.
2. Students will demonstrate foundational knowledge in the molecular, cellular, and developmental biology disciplines, as well as the closely related fields of biochemistry and genetics.
3. Students will develop the ability to conduct novel, independent research that advances knowledge in the field. This includes mastering the essential literature, methods, and techniques in a self-selected area of specialization, as well as developing critical analysis skills necessary to evaluate data.

OSU Biochemistry Program – Ph.D.

LEARNING OUTCOMES:

1. Articulate scientific concepts, methods, results, and conclusions effectively to peers, practitioners, and the public, in oral and written form.
2. Evaluate scientific work critically, by a, cenalyzing, synthesizing and applying scientific knowledge.
3. Demonstrate a broad foundational knowledge of the field of biochemistry.
4. Demonstrate in-depth knowledge of areas of specialization, including the current status of the field and what remains to be learned.
5. Conduct research safely, responsibly and professionally, in accord with the ethical standards and best practices of the profession.
6. Conduct meaningful scientific inquiry leading to new knowledge in the field, including devising and testing hypotheses, mastering required methods and techniques, and interpreting research data.

OSU Nutrition Program – Ph.D.

LEARNING OUTCOMES:

1. Students will use critical thinking, evidence-based principles and current information to analyze situations, issues & problems.
2. Students will engage in the ethical conduct of research.
3. Students will communicate effectively both orally & in writing.
4. Students will apply the scientific method, including comprehension of the literature, study design, & research methods, to specific research questions.
5. Students will demonstrate comprehension of physical, biological, social & behavioral sciences and apply these scientific principles to the study of nutrition.
6. Students will demonstrate skills in assessing the nutritional status of humans & animals and in planning surveillance programs or intervention programs for optimal health.
7. Students will demonstrate comprehension of the relation between nutrition & the occurrence & management of disease.
8. Students will demonstrate in-depth knowledge of digestion, absorption, metabolism and functions of nutrient & other bioactive dietary compounds at the whole body, cellular & molecular levels.

Moritz College of Law

BY PROGRAM:

Alphabetical

Law – J.D.

LEARNING OUTCOMES:

1. At a minimum, professional judgment requires combining the above elements to solve a particular problem. But effective judgment seems to be more than the sum of these parts. In addition to knowing the rules of professional responsibility and applying them critically to a particular case, for example, a lawyer's professional judgment includes a special sensitivity to ethical issues. Expert lawyers also have the ability to recognize key elements in complex problems: One situation may require sophisticated research and case analysis, while another will respond to a simple nonlegal solution. Professional judgment also encompasses the ability to change tactics as a client's needs evolve; few legal situations are static.
2. Lawyers interact with many different people, including clients, peers, supervisors, staff members, judges, and legislators. To succeed, lawyers need skills such as motivating others; influencing others; working as a team; and relating to people who differ culturally, economically, linguistically, or in other ways. In addition, successful lawyers must demonstrate professionalism for effective and ethical participation in the legal profession.
3. Lawyers use specialized materials, including judicial opinions, statutes, regulations, contracts, disclosure statements, depositions, jury instructions, etc. Legal professionals must know how to find, interpret, and apply these materials. Similarly, lawyers participate in a large number of law-related processes, such as contract negotiations, real estate closings, divorce settlements, administrative hearings, will preparation, trials, settlement conferences, and appeals. Legal professionals know how to navigate successfully the processes relevant to their practice areas.
4. Legal work relies upon many communication methods. In fact, lawyers may employ more types of communication than any other professionals. "Communication" includes both receiving information and imparting it. Some of the many communication modes that lawyers use are: gathering information from clients; interviewing witnesses; corresponding with clients, colleagues, and others by email; advising clients by letter; writing memos; participating in meetings; drafting contracts; writing briefs; persuading juries; lobbying legislators and regulators; and making appellate arguments.
5. Lawyers think critically about problems. Most lawyers use at least four types of critical thinking: (1) deductive reasoning, (2) cost-benefit analysis, (3) thinking by analogy, and (4) viewing problems from competing perspectives. Lawyers apply these thought processes both to specific legal materials (e.g., analyzing a case) and to resolving an overall problem (e.g., advising a client on a course of action).
6. Meta-cognition means the ability to reflect on one's own thought processes, to improve those processes, and to adapt them to new situations. Law is a profession that requires constant learning and adaptation. Lawyers, therefore, must be able to recognize shortfalls in their own knowledge or training, devise ways to remedy those shortfalls, and pursue those remedies. Some cognitive scientists describe meta-cognition as the most essential intellectual ability in any professional field, because it allows a practitioner to move from competence to excellence.
7. Lawyers use specialized words and concepts. To practice effectively, a lawyer must know a core set of legal concepts, the rules governing professional responsibility, and specialized doctrine in the

lawyer's practice area. Legal "doctrine," moreover, encompasses more than the black-letter rules in a field; it includes the ambiguities and open issues within that field.

Law – L.L.M.

LEARNING OUTCOMES:

1. During their one year in the program, students will gain a comparative understanding of U.S. law, legal institutions, and American legal culture, including essential substantive and procedural elements.
2. Students shall exhibit fundamental skills in American legal research, legal analysis, and legal reasoning. They shall also develop familiarity with U.S. analytic and persuasive writing in legal settings.
3. Lawyers use specialized words and concepts. To practice effectively, a lawyer must understand core legal concepts and specialized doctrine in the lawyer's practice area. Legal "doctrine," moreover, encompasses more than the black-letter rules in a field; it includes the ambiguities and open issues within that field.
4. Meta-cognition means the ability to reflect on one's own thought processes, to improve those processes, and to adapt them to new situations. Law is a profession that requires constant learning and adaptation. Lawyers, therefore, must be able to recognize shortfalls in their own knowledge or training, devise ways to remedy those shortfalls, and pursue those remedies. Some cognitive scientists describe meta-cognition as the most essential intellectual ability in any professional field, because it allows a practitioner to move from competence to excellence.
5. Lawyers increasingly interact with many different people in the global marketplace on a variety of private and public matters. To succeed, lawyers need skills and experience interacting with people who differ culturally, economically, linguistically, or in other ways.

Master in the Study of Law – M.S.L.

LEARNING OUTCOMES:

1. Students in the Masters for the Study of Law program will gain a basic understanding of law, legal institutions, and legal culture, including essential substantive and procedural elements.
2. Lawyers use specialized words and concepts. To work effectively in a field related to law, a professional must understand core legal concepts and specialized doctrine in the legal practice area. Legal "doctrine," moreover, encompasses more than the black-letter rules in a field; it includes the ambiguities and open issues within that field.
3. Lawyers use specialized materials, including judicial opinions, statutes, regulations, contracts, etc. Professionals working in fields related to law will benefit by knowing how to find, interpret, and apply the materials relevant to their work. Similarly, lawyers participate in a large number of law-related processes. Professionals in allied fields should be familiar with the legal processes they will encounter in their areas of expertise.
4. Lawyers think critically about problems. Most lawyers use at least four types of critical thinking: (1) deductive reasoning, (2) cost-benefit analysis, (3) thinking by analogy, and (4) viewing problems from competing perspectives. Professionals in fields associated with law should recognize and be able to apply these thought processes to the problems that arise in their field.
5. Legal work relies upon many communication methods that include both receiving information and imparting it. To work effectively in a filed related to law, other professionals must communicate effectively with lawyers.

College of Medicine

BY PROGRAM:

Alphabetical

Genetic Counseling – M.S.

LEARNING OUTCOMES:

1. Graduates of the OSU GCGP will evaluate and synthesize information from research, as well as produce their own sound and scientific research related to the genetics profession.
2. Graduates of the OSU GCGP will achieve advanced knowledge in genetics, genomics, and psychosocial counseling for use in evidence based practice.
3. Graduates of the OSU GCGP will respect and empathize with their patients, peers, learners, supervisors, and other healthcare professionals.
4. Graduates of the OSU GCGP will achieve positions of leadership within their practice setting, local communities, and national organizations and will provide mentorship to developing genetic counselors.

Integrated Biomedical Science – Ph.D.

LEARNING OUTCOMES:

1. Our graduates will possess a breadth of understanding for the mechanisms underlying human disease, which coupled with intensive integrative research training, positions our graduates for success in a wide range of career opportunities.
2. Combine mentored laboratory research with a rigorous and modern curriculum.
3. Provide training in professional development and ethics using lectures, workshops, and seminars.
4. Students will receive specialized training in areas of choice related to the student's thesis work using classes and laboratory training.

Medical Science – M.S.

LEARNING OUTCOMES:

1. Provide COM residents and fellows with training in translational research ethics and responsible conduct of research.
2. Provide COM residents and fellows with training in translational research ethics and responsible conduct of research.
3. Provide COM residents and fellows with training in identifying funding opportunities and in preparation of research grant proposals to NIH and other extramural sponsors.
4. Provide COM residents and fellows with training in identifying funding opportunities and in preparation of research grant proposals to NIH and other extramural sponsors.
5. Provide College of Medicine (COM) residents and fellows with training in translational research design.
6. Provide College of Medicine (COM) residents and fellows with training in translational research design.
7. Provide COM residents and fellows with training in scientific communication, both oral and written.
8. Provide COM residents and fellows with training in scientific communication, both oral and written.
9. Provide COM residents and fellows with training in biostatistics.
10. Provide COM residents and fellows with training in biostatistics.

Medicine – M.D.

LEARNING OUTCOMES:

1. The student will exemplify the ethics, values and behaviors of the medical profession through consistently demonstrating compassion, respect, honesty, integrity, accountability, altruism, prudence, social justice and commitment to excellence in all professional and personal responsibilities.
2. The student will approach the care of patients as a cooperative endeavor, integrating patients' concerns and ensuring their health needs are addressed.
3. The student will comprehensively evaluation patients by obtaining accurate and pertinent medical histories; conducting appropriate and thorough physical examinations; gathering detailed ancillary information; synthesizing all relevant data to generate prioritized differential diagnoses and formulating plans.
4. The student will use best available information to develop patient care plans that reflect cost-effective utilization of diagnostic tools and therapeutic interventions appropriate for each patient/population and delivered in a compassionate, safe and error-limited environment.
5. The student will understand the role of disease prevention and health promotion in relation to individual patients and/or patient populations and utilize these principles in clinical encounters.
6. The student will demonstrate broad knowledge of fundamental science, principles, and processes basic to medicine and apply this in a judicious and consistent manner to prevent common health problems and achieve effective and safe patient care.
7. The student will understand the clinical relevance of scientific inquiry and demonstrate the ability to evaluate emerging knowledge and research.
8. The student will utilize state of the art information technology and tools to retrieve, manage and use biomedical information in the care of individuals and populations.
9. The student will describe the indications, contraindications, and potential complications of common clinical procedures and perform the basic clinical procedures expected of a new PGY-1.
10. The student will evaluate the performance of individuals and systems to identify opportunities for improvement.
11. The student will seek out and apply best practices, measure the effect of changes and develop strategies to improve performance.
12. The student will demonstrate an understanding of the role of the student and physician in the improvement of the healthcare delivery system.
13. The student will identify one's own strengths, weaknesses and limits; seek and respond appropriately to performance feedback; maintain an appropriate balance of personal and professional commitments; and seek help and advice when needed.
14. The student will demonstrate leadership and collaborate effectively with other healthcare team members and professional associates.
15. The student will understand how human diversity may influence or interfere with exchange of information.

16. The student will use effective listening, observational, and communication techniques in all professional interactions.
17. The student will produce timely documentation and communication that is clear, concise, and organized, in a way that optimizes patient care and minimizes medical errors.
18. The student will use information technology appropriately to manage medical information and patient care decisions, promote education, and communicate in the interests of patients.
19. The student will effectively prepare and deliver educational materials to individuals and groups.
20. The student will understand the institutions and individuals that participate in healthcare delivery and the role of the physician in the health care system.
21. The student will appropriately use system resources and assist patients in accessing health care that is safe, effective, patient-centered, timely, efficient and equitable.
22. The student will understand the interdependence of the component parts of the healthcare system and the potential for unintended consequences within the system.
23. The student will identify and utilize professional role models as a means of growth and accept the responsibility of acting as a role model and teaching and training others.

Pathology – M.S.

LEARNING OUTCOMES:

1. Students will acquire an understanding of fundamental mechanisms of pathogenesis and complete a mentored research project which addresses a timely, relevant problem in mechanisms of disease, culminating in a Master's thesis.

Pharmacology – M.S.

LEARNING OUTCOMES:

1. Explain the relationship between pathophysiologic processes and pharmacologic interventions for common disease states.
2. Describe basic characteristics (indication, mechanism of action, drug-drug interactions, genetic influence, and expected adverse effects) of commonly used medications and major classes of medications.
3. List and define basic pharmacokinetic parameters (e.g., volume of distribution, elimination rate constant, clearance, loading and maintenance dose, and half life), and calculate these parameters in a problem-solving context.
4. Predict drug metabolism based on pharmacogenetics, and calculate the distribution of alleles for rapid and slow metabolism in a population based on the Hardy-Weinberg equation.
5. Apply pharmacokinetic principles to the design of clinical drug trials incorporating disease- and population-specific considerations.
6. Describe the Belmont Report, the Declaration of Helsinki, and basic requirements for the protection of human subjects; assess the challenges and ethical considerations in conducting research with vulnerable populations and demonstrate a thorough understanding of human subject regulations.
7. Describe the principles of Good Clinical Practice and the different phases of drug development.
8. Apply basic requirements of the Code of Federal Regulations to the conduct of clinical trials, including the requirements of Institutional Review Boards and the responsibilities of investigators and pharmaceutical sponsors of clinical trials.
9. Describe the typical design of a first-time-in-humans clinical trial, including dose selection, pharmacokinetic samplings, safety tests, and eligibility criteria for the subject population, and design a protocol for a first-time-in-humans study.
10. Describe common types of first-time-in-humans clinical trials, including escalating multiple-dose studies, fed/fast studies, and bioavailability/bioequivalence studies.
11. Design a protocol for a phase 1 (first-in-human) drug trial by synthesizing the preclinical drug study outcomes and considerations for expected toxicity provided in an Investigator's Brochure.
12. Create the key operational documents required to manage and coordinate clinical trials, including the study budget, study implementation timeline, study initiation plan, subject consent forms, subject recruitment forms (scripts and advertisements), case report forms, and study closure procedures.
13. Evaluate decisions at critical points in the clinical drug development process to ensure patient safety, regulatory compliance, and product success in the post-marketing environment.
14. Apply statistical methods to the design of clinical trials, evaluation of study outcomes, and the interpretation of results for dissemination.

College of Medicine

SCHOOL OF HEALTH AND REHABILITATION SCIENCES:

By Program, Alphabetical

Allied Medicine – M.S.

LEARNING OUTCOMES:

1. Demonstrate knowledge and mastery of educational and/or management principles related to healthcare.
2. Use critical thinking, evidence-based principles and current information to analyze and evaluate issues and policies in healthcare.
3. Integrate learning from cognate coursework into working knowledge through critical evaluation of the literature, scholarship and advanced coursework.
4. Demonstrate personal initiative in education and career planning.
5. Exhibit effective professional behavior including leadership, written and oral communications, time management and teamwork in an ethical manner and in a variety of diverse environments including academic, clinical, translational and research settings.
6. Analyze, synthesize and conduct research by completing a research thesis (Plan A) or advanced, complex project (Plan B).

Anatomy – M.S.

LEARNING OUTCOMES:

1. No Outcomes Reported.

Anatomy – Ph.D.

LEARNING OUTCOMES:

1. No Outcomes Reported.

Health and Rehabilitation Science – Ph.D.

LEARNING OUTCOMES:

1. Students will design and conduct original, independent research of sufficient quality for publication.
2. Students will analyze and synthesize published data in an in-depth manner within a focused area of health sciences and broadly across all fields of health and rehabilitation sciences.
3. Students will analyze and apply effective teaching methods in health sciences.
4. Students will communicate research findings in clear, concise oral and written presentations in classroom, seminars and scientific/professional meetings.
5. Students will develop a personalized education plan as part of a career path to a research-focused position in academia or clinical settings.
6. The Health and Rehabilitation Sciences PhD Program is an interdisciplinary program of health sciences professionals holding a professional graduate degree (i.e. MOT, DPT) or Master of Science degree. Graduates are prepared to enter academic positions and engage in discovery and dissemination of advanced knowledge in the various health disciplines. All students are trained in scientific presentations, manuscript writing, grant development and experimental training. Student assessment and progress is measured by defined milestones for students in the first year, the second year, the pre-candidacy phase and the pre-defense phase.

Occupational Therapy – M.O.

LEARNING OUTCOMES:

1. Student demonstrates excellence in clinical practice through the provision of science-driven, outcomes-oriented and evidence-based evaluation, intervention, and discharge planning.
2. Student demonstrates excellence in clinical practice through the provision of compassionate, empathetic and client-centered occupational therapy practitioners aimed at promoting the dignity and independence of their clients.
3. Student is able to critically analyze literature related to assignment/capstone project.
4. Student demonstrates effective translation of knowledge to practice through the selection of appropriate measures to assess outcomes, the critical analysis, integration, and synthesis of research evidence with clinical expertise, and the communication of research evidence to clients, facilities, and populations.
5. Demonstrates professional leadership in practice through advocacy, service, articulation of OT distinct value, effective inter-professional communication and collaboration, and assertive communication with individuals, groups, communities and populations.
6. Demonstrates professional behaviors, adherence to professional ethics and standards, commitment to professional development, and engagement in activities that support lifelong learning.

Physical Therapy – D.P.T.

LEARNING OUTCOMES:

1. To communicate in a clear and effective manner with people from various socio-cultural backgrounds, both verbally and in writing.
2. Demonstrate critical thinking, professional decision making, and/or psychomotor skills necessary for safe and competent practice in physical therapy.
3. Integrate evidence-based practice and scholarship in making and prioritizing professional decisions in physical therapy.
4. The student/graduate will develop the ability to serve and advocate for the benefit of the public and profession.

College of Nursing

BY PROGRAM:

Alphabetical

Nursing – M.S.

LEARNING OUTCOMES:

1. Masters students will demonstrate satisfactory performance on the clinical practice performance question of the masters comprehensive exam.
2. Masters students will demonstrate satisfactory performance on the evidence based practice question of the masters comprehensive exam.
3. Masters students will demonstrate satisfactory performance on the role of advanced practice nursing as a profession and a discipline question of the comprehensive exam.

Nursing – Ph.D.

LEARNING OUTCOMES:

1. Synthesizes knowledge from nursing and other disciplines to develop and test theory related to health.
2. Conducts research that builds nursing science.
3. Communicates the results of theory development and research.
4. Provides leadership in the area of health promotion, disease prevention and the advancement of clinical science through the development and application of new knowledge.

Nursing Practice – D.P.N.

LEARNING OUTCOMES:

1. Apply EBP competencies when generating policy, leadership, and practice changes.
2. Use conceptual and analytical skills in evaluating the links among practice, ethics, systems and policy issues.
3. Develop new approaches to advanced nursing practice and health care delivery based on scientific knowledge and theories of nursing and other disciplines.
4. Provides leadership in the area of health promotion, disease prevention and practice through application of translational science.

College of Optometry

BY PROGRAM:

Alphabetical

Optometry – O.D.

LEARNING OUTCOMES:

1. The goal of the Applied Specialties Track is to develop the physical and mental skills necessary to provide vision care related to specific treatment modalities, ocular conditions, or patient populations. These specific entities include contact lenses, vision therapy, aniseikonia, low vision, pediatrics, gerontology, and environmental vision.
2. The goal of the Biological Preparation Track is to give general overviews of body systems in order to provide a basis for detecting health risk, for recognizing anatomical features, for understanding system functions with special attention to the visual system, and for the study of more focused subject areas.
3. The goal of the Disease Track is to provide the student with the knowledge and skills necessary to detect, diagnose, and manage disease of the eye and visual system and of systemic diseases manifesting in the visual system.
4. The goal of the General Optometry Track is to develop the physical and mental skills necessary for primary vision care and to provide a patient setting in which the student can practice, demonstrate, and develop these skills.
5. The goal of the Optics Track is to provide the knowledge and skills necessary to design optical systems, provide corrective optical appliances or treatments to the eye and visual system, and to appreciate the eye as an optical system.
6. The goal of the Professional Orientation Track is to provide students with a sound knowledge of optometry as a profession, to instill ethical and legal guidelines for the practice of optometry, to relate optometry to the broader perspective of public health, and to prepare students for the business aspects of optometric practice.
7. The goal of the Vision Science Track is to provide the physical, physiological, and psychological bases for understanding the normal functions of the eye and visual system, understanding the rationale of methods used to detect abnormalities, understanding the design of diagnostic tests, and understanding the rationale for various treatment options.

Vision Science – M.S.

LEARNING OUTCOMES:

1. Graduates should be able to understand and solve issues that arise during scientific experimentation.
2. Graduates should be able to design a study that appropriately answers the research question and understand the analysis of data that are collected.
3. Graduates should be able to critically evaluate the literature, scientific proposals, and presentations.

Vision Science – Ph.D.

LEARNING OUTCOMES:

1. Graduates should be able to understand and solve issues that arise during scientific experimentation.
2. Graduates should be able to design a study that appropriately answers the research question and understand the analysis of data that are collected.
3. Graduates should be able to critically evaluate the literature, scientific proposals, and presentations.

College of Pharmacy

BY PROGRAM:

Alphabetical

Pharmaceutical Sciences – M.S.

LEARNING OUTCOMES:

1. Identify research questions to address a problem as evidenced by completion of PhD candidacy or Master's exam.
2. Identify/ interpret/ critique literature/ assess state of knowledge regarding problem as evidenced by participation in Division Seminar or Journal Club.
3. Design and write experimental protocol, including study Methods/Design/ Implementation as evidenced by completion of PhD candidacy or Master's exam. or lab notebook or the design of an original research project.
4. Conduct and complete research project contributing new information to the field as evidenced by papers or publications, or presentations at meetings, or dissertation and thesis, or patents and intellectual property.
5. Communicate research results, both verbally and through writing as evidenced by papers, posters, or presentations.
6. Conduct Ethically Responsible Research as evidenced by successful completion of a Research and Ethics Course and application of ethical research practices.
7. Demonstrate preparation for careers in academia, industry, government agencies, or other related fields as evidenced by creation of an Individual Development Plan or completion of a residency, teaching workshop, or internship, or job placement.

Pharmaceutical Sciences – Ph.D.

LEARNING OUTCOMES:

1. Identify research questions to address a problem.
2. Identify/ interpret/ critique literature/ assess state of knowledge regarding problem.
3. Design and write experimental protocol, including study Methods/Design/ Implementation.
4. Conduct and complete research project contributing new information to the field.
5. Communicate research results, both verbally and through writing.
6. Conduct Ethically Responsible Research.
7. Demonstrate preparation for careers in academia, industry, government agencies, or other related fields.

Pharmacy – Pharm.D.

LEARNING OUTCOMES:

1. Graduates provide population-based and patient-specific pharmaceutical care, thereby helping patients achieve optimal clinical and patient-centered outcomes.
2. Graduates effectively manage and use resources of the health care system to promote health and improve pharmaceutical care outcomes.
3. Graduates promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an inter-professional team of health care providers.

John Glenn College of Public Affairs

BY PROGRAM:

Alphabetical

THE OFFICE OF ACADEMIC AFFAIRS

Public Policy and Management – M.A.

LEARNING OUTCOMES:

1. Apply the context of the public policy process to problem solving.
2. Identify the basic elements of the policy public process.
3. Understand the legal foundations of policy and management in the public sector.
4. Impact the policy process to advance the public interest.
5. Draw connections between public problems, goals, public programs, outputs, and outcomes.
6. Apply knowledge of the historical foundations of public affairs (policy, administration, and management) in appropriate contexts.
7. Evaluate connections between public problems, goals, public programs, outputs, and outcomes.
8. Understand legal reasoning.
9. Understand how the law can be used to achieve public goals.
10. Evaluate the quality and validity of economic information.
11. Apply and communicate private and public sector methods of addressing violations of the neoclassical model.
12. Analyze and evaluate alternative methods of revenue generation and allocation.
13. Know and apply basic budgeting tools.
14. Manage and lead public organizations towards policy goals.
15. Understand public organizations as a unit of analysis.
16. Identify and manage external/ environmental challenges to organizational performance.
17. Identify what constitutes feasible performance outputs for public organizations.
18. Engage in strategic planning for public organizations.
19. Identify and manage internal challenges to organization performance.
20. Lead and motivate workers in public organizations.
21. Manage innovation and change.
22. Assess data quality and create surveys and sampling methods to address problems.
23. Manage storage and retrieval of data.
24. Understand the role of information technology in managing and leading an organization.
25. Seek and identify patterns in data.
26. Understand the logic of a statistical argument and be able to produce them for varied audiences and in multiple ways.
27. Support claims with statistically sound quantitative and/or qualitative evidence.

Public Policy and Management – M.P.A.

LEARNING OUTCOMES:

1. Apply the context of the public policy process to problem solving.
2. Identify the basic elements of the policy public process.
3. Understand the legal foundations of policy and management in the public sector.
4. Impact the policy process to advance the public interest.
5. Draw connections between public problems, goals, public programs, outputs, and outcomes.
6. Apply knowledge of the historical foundations of public affairs (policy, administration, and management) in appropriate contexts.
7. Evaluate connections between public problems, goals, public programs, outputs, and outcomes.
8. Understand legal reasoning.
9. Understand how the law can be used to achieve public goals.
10. Evaluate the quality and validity of economic information.
11. Apply and communicate private and public sector methods of addressing violations of the neoclassical model.
12. Analyze and evaluate alternative methods of revenue generation and allocation.
13. Know and apply basic budgeting tools.
14. Manage and lead public organizations towards policy goals.
15. Understand public organizations as a unit of analysis.
16. Identify and manage external/ environmental challenges to organizational performance.
17. Identify what constitutes feasible performance outputs for public organizations.
18. Engage in strategic planning for public organizations.
19. Identify and manage internal challenges to organization performance.
20. Lead and motivate workers in public organizations.
21. Manage innovation and change.
22. Assess data quality and create surveys and sampling methods to address problems.
23. Manage storage and retrieval of data.
24. Understand the role of information technology in managing and leading an organization.
25. Seek and identify patterns in data.
26. Understand the logic of a statistical argument and be able to produce them for varied audiences and in multiple ways.
27. Support claims with statistically sound quantitative and/or qualitative evidence.

Public Policy and Management – Ph.D.

LEARNING OUTCOMES:

1. Upon successful completion of the program, students will have mastered general knowledge of the public policy formulation, implementation and evaluation processes.
2. Upon successful completion of the program, students will have attained competency in the use of advanced quantitative tools required for investigating public policy and management problems.
3. Upon successful completion of the program, students will be able to apply public sector economic theory to policy analysis and management problems.
4. Upon successful completion of the program, students will be able to apply the concepts, methods, and techniques of organization theory and administrative processes to the public sector environment.
5. Upon successful completion of the program, students will have demonstrated mastery of, and make an original contribution to, an advanced specialization field emphasizing multidisciplinary contributions to addressing public sector problems.

College of Public Health

BY PROGRAM:

Alphabetical

THE OFFICE OF ACADEMIC AFFAIRS

Health Services Management & Policy – M.H.A.

LEARNING OUTCOMES:

1. Explain financial and accounting information, prepare and manage budgets, and evaluate investment decisions.
2. Use statistical and financial methods and metrics to set goals and measure organizational performance.
3. Develop a schedule, budget and goals for a project and to manage project resources to meet goals.
4. Recognize opportunities to improve health services organizations through application of organizational theories and organization development principles.
5. Apply organizational behavior theories to health services organizations.
6. Explain how organizational and environmental factors influence the structural design of health care organizations, including the distribution of authority and relationships among organizational subunits.
7. Use systems-thinking and analytic methods to assess operations performance and improve organization processes.
8. Explain how principles and practices of human resource management are used to develop a diverse and high performing work force.
9. Discuss the value, opportunity, and risks of information technology in health service organizations and the broader health system.
10. Utilize market techniques to position the organization favorably within its environment.
11. Work cooperatively with others, to be part of a team, and to work together, as opposed to working separately or competitively.
12. Formulate strategic goals and objectives with appropriate consideration of the business, cultural, political and regulatory environment and to develop programs and business plans in response to these goals.
13. Apply principles of quality improvement in the context of clinical performance.
14. Apply basic principles of ethical analysis to issues relevant to the profession and to the communities and settings in which they work.
15. Communicate (speak and write) in a clear, logical, and grammatical manner, prepare cogent business presentations, and facilitate a group.
16. Use information on health status and its determinants to manage health risks and behaviors in defined, diverse populations.
17. Describe the public policy process related to health care, including the creation and implementation of policy and the political aspects of policy.
18. Recognize legal issues that may arise in health care delivery and business settings and respond appropriately.
19. Explain the role and function of governing boards and methods for establishing effective board relationships with executive management.
20. Communicate clearly and persuasively one's own position to various audiences, in part by understanding their needs and interests and identifying points of consensus and conflict.
21. Explain how leaders communicate a transformational vision and effectively lead and sustain change.
22. Discuss individual and professional goals and values, avenues for ongoing education, and the value of cultivating professional networks.

23. Identify the roles of clinical professionals and how diverse health care professionals collaborate to deliver patient care and meet organizational goals.
24. Interpret and apply statistical methods for organization decision making.
25. Apply relevant economic principles to analyze the structure, management, and performance of organizations and the health system.
26. Use multiple methods and sources to seek comprehensive information for decision support.

Public Health – M.P.H.

LEARNING OUTCOMES:

1. Apply foundational principles of environmental health science to categorize sources and types of contaminants, matrices involved, pathways for and modes of exposure, associated health effects and societal issues, approaches to control, and major regulations.
2. Apply epidemiologic principles to investigate the distribution of risk factors and disease in the population to improve public health.
3. Apply evidence-based concepts of health behavior and health promotion to the design of public health messages and strategies.
4. Develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served.
5. Apply basic principles of ethical analysis to issues of public health practice and policy.
6. Apply appropriate descriptive and inferential statistical techniques to public health data and interpret results of statistical analyses in the context of public health research and evaluation.
7. Discuss the major components of the U.S. health care system and be able to apply their understanding to examine health policy and health program issues.
8. Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities.
9. Collaborate with multidisciplinary groups to recognize and evaluate public health issues and develop strategies for intervention.
10. Apply the core functions of assessment, policy development, and assurance in the analysis of public health problems and their solutions.

Public Health – M.S.

LEARNING OUTCOMES:

1. Read the scientific literature in the student's field and critique the methods and results.
2. Conduct literature reviews to evaluate the state of the science regarding specific topics.
3. Identify an unanswered research question, formulate a hypothesis, and design a research study.
4. Write a research proposal.
5. Conduct a research study.
6. Evaluate research data and prepare a report summarizing the data, interpreting the statistical results, and presenting the findings, limitations and conclusions.
7. Present and explain the study's purpose, methods, results and conclusions to an informed audience.

Public Health – Ph.D.

LEARNING OUTCOMES:

1. Conduct thorough literature reviews to summarize and evaluate the state of the science regarding new topics in the student's general area or specialization.
2. Identify gaps in that literature and formulate research questions designed to address those gaps.
3. Formulate hypotheses and design a research study using the appropriate research methods and approaches.
4. Prepare a research proposal to address the research question, with attention to study design; subject selection; measurement of variables; methods for sample size determination, data collection, data management/analysis; and interpret results.
5. Apply relevant theories and conceptual models to inform and ground research and data analysis.
6. Conduct a research study.
7. Analyze research data and prepare a publishable manuscript summarizing the results and interpreting the findings.
8. Communicate orally and in writing a research study's purpose, methods, results and conclusions to an informed audience.

College of Social Work

BY PROGRAM:

Alphabetical

Social Work – M.S.W.

LEARNING OUTCOMES:

1. Demonstrate Ethical and Professional Behavior.
2. Assess individuals, families, groups, organizations, and communities.
3. Intervene with individuals, families, groups, organizations, and communities.
4. Evaluate with individuals, families, groups, organizations, and communities.
5. Engage Diversity and Difference in Practice.
6. Advance Human Rights and Social, Economic, and Environmental Justice.
7. Engage In Practice-informed Research and Research-informed Practice.
8. Engage in Policy Practice.
9. Engage with Individuals, Families, Groups, Organizations, and Communities.
10. Assess Individuals, Families, Groups, Organizations, and Communities.
11. Intervene with Individuals, Families, Groups, Organizations, and Communities.
12. Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities.
13. Students would recommend the MSW program to others wishing to obtain a social work degree.
14. Engagement, assessment, intervention, and evaluation.

Social Work – Ph.D.

LEARNING OUTCOMES:

1. Proficiency in using theory to guide research questions and/or hypothesis specification.
2. Ability to articulate major problem of interest that logically guide the development of research questions based on relevant literature and theory.
3. 80% of doctoral student will score at least 4 out of a 1-5 scale on Ability to explicitly and clearly discuss the implications of findings to social work practice, research, policy, or education.
4. Ability to address the role of race, culture & other types of diversity in shaping research questions and methods.
5. Skills to conduct literature review.
6. Ability to independently teaching at least one course at the BSSW or MSW levels.
7. Ability to publish articles in peer-reviewed journals.
8. Ability to demonstrate a strong sense of research ethics.
9. Ability to match research questions with appropriate research methods and design (e.g., research strategy, sample design, measurements, data analyses, etc.)

College of Veterinary Medicine

BY PROGRAM:

Alphabetical

Comparative & Veterinary Medicine – M.S.

LEARNING OUTCOMES:

1. The graduates of the Comparative and Veterinary Medicine Graduate Program will: have the ability to design and conduct original research focusing on animal and human health, and effectively analyze research data.
2. Develop critical problem solving skills.
3. Be adept in critical review of scientific literature.
4. Embrace integrity, responsibility and the highest ethical values.
5. Exhibit professionalism and leadership, and have the ability to engage in cross-disciplinary collaborative research.
6. Be able to effectively communicate research findings and their significance (in oral and written format) to both scientific and lay audiences.

Comparative & Veterinary Medicine – Ph.D.

LEARNING OUTCOMES:

1. The graduates of the Comparative and Veterinary Medicine Graduate Program will: have the ability to design and conduct original research focusing on animal and human health, and effectively analyze research data.
2. Develop critical problem solving skills.
3. Be adept in critical review of scientific literature.
4. Be able to effectively communicate research findings and their significance (in oral and written format) to both scientific and lay audiences.
5. Embrace integrity, responsibility and the highest ethical values.
6. Exhibit professionalism and leadership, and have the ability to engage in cross-disciplinary collaborative research.

Veterinary Medicine – D.V.M.

LEARNING OUTCOMES:

1. Have a broad working knowledge of the scientific concepts, principles, and processes relevant to the current practice of veterinary medicine.
2. Understand the role of scientific inquiry (i.e., research) in the advancement of medical knowledge.
3. Can obtain, evaluate and apply new knowledge in the diagnosis, treatment and prevention of disease.
4. Effectively apply basic medical skills in the diagnosis and treatment of patients.
5. Effectively apply basic surgical skills in the treatment of patients.
6. Administer analgesics and anesthesia with appropriate concern for patient welfare.
7. Provide basic emergency treatment and critical care.
8. Provide timely documentation in medical records that is clear, concise, and organized to optimize patient care and minimize errors.
9. Demonstrate good oral and written communication skills with clients, colleagues, team members, and the general public.
10. Interact compassionately with patients and clients.
11. Demonstrate sensitivity to and respect for the emotional attachment of clients to their animals and their financial concerns.
12. Collaborate effectively with colleagues and technical staff to facilitate patient care; give and receive performance feedback in a constructive manner.
13. Recognize and uphold the veterinarian's professional, legal and ethical obligations to animals, animal owners, professional colleagues and society.
14. Understand the importance of sound business and financial management principles to the practice of veterinary medicine.
15. Are self-motivated learners and critical thinkers.
16. Utilize effective strategies for self-improvement and recognize the need for life-long learning to maintain and improve clinical competence.
17. Utilize information technology to retrieve, manage, and apply biomedical information for the diagnosis and management of individual patients and populations.
18. Recognize their strengths, weaknesses, and limitations; seek help and advice when needed, including case referral where appropriate.
19. Demonstrate the ability to apply basic disease prevention and health promotion practices to individual patients and populations.
20. Recognize important zoonotic and foreign animal diseases and be able to articulate appropriate diagnostic, prevention, and control strategies.
21. Contribute to improved public health by promoting food safety, food security, and biosecurity practices that reduce the spread of infectious diseases in human and animal populations.