

# Course Descriptions

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**ART 510. Drawing. 1-4 Hour.**

Experimentation and elaboration of drawing skills and techniques, both innovative and traditional. Emphasis on individual exploration. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 511. Painting. 1-4 Hour.**

Individual research and experimentation in painting. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 512. Ceramics. 1-4 Hour.**

Individual instruction and experimentation in ceramics. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 513. Sculpture. 1-4 Hour.**

Extensive work and study in three dimensional form, media, and methods. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 514. Graphic Design. 1-4 Hour.**

Extensive work and study in Graphic Design media and methods. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 515. Metalsmithing: Jewelry and Small Sculpture. 1-4 Hour.**

Exploration of historical, traditional, and innovative jewelry and small sculpture techniques using non-ferrous metals, gems, and other materials. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 516. Crafts. 1-4 Hour.**

Extensive work and study in craft media and methods. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 517. Photography. 1-4 Hour.**

Individual research and experimentation in photography. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 518. Printmaking. 1-4 Hour.**

Individual research and experimentation in printmaking. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 519. Computer Graphics. 1-4 Hour.**

Individual research and experimentation in computer graphics. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 520. Mixed Media. 1-4 Hour.**

Individual research and experimentation in mixed media. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 521. Multi-Media. 1-4 Hour.**

Individual research and experimentation in multi-media. Repeatable to 10 credits. Prerequisite: Permission of instructor.

**ART 525. Research In Art Education. 1-4 Hour.**

Readings in the research, theory, and practice of teaching art. Focused study and practice in the implementation of research findings. Repeatable to 10 credits.

**ART 540. Art History: Contemporary Trends & Theory. 2 Hours.**

Presentation of contemporary trends in the visual arts from the 1960s forward and discussion of contemporary theory and criticism.

**ART 550. Issues In Art: Graduate Seminar. 1 Hour.**

Independent exploration of the theoretical basis for integrated concepts and methods of critical analysis in the visual arts. The course is intended to help students become aware of the major critical perspectives of the discipline and practical issues related to careers in the fine arts. Students in this course will complete. methodological, critical, and professional projects. Repeatable to 10 credits.

**ART 570. Workshop. 1-4 Hour.**

Special emphasis and encouragement in the use of new materials. Primary course objectives are to be accomplished by bypassing traditional techniques and establishing new approaches to problem solving. Repeatable to 8 credits. Prerequisite: Permission of instructor.

**ART 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled.

**ART 590. Individual Research. 1-3 Hour.**

Research and creative experiences within a specific area of interest in the Visual Arts and emphasis on the refinements of aesthetic applications of techniques and media. Repeatable to 22 credits. Prerequisite: Permission of instructor.

**ART 598. Professional Exhibition. 2 Hours.**

Artist statement preparation, design, installation, and catalog of solo show or special research in art education. Repeatable to 4 credits. Prerequisite: Permission of student's Graduate Committee.

**ART 599. Thesis. 1 Hour.**

Provides for individual research culminating in a thesis. Repeatable to 2 credits. Prerequisite: Permission of student's Graduate Committee.

**BADM 525. Strategic Marketing. 3 Hours.**

Investigates marketing from a managerial perspective, including the critical analysis of functions of marketing, opportunity assessment, marketing planning and programming, marketing leadership and organization, and implementing, evaluating, controlling, and adjusting the marketing effort. Focuses on the creative process involved in applying the knowledge and concepts of marketing to the development of marketing strategy. Integrates marketing decisions, ethics, strategies, and plans with other functional business areas.

**BADM 535. Management Principles and Practices. 3 Hours.**

Introduces principles and practices of managing corporate and organizational resources. Describes how managers plan, organize, lead, motivate, and control human and other resources. Introduces classical, behavioral, ethical, and quantitative approaches to management. Explores management challenges and problems as presented by individuals and groups.

**BADM 537. Human Resource Management. 3 Hours.**

Studies the contribution of the human resource management function to the strategic effectiveness of an organization, including job analysis, employment law, staffing, retention, human resource development, performance management, compensation, and negotiations. Prerequisite: BADM 535.

**BADM 550. Statistical and Quantitative Applications/A Managerial Approach. 3 Hours.**

Introduces the applications of statistical and quantitative techniques to business decision-making; covers the development of skills in interpreting techniques using analysis of variance, decision analysis, linear and multiple regression analysis and various quantitative techniques. Additionally, emphasizes modeling and forecasting issues and methodology. Explores software applications for research using industry standard statistical software packages.

**BADM 555. International Management. 3 Hours.**

Provides an intensive study of managerial concepts and methods pertaining to international business with a focus on the special demands made on managers of international operations, due to differences in management styles and systems. Exposes students to cultural, behavioral, ethical, and strategic imperatives in a global business environment. Prerequisite: BADM 535.

**BADM 565. Strategic Management. 3 Hours.**

Challenges the student to conceptualize, analyze, and plan the application and administration of strategies both from the executive level and from the organizational entrepreneurial level. Integrates the teachings of a variety of fields and depends heavily on case analysis. Prerequisite: BADM 535. Corequisite: FIN 545.

**BADM 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students who have previously enrolled in BADM 598 or BADM 599 but have not completed the requirements for the course by the end of semester. Fee required.

**BADM 592. Special Topics. 1-3 Hour.**

Presents study of selected areas in management.

**BADM 595. Capstone Course. 3 Hours.**

Individual or group research culminating in a formal paper and presentation. Example of research includes, a business plan, a case study, or an applied research project. The research must be conducted for a third-party client. Take the last semester. Prerequisites: BADM 525, BADM 535, FIN 545.

**BADM 596. Management Internship. 1-3 Hour.**

Supervised professional experience in management. Standards set by employer and faculty advisor must be met. Internship is in optional and additional to the 30 credits required for the master's degree.

**BADM 598. Project. 1-3 Hour.**

An extended individual research project culminating in a formal paper.

**BADM 599. Thesis. 1-3 Hour.**

Provides for individual research culminating in a thesis.

**BIOL 520. Advanced Developmental Biology. 3 Hours.**

Advanced study of morphogenesis including genetic mechanisms and four-dimensional visualization.

**BIOL 530. Advanced Anatomy & Physiology. 3 Hours.**

Recent advances in the study of anatomy and physiology.

**BIOL 550. Ecology Of The Great Plains. 3 Hours.**

Ecology of the Northern Great Plains, especially focusing on grasslands. Course involves collection, identification and classification of flora and fauna of North Dakota and adjoining US states and Canadian Provinces.

**BIOL 570. Frontiers In Biology. 3 Hours.**

Recent advances in biotechnology, genetic engineering, environmental issues, and the like.

**BIOL 579. Research. 2-4 Hour.**

**BIOL 590. Seminar. 1-3 Hour.**

Seminars on topics as approved by the division chair.

**BIOL 592. Special Topics. 1-3 Hour.**

Special Topics in Biology.

**BIOL 597. Independent Study. 1-3 Hour.**

Individual study on topics as approved by the division chair.

**BIOL 598. Project and Report. 2 Hours.**

An extended research project on science education; could include action research conducted in the classroom. Many projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee.

**BIOL 599. Thesis. 2 Hours.**

Individual research culminating in a thesis.

**BIT 510. Managerial Communication. 3 Hours.**

Focuses on the application of communication strategy to improve oral and written messages that are appropriate for today's global business environment. Includes three themes: communication improvement through reflection and application, contemporary communication practices and influences, and communication components of planning, conducting, and presenting research.

**BIT 557. Foundations of Information Assurance and Security. 3 Hours.**

The course surveys the broad field of information assurance and security including core concepts and methods used to secure enterprise systems, networks, and information. You will learn the foundations of business and information security in several contexts, including disruptive technologies, current threats, and security events.

**BIT 559. Systems Analysis. 3 Hours.**

This course provides an understanding and application of system analysis and modeling processes. Students evaluate and choose appropriate system development methodologies and analyze a system. Students learn the importance of effective communication and integration with users. The course emphasizes interpersonal skill development with clients, users, team members, and others associated with development, and operation of an information system.

**BIT 560. Manage/Integrate IS Function. 3 Hours.**

An integrative managerial perspective for aligning competitive strategy, core competencies, and information system functions along with technology. Development and implementation of policies and strategies to achieve organizational goals. Defining the systems that support the operational, administrative, and strategic needs of the organization, its business units, individual employees, and external business relationships. Includes global and international issues such as privacy, security, workforce restrictions, and collaboration.

**BIT 561. IS Project Management. 3 Hours.**

IS Project Management will introduce students to the concepts of managing projects within an organizational context, including the processes related to initiating, planning, executing, controlling, reporting, and closing a project; project integration, scope, time, cost, quality control, and risk management; software size and cost estimation; assigning work to programmer and other teams; monitoring progress; version control; and identifying project champions, working with user teams, training, and documentation.

**BIT 562. Management Information Systems. 3 Hours.**

Integrates fundamental concepts of systems and information with those of organizational structure and management. Performs the analysis of information flow in organizations and the operating context of the various computer-based subsystems of an organizational information system.

**BIT 563. Database Systems & Application. 3 Hours.**

Promotes an understanding of the issues in managing database systems as an essential organizational resource. Students learn the enterprise-data-architecture components, data storage configurations, and information retrieval methods. It expands from the relational model to the multidimensional model, object-relational techniques, and web accessed data. Corequisite: BIT 559.

**BIT 565. Systems Design. 3 Hours.**

This course provides an understanding and application of systems design, implementation, and maintenance methodologies. Students learn that systems design is not merely a 'technical' or 'computer' activity, but a 'business' activity. Prerequisites: BIT 563 and BIT 564.

**BIT 566. Knowledge Management. 3 Hours.**

Study of theory and application of the management of organizational knowledge for creating business value and generating a competitive advantage. Focus on how to implement a knowledge management strategy and knowledge management system in an organization. Includes infrastructure evaluation; KM system analysis, design, and development; and KM system deployment and assessment.

**BIT 570. E-Business Strategy. 3 Hours.**

This course covers the fundamental technologies associated with consumer-to-business and business-to-business interaction and delivery of content via the Internet.

**BIT 575. Business Network Systems Management. 3 Hours.**

Develops a managerial level of technical knowledge and terminology for data, voice, image, and video communications and computer networks to effectively communicate with technical, operational and management people in telecommunications. Students are expected to understand and apply data communications concepts to situations encountered in industry; learn general concepts and techniques of data communications; understand the technology of the Internet; and understand the regulatory environment.

**BIT 581. Contemporary Methods Teaching Business. 3 Hours.**

An online course designed to enhance awareness of teaching and learning; this course is designed for both continuing secondary and new post-secondary business educators. Topics include but are not limited to, current issues in business education, curriculum design, advanced technology usage, instructional techniques for the classroom, teaching an online environment, working with diverse learners, assessment of student learning, and professional opportunities.

**BIT 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in BIT 582 but have not completed the requirements for the course by the end of the summer semester. Fee Required.

**BIT 592. Special Topics. 1-3 Hour.****BIT 595. Professional Consulting In IS. 3 Hours.**

While consulting with a business, students will integrate the concepts and techniques learned in the MSIS program. Taken during final semester.

**BIT 598. Project. 1-3 Hour.**

An extended individual research project culminating in a formal paper. Restricted to graduates.

**CD 501. Introduction to Graduate Studies. 3 Hours.**

Examines research design and methods most commonly used in communication disorders with emphasis on understanding and applying research to inform everyday clinical decisions.

**CD 502. Early Inter-Interdisciplinary Study. 2 Hours.**

A course on interdisciplinary assessment and service delivery for children 0-5 years of age. This course will prepare students for early intervention with infants and toddlers at risk for or presenting communication disorders.

**CD 503. Grad Seminar In Research. 1-3 Hour.**

The seminar is available to any graduate student considering or actively pursuing a thesis in any area of communication disorders, with any advisor. Priority attention will be given to students who have actually started the thesis process. Students not actually into the thesis process will be expected to participate in problem solving, and other activities of critical thinking. Each student will provide a weekly update of research and writing activities. In this way, actual problems may be confronted as they occur. Students may rehearse thesis presentation and defense; ask and answer questions about research process and results; and prepare themselves for actual thesis committee meetings. The scientific process, methods for organization and analysis of data, manuscript content, ethical standards, and The Publication Manual of the American Psychological Association will be stressed.

**CD 511. Clinical Practicum: Therapy. 3 Hours.**

Supervised Practicum in various setting as assigned by the Clinic Coordinator. Based on the student's clinical track, assignments are made to MSU Pediatric Clinic, MSU Adult Clinic, or other community sites, such as schools, acute care and long-term care facilities.

**CD 513. Assessment Practicum. 3 Hours.**

Principles and procedures for advanced communication evaluations. Practical experience with techniques and procedures for differential diagnosis. A student must accrue designated ASHA clock hours in diagnosis.

**CD 516. Public School Practicum: Speech-Language-Pathology. 1-12 Hour.**

Supervised external practicum in a school setting. Graduates who seek employment in a North Dakota public school will need to have completed at least 100 hours of practicum in a school setting.

**CD 517. Adv External Practicum: Speech-Language-Pathology. 1-12 Hour.**

Supervised external practicum at a medical, long term care, private practice, or other non-MSU clinical site.

**CD 520. Fluency Disorders. 3 Hours.**

A study of the historical and current theories for stuttering with attention to a review of published research.

**CD 521. Speech-Language-Pathology Development and Disorders. 4 Hours.**

The study of speech language development and disorders of children. Inter-relationships among personal, social, academic, speech and language skills are covered. Academic modifications and coordination with specialized personnel are emphasized. (For non-majors).

**CD 522. Neurogenic Communication Disorders. 3 Hours.**

This course will investigate what happens when an individual's acquired communication abilities are impaired. It will provide a general review of neurology of speech and language. Further it will study nervous system pathology, symptoms, diagnosis and management of a variety of adult neurologic communication disorders including those associated with aphasia, right hemisphere syndrome, traumatic brain injury and dementia.

**CD 524. Neuro Based Speech Disorders. 3 Hours.**

The clinical diagnosis and management of communication and swallowing disorders having an underlying neurological basis. Included will be a review of pertinent medical and clinical literature pertaining to the various disorders and associated problems.

**CD 526. Applied Phonology. 3 Hours.**

This course is designed to give students knowledge of theoretical positions influencing the development of a conceptual framework to understand, evaluate and provide therapy for individuals with phonological disabilities. Application techniques for additional speech sound disorders will be presented.

**CD 528. Assessment in SLP. 3 Hours.**

A review and critical analysis of tools and techniques used in diagnosis of speech and language disorders. The student must observe diagnostic procedures and be competent in the execution of diagnostic tools.

**CD 530. Cleft Palate. 1 Hour.**

This course will review the types of oral-facial clefts and resulting speech and resonance disorders experienced by those with oral-facial clefts or other velopharyngeal incompetencies (VPI). Assessment and treatment of speech and resonance disorders secondary to clefting or other VPI will be addressed.

**CD 532. Voice Disorders. 3 Hours.**

A course which primarily investigates the common etiologies and pathologies associated with laryngeal voice disorders. Included are techniques for both the perceptual and instrumental analysis of voice, acoustic, aerodynamic, and the evaluation of vocal fold movement patterns through videostroboscopy. Understanding these diagnostic procedures will lead to the initiation of a wide range of treatment procedures. In addition, this course will familiarize the student with the postoperative anatomy, physiology and treatment of the laryngectomized patient. A review of the pertinent medical and clinical literature pertaining to both laryngeal and alaryngeal voice will be included as a course requirement.

**CD 534. Adolescent Communication. 2 Hours.**

Study of the history, nature, evaluation and treatment of language disorders in adolescents.

**CD 535. Dysphagia. 3 Hours.**

This course will cover normal physiology of deglutition followed by abnormalities, including congenital, acquired neurological or surgical, that can result in dysphagia. Bedside and radiographic evaluation of swallowing dysfunctions will be included as well as the multidisciplinary team approach to treatment and management.

**CD 536. AAC: Multiple Disabilities. 3 Hours.**

This course addresses the communication needs of and services for persons with severe or multiple disabilities. The course addresses both assessment and intervention issues emphasizing functional communication in the individual's natural environments. Both high and low-tech augmentative and alternative communication systems are reviewed. Review of related current literature is required.

**CD 538. Language and Literacy. 3 Hours.**

Capstone course in language with emphasizing how language relates to literacy from birth through the academic years. Topics will include the neurobiology of language and literacy, societal contributions, typical and atypical development, as well as intervention and service delivery models.

**CD 539. Audiology for the SLP. 2 Hours.**

The underlying neurological systems, behavioral manifestations, procedures for assessment, diagnosis and management of central auditory processing disorders as it relates to language, learning and academics in preschool and school age populations.

**CD 540. Professional Issues. 2 Hours.**

This course is designed to explore critical contemporary professional issues in speech language pathology linking course work and theory to practice. Various professional, legal, ethical, counseling, employment, societal, and supervisory issues will be covered.

**CD 545. Public School Methods in SLP. 2 Hours.**

Examines issues critical to the practice of speech-language pathology in school settings including legislative foundations, legal and ethical considerations, strategic learning models for school-aged students, and other contemporary issues relative to public school practice.

**CD 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee Required.

**CD 590. Seminar In Communication Disorders. 1-3 Hour.**

A special course of study related to a specific problem or unique area of concentration relative to audiology, offered to any number of qualified graduate students upon request.

**CD 592. Special Topics. 1-3 Hour.**

Opportunity is provided to read literature in Speech-Language Pathology or related professional disciplines on an individual basis to meet student needs and interests.

**CD 597. Independent Study. 1-3 Hour.**

Student initiated study under the direction of a faculty member.

**CD 599. Thesis. 1-3 Hour.**

Individual research culminating in a thesis.

**CHEM 510. Organic Chemistry For Teachers. 3 Hours.**

An in-depth examination of the chemical and physical properties of organic functional groups.

**CHEM 520. Physical Chemistry For Teachers. 3 Hours.**

The topics covered will include thermodynamics, equilibria, kinetics, electrochemistry, solution properties, and phase equilibria. No previous knowledge of calculus is assumed.

**CHEM 550. Inorganic Chemistry For Teachers. 3 Hours.**

Among topics considered are periodic law, ionic bonding, crystalline structure of ionic compounds.

**CHEM 570. Frontiers In Chemistry. 3 Hours.**

Developments in chemistry, including such subjects as environmental chemistry, use of computer models, and study of chemical reaction mechanisms.

**CHEM 579. Research. 2-4 Hour.**

**CHEM 590. Seminar. 1-3 Hour.**

Seminars on topics as approved by the division chair.

**CHEM 592. Special Topics. 1-3 Hour.**

Special Topics in chemistry.

**CHEM 597. Independent Study. 1-3 Hour.**

Individual study on topics as approved by the division chair.

**CHEM 598. Project and Report. 2 Hours.**

An extended research project on science education; could include action research conducted in the classroom. Many projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee.

**CHEM 599. Thesis. 2 Hours.**

Individual research culminating in a thesis.

**CJ 501. Criminal Justice Research I. 3 Hours.**

**CJ 503. Criminal Justice Research II. 3 Hours.**

**CJ 505. Studies Criminological Theory. 3 Hours.**

**CJ 520. Criminal Justice Administration. 3 Hours.**

**CJ 540. Criminal Justice Policy Analysis. 3 Hours.**

**CJ 560. Management Issues In CJ. 3 Hours.**

**CJ 570. Internship. 3-6 Hour.**

**CJ 580. Occupational/Organization Crime. 3 Hours.**

**CJ 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee Required.

**CJ 590. Seminar. 3 Hours.**

**CJ 592. Special Topics. 1-3 Hour.**

**CJ 595. Independent Research. 1-24 Hour.**

**CJ 597. Independent Study. 1-3 Hour.**

**CJ 598. Graduate Justice Project. 3 Hours.**

Justice related project or concept paper developed and written under the supervision of a major professor and approved by the students graduate committee. Topics may include, but are not limited to: criminal justice agency focused problem or issue; examination of operational policies and procedures; staff study; or theoretical or social justice advocacy issue with implications for criminal justice.

**CJ 599. Thesis. 1-6 Hour.**

**CJ 630. Seminar Tribal Justice System. 3 Hours.**

**CJ 635. Juvenile Justice. 3 Hours.**

**CJ 640. Criminal Justice Policy. 3 Hours.**

**CJ 645. Rural Justice Issues. 3 Hours.**

**CJ 690. Data Analysis. 3 Hours.**

**CSCI 568. Applied Cryptography. 3 Hours.**

Modern cryptography algorithms are necessary for protection of data storage and communication streams from disclosure and manipulation of information to distrusted or malicious parties. This course explains the inner workings of cryptographic primitives and how to implement them. Assignments will be both theoretical and application based. Experience with C/ C++ programming is required.

**CSCI 594. Directed Research in Cyber Security. 3 Hours.**

Faculty directed research in cyber security topics.

**ED 501. Designing and Interpreting Education Research/Quantitative. 2 Hours.**

An examination of basic quantitative research techniques most commonly used in educational research, an evaluation of the strengths and weaknesses of these techniques, and analysis of appropriate applications to concrete examples.



**ED 502. Designing & Interpreting Ed Research/Qualitative. 2 Hours.**

An examination of basic qualitative research methods most commonly used in educational research, an evaluation of the strengths and weaknesses of these approaches, and analysis of appropriate applications.

**ED 509. Historical Perspectives, Public Policy, & Programming Gifted Education. 3 Hours.**

An analysis of origins and history of gifted education focusing on populations of gifted students. A review of local, state and federal policies and practices; past, present and future. An exploration of collaboration efforts between educational agencies, local learning communities, parents, and the larger community.

**ED 510. Characteristics Of Gifted Children and Teaching Strategies. 3 Hours.**

Discuss descriptors of gifted children. Explore theories on nurturing the development of gifted children. Examine research on the behavioral characteristics of gifted children at home, in school, and in the community. Critically evaluate current methods, materials, and assessment strategies. Survey basic teaching strategies for teaching the gifted.

**ED 511. Curriculum Models. 3 Hours.**

Beyond activities and strategies; explore designs and operations of curriculum models for teaching gifted students. Examine the constructs and development of curriculums for gifted populations. Define the interrelationship of program objectives to identification processes. Examine the identification systems of history and those currently in use.

**ED 512. Student Teaching. 2 Hours.**

Supervised practicum with gifted and talented children at various grade levels.

**ED 515. Individualizing Strategies. 2 Hours.**

Determining programs and appropriate instructional approaches for elementary students.

**ED 518. Educational Philosophy. 2 Hours.**

Traditional and contemporary philosophical thoughts and their educational implications.

**ED 519. Diversity in a Global Perspective. 3 Hours.**

Provides students with a study of diverse cultures including Native American. Examines curriculum and pedagogy from the perspective that all students, regardless of the group to which they belong, such as those related to gender, social class, ethnicity, race, culture, religion, or exceptionality, should be ensured educational equity in school. Provides models for appropriate modification of curriculum and instruction.

**ED 520. Supervision and Mentoring of Preservice and New Teachers. 3 Hours.**

Methods, background, and techniques for working with and providing supervision and mentoring for preservice teachers and new teachers.

**ED 521. Integrating Technology into Teaching and Learning. 3 Hours.**

Current and emerging technologies and how they impact student learning. Will require a research foundation as well as a knowledge and skills base in current technology.

**ED 522. Curriculum Design and Assessment. 3 Hours.**

Current trends in curriculum design theory and assessment strategies and their application in teaching and learning.

**ED 523. Linguistics for ELL/Bilingual Educators. 3 Hours.**

This course will provide participants with basic understanding of analytic methods of several core subfields of linguistics, including phonetics, phonology, morphology, syntax, semantics, and pragmatics, as well as an introduction to the history of English, socio-linguistics, and bilingualism. Throughout the course there will be opportunities to analyze language data and discuss various language-related issues. No previous training in linguistics is required or assumed. This course will help participants to see language as both social and cognitive phenomenon.

**ED 524. Intro to Bilingual and Multilingual Education. 3 Hours.**

This course is an introduction to the social and educational aspects of both bilingualism and multilingualism. It offers an overview of the broad range of sociolinguistic and political issues surrounding both bilingualism and multilingualism. The course will also examine the language mixing behavior of both bilingual and multilingual speakers, and explore the use of two or more languages in popular music, advertising, and online social spaces. It will also cover such key topics as language maintenance and shift attitudes toward bilingualism, multilingualism, bilingual identity, multilingual educational models and policies, and bilingual parenting.

**ED 525. Methodology of Teaching English Language Learners and Materials. 3 Hours.**

This course investigates traditional and modern approaches and techniques for teaching English Language Learners theories of second-language acquisition/learning; curriculum and materials design of ELL for academic, social/survival, and professional purposes.

**ED 526. ELL Testing and Evaluation. 3 Hours.**

This course will provide participants with the theory and methodology appropriate for ELL testing. Course content includes an investigation of literature containing theoretical foundations of and research for second-language testing. Course participants will be expected to use research findings in the practical application of test construction, administration, and evaluation.

**ED 535. Models Of Teaching & Learning. 3 Hours.**

Study of student learning with emphasis on cognitive development processes. Emphasis will be placed on current mind/brain research and examining why particular teaching models may be better facilitate particular learning goals.

**ED 540. Reading: Advance Diag & Remed. 2 Hours.**

Study, diagnosis and treatment of reading problems.

**ED 541. Clinical Practice Remedial Read. 2 Hours.**

Supervised practice in working with reading disability cases in a clinical setting.

**ED 544. Neurobiology Of Communication. 3 Hours.**

CD 544 is an advanced class covering the neurological processes of the brain and their relationship to speech, language and hearing. Objectives of the class include (1) understanding the anatomy and physiology of the brain, (2) understanding the neurobiological factors required for communication, and (3) understanding the complexities of sensory, motor and cognitive functions involved in communication. CD 544 will also cover the disorders of communication resulting from brain dysfunction.

**ED 550. Dynamics Of Managing Learning. 2 Hours.**

Organizational and mind/brain-based approaches for creating positive learning environments; understanding and managing disruptive and counterproductive behaviors, strategies for building interactive involvement among learning partners. The course draws upon multi-disciplinary research bases in cognitive sciences and group dynamics.

**ED 551. Second Language Acquisition. 3 Hours.**

This course investigates traditional and modern approaches and techniques for teaching English Language Learners theories of second-language acquisition/learning; curriculum and materials design of ELL for academic, social/survival, and professional purposes.

**ED 554. Teaching Reading in the Content Areas. 2 Hours.**

Designed for middle and secondary level teachers. Stresses the development and utilization of reading and study skills through the content subjects.

**ED 555. Middle School: Philosophy and Curriculum. 2 Hours.**

The integration of adolescent development theory within the framework of middle school philosophy and curriculum.

**ED 556. Middle School: Teaching Strategies. 3 Hours.**

Organization of curriculum and instruction for middle school education including teaming, scheduling, integrating, and involving parents and the community.

**ED 557. Readings in Cognitive Science. 1-3 Hour.**

Contemporary neuroscience findings and their appropriate application to learning, behavior, and teaching are constantly evolving; currency of information requires study of first-source research in a specific area. Readings in Cognitive Science is an elective which meets that need for M.Ed candidates taking Cognitive Science as their concentration, and is also open to those in other M.Ed concentrations if requested by their Graduate Committee Chair. Up to 3 credits of targeted Readings in Cognitive Science may be used with a given concentration.

**ED 558. Trauma Informed Practice for Teachers. 3 Hours.**

This course is designed to increase awareness of the effects of trauma on students in classrooms. The course will introduce the participants to the Neurosequential Model in Education (NME), a systematic approach to healing and educating students who have suffered childhood trauma. Through discussion, research and application, participants will seek ways to accommodate students who need the well-ordered interventions and strategies that the trauma-informed classrooms should provide.

**ED 570. Curriculum Theory. 3 Hours.**

This course offers an overview regarding the historical influences of curriculum and how those influences affect curricular understandings today. Students will take a critical look at variety of arguments and theories about curriculum, including: Jane Addams, John Dewey, John Franklin Bobbitt, Maria Montessori, Ralph Tyler, James Popham, Elliot Eisner, E.D. Hirsch, Maxine Greene, and Nel Noddings. Students will also compare and contrast curricular ideals with educational realities in an effort to balance their beliefs with present curricular circumstances. This course will include practical application in the development of curricular materials.

**ED 571. Assessment Theory. 3 Hours.**

This course would offer an overview of the historical influences of assessment and how those influences affect our understandings. From common school public exhibitions, to the emergence of paper-pencil tests in the New England states, to the A Nation at Risk report and the standardized assessment movement, students will learn about how assessment has been used to measure learning and provide accountability. This course would also focus on modern assessment types as well as what is revealed and concealed in interpreting assessment results. This course would include practical application in the development of both formative and summative assessments.

**ED 572. Data Driven Instruction. 3 Hours.**

This course would focus on how to collect and interpret student data as a means to inform instructional practices. To this end, the course would take a critical look at the advantages and disadvantages of using standardized test data as rationale in heterogeneous ability grouping. This course would also offer alternative and complimentary approaches to inform pedagogy based on students-needs-such as formative assessment systems. This course would offer a practical application in collecting and responding to student data.

**ED 573. Educational Leadership. 3 Hours.**

This course would provide context and support for students as they prepare to take on leadership roles within their educational settings. This course would juxtapose competing interests from outside agencies with local voices within particular school systems, provoking students to consider how to balance the array of interests educational leaders regularly face. This course would have a practical application aspect in providing leadership opportunities and prompting reflection.

**ED 580. ELL Practicum in Schools. 3 Hours.**

This course is a student teaching internship for those seeking K-12 ELL certification. The primary purpose of this practicum is to provide those planning to teach ELL in public schools with an opportunity to observe and interact with ELL teachers and students in the classroom and gain an understanding of the real world of school; of the challenges confronting teachers, administrators and students; and of the resources available to deal with these.



**ED 581. Applied Methods and Practicum. 1-3 Hour.**

This course gives M.Ed candidates opportunity to work with their specialty-area advisor to develop current pedagogical skills specific to that area. Practicum will include 30 hours of guided experience in a P-12 school at the appropriate level. Placements in school settings are approved by the Teacher Advisement and Field Placement Office and arranged in collaboration with the candidate's specialty-area advisor. M.Ed candidates who are already licensed to teach may take this course as an elective. For candidates seeking initial teaching licensure at the graduate level, this course may be taken as a prerequisite to, or co-requisite with ED 497 Mentored Clinical Practice; or as a prerequisite to ED 495 Student Teaching.

**ED 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee Required.

**ED 590. Seminar In Education. 1-3 Hour.**

A special course of study related to specific problem or unique area of concentration relative to education, offered to any number of qualified graduate students upon request.

**ED 592. Special Topics. 3 Hours.**

Opportunity is provided to read literature on current brain research and exceptional children on an individual basis to meet student needs and interests.

**ED 597. Independent Study. 1-3 Hour.**

Student initiated study under the direction of faculty advisor.

**ED 598. Project And Report. 1-2 Hour.**

An extended action research project conducted in the classroom with a report of the project. All projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee. Credits may be split 1 + 1, over 2 semesters.

**ED 599. Thesis. 1-2 Hour.**

Individual research culminating in a thesis. Credits may be split 1 + 1, over 2 semesters.

**ELED 524. Current Trends: Science. 2 Hours.**

Current research, learning principles, and teaching techniques in science theory and classroom instruction.

**ELED 526. Current Trends: Social Science. 2 Hours.**

Current research, learning principles, and teaching techniques in social science theory and classroom instruction.

**ELED 528. Current Trends: Reading/Lang Art. 3 Hours.**

Current research, learning principles, and teaching techniques in language arts and reading theory and classroom instruction.

**ELED 530. Current Trends: Math. 2 Hours.**

Current research, learning principles, and teaching techniques in math theory and classroom instruction.

**ELED 545. Literature For Children. 2 Hours.**

An examination of the range and quality of current children's literature including its potential for integration throughout the curriculum.

**ELED 550. ECETeaching Methods and Materials. 3 Hours.**

The study of a variety of teaching methods and materials for teaching and assessing children and youth in the general education classroom.

**ELED 551. Play Development In Children. 3 Hours.**

Students will learn about the various stages of play in the socialization of young children and the teacher's role in facilitating social development through play. Students will learn to use a variety of observational techniques such as running, anecdotal, and developmental records, among others, and learn assessment strategies. Students will develop, plan, and teach lessons and units appropriate to gross and fine motor development in young children.

**ELED 552. Theories of Early Childhood Curriculum. 3 Hours.**

Students will learn theories of early childhood education as propounded by Piaget, Vygotski, Erikson, and others. They will learn the history of early childhood education, from the philosophies of Comenius and Froebel, and on to Montessori and Reggio Emilia. Students will explore their roles as early childhood educators and discuss and engage in a variety of developmentally appropriate methodologies. They will learn about effective uses of technology in early childhood classrooms. A variety of observational and assessment strategies will be included in discussion of methodologies.

**ELED 553. Symbolism: Reading & Child. 3 Hours.**

Students will learn theories of language acquisition and study emergent literacy in young children. They will develop a project in which they analyze children's books as to appropriateness of genre, language, illustrations, and format. They will learn a variety of methods for observing and assessing the speech of young children.

**ELED 592. Special Topics. 1-3 Hour.****ENGL 516. Research In Teaching Writing. 3-6 Hour.**

Readings in the research, theory, and practice of teaching writing. Emphasis on constructing position papers which demonstrate synthesis, evaluation, and application of concepts from readings.

**ENGL 525. Topics In Language Arts Pedagogy. 3-9 Hour.**

Focused study in recent theoretical developments in language arts pedagogy for the English classroom. Emphasis on weaving language study into student-centered classroom approaches. Topics vary for each offering. Repeatable up to 9 credits, but only 3 credits count toward degree.

**ENGL 535. Topics In Teaching Literature. 3-9 Hour.**

Focused study in teaching and using literature in the classroom. Topics vary for each offering. Repeatable up to 9 credits, but only 3 credits count toward degree.

**ENGL 536. Enrich Reading In Content Area. 3-9 Hour.**

Reading in the research, theory, and practice of teaching and using reading in the classroom. Emphasis on constructing position papers which demonstrate synthesis, evaluation, and application of concepts from the readings.

**ENGL 540. Prof Issues & Methods In English. 3-6 Hour.**

Introduction to graduate study in English pedagogy, including an overview of current professional issues and of methods for engaging in research and thesis processes.

**ENGL 543. Pract. Approach To Teach Writing. 3-9 Hour.**

Practice in process-oriented approaches to writing. Emphasis on students' own personal and reflective writing in a workshop environment. This course is a component of the Northern Plains Writing Project Summer Institute.

**ENGL 545. Topics In Teaching Writing. 3-9 Hour.**

Focused study in teaching and using writing in the classroom. Topics vary for each offering. Repeatable up to 9 credits, but only 3 credits count toward degree.

**ENGL 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee Required.

**ENGL 592. Special Topics. 1-4 Hour.**

Occasional and topical subjects.

**ENGL 597. Independent Study. 1-3 Hour.**

Independent study under the direction of a faculty advisor.

**ENGL 599. Thesis. 1-3 Hour.**

Individual research culminating in a thesis.

**FIN 545. Financial Management and Accounting. 3 Hours.**

Provides advanced study in corporate financial management and accounting to provide a conceptual framework for analyzing the major types of decisions made by financial executives. Focuses on the application of theory to topical areas, including the functional uses of accounting, financial analysis, financial planning and forecasting, budgeting, acquisition and management of capital, financial instruments and markets, capital structure, and corporate valuation.

**GEOL 510. Advanced Physical Geology. 3 Hours.**

**GEOL 520. Advanced Historical Geology. 3 Hours.**

**GEOL 550. Advanced Mineralogy & Petrograph. 3 Hours.**

**GEOL 570. Global Plate Tectonics. 3 Hours.**

**GEOL 579. Research. 2-4 Hour.**

**GEOL 590. Seminar. 1-3 Hour.**

**GEOL 592. Special Topics. 1-3 Hour.**

**GEOL 597. Independent Study. 1-3 Hour.**

**GEOL 598. Project and Report. 2 Hours.**

An extended research project on science education; could include action research conducted in the classroom. Many projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee.

**GEOL 599. Thesis. 2 Hours.**

**KIN 501. Exercise Science. 3 Hours.**

The study of the physiology of the skeletal, muscular, respiratory, nervous, and circulatory systems. Special references made to physiological adjustments made during acute and chronic exercise.

**KIN 510. Sports Leadership and Administration. 3 Hours.**

Students will discuss the process of leadership and leadership development in sports organizations. Leadership styles, qualities, philosophies and the ability to adapt to different situations are addressed. Information on recruiting, training, supervising and evaluating personnel are examined as are current sporting issues and their impact on sport leadership. The philosophy of athletics and sport programs, communication and leadership skills, facilities and equipment management, budgeting, personnel management, risk management, public relations and current issues will be explored.

**KIN 520. Advanced Methods of Teaching Group Fitness. 3 Hours.**

The course is designed to provide physical educators, coaches, and fitness professionals with instruction, practice, and teaching experience in group fitness. Instruction will focus on skills to advance knowledge and practice in yoga, pilates, resistance tubing, stability balls, freights, low-mid-high impact aerobics, step aerobics, circuit training, interval training and kickbox. Special emphasis will be on developing training routines tailored to fit individual ability, fitness level, and desired outcomes for students and clients.

**KIN 530. Advanced Methods of Teaching Resistance Training. 3 Hours.**

The course is designed to provide physical educators, fitness specialists, and coaches with instruction, practice, and teaching experience in resistance training. Instruction will focus on skills to advance knowledge and practice in resistance training using free weights, weight machines, and plyometrics. Special emphasis will be placed on Olympic lifts, structural lifts, core training, and developing training routines to fit the individual needs, ability, fitness level, and desired outcomes for students, clients and athletes.

**KIN 540. Foundations of Sports and Exercise Psychology. 3 Hours.**

The course is designed to provide athletic coaches, athletic administrators, physical education teachers, and fitness specialist's insight and skills in the psychology of communication, perception, learning, personality, motivation, and emotion. Emphasis will be placed on understanding participants, environments, group process, and enhancing performance, health, and well-being as they relate to sport and physical activity.

**KIN 555. Sports Law. 3 Hours.**

The course will introduce core substantive areas of law that affect the sporting industry at all levels-amateur, professional, and recreational. Topics include: constitutional law, torts, contracts, labor and employment law, Title IX, federal discrimination laws, antitrust, intellectual property, and law of private associations. Students will learn how state and federal law impacts the sporting industry, in addition to regulations from state high school athletic associations, the NCAA, and professional sports.

**KIN 560. Sports Media and Event Planning. 3 Hours.**

This course provides an analysis of sport media's changing landscape and the role it plays in political, social and technological climates. Emphasis on intercollegiate sports and the implications of simultaneous production and consumption. Course will examine new information technologies, commercial pressures in sport media and global sport media expansion. Course also provides student exposure to comprehensive event planning and management for sport and special events. Students will understand and create the operational plan for a sport event, which includes developing marketing and sponsorship strategies, media strategies; developing timelines, schedules and responsibilities for activities leading up to and through the event transportation and traffic flow, hospitality, personnel, registration, finances, restroom and waste facilities.

**KIN 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee required.

**KIN 592. Special Topics. 0 Hours.**

Provides for student in specific areas of interest in physical education or human performance.

**KIN 595. Capstone Experience. 1-4 Hour.**

Individual applied research project for a client in a sports management field. Deliverables include a formal research paper and professional presentation to the client, faculty, and other students in the sports management program. Designed to be completed over the last 16 weeks of the students' program of study under the supervision of a faculty advisor.

**MATH 501. Action Research in Math Ed. 2 Hours.**

Prepares practicing mathematics teachers to study issues or problems relating to mathematics education within their classrooms, schools or districts with supervision by a MSU faculty member. Course topics include how to interpret educational research and literature; design and implement reliable and valid action research; identify worthwhile problems; and formulate questions that can be addressed through action research.

**MATH 505. Fund Concepts Advanced Math. 3 Hours.**

The study of topics from foundational mathematics such as logic and proof, mathematical induction, set theory, relations and functions.

**MATH 507. History Of Mathematics. 3 Hours.**

Survey of the history of mathematics with emphasis on examining and solving problems that typify each historical period. While taking this course, students will (a.) become familiar with the history of mathematics, (b.) be introduced to historical figures who contributed to the development of mathematics, (c.) outline major trends, themes, and problems that impacted the development of mathematics, (d.) research the actual mathematics of different historical periods, and (e.) consider how the history of mathematics can be incorporated into the teaching of mathematics. In addition to discussions, problems, and exams, students will create projects that incorporate the history of mathematics into the high school math courses they teach.

**MATH 511. Trends in Math Education. 3 Hours.**

Exploration of topics and curriculum trends in secondary school mathematics.

**MATH 523. Probability and Statistics for Secondary School Teachers. 3 Hours.**

Discrete and continuous probability models. Data analysis. Statistical inference.

**MATH 531. EL/MS Measurement. 3 Hours.**

This course will concentrate on the concept of measurement. Students will use manipulatives to help demonstrate length, area, and volume relationships and derive the formulas for these measures. They will make measurements of length and area using both standard and non-standard units. Further, students will, within systems of units, work on conversions relative to weight, length, area, volume, and mass.

**MATH 532. EI/MS Problem Solving / Algebra Reasoning. 3 Hours.**

The first part of this course will focus on Polya's problem solving process. Students will be guided through the process and learn how to use assessment and evaluation tools. The second part of this course will focus on algebraic thinking. Students will learn about representing patterns mathematically, demonstrating properties of numbers both through manipulatives and symbolically, and apply their problem solving skills to algebraic problems.

**MATH 533. EL/MS Geometry. 3 Hours.**

The primary focus of this course will be the exploration of two- and three- dimensional shapes and their properties. A historical look at Euclidean geometry and constructions using the Euclidean tools of a compass and straight edge will include students relating the properties of various quadrilaterals to those constructions. Students will learn to use proper geometric notation to facilitate their learning as they explore geometry concepts illustrated by interactive applets on the Web through use of the Geometer's Sketchpad.

**MATH 534. EL/MS Probability and Statistics. 3 Hours.**

Students will be introduced to elementary grade level statistics and probability through the process of exploration and problem solving. Appropriate technology will be introduced as needed.

**MATH 535. Using Technology in EL/MS Math. 3 Hours.**

Teachers will learn how to use specific technologies and discover ways to integrate these technologies into their classrooms. Technologies that will be covered are: graphing calculator, spreadsheet, Geometer's Sketchpad, Math Type, and other appropriate mathematical technologies.

**MATH 536. Number/Operation in EI/MS Math. 3 Hours.**

The focus of this courses will be on building conceptual understanding of mathematical operations with whole numbers, integers, and rational numbers in the form of fractions and decimals. Emphasis will be placed on the operation of addition, subtraction, multiplication, division, and powers.

**MATH 540. Geometry for Secondary School Teachers. 3 Hours.**

Content, rationale, and methods for secondary geometry instruction, focusing on an axiomatic system. Includes many applications and activities using technology.

**MATH 550. Technology For Teaching Math. 3 Hours.**

Current and relevant technologies for K-16 mathematics education (e.g., software, curricular materials, calculators, interactive whiteboards) will be examined and explored. Issues related to the implementation of such technologies and their impact on teaching and learning of mathematics will be addressed.

**MATH 565. Calculus for Secondary School Teachers. 3 Hours.**

Participants in this course will review and strengthen their understanding of calculus and its applications. Differential and integral calculus will be taught with a geometric, numeric, analytic and verbal approach, not just a series of procedures and rules. The course will include appropriate technology and many applications. Student will discuss how the methods and content of this course are relevant to teaching and learning secondary mathematics and to the state and national mathematics standards.

**MATH 580. Algebra for Secondary School Teachers. 3 Hours.**

Introduction to algebraic methods, proof, content and the utilization of appropriate technology. There is an emphasis on functions involving topics from advanced algebra, number theory, and abstract algebra. Proofs will involve Peano's postulates, real number field properties, and many algebraic theories related to functions.

**MATH 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee required.

**MATH 590. Seminar. 1-4 Hour.**

Opportunity is provided to read literature in mathematics on an individual basis to meet student needs and interests.

**MATH 592. Special Topics. 1-4 Hour.**

A special course of study related to a specific problem or unique area of concentration relative to mathematics, offered to any number of qualified graduate students upon request.

**MATH 596. Capstone Proposal. 2 Hours.**

With guidance from faculty, students pursue problems in the context of their classrooms, schools, or districts which impinge on student achievement in mathematics. Students work with their faculty advisors to characterize the problems, complete reviews of relevant literature, and create action research proposals to address the problems and evaluate outcomes of the proposed interventions.

**MATH 597. Independent Study. 1-4 Hour.**

Student initiated study under the direction of a faculty advisor.

**MATH 598. Capstone Project. 1-3 Hour.**

With guidance from faculty, students conduct action research addressing problems in the context of their classrooms, schools, or districts which impinge on student achievement in mathematics. Students work with their faculty advisors to implement interventions, collect, and analyze data resulting from the interventions, and summarize results. Findings are written up for publication and presented orally to peers at a capstone symposium. Following the presentations, students defend their projects before their graduate committees. Prerequisites: MATH 501 and 596.

**MATH 599. Thesis. 1-2 Hour.**

Individual research culminating in a thesis.

**MUSC 501. Research in Music Education. 4 Hours.**

The methodology and procedures of music education research. Topics may include: methods and interpretation of quantitative and qualitative research in music education, library aids to research, publications in music and music education, and an overview of previous music education research.

**MUSC 502. Graduate Music Seminar. 3 Hours.**

A special course of study related to a specific problem or unique area of concentration relative to music.

**MUSC 510. Graduate Music History. 3 Hours.**

Study of music history through its distinctive literature, musical style and commonly associated performance practices.

**MUSC 515. Graduate Music Theory. 3 Hours.****MUSC 520. Critical Issues in Music Educ.. 3 Hours.**

A study of music education's development, prominent philosophies and contemporary theory and practice.

**MUSC 523. Private Conducting. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and rehearsal skills. All private study must be approved through a pre-program assessment. Repeatable with departmental approval.

**MUSC 524. Private Lessons-Percussion. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable with departmental approval.

**MUSC 525. Private Lessons-Piano. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable for credit. Departmental approval required.

**MUSC 526. Private Lessons-Voice. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable for credit. Departmental approval required.

**MUSC 527. Private Lessons-Strings. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable for credit. Department approval required.

**MUSC 528. Private Lessons-Brass. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable for credit. Departmental approval required.

**MUSC 529. Private Lessons-Woodwinds. 1-3 Hour.**

Individual study encompassing technical development, musical refinement and solo performance ability. All private study must be approved through a pre-program assessment. Repeatable for credit. Departmental approval required.

**MUSC 530. Curr Dev for the Music Clsm. 3 Hours.**

Application of learning theory and advanced studies of musical methods for the K-12 music classroom curriculum.

**MUSC 532. Graduate Conducting. 3 Hours.**

Group study encompassing technical development, musical refinement and rehearsal skills.

**MUSC 535. Technology In The Music Clsroom. 3 Hours.**

Arranging, recording and teaching in the music curriculum through the use of current technology.

**MUSC 540. Perspectives in World Music. 3 Hours.**

An examination of the music of non-Western and non-Anglo North American ethnic groups of the world and ethnic sub-cultures in North America.

**MUSC 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee required.

**MUSC 590. Music Education Seminars. 1-3 Hour.**

A special course of study related to a specific problem or unique area of concentration relative to music. Repeatable for credit. Departmental approval required.

**MUSC 591. Advanced Music Methods Training. 3 Hours.**

In depth study of various theories of music instruction including Kodaly, Orff, and Dalcroze methods offered on a rotating basis.

**MUSC 592. Special Topics In Music Education. 1-3 Hour.****MUSC 597. Independent Study. 1-3 Hour.**

Student initiated study under the direction of a faculty advisor. Repeatable for credit. Departmental approval required.

**MUSC 598. Capstone Project. 2 Hours.**

Individual research project guided by a graduate faculty member designed to serve as the culminating experience of the master of music education degree. Prerequisites: MUSC 501 or ED 501 & 502 and MUSC 520.

**MUSC 599. Capstone Project. 1-4 Hour.**

Individual research project guided by a graduate faculty member designed to serve as the culminating experience of the master of music education degree.

**PHYS 579. Research. 2-4 Hour.**

**PHYS 590. Seminar. 1-3 Hour.**

Seminars on topics as approved by the division chair.

**PHYS 592. Special Topics. 1-3 Hour.**

Special Topics in Physics.

**PHYS 597. Independent Study. 1-3 Hour.**

Individual study on topics as approved by the division chair.

**PHYS 598. Project and Report. 2 Hours.**

An extended research project on science education; could include action research conducted in the classroom. Many projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee.

**PSY 503. Statistics I. 3 Hours.**

The tool necessary for understanding contemporary educational research, including probability, measures of central tendency, and sampling theory.

**PSY 510. Cognitive Science. 3 Hours.**

A survey of topics in biopsychology, sensation and perception, and cognitive science designed to expand educators' understanding of mind/brain function and how learning occurs.

**PSY 511. Human Growth and Development. 3 Hours.**

Theory and research in the areas of sensorimotor, language, cognitive, emotional, social, and moral behavior of the normal child. The interaction of the biological and environmental factors influencing growth and development are stressed.

**PSY 512. Research Design and Measurement. 4 Hours.**

A variety of research methodologies, as pertains to school psychology, will be examined, as well as the advantages and disadvantages of their use. Nature and type of measurement and the construction of measuring devices will be discussed.

**PSY 513. School Psychology Research Seminar. 2 Hours.**

Practicum in research design and implementation. Students will design a research project relevant to issues in school psychology. Students will select and meet with an advisor regarding preparation of the project, meet with and have project proposal approved by their graduate committee.

**PSY 514. Individual Cognitive Assessment. 4 Hours.**

Concerned with theory and methodology as well as procedures and techniques of administering a wide range of group and individually administered tests of intelligence. The students will be required to complete 25 test administrations and protocols; and ten written reports. One report will be a capstone report where some child has been administered at least three tests.

**PSY 515. Academic Assessment. 4 Hours.**

This course will prepare students with the skills necessary to properly administer and interpret the most commonly used measures of academic achievement in schools settings. Particular emphasis will be placed on the Woodcock-Johnson IV ACH, Wechsler Individual Achievement Test - Third Edition, and other diagnostic reading, writing, and mathematic assessments. Students will also learn how to translate assessment results into meaningful evidenced-based interventions.

**PSY 518. Psychopathology Of Children. 3 Hours.**

Behavior problems are considered from the point of view of genetic abnormalities, teratogens, deviations in normal development, effects of social and family stressors, and failure to develop appropriate social skills. The major theories and research related to the development of deviant behavior in children are examined within this framework.

**PSY 525. Role and Function Of School Psychologist. 3 Hours.**

Current issues facing school psychologists and the impact of family dynamics on the child's learning and behaviors are examined. Attention is paid to the legal aspects and ethics of being a school psychologist. This course considers consultation with parents, school systems, and the community. Laws governing education will be reviewed.

**PSY 533. Social and Behavioral Interventions In School. 3 Hours.**

The application of research-based interventions to the social and behavioral problems of children and adolescents in the school setting, and mental health issues in the schools will be discussed. This course has a practicum of shadowing educators, including school psychologists, working with special needs children.

**PSY 550. Issues in School Psychology. 3 Hours.**

This course provides an integrated seminar setting for instruction and discussion of developments in School Psychology. Prerequisite(s): CD 521, 539 and PSY 516.

**PSY 584. School Psychology Practicum I. 3 Hours.**

This practicum provides students an opportunity to apply learning from content courses to elementary and secondary students who are failing to find academic success in school. The assessment of processing problems that sometimes underlie learning disabilities will be examined.



**PSY 585. School Psychology Practicum II. 3-6 Hour.**

This practicum focuses on assisting school children with challenging behavior problems. Emphasis will be placed on deciding whether a diagnostic or consultative role will best meet a particular child's needs.

**PSY 586. Clinical Experience. 3 Hours.**

This course provides instruction and supervision to accompany clinical practice in the Minot State University School Psychology Clinic. Prerequisite(s): PSY 525 and 590.

**PSY 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee required.

**PSY 590. Counseling Skills. 3 Hours.**

Students will learn and practice their counseling skills including active listening and reality therapy.

**PSY 592. Special Topics. 1-3 Hour.**

This course is intended to provide a seminar format for discussion and instruction of topic areas in School Psychology.

**PSY 593. School Safety, Crisis Preparation, and Crisis Response. 3 Hours.**

This course is designed to promote knowledge related to preventing school crises and responding appropriately if a school crisis occurs. It emphasizes current research to help inform school psychological practices and promotes recovery efforts to regain school stability. In addition, it examines risk and resilient factors necessary for safe and healthy schools.

**PSY 594. Consultation and Collaboration. 3 Hours.**

This course is designed to promote knowledge of various consultation and collaboration methods utilized by school psychologists. It emphasizes that ability to consult and collaborate with school personnel, families, and communities to design, implement, and evaluate specific programs and interventions.

**PSY 597. Thesis. 1-6 Hour.**

Individual research culminating in a thesis.

**PSY 598. Internship. 6 Hours.**

This internship will involve spending 600 hours in school or a similar setting. It will also involve an integrative experience where the individual will demonstrate competencies in assessment, programming, consultation, and counseling.

**PSY 599. Internship. 1-6 Hour.**

The internship will involve spending 600 hours in schools or a similar setting. It will also involve an integrative experience where the individual will demonstrate competencies in assessment, programming, consultation, and counseling.

**SCI 501. Research Methods. 3 Hours.**

Introduction to skills needed to carry out scientific research, including library, computer, communication, data management, and analysis skills. Students will propose a scientific research project.

**SCI 505. Biogeochemical Cycles. 3 Hours.**

Interdisciplinary study of global biogeochemical cycles and their impact on the environment.

**SCI 510. Survey Science Curricula. 3 Hours.**

Historical survey of science curricula with an emphasis on recent issues and trends and their application to current teaching practice.

**SCI 579. Research. 2-4 Hour.****SCI 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled. Fee required.

**SCI 590. Seminar. 1-3 Hour.**

Seminars on topics as approved by the division chair.

**SCI 592. Special Topics. 1-3 Hour.**

Special topics in Science.

**SCI 597. Independent Study. 1-3 Hour.**

Individual study on topics as approved by the division chair.

**SCI 598. Project and Report. 2 Hours.**

An extended research project on science education; could include action research conducted in the classroom. Many projects will require approval by the Institutional Review Board (IRB). The project report must meet Graduate School guidelines and be approved by a graduate committee.

**SCI 599. Thesis. 2 Hours.**

Individual research culminating in a thesis.

**SPED 501. Intro To Graduate Studies. 3 Hours.**

This core course provides an overview of the components and process of ethical educational research. It includes an examination of the research techniques most commonly used in the field of special education. Graduate candidates will explore the thesis process and begin the process of reviewing the literature related to a chosen topic and developing sound research questions.

**SPED 503. Research Design and Methodology. 3 Hours.**

This course is part of the special education research core and provides students with a comprehensive foundation in quantitative and qualitative methods for conducting meaningful inquiry and research. The purpose of this course is to help students write a clear description of the methodology section of their Master's thesis. They will gain a deeper understanding of research intent and design, methodology and technique, format and presentation, and data management and analysis informed by commonly used statistical methods. Prerequisites: Students must complete SPED 501 and 531 before enrolling in this course.

**SPED 504. Introduction to Services for Young Exceptional Children. 3 Hours.**

Students in this course receive an overview of service delivery models for young children who have or are suspected of having developmental delays and their families. Definitions, characteristics, legislative issues, family support, and educational impacts are described.

**SPED 505. Consultation and Supervision in SPED. 2 Hours.**

Students in this course study the various organizational models for special education services. It includes examination of consultant models throughout the processes of referral, appraisal, placement, implementation and evaluation.

**SPED 509. Infant/Toddler Development. 3 Hours.**

Infant Development is designed to provide the learner with a thorough analysis of typical and atypical infant/toddler development. The course includes the observation and study of typical and atypical development in children from birth through thirty-six months. Criterion for monitoring development across domains is discussed. An overview of basic service delivery definitions and concepts in early intervention is also provided.

**SPED 510. Law & Policy in Special Education. 3 Hours.**

This course is designed to provide educators an in depth study of the federal and state laws concerning provision of educational services and supports to students with disabilities in the public schools. Graduate candidates will increase their knowledge of advocacy and leadership skills in order to advance quality service provision for individuals with disabilities.

**SPED 513. Deaf Studies. 3 Hours.**

This course presents a comprehensive study of the Deaf community. Topics include history, culture, language, literature, art, society and social networks, customs, traditions, and identity.

**SPED 515. Practicum. 1-4 Hour.**

Designed to provide specific field experiences by program; typically, a culminating requirement with a minimum of 120 hours. Prerequisite: Completion of all graduate course requirements in the area of specialization with a minimum GPA of 3.00 or permission of department chair.

**SPED 516. Diagnostic Practicum. 4-8 Hour.**

This course provides practicum in all aspects of the  $\zeta$ Team Evaluation $\zeta$  process from administration to diagnosis, report writing, and program planning. Prerequisite: Completion of all graduate course requirements or permission of the program director.

**SPED 517. Methods for Mild Disabilities. 3 Hours.**

This advanced methods course studies the strategies, methods, and materials for educational programming necessary when teaching students with mild disabilities. This course focuses on academics, social functioning, vocational training, and life skills instruction for individuals with Developmental Disabilities, Learning Disabilities and Emotional Disabilities requiring less intensive levels of support. This course addresses teaching methods across specific content areas as well as the roles of educators in integrated settings to successfully collaborate to enhance opportunities for individuals with exceptionalities.

**SPED 521. Comm Support For Individuals with Behavior Disorders. 2 Hours.**

This course provides an analysis of the major service system (education, human/social services, mental health, juvenile justice) for individuals with emotional or behavior disorders.

**SPED 522. Guidance and Counseling For Behavior Disorders. 3 Hours.**

This course will review best practices in servicing students who have emotional or behavioral disorders. It will cover techniques for teaching students alternative behaviors in one-on-one and small group settings.

**SPED 524. High-Intensity Support Methods. 3 Hours.**

This course provides in depth study of the knowledge and skills needed to plan and deliver effective instruction in a variety of school and community-based settings to students with high-intensity support needs.

**SPED 525. Intro To Severe Disabilities. 1 Hour.**

This is an introduction to the study of persons with severe disabilities and the services they receive. Instructors will cover basic concepts in services in severe disabilities as well as characteristics of individuals and of service. This course should be taken before or simultaneously with other Severe Disabilities courses.

**SPED 526. Observation Of Student Learning. 1 Hour.**

This course is designed to teach students how to conduct observations of student learning. This course is geared specifically to address issues related to working with students with severe disabilities. Strategies for conducting observations in the classroom, using observations to gather assessment data, using data collected to make educational decisions for students will be discussed.

**SPED 527. Basic Skills For Teaching. 1 Hour.**

This course is designed to provide an overview of curriculum development, instructional strategies, and additional "best practice" procedures for students with severe disabilities. Emphasis is on utilization of an activity-based and ecological inventory approach to curriculum design and programming for skill acquisition, generalization, and maintenance. Elements of classroom management, integrated related services, and family participation are also introduced.

**SPED 528. Managing Daily Activities. 1 Hour.**

This class introduces learners to the practical aspects of managing daily activities for people with severe/multiple disabilities. The course focuses on how to set up and organize a program. Topics include understanding related best practices, standards, developing activities and daily schedules, teacher/provider and para-professional roles and responsibilities, daily communication with families and related service personnel, managing personal care routines, and training and evaluating staff in response to a program evaluation of the daily activities.

**SPED 529. Assistive Technology. 2 Hours.**

Provides an introduction to the use of assistive technology to support students who have disabilities. Introductory material is presented related to technology that may be used to aid communication, mobility, learning, and independence. Issues regarding assessment of student technology needs and funding assistive technologies are also covered.

**SPED 530. Physical and Medical Needs of Persons with Severe Disabilities. 3 Hours.**

This course is an introduction to physically handicapping conditions and related educational practices. Etiological considerations with educational implications are stressed in at least the following areas: cerebral palsy, spina bifida, muscular dystrophy, epilepsy, and skeletal deformities. Review of methods for physical and health management is provided.

**SPED 531. Psychoeducational Aspects of Exceptional Children. 3 Hours.**

This course takes an advanced educational psychology approach to examining psychological and sociological factors influencing the development and learning of exceptional children. The goal is to deepen graduate candidates' understanding of matching learner characteristics with support approaches for students with or at risk for disabilities.

**SPED 533. Clinical Practice. 1-4 Hour.**

This course provides a practicum in the assessment of children or adults with disabilities.

**SPED 534. Managing Behaviors. 1 Hour.**

This course is designed to teach management of student behaviors in the classroom and is geared to specifically address issues related to working with students with severe disabilities. Common behavior issues and their function will be discussed, as well as strategies for managing these excess behaviors.

**SPED 535. Inclusion Strategies. 1 Hour.**

The focus of this course is on the introduction of the philosophical, theoretical and practical aspects of providing inclusive education and includes the following: developing support for inclusion in school settings; facilitating transitions from special education into regular education classrooms; encouraging professional collaboration; developing regular education curriculum; designing adaptations and modifications; building social relationships and acceptance; and addressing typical challenges and barriers to inclusion.

**SPED 536. Managing Physical Movement. 1 Hour.****SPED 537. Facilitating Team Collaboration. 1 Hour.****SPED 538. Final Practicum in DD. 1-4 Hour.**

This is a mentored, individualized field practicum in setting and serving youth with developmental disabilities. Prerequisite: Completion of all graduate course requirements in DD/ASD with a minimum GPA of 3.0 or permission of the department chairperson.

**SPED 540. Appraisal Development Disability. 3 Hours.**

A methods course in educational appraisal of learners with severe or multiple handicaps, birth through 21 years. Competencies in screening, formal assessment, informal diagnostic techniques, interdisciplinary team evaluation and evaluating program variables emphasized. The focus is on connecting appraisal strategies to educational program planning.

**SPED 543. Methods of Teaching ECSE. 3 Hours.**

A methods course in instruction of children from birth through age five that emphasizes best practices in instruction; curriculum development and implementation with ongoing assessment of children's progress.

**SPED 550. Special Education Assessment. 2 Hours.**

This course provides a description of processes of assessment for screening special education, eligibility, program planning, and evaluation. Legal requirements, professional roles and responsibilities, and terminology are covered. Focus is on the interdisciplinary assessment process.

**SPED 561. Classroom Management and Positive Behavior Support. 3 Hours.**

This is an exploratory course in the application of effective and practical positive behavior support principles for special education teachers and pre-service school psychologists. Principles and strategies introduced in this course are derived from an extensive research base in positive behavior supports and effective teaching with learners who have special needs and with those who are typically developing learners.

**SPED 563. Family and Community Systems in Early Intervention. 3 Hours.**

This course identifies and validates ecological variables that impact early intervention services. Emphasis is placed on a family-centered approach as it impacts service delivery formats, related service, support services, parent involvement, inter-agency collaboration, and program design. Family structure and dynamics are emphasized.

**SPED 565. Early Intervention: Deaf/HH. 3 Hours.**

The focus of this course is on a family-centered approach to providing support and services to deaf and hard of hearing children and their families. Additional emphasis is placed on the effectiveness of early intervention on the language, social, and academic development of young children. Students are exposed to assessment strategies, effective program development and language intervention approaches which help young children acquire fluent language and communication skills.

**SPED 583. Strategies to Support Listening & Spoken Language. 3 Hours.**

This course focuses on the development of the audition and speech for children who are deaf/hard of hearing. The speech perception-production cycle is discussed with emphasis on specific teaching strategies for facilitating learning to listen and talk in children who are deaf/hard of hearing.

**SPED 584. Teaching Language to Deaf/HH. 3 Hours.**

This empirically based course explores the effects of hearing loss on language acquisition and development, assessment techniques, instructional strategies and communication methods and philosophies. The emphasis is on best practices.

**SPED 585. Advanced Audiology for Educators of the Deaf/Hard of Hearing. 3 Hours.**

This course is an advanced look into the audiology centered knowledge necessary to working with children who have hearing loss. The course will cover several concepts that are important to the understanding of hearing and hearing disorders, such as basic acoustics, anatomy and physiology of the auditory system and audiometry specifically designed for the pediatric patient. Different types and degrees of hearing loss in addition to the different amplification devices recommended for those with hearing loss will be addressed. A collaborative approach to service provision for children who are deaf/hard of hearing is stressed.

**SPED 586. Teaching Reading/Academics to DHH. 4 Hours.**

This course presents assessment and methods of teaching reading, math, social studies and science to student who are deaf or heard of hearing. The emphasis is on effective and empirically proven instructional approaches and stresses the development of language across all content areas.

**SPED 589. Continuing Enrollment. 0 Hours.**

Required enrollment for students previously enrolled in thesis or project credits who have not completed the credits by the end of the semester enrolled.

**SPED 590. Seminar In Special Education. 1-6 Hour.**

This course provides a special course of study related to a specific problem or unique area of concentration relative to special education, offered to any number of qualified graduate students upon request.

**SPED 592. Special Topics. 1-3 Hour.**

Through this course, opportunity is provided to read research literature in special education on an individual basis to meet student needs and interests.

**SPED 597. Independent Study. 1-3 Hour.**

This course provides student-initiated study under the direction of a faculty advisor.

**SPED 599. Thesis. 1-3 Hour.**

This course provides individual research culminating in a thesis.