

COURSE DESCRIPTIONS

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Biblical Education - General Studies (BEGS)**BEGS-6250 Bible Survey for Professionals 2 hours**

This course provides a comprehensive perspective or “big picture” of the Bible. Students will develop and apply inductive Bible study methods and principles for developing theology while increasing their Bible content knowledge and awareness of Bible study tools. Students will strengthen their biblical worldview as it relates to their field, enabling them to assist colleagues, parents, and students in applying biblical principles.

BEGS-7250 Foundations of Biblical Theology 2 hours

Designed to introduce the student to a Christian worldview created within a biblical framework, this course addresses the definition, function, formation, and evaluation of worldview. Then Christian responses and applications will be developed from a survey of biblical theology with emphasis on the teaching of the Bible, God, man, and salvation. Through course assignments, the student will be able to use the skill of worldview development to examine basic issues in education as well as in life.

Education Curriculum Studies (ECS)**ECS-6550 Special Topics in Curriculum 1–2 hours**

This course offers focused instruction and project work on a current or special topic in curriculum, often provided as part of a school inservice, teachers' convention, or specially scheduled course. Students may earn up to four credits.

ECS-7000 Curriculum Theory: Analysis and Design 2 hours

This course studies the philosophical basis, theoretical models, and instructional considerations necessary in curriculum design and construction. Emphasis will be given to the necessity of identifying assumptions underlying curriculum decisions, ascertaining and developing curriculum to meet the needs of various types of students, and aligning instructional techniques with curriculum goals and objectives. The historical foundations of curriculum and the role of leadership in curriculum change are also addressed.

ECS-7100 2 hours**Curriculum Theory: Implementation and Evaluation**

This course offers a study of the theoretical models, instructional considerations, and administrative issues involved in the implementation and evaluation of curriculum. Emphasis is given to the process of curriculum implementation at the district and school level and the evaluation of curriculum effectiveness in light of specified goals. *Prerequisite: ECS-7000 Curriculum Theory: Analysis and Design.*

ECS-7900 2 hours**Applied Research Project in Curriculum, Instructional, and Personnel Development**

Students will complete an approved applied research project designed in conjunction with a faculty advisor and/or an external mentor. The project must take place in an appropriate educational setting. The research project will be documented by a multi-media presentation and written report which will be suitable for the portfolio.

ECS-7950 2 hours**Research Thesis in Curriculum, Instructional, and Personnel Development**

Students develop an organized scientific contribution or comprehensive analysis of a theory and/or practice in a specific area of education. Thesis topic must be approved by graduate advisor or thesis committee. Credit may be earned over a period of several semesters.

Education Administration (EDA)**EDA-6100 Educational Leadership Theory–Su 3 hours**

Advanced analysis and synthesis of the knowledge, skills, and dispositions of ethical leaders who promote the success of all students by : creating cultures of educational excellence; responding to diverse learner needs; facilitating the development of safe, efficient, and effective learning environments; and influencing the political, social, economic, legal, and cultural contexts that shape schools and schooling. (odd years)

EDA-6550 Special Topics in Administration 1–4 hours

This course offers focused instruction and project work on a current or special topic in administration, often provided as part of a school inservice, teachers' convention, or specially scheduled course. Students may earn up to 4 credits.

EDA-6560 Organizational Administration–Su 3 hours

This course is a study of the concepts, styles, and exercise of organizational leadership in schools. This course will develop an understanding of the complex role of being a leader. (even years)

EDA-6600 2 hours**The Principalship: Early Childhood to Young Adolescence**

This course will focus on issues that promote the effective operation of schools for early and middle grades. Promotion of the success of all students by quality management of school operations will include (1) developmentally appropriate design and use of facilities, (2) development of a safe, secure, and efficient learning environment, (3) nurture of a school culture conducive to learning, and (4) developmentally and legally appropriate day-to-day operational policies and procedures.

EDA-6700 2 hours**The Principalship: Adolescence to Young Adult**

This course will focus on issues that promote the effective operation of schools for middle and secondary grades. Promotion of the success of all students by quality management of school operations will include (1) developmentally appropriate design and use of facilities, (2) development of a safe, secure, and efficient learning environment, (3) nurture of a school culture conducive to learning, and (4) developmentally and legally appropriate day-to-day operational policies and procedures.

EDA-7000 Assessing Classroom Performance 2 hours

This course defines the role of the mentor in enhancing instructional effectiveness through the mentoring and assessing process. Of particular focus are the skills and processes for mentoring and assessing classroom performance of teachers. The development of a continuing improvement plan will also be addressed.

EDA-7050 Curriculum Development for Instruction 3 hours

This course will help administrators determine educational needs of their constituency, and give some insights for curricular design and instruction improvement, and development of staff and program evaluation. This program will assist the administration in managing every area of the curricular process in their setting including determining teaching strategies and priorities which promotes the success fo all students. To have successful students the administration will learn how to involve the community, know learning and motivational theories to help the students advance in their becoming life-long learners. (odd years)

EDA-7100 School Finance 3 hours

Students will study the historical issues, constitutional issues, sources of revenue, state aid distribution methods, and the budgeting process for K–12 schools. The course is designed for the practicing school administrator and will focus on Ohio public schools.

EDA-7150 School Law 3 hours

An introduction to the specific legal issues pertinent to education with emphasis on the relationship between school administration and employees, students, the community, and various levels of government.

EDA-7200 Pupil Services Programs 3 hours

Organization and analysis of pupil services offered to a school district. Current issues, especially legal and ethical are examined. (even years)

EDA-7300 Building level Personnel—Su 3 hours

Advanced analysis and synthesis of the knowledge, skills, and dispositions of ethical leaders who promote the success of all students by: creating cultures of educational excellence; responding to diverse learner needs; facilitating the development of safe, efficient, and effective learning environments; and influencing the political, social, economic, legal, and cultural contexts that shape schools and schooling. (even years)

EDA-7600 Building Collaborative Schools 3 hours

This course presents and develops the skills necessary for the principal in building collaborative schools. It emphasizes the building and development of a shared vision for the school which values the positives of a diverse community, consensus building and negotiating with various constituents, business, and social agencies within diverse community settings. Techniques will be presented for collaborating with families, responding to community needs, and mobilizing community resources to facilitate student success and the school vision.

EDA-7900 2hours**Applied Research Project in Educational Administration**

Students will complete an approved applied research project designed in conjunction with a faculty advisor and/or an external mentor. The project must take place in an appropriate educational setting. The research project will be documented by a multi-media presentation and written report which will be suitable for the portfolio.

EDA-7950 2 hours**Research Thesis in Educational Administration**

Students develop an organized scientific contribution or comprehensive analysis of a theory and/or practice in a specific area of education. Thesis topic must be approved by graduate advisor or thesis committee. Credit may be earned over a period of several semesters.

EDA-7960 Principal Internship—Sp 3 hours

This internship is a planned, supervised, and evaluated field-based experience. It is designed to be the culminating field experience for the Principal Licensure Program. *Prerequisite: All the EDA courses that are required for the Principal Licensure program. This is a capstone course for the program.* (even years)

Education General (EDU)**EDU-6000 Learning Theory 2 hours**

This course studies the development of current theories in cognitive psychology: examination of human memory structure, encoding, storage, and retrieval processes as well as how beliefs about one's self, intelligence, and the nature of knowledge affect knowledge acquisition and the development of critical thinking, problem solving, and reflective thinking. The course will focus on an examination of current theories regarding constructivism, associationism, cognitive motivation, and meta-cognition.

EDU-6050 Applied Learning Theory 2 hours

This course offers an application of current theories of cognitive processing (e.g., encoding, storage, and retrieval), meta-cognition, and cognitive and affective factors of motivation to classroom instruction and assessment. Emphasis placed on the development of instructional lessons and units that utilize current theories of learning to enhance the development of meaningful learning, critical thinking, and intrinsic motivation in students.

EDU-6100 History and Philosophy of Education 2 hours

This course addresses the relationship between philosophy of education and how various philosophies have historically affected the practice of schooling, in the United States. It will examine how different philosophical schools answer questions related to the nature and purpose of schooling, and how these philosophies have been incorporated and modified to deal with social and cultural changes in United States history.

EDU-6150 Diversity and Social Issues in Education 2 hours

A study of the social, cultural, and political issues that affect decision-making and student achievement in schools, this course will examine the role of school in the enculturation or "Americanization" of students; the effects of student background and culture on achievement; and the different socio-cultural groups with a political stake in the curriculum and how these groups work to further their interests.

EDU-6200 Models of Teaching 2 hours

This course provides an overview of several models of teaching. After studying the theory behind a given model, students will participate in classroom demonstrations and then practice the model in micro-teaching or classroom situations.

EDU-6250 Statistical Reasoning in Education 3 hours

This course offers a survey of descriptive and sampling statistics applied for use in investigation and decision-making in education. Topics covered include the nature of quantitative design in educational research, descriptive statistics for univariate distributions, joint distributions, drawing inferences from statistical data, and statistical tests for between-subjects and within-subject designs.

EDU-6300 Program and Outcomes Assessment 2 hours

This course studies assessment concepts and procedures in the K–12 school setting. The course will review competencies required of teachers for educational assessment of students and application of assessment procedures in a K–12 program setting.

EDU-6400 Intervention Strategies and Techniques 2 hours

The course will focus on examination of the educational literature regarding effective teaching practices and behavior change strategies for students with special educational needs. It provides an opportunity to explore, design, implement, and evaluate school-based interventions for students with high-incidence disabilities.

EDU-6550 Special Topics in Instruction 1–2 hours

This course offers focused instruction and project work on a current or special topic in instruction, often provided as part of a school inservice, teachers' convention, or specially scheduled course. Students may earn up to 4 credits.

EDU-6700 Technology in Education 2 hours

A variety of resources and instructional websites are used to allow teacher candidates to take their own next step in the use of instructional technology. Students develop and present technology-based instruction reflecting newly-acquired technology skills. Basic technology skills developed include the creation and editing of images, audio, and wikis and the use of a web-based course management system, presentation software, and online research tools. Students already familiar with these technologies are required to expand their current skill set and demonstrate their skills in the delivery of instruction. (Fee: \$125)

EDU-7000 School Improvement 2 hours

School improvement is the continuous process of renewal of the social system, the curriculum, and the staff of the school. This course is designed to develop the meaning of the concepts, strategies, and practices involved in improving the school as a whole. Students will analyze school improvement from both the short-range and long-range perspective. The course will address areas such as improving proficiency scores, the learning environment, and attendance rates. The students will participate in simulations and discussions designed to analyze school improvement using data, improvement strategies, and formal evaluations.

EDU-7200 Research Design 2 hours

This course provides a critical study of research techniques and reporting methods used in education. Students will design a research project or thesis, utilizing accepted educational research methods.

EDU-7900 Applied Research Project in Education 2 hours

Students will complete an approved applied research project designed in conjunction with a faculty advisor and/or an external mentor. The project must take place in an appropriate educational setting. The research project will be documented by a multi-media presentation and written report, which will be suitable for the portfolio.

EDU-7950 Research Thesis in Education 2 hours

Students develop an organized scientific contribution or comprehensive analysis of a theory and/or practice in a specific area of education. Thesis topic must be approved by the graduate advisor or thesis committee. Credit may be earned over a period of several semesters

EDU-7965 Continuing Research 0-1 hours

This course provides continuous registration for both Research Thesis and/or Research Project. Students will be permitted to register for this course for zero credits in the two terms following the thesis or project course. Subsequent registrations for this course will be as a 1 credit hour graduate course. *Prerequisites: ECS-7900 Applied Research Project in Curriculum, Instructional and Personnel Development or ECS-7950 Research Thesis in Curriculum, Instructional, and Personnel Development; EDA-7900 Applied Research Project in Educational Administration or EDA-7950 Research Thesis in Educational Administration; EDU-7900 Applied Research Project in Education or EDU-7950 Research Thesis in Educational Administration.*

Nursing (NSG)**NSG-5000 Theoretical Foundations of Nursing Practice 3 hours**

The focus of this course is on analysis and critique of selected theories from nursing, related disciplines and organizational leadership for application to health care delivery and to advanced nursing practice.

NSG-5010 Advanced Physiology and Pathophysiology 3 hours

The focus of this course is on in-depth analysis of normal physiologic and pathologic mechanisms of diseases as the foundation for clinical assessment, decision-making, and management for clients across the lifespan. Synthesis and application of current research-based knowledge regarding pathological changes are also addressed.

NSG-5020 Advanced Health/physical Assessment and Diagnostic Reasoning 3 hours

This course focuses on utilization of diagnostic reasoning in analyzing data from comprehensive health assessment of clients across the lifespan in order to determine appropriate and effective health care, including health promotion strategies. *Prerequisite: NSG-5010 Advanced Physiology and Pathophysiology and evidence of undergraduate instruction in health assessment.* (Fee: \$150)

NSG-5030 Advanced Pharmacology 3 hours

The focus of this course is on both pharmacotherapeutics and pharmacokinetics of broad categories of pharmacologic agents. Emphasis is placed on assessment, diagnosis and management (including the prescription of pharmacologic agents) of a client's common health problems in a safe, high-quality, and cost-effective manner. *Prerequisite: NSG 5010 Advanced Physiology and Pathophysiology.*

NSG-5040 Professional Role Development for Advance Practice 3 hours

The focus of this course is on professional role development and performance competence of the nurse in advanced clinical practice within the context of health care delivery system. The leadership aspects of the roles of advanced practice are emphasized in relation to health care delivery, policy formulation, legislation and finance for advanced practice. Principles and process of writing for publication are presented. (Fee: \$150)

NSG-5045 Professional Role Development for the Nurse Educator 3 hours

The focus of this course is on professional role development and performance competence of the nurse educator. The leadership aspects of the roles are emphasized in relation to health care delivery, policy formulation, and legislation. Principles and process of writing for publication are presented.

NSG-5050 Research for Evidence-Based Nursing Practice 3 hours

The focus of this course is on the utilization and discovery of new knowledge to provide high-quality health care, initiate change, and improve nursing practice. Emphasis is placed on utilization of research including the evaluation of research, problem identification within the clinical practice setting, awareness of practice outcomes, and evidence-based practice. *Prerequisites: Computer literacy, undergraduate nursing research course, undergraduate statistics course.*

NSG-5060 Bioethics and Spiritual Care in Nursing 2 hours

The focus of this course is to introduce students to Christian ethics, biblical principles of spiritual care, biblical and non-biblical worldviews, secular theories of ethics and spirituality, critical thinking techniques, and principles of analysis used to resolve "real-life" moral and spiritual dilemmas nurses encounter in a variety of practice settings. The course is also open to other health care professionals. *Prerequisites: BEGS-6250 Bible Survey and BEGS-7250 Foundations of Biblical Theology or undergraduate minor in Bible.*

NSG-5070 Policies and Strategies for Health Care Delivery 3 hours

The focus of this course is on health policy, legislation, and policy making within the context of contemporary healthcare. Application to the role of the advanced practice nurse will be emphasized.

NSG-6010 Advanced Concepts in the Care of Older Adults 3 hours

The focus of this course is to prepare the advanced practice students with the theoretical, scientific, and technical foundations required in care for mature adults and aging family members. *Prerequisites: NSG-5010 Advanced Physiology and Pathophysiology, NSG 5020 Advanced Health/physical Assessment and Diagnostic Reasoning, NSG-5030 Advanced Pharmacology, NSG-5040 Professional Role Development for Advanced Practice or NSG-5045 Professional Role Development for the Nurse Educator, and NSG-5060 Bioethics and Spiritual Care.* (Fee: \$100)

NSG-6020 Advanced Practice in the Care of Older Adults for FNP 1 hour

In this course, the students are afforded the opportunity to master knowledge of health care problems in older adults, and to develop the advanced clinical and decision-making skills required. The students apply knowledge and skills of health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems of older adults in a clinical practice setting. The students work under the supervision of qualified preceptors and School of Nursing faculty to ensure that students achieve entry-level clinical competency in the nurse practitioner role. The practicum includes a 150-hour precepted clinical experience with qualified preceptors. *Prerequisite:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, NSG-5060 *Bioethics and Spiritual Care*. *Co-requisite:* NSG- 6010 *Advanced Concepts in the Care of Older Adults*. (Fee: \$100)

NSG-6020 Advanced Concepts in the Care of Adults 3 hours

The focus of this course is to prepare the advanced practice students with the theoretical, scientific, and technical foundations required in caring for adults. Emphasis is placed on health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems unique to adults in a variety of settings. Evidence-based management strategies, ethical decision-making, and culturally sensitive care are addressed. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. (Fee: \$100)

NSG-6025 Advanced Practice for the Care of Adults for FNP 1 hour

In this course, the students are afforded the opportunity to master knowledge of health care problems in adults, and to develop the advanced clinical and decision-making skills required. The students apply knowledge and skills of health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems of adults in a clinical practice setting. The students work under the supervision of qualified preceptors and School of Nursing faculty to ensure that students achieve entry-level clinical competency in the nurse practitioner role. The practicum includes a 150-hour precepted experience with qualified preceptors. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. *Co-requisite:* NSG- 6020 *Advanced Concepts in the Care of Adults* (or permission of instructor). (Fee: \$100)

NSG-6030 Advanced Concepts in the Care of Women 3 hours

The focus of this course is to prepare the advanced practice students with the theoretical, scientific, and technical foundations required in caring for women. Emphasis is placed on health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems unique to women in a variety of settings. Evidence-based management strategies, ethical decision-making, and culturally sensitive care are addressed. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. (Fee: \$100)

NSG-6035 Advanced Practice for the Care of Women for FNP 1 hour

In this course, the students are afforded the opportunity to master knowledge of health care problems in women, and to develop the advanced clinical and decision-making skills required. The students apply knowledge and skills of health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems of women in a clinical practice setting. The students work under the supervision of qualified preceptors and School of Nursing faculty to ensure that students achieve entry-level clinical competency in the nurse practitioner role. The practicum includes a 150-hour precepted experience with qualified preceptors. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, and NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. *Co-requisite:* NSG- 6030 *Advanced Concepts in the Care of Women* (or permission of instructor). (Fee: \$100)

NSG-6040 Advanced Concepts in the Care of Children 3 hours

The focus of this course is to prepare the advanced practice students with the biblical, theoretical, scientific and technical foundations required in caring for children (infancy through adolescence). Emphasis is placed on health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems of children (infancy through adolescence) in a variety of settings. Growth and development of the healthy newborns, infants, children and adolescents are examined along with stage-appropriate anticipatory health-management strategies. Evidence-based management strategies, ethical decision-making, and culturally sensitive care are addressed. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, and NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. (Fee: \$100)

NSG-6045 Advanced Practice in the Care of Children for FNP 1 hour

In this course, the students are afforded the opportunity to master knowledge of health care problems in children and adolescents, and to develop the advanced clinical and decision-making skills required. The students apply knowledge and skills of health promotion, disease prevention, assessment, diagnosis, and management of common primary health problems of children and adolescents in a clinical practice setting. The students work under the supervision of qualified preceptors and School of Nursing faculty to ensure that students achieve entry-level clinical competency in the nurse practitioner role. The practicum includes a 150-hour precepted experience with qualified preceptors. *Prerequisites:* NSG-5010 *Advanced Physiology and Pathophysiology*, NSG-5020 *Advanced Health/physical Assessment and Diagnostic Reasoning*, NSG-5030 *Advanced Pharmacology*, NSG-5040 *Professional Role Development for Advanced Practice* or NSG-5045 *Professional Role Development for the Nurse Educator*, and NSG-5060 *Bioethics and Spiritual Care*. *Co-requisite:* NSG-6040 *Advanced Concepts in the Care of Children* (or permission of instructor). (Fee: \$100)

NSG-6100 Foundations of Nursing Education 3 hours

This course is designed to provide an overview of the various activities inherent in the role of the nurse educator within academic and practice settings. There is a focus on concepts and theories basic to curriculum development, philosophies of education, learning theories, and research in nursing education. Standards and regulations influencing nursing education programs and curriculum development are also analyzed. *Prerequisite:* NSG-5045 *Professional Role Development for the Nurse Educator*.

NSG-6110 Teaching Methods and Strategies 3 hours

This course is designed to provide an analysis of teaching and learning strategies for effective functioning as a nurse educator. Use of evidence-based educational strategies, assessment of learners, and implementation of various instructional techniques for classroom and clinical instruction are emphasized. Strategies for promoting critical judgment and clinical decision-making, including the use of technology and simulation are included. *Prerequisite:* NSG-6100 *Foundations of Nursing Education*. (Fee: \$50)

NSG-6120 Evaluation in Nursing Education 3 hours

The foci of this course are an overview of evaluation techniques that enable nurse educators to plan and implement a variety of education-related evaluation approaches including test construction, item analysis, teaching effectiveness, and clinical performance appraisals. Use of other methods of evaluation, such as case scenarios, papers, projects, and presentations are analyzed. Program-level evaluation, including standards for program accreditation, is introduced. *Prerequisite:* NSG-6110 *Teaching Methods and Strategies*. (Fee: \$50)

NSG-6130 Teaching Practicum I 1 hour

This course is designed to provide supervised practical experiences to apply principles of curriculum design and teaching/learning theories and principles to the classroom and laboratory settings. Students utilize technology and simulation for designing and implementing learning experiences. The practicum includes 150 hours of laboratory and precepted opportunities for students to analyze and apply teaching strategies and includes seminar discussion focusing on solutions to contemporary issues related to nursing education and the role of the nurse educator. *Prerequisite:* NSG-6110 *Teaching Methods and Strategies* or permission of instructor. (Fee: \$100)

NSG-6140 Teaching Practicum II 1 hour

In this course, the students are afforded the opportunity to partner with a professional educator to apply acquired knowledge and skills in an educational setting. The practicum includes 150 hours with a nurse educator preceptor focusing on integrating the knowledge, skills, and resources necessary for evidence-based nursing education. Students collaborate with the nurse educator in implementing teaching/learning strategies and performance evaluation in the classroom, laboratory, and clinical settings. *Co-requisites:* NSG-6120 *Evaluation in Nursing Education* (or permission of instructor). (Fee: \$100)

NSG-6200 Philosophy and Theology of Health, Healing, and Illness 3 hours

In this course, the focus is on the analysis and critique of the philosophy and theology of health ministry for their application to nursing care. The leadership aspects of the health ministry role in health, healing, wholeness, and illness are emphasized in relation to advanced nursing practice. *Prerequisites:* BEGS-6250 *Bible Survey* and BEGS-7250 *Foundations of Biblical Theology* or an undergraduate minor in Bible. (Fee: \$50)

NSG-6210 Global Health and Vulnerable Populations 3 hours

The focus of this course is on contemporary global health issues which are examined through an analysis of social, political, cultural, and ethical policies. Issues examined include the principles, measurements, and the health-development link, global health themes, and the burden of disease and their relation to vulnerability. *Prerequisite:* NSG-5070 *Policies and Strategies for Health Care Delivery*, *Co-requisite:* NSG-6220 *Epidemiology* (or permission of instructor). (Fee: \$50)

NSG-6220 Epidemiology 3 hours

The focus of this course is on the acquisition and utilization of selected principles, concepts, and methods of epidemiology. Emphasis is placed on the problem identification, design, analysis, and interpretation of epidemiological studies. *Prerequisite:* NSG-5050 *Research for Evidence-based Nursing Practice*. (Fee: \$50)

NSG-6230 Population-Based Health Care Management 3 hours

This course is designed to prepare the student with the theoretical, scientific, and technical foundations in caring for vulnerable populations domestically and globally through health ministry. Emphasis is placed on the application of epidemiological methods and primary health care including health promotion and disease prevention strategies. *Prerequisites:* NSG-6210 *Global Health and Vulnerable Populations* and NSG-6220 *Epidemiology*. (Fee: \$50)

NSG-6240 Practicum I 2 hours

In this course, the student is afforded the opportunity to apply the theoretical concepts of global health and vulnerable populations by working in a supervised health ministry setting that serves global, immigrant, refugee, or vulnerable populations. The practicum includes 200 hours in seminar and precepted experiences in which students will assess, analyze, and evaluate health ministry strategies to promote health and prevent disease in vulnerable populations. *Prerequisite:* NSG-5070 *Policies and Strategies for Health Care Delivery*, *Co-requisites:* NSG-6210 *Global Health and Vulnerable Populations* (or permission of instructor), NSG-6220 *Epidemiology*. (Fee: \$100)

NSG-6250 Practicum II**1 hour**

In this course, students partner with a domestic, global, or health ministry agency to apply the acquired knowledge and skills in global health ministry. The practicum includes 200 hours of collaboration with a nurse missionary, parish nurse working in a setting that serves vulnerable populations, a community development project in a developing nation, or a nurse serving with a global voluntary agency. The focus of this experience is implementing population-based health care management principles. *Prerequisites:* NSG-6200 *Philosophy and Theology of Health, Healing, and Illness*; NSG-6210 *Global Health and Vulnerable Populations*; NSG-6220 *Epidemiology*. *Co-requisite:* NSG-6230 *Population-Based Health Care Management (or permission of instructor)*. (Fee: \$100)

NSG-6300 Master's Project I**2 hours**

The students will develop an evidence-based practice project with an identified area of interest: practice or education. In Master's Project I, the students will identify a topic of current concern within the specialty, review and synthesize the relevant literature, examine and address a specific issue. The scholarly activity is supervised and guided by a faculty advisor and committee. *Prerequisites:* NSG-5000 *Theoretical Foundations of Nursing Practice* and NSG-5050 *Research for Evidence-based Nursing Practice*.

NSG-6350 Master's Project II**2 hours**

The students will work closely with a faculty advisor and committee to complete the project designed in Master's Project I. In Master's Project II, the students will bring the implementation, analysis, and evaluation of the project to completion. Completion of a scholarly paper reflecting the activity is required.

Prerequisites: NSG-5000 *Theoretical Foundations of Nursing Practice*, NSG-5050 *Research for Evidence-based Nursing Practice*, and NSG-6300 *Master's Project I*. (Fee: \$50)

NSG-6400 Master's Thesis I**2 hours**

The students will engage in individual research related to an aspect of care related to the nurse practitioner, global health ministries, or nurse educator professions. In Master's Thesis I, the students refine the research proposal developed in NSG 5050, secure IRB approval and prepare the proposal for implementation. The scholarly activity is supervised and guided by a faculty advisor and thesis committee. *Prerequisites:* NSG-5000 *Theoretical Foundations of Nursing Practice* and NSG-5050 *Research for Evidence-based Nursing Practice*.

NSG-6450 Master's Thesis II**2 hours**

The students will work closely with a faculty advisor and committee to complete the research proposal designed in NSG-6400 Master's Thesis I. In Master's Thesis II, the students will bring the implementation, analysis, evaluation, and dissemination of the thesis work to completion. Completion of a scholarly thesis paper reflecting the research activity is required. *Prerequisites:* NSG-5000 *Theoretical Foundations of Nursing Practice*, NSG-5050 *Research for Evidence-based Nursing Practice*, and NSG-6400 *Master's Thesis I*. (Fee: \$50)

PHAR-6111 Research Design and Methodology–Fa **3 hours**

This course provides an introduction to research design and methodology, as related to pharmacy and the health sciences. This course will focus on concepts of scientific research across the discipline of pharmacy, research strategies and methodology for qualitative and quantitative research, and principles of epidemiologic research. Students also will learn how to develop and write research projects, as this course provides the basis for the research project that will be completed and presented in PHAR 7348 Research Seminar. *Prerequisites:* Good standing in P1 year in the School of Pharmacy and PPHR-2100 *Biostatistics*.

PHAR-6112 Introduction to Self Care–Fa**2 hours**

This course will focus on the development of an understanding of self-care, including its scope and limitations in the U.S. healthcare system, and a knowledge base regarding over-the-counter (OTC) medications (both traditional and complementary/alternative, e.g., herbs, nutritional supplements, homeopathics) and home diagnostic/medication therapy management tests/aids. Further, students will learn how to interact with patients towards the appropriate selection and use of these products. *Prerequisites:* P1 year in good standing in the School of Pharmacy; BIO-3450 *Human Structure and Function I*; BIO-3460 *Human Structure and Function II*; PPHR-3200 *Pharmacy Calculations*.

PHAR-6121 Pharmacy Practice Lab I–Fa**1 hour**

This course will focus on understanding concepts and developing skills fundamental to the practice of pharmacy, including methods of non-sterile medication preparation (e.g. reconstitution of oral powders for suspension, compounding of topical creams and ointments, encapsulation of dry powders), pharmacy calculations, and regulations and standards related to medication preparation. It will also introduce students to the medication use process; including medication procurement, inventory management, medication storage and security, and prescription transmission/receipt, interpretation, evaluation, fulfillment (including product selection, apportioning, packaging and labeling), dispensing, and record keeping. The students will learn to navigate computerized prescription processing systems, prescription benefits management systems, patient-based drug information systems, electronic medical records, and point-of sale systems. Health literacy and cultural competency will be practiced and the student will be introduced to patient counseling and assessment skills. They will also practice communication with other health-care providers. *Prerequisites:* good standing in P1 year in the School of Pharmacy.

Pharmacy (PHAR)**PHAR-6110 Introduction to Pharmacy Practice–Fa** **1 hour**

This course will focus on understanding the U.S. health care system and contemporary models of pharmacy practice. Key topics will include the regulations applicable to the practice of pharmacy in preparation for pharmacy internship experiences, prescription interpretation and fulfillment processes, health/pharmacy literacy, patient safety and communication, cultural literacy, and models professionalism. *Prerequisites:* P1 in good standing in the School of Pharmacy; PPHR-1011 *Profession of Pharmacy-History and Issues*; PPHR-1012 *Profession Pharmacy-History and Issues*; PPHR-2013 *Profession of Pharmacy-Careers*; PPHR-2014 *Profession of Pharmacy-Careers*.

PHAR-6122 Pharmacy Practice Lab II–Sp 1 hour

This course will focus on understanding concepts and developing skills fundamental to the practice of pharmacy, including methods of sterile and non-sterile medication preparation (e.g., reconstitution of oral powders for suspension, compounding of topical creams and ointments, encapsulation of dry powders), pharmacy calculations, and regulations and standards related to medication preparation. It will also introduce students to the medication use process; including medication procurement, inventory management, medication storage and security, and prescription transmission/receipt, interpretation, evaluation, fulfillment (including product selection, apportioning, packaging and labeling), dispensing, and record keeping. The students will learn to navigate computerized prescription processing systems, prescription benefits management systems, patient-based drug information systems, electronic medical records, and point-of-sale systems. Health literacy and cultural competency will be practiced and the student will be introduced to patient counseling and assessment skills. They will also practice communication with other health-care providers. *Prerequisites: good standing in the P1 year in the School of Pharmacy; PHAR-6121 Pharmacy Practice Lab I.*

PHAR-6130 Medicinal Biochemistry–Sp 4 hours

This course will address the chemical and physical properties of the biological macromolecules including proteins, carbohydrates, lipids, and nucleic acids. Additionally, the metabolic pathways, enzyme kinetics, and thermodynamics associated with these molecules will be discussed. The student will apply these biochemical principles to maintenance of health as well as to the pharmacological management of disease. *Prerequisites: admission into the Pharm.D. program*

PHAR-6131 Pharmaceutical Sciences I–Fa 5 hours

The major focus of this course is to introduce biophysical principles that are foundational for evaluating different pharmaceutical systems. This course will emphasize development of thermodynamic concepts that explains the equilibrium phenomena in different buffers, ionic solutions, and complex formation in various pharmaceutical dosage forms. Further, non-homogenous pharmaceutical systems and the problems involving interfacial phenomena and the stability of pharmaceutical dosage forms will also be studied. *Prerequisite: admission into the Pharm.D. program.*

PHAR-6132 Pharmaceutical Sciences II –Sp 5 hours

This course will lay the foundation for understanding the medicinal chemistry and pharmacological principles that govern the pharmacodynamics and pharmacotherapeutics of the various classes of drugs. *Prerequisites: good standing in the P1 year in the School of Pharmacy; PHAR-6131 Pharmaceutical Sciences I.*

PHAR-6133 Genetics and Pharmacogenomics–Sp 3 hours

This course introduces the basics of genetics followed by disease-specific applications of pharmacogenomics to provide an insight in to the future of clinical pharmacy practice. Using case studies, class discussion and a scholarly paper, students will apply genetic and pharmacogenomics principles to the practice of pharmacy. *Prerequisite: admission into the Pharm.D. program.*

PHAR-6134 Pharmacokinetics and Biopharmaceutics–Sp 4 hours

This course will lay the foundation for understanding the kinetic phenomena that helps to quantify and integrate the journey of drugs in the body. In addition, this course also shows the practical applications of pharmacokinetics and biopharmaceutics in providing a rational approach to patient care by establishing, optimizing and individualizing dosage regimen of different drugs in a clinical setting. *Prerequisites: Good standing in P1 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences.*

PHAR-6150 Drug Information and Informatics–Sp 3 hour

A primary focus of this course is the development of skills related to the retrieval, analysis and communication/dissemination of drug-related information. Further, this course will investigate the manner in which such information is integrated into automated data processing systems—including the benefits, risks, and constraints of such integration. *Prerequisites: P1 year in good standing in the School of Pharmacy; PHAR-6110 Introduction to Pharmacy Practice; PHAR-6121 Pharmacy Practice Lab I.*

PHAR-6171 1 hour**Introductory Pharmacy Practice Experience I–Fa**

Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period through the semester, totaling 52 contact hours. Students will demonstrate core practice skills: communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics and critical thinking. *Prerequisite: entrance into the professional curriculum.*

PHAR-6172 1 hour**Introductory Pharmacy Practice Experience II–Sp**

Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period throughout the semester, totaling 52 contact hours. Students will demonstrate core practice skills: communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics and critical thinking. *Prerequisite: entrance into the professional curriculum.*

PHAR-6210 2 hours**Cross-Cultural Care and Communication–Fa**

This course utilizes a cross-cultural framework to communicate principles of healthy living and provide patient care to different people groups. The course emphasizes the application of biblical basis for missions in providing patient care across different cultures with a genuine respect for the specific culture involved. In addition, this course introduces the design, implementation, and evaluation of health communication programs. *Prerequisites: good standing in P1 year in the School of Pharmacy PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics.*

PHAR-6211 Medication Therapy Management–Fa, Sp 2 hours

This course will provide the student with an in-depth, working knowledge of Medicare Part D, with an emphasis on Medication Therapy Management (MTM) Services. Through self-study modules, case studies, and hands-on patient interview and assessment practice sessions, students will strengthen existing skills needed to develop and implement MTM services in community pharmacies. *Prerequisites: good standing in P2 or P3 year in the School of Pharmacy. (odd years)*

PHAR-6231 Exotoxicology–Sp**2 hours**

This course explores the current understanding related to different interactions of substances and chemicals in environmental systems and subsystems on their bioavailability, circulation, and assimilation in target organisms as well as their physiological and pathophysiological responses. In addition, this course will examine the mechanisms and processes by which chemicals exert their effects on ecosystems and their ultimate impact on the populations or communities. *Prerequisites: good standing in P1 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics.*

PHAR-6250 Applied Biomedical Sciences Module–Fa**5 hours**

This course studies application of fundamental concepts of pharmacology, toxicology, and pharmacognosy in direct patient care-related issues. The concepts related to pathophysiological conditions, crude drug extraction, drug interactions, xenobiotics, toxins, and their toxicokinetics will be discussed in detail.

Prerequisites: good standing in P1 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics.

PHAR-6251 Cardiology Module–Fa**5 hours**

This course prepares the student to manage therapy of patients with conditions or diseases affecting the cardiovascular system. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medical chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-6252 Renal and Gastrointestinal Module–Fa**5 hours**

This course prepares the student to manage therapy of patients with conditions or diseases affecting the renal and gastrointestinal systems. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-6253 Pulmonology Module–Sp**5 hours**

This course prepares the student to manage therapy of patients with conditions or diseases affecting the pulmonary system. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-6254**5 hours****Infectious Disease and Immunology Module–Sp**

This course prepares the student to manage therapy of patients with conditions or diseases affecting the immune system and/or caused by infection. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-6255**5 hours****Endocrinology and Dermatology Module–Sp**

This course prepares the student to manage therapy of patients with conditions or diseases affecting the endocrine system or the skin. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-6260 Patient Care and Safety–Fa**2 hours**

This course provides an introduction to patient assessment. Topics include taking a medical history and review of systems, cultural competency, health literacy, interpretation of laboratory and diagnostic tests, documentation of patient care activities and writing progress notes, therapeutic plan development, and patient safety issues. *Prerequisite: P2 in good standing.*

- PHAR-6273** **1 hour**
Introductory Pharmacy Practice Experience III–Fa
 Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period throughout the semester, totaling 52 contact hours. Students will demonstrate core practice skills: communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics and critical thinking. *Prerequisite: P2 in good standing.*
- PHAR-6274** **1 hour**
Introductory Pharmacy Practice Experience IV–Sp
 Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period throughout the semester, totaling 52 contact hours. Students will demonstrate core practice skills: communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics and critical thinking. *Prerequisite: P2 in good standing*
- PHAR-7310 Biomedical Informatics–Fa, Sp** **2 hours**
 This course is designed to familiarize students with the application of computer technologies and information science in biomedicine and health science. Through a combination of lectures and hands-on computer exercises, students will be introduced to the conceptual and technical components of biomedical informatics. The conceptual components will include principles of database design, human-computer interfaces, medical terminologies and coding systems, medical decision analysis methods, clinical information systems architectures, and methods for measuring costs and benefits in health care systems. The technical components will include use of the Internet for biomedical applications, current and emerging wide area network technologies, use of literature and molecular sequence databases, and systems for telemedicine. *Prerequisites: PHAR-6110 Introduction to Pharmacy Practice; PHAR-6111 Research Design and Methodology; PHAR-6150 Drug Information and Informatics; PHAR-6171 Introductory Pharmacy Practice Experience I; PHAR-6250 Applied Biomedical Module; PHAR-6260 Patient Care and Safety; PHAR-6273 Introductory Pharmacy Practice Experience III.*
- PHAR-7311** **2 hours**
Community Pharmacy Management Seminar–Sp
 Building on the overviews presented in PHAR-7353 Leadership and Business Module, this seminar course will focus on developing the knowledge and skills necessary to effectively and successfully manage the business of community pharmacy. Students will actively address a number of issues related to the entrepreneurial, financial, human resource, legal, operational, customer service and professional aspects of owning/operating a fictitious independent community pharmacy located in a mid-sized community in the Midwest. *Prerequisites: PHAR-6110 Introduction to Pharmacy Practice; PHAR-6112 Introduction to Self Care; PHAR-6171 Introductory Pharmacy Practice Experience I; PHAR-6172 Introductory Pharmacy Practice Experience II; PHAR-6260 Patient Care and Safety; PHAR-6273 Introductory Pharmacy Practice Experience III; PHAR-6274 Introductory Pharmacy Practice Experience IV; PHAR-7353 Leadership and Business Module.*
- PHAR-7312 Topics in International Pharmacy–Fa, Sp** **2 hours**
 This course will engage students in discussions relating to global pharmaceutical issues and international practices of pharmacy. This will be facilitated via readings, web-based resources, guest faculty presenters, and student presentations. *Prerequisites: good standing in P2 or P3 year in the School of Pharmacy. (odd years)*
- PHAR-7321 Pain Management–Fa, Sp** **2 hours**
 This course will provide an in-depth, case-based, problem-solving approach to pain management in patients with both acute and chronic pain. Students will be guided by a faculty facilitator through various types of complex pain patients. Students will develop a working knowledge of opioid dosing and titration, adjuvant medications, non-steroidal anti-inflammatory drugs and non-pharmacologic therapy. Students will be provided with a list of resources to assist them in their application of therapeutic principles to pain patients. The content of this course will be significantly more in-depth than the core curriculum requirements of pain management. *Prerequisites: good standing in P2 or P3 year in the School of Pharmacy. (odd years)*
- PHAR-7331 Industrial Pharmacy–Sp** **2 hours**
 This course will discuss fundamental principles of Good Manufacturing Practice (GMP) in the pharmaceutical industry. The course will introduce the GMP principles and approaches for active pharmaceutical ingredients, excipients and finished pharmaceuticals that are applicable in day-to-day operations of the industry. In addition, the course will also study the history, the science, and the laws behind GMP that ensure high-quality operation and maintenance of a pharmaceutical industry. *Prerequisites: good standing in P1 and P2 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics*
- PHAR-7332 Perinatal Pharmacology–Sp** **2 hours**
 This course will take an in-depth view of the fetal and intrauterine pharmacology and provides scientific basis for the effect of drugs on fetus. The course will explain the basic concepts together with experimental evidence on metabolism and distribution of drugs in the placenta, effect of drugs on placental metabolism, and biochemical and behavioral effects on infants when drugs are administered during perinatal period. *Prerequisite: good standing in P1 and P2 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics.*
- PHAR-7342 Law and Legal Affairs–Fa** **1 hour**
 This course will introduce students to the U.S. legal system, and specifically the systems by which laws and rules related to the practice of pharmacy are created/promulgated, including the bodies of regulators responsible for such activities (e.g., federal and state legislatures, state boards of pharmacy, DEA, FDA). The course will subsequently focus on the laws and rules governing the practice of pharmacy in the state of Ohio as a guide to understanding the same across the nation. Case law will be used to demonstrate the tensions and limitations of current laws and rules in the context of contemporary practice, particularly considering ethical dilemmas in pharmacy practice. *Prerequisites: P3 in good standing in the School of Pharmacy; PHAR-6110 Introduction to Pharmacy Practice; PHAR-6112 Introduction to Self Care; PHAR-6121 Pharmacy Practice Lab I; PHAR-6122 Pharmacy Practice Lab II; PHAR-6150 Drug Information and Informatics; PHAR-6171 Introductory Pharmacy Practice Experience I; PHAR-6172 Introductory Pharmacy Practice Experience II; PHAR-6273 Introductory Pharmacy Practice Experience III; PHAR-6274 Introductory Pharmacy Practice Experience IV; PHAR-7353 Leadership and Business Module.*

PHAR-7346 Bioethics—Sp 3 hours

This course will explore the philosophical and theological foundations for professional, biomedical, and clinical ethics. Using case studies on different issues like contraception, abortion, euthanasia, personhood, and research ethics, this course will discuss and analyze them from different worldviews and contrast them with a biblical worldview. *Prerequisites: good standing in P2 year in the School of Pharmacy; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6250 Applied Biomedical Sciences Module.*

PHAR-7348 Research Seminar—Sp 2 hours

This course will introduce the student to professional research projects. The research project will be developed in concert with a member of the faculty, and will examine any valid pharmacy research question. Each student will be required to submit their project for a poster at a professional session. *Prerequisites: P3 in good standing in the School of Pharmacy; PHAR-6251 Cardiology Module; PHAR-6252 Renal and Gastrointestinal Module; PHAR-6253 Pulmonology Module; PHAR-6254 Infectious Disease and Immunology Module; PHAR-6255 Endocrinology and Dermatology Module; PHAR-6260 Patient Care and Safety.*

PHAR-7351 Neurology and Psychiatry Module—Fa 5 hours

This course prepares the student to manage therapy of patients with conditions or diseases affecting the neurologic system and psychiatric disorders. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-7352 Oncology and Palliative Care Module—Fa 5 hours

This course prepares the student to manage therapy of patients with oncologic conditions or diseases and/or palliative care issues. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-7353 Leadership and Business Module—Fa 3 hours

This course will focus on developing the knowledge and skills necessary to successfully manage the business of pharmacy in various models/settings (e.g., privately owned and chain community pharmacies; hospitals/health systems), including entrepreneurship, business planning, human resource management (including employee candidate interviews), pharmacy operations, product/service pricing and reimbursement and business marketing. Further, models of leadership will be reviewed and related skills will be cultivated. *Prerequisites: P3 in good standing in the School of Pharmacy; PHAR-6110 Introduction to Pharmacy Practice; PHAR-6112 Introduction to Self Care; PHAR-6121 Pharmacy Practice Lab I; PHAR-6122 Pharmacy Practice Lab II; PHAR-6150 Drug Information and Informatics; PHAR-6171 Introductory Pharmacy Practice Experience I; PHAR-6172 Introductory Pharmacy Practice Experience II; PHAR-6273 Introductory Pharmacy Practice Experience III; PHAR-6274 Introductory Pharmacy Practice Experience IV; PHAR-7353 Leadership and Business Module*

PHAR-7354 Special Populations Module—Fa 5 hours

This course prepares the student to manage therapy of pediatric and geriatric patients, or patients with women's or men's health issues. The course focuses on the application of principles through a mixture of problem-based learning in small group settings, simulation and demonstration labs, and expert consultations in a team-taught, multidisciplinary environment. The course vertically integrates pharmacology, medicinal chemistry, pharmacokinetics, anatomy, physiology and pathophysiology, therapeutics, patient assessment, epidemiology, and administrative and psychosocial-behavioral issues involved in patient care. Over-the-counter, prescription, herbal and nontraditional therapies, and non-drug therapies are specifically included. *Prerequisites: PHAR-6111 Research Design and Methodology; PHAR-6130 Medicinal Biochemistry; PHAR-6131 Pharmaceutical Sciences I; PHAR-6132 Pharmaceutical Sciences II; PHAR-6133 Genetics and Pharmacogenomics; PHAR-6134 Pharmacokinetics and Biopharmaceutics; PHAR-6150 Drug Information and Informatics.*

PHAR-7355 Capstone—Sp 5 hours

The focus of this course is to apply the material learned in the Disease Modules to describe, optimize and critique drug therapy in complex patient cases in a variety of practice settings. The student will present this information in writing and verbally throughout the course. The activities will include case presentations, review, analysis and application of the literature, and written papers. Students will be required to demonstrate proficiency in patient assessment, medication history, patient counseling and communication skills through simulated patient care settings. *Prerequisites: P3 in good standing in the School of Pharmacy; PHAR-6251 Cardiology Module; PHAR-6252 Renal and Gastrointestinal Module; PHAR-6253 Pulmonology Module; PHAR-6254 Infectious Disease and Immunology Module; PHAR-6255 Endocrinology and Dermatology Module; PHAR-6260 Patient Care and Safety; PHAR-7351 Neurology and Psychiatry Module; PHAR-7352 Oncology and Palliative Care Module; PHAR-7353 Leadership and Business Module; PHAR-7354 Special Populations Module; PHAR-7375 Introductory Pharmacy Practice Experience V.*

- PHAR-7375** **1 hour**
Introductory Pharmacy Practice Experience V–Fa
 Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period throughout the semester, totaling 52 contact hours. Students will demonstrate core practice skills; communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics, and critical thinking. *Prerequisites: entrance into the P1 portion of the professional curriculum.*
- PHAR-7376** **1 hour**
Introductory Pharmacy Practice Experience VI–Fa
 Introductory Pharmacy Practice Experiences (IPPE) in the first year of the professional curriculum are designed to provide opportunities for students to practice technical pharmacy skills in either community or institutional settings. Students in IPPE will meet with an assigned preceptor for a four-hour period throughout the semester, totaling 52 contact hours. Students will demonstrate core practice skills; communication, calculations, ethics, medication safety, managing resources, wellness, health promotion, technology, informatics, and critical thinking. *Prerequisites: entrance into the P1 portion of the professional curriculum.*
- PHAR-7481** **1 hour**
Advanced Institutional Experience I–Fa, Sp, Su
 Advanced Institutional Experience I is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Institutional Experience I is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: entrance into the P1 portion of the professional curriculum.*
- PHAR-7482** **4 hours**
Advanced Community Experience I–Fa, Sp, Su
 Advanced Community Experience I is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Community Experience I is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*
- PHAR-7483** **4 hours**
Advanced Ambulatory Care Experience I–Fa, Sp, Su
 Advanced Ambulatory Care Experience I is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Ambulatory Care Experience I is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*
- PHAR-7484** **4 hours**
Advanced Acute Care Experience I–Fa, Sp, Su
 Advanced Acute Care Experience I is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Acute Care Experience I is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*
- PHAR-7485** **4 hours**
Advanced Institutional Experience II–Fa, Sp, Su
 Advanced Institutional Experience II is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Institutional Experience II is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: PHAR-7481 Advanced Institutional Experience I.*
- PHAR-7486** **4 hours**
Advanced Community Experience II–Fa, Sp, Su
 This course is a selective experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This course meets the requirement for one of the two required selective experiences. Advanced Community Experience II is designed to further the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: PHAR-7482 Advanced Community Experience I.*
- PHAR-7487** **4 hours**
Advanced Ambulatory Care II–Fa, Sp, Su
 Advanced Ambulatory Care II is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Institutional Experience II is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: PHAR-7483 Advanced Ambulatory Care Experience I.*

PHAR-7488 Advanced Acute Care Experience II–Fa, Sp, Su 4 hours

Advanced Acute Care Experience II is a required experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. Advanced Acute Care Experience II is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in an institutional pharmacy practice setting. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: PHAR-7484 Advanced Acute Care Experience I.*

PHAR-7510 Institutional Care Elective–Fa, Sp, Su 4 hours

Institutional care is a category of electives of the experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives This course may be repeated under different sections. *Prerequisites: P4 year in good standing.*

PHAR-7511 Pain Management Elective–Fa, Sp, Su 4 hours

Pain management is an elective of the experiential rotations in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*

PHAR-7520 Acute Care Elective–Fa, Sp, Su 4 hours

Acute care is a category of electives of the experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives This course may be repeated under different sections. *Prerequisites: P4 year in good standing.*

PHAR-7530 Community Care Elective–Fa, Sp, Su 4 hours

Community care is a category of electives of the experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives. This course may be repeated under different sections. *Prerequisites: P4 year in good standing.*

PHAR-7531 Medical Mission–Fa, Sp, Su 4 hours

Medical mission a category of electives of the experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year student in good standing.*

PHAR-7540 Ambulatory Care Elective–Fa, Sp, Su 4 hours

Ambulatory care a category of electives of the experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives This course may be repeated under different sections. *Prerequisites: P4 in good standing.*

PHAR-7541 Anticoagulation Service Elective Experience–Fa, Sp, Su 4 hours

The anticoagulation service elective is an elective experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*

PHAR-7550 Long-Term Care Elective—Fa, Sp, Su **4 hours**

Long-Term care is a category of electives of the experiential rotations in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives This course may be repeated under different sections. *Prerequisites: P4 in good standing.*

PHAR-7551 **4 hours****Nutrition Support Elective Experience**—Fa, Sp, Su

The nutrition Support elective is an elective experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*

PHAR-7552 **4 hours****Mental Health Elective Experience**—Fa, Sp, Su

The mental health elective is an elective experiential rotation in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. *Prerequisites: P4 year in good standing.*

PHAR-7560 Non-Patient Care Elective—Fa, Sp, Su **4 hours**

Non-Patient care is a category of electives of the experiential rotations in the Advanced Pharmacy Practice Experience (APPE) sequence. This category of electives provides experiences that is designed to foster the development of the knowledge, skills, abilities, attitudes, and values of a pharmacist in institutional care environments. APPE's are full-time and are conducted under pharmacist-preceptors who provide supervision and monitoring. Advanced experiences emphasize the need for continuity of care throughout the health care delivery system, including the availability and sharing of information regarding a patient's condition, medications, and other therapies. Students may register for one to three sections within this category of electives This course may be repeated under different sections. *Prerequisites: P4 year in good standing.*