

ACADEMIC PROGRAMS

COURSE NUMBERING AND CLASSIFICATION SYSTEM

000-099	Preparatory courses (no credit allowed toward requirements for academic degrees)
100-299	Lower division courses (freshman and sophomore level)
300-499	Upper division courses (junior and senior level)
500-599	First graduate or professional year
600-699	Second graduate or professional year
700-799	Third professional year

BIOL	Biology
BUSI	Business
CHEM	Chemistry
ECON	Economics
ENGL	English
GEDU	General Education
GSCI	General Science
HEP	Health Promotion
HIST	History
HSCI	Health Science
MATH	Mathematics
PHYS	Physics
POLS	Political Science
PSYC	Psychology
SOCI	Sociology
SPCH	Speech
ACS	Associated Clinical Sciences
ANA	Anatomy
CHE	Chemistry
CLI	Clinic
DIM	Diagnostic Imaging
GED	General Diagnosis
MPH	Microbiology and Public Health
NMS	Neuromusculoskeletal Diagnosis
PAT	Pathology
PHY	Physiology
PHT	Physiotherapy
PRA	Chiropractic Practice
PRI	Principles of Chiropractic

COURSE REQUIREMENTS AND DESCRIPTIONS

The curriculum outlined in the *Catalog* or other College documents represents the academic programs as they were offered at the time the *Catalog* was printed. These programs are subject to change. Students will be notified of changes as they are made.

Specific questions relating to the curriculum may be directed to the dean or director of degree program or department chairpersons. Advance appointments may be required with these individuals.

The College reserves the right to limit the offering of any course based on faculty availability and/or enrollment.

LECTURE/ONLINE HYBRID COURSES

The Los Angeles campus' Department of Undergraduate Studies offers a selection of courses combining in-class lecture and discussion with an online component, including General Psychology, Cultural & Ethnic Studies, General Sociology, Introduction to Business, General Economics, History of American Culture, U.S. Government, Intermediate and College Algebra. Hybrid courses are offered in accelerated, eight-week modules and are equivalent to regular classroom courses in terms of their goals, objectives, course content and outcomes. Hours are divided evenly between in-class time and online activities. Online course-related communications, materials, exercises and quizzes are web-based and easily accessible through any Internet Service Provider (ISP). Online portions of the courses are conducted asynchronously, available on a 24-hour, seven-day-a-week schedule, so that students have greater flexibility to control their participation in these courses.

Hybrid courses are interactively structured to allow ongoing communication between students and instructors, as well as among students, through e-mail and weekly discussion threads available through the online course site. Students are required to log in at least once a week for discussions, to submit the assignments/papers, or to take assigned quizzes. Midterm and final examinations are given on campus.

COURSE DESCRIPTION KEY

(Lecture Clock Hours per week / Laboratory Clock Hours per week / Credit Hours/ Trimester Clock Hours)

Example: (3/0/3/45)

3 = Lecture Clock Hours per week

0 = Laboratory Clock Hours per week

3 = Credit Hours

45 = Trimester Contact Hours

Laboratory Hours Equivalency:

2 laboratory hours = 1 credit hour

2 laboratory hours = 2 contact hours

The course description key represents credit hours based on a trimester system. A majority of the undergraduate courses are offered on an accelerated eight-week modular format.

Lecture hours are based on an eight-week format.

Course Prerequisites: Students must successfully complete the prerequisites for a course with a minimum grade of “C,” prior to taking the associated course. Corequisites are taken prior to, or concurrent with, the corresponding corequisite course. Withdrawal from a corequisite course will result in an administrative withdrawal from the corresponding corequisite course.

ELECTIVE HOURS

Elective courses are available in the B.S., M.S. and D.C. degree programs. Each degree program offers a number of elective courses described in the *Catalog*. For more information on elective hours, contact the dean or the program director.

Elective courses will be offered based on faculty availability, a minimum enrollment number established by the College, and may be offered on a rotating basis.

UNDERGRADUATE STUDIES

Undergraduate Program Mission

The Cleveland Undergraduate Studies program mission is to provide a respected and recognized undergraduate studies program specializing in life sciences and health promotion, preparing graduates to continue in health-related education programs.

Associate of Arts in Biological Sciences Degree Program/Bachelor of Science in Human Biology Degree Program

Cleveland Chiropractic College offers the degrees of Associate of Arts in Biological Sciences and Bachelor of Science in Human Biology. Students may pursue either the Bachelor of Science or the Doctor of Chiropractic degree independently or both degrees concurrently.

The general objective of the undergraduate program is to provide the student a strong undergraduate education that stresses the structure and function of the human body, while providing for the general education requirements of the degree.

The specific objectives of the Bachelor of Science in Human Biology degree are:

1. To provide enrolled Doctor of Chiropractic students with the opportunity to meet the eligibility requirements for chiropractic licensure in those states that require a pre-licensure, regionally accredited baccalaureate degree. Currently, several states have such a requirement in addition to the Doctor of Chiropractic degree for chiropractic licensure.
2. To provide Cleveland Chiropractic College graduates the opportunity to pursue additional graduate degree programs. A regionally accredited Bachelor of Science degree in Human Biology may enhance the graduate's opportunities to accomplish this goal.
3. To offer prerequisite health science and general education courses for first professional health care doctoral degree programs.

Specific requirements for the Associate of Arts in Biological Sciences and Bachelor of Science in Human Biology and the concurrent degree of B.S./D.C. are indicated in the admissions policies of the College.

ASSOCIATE OF ARTS IN BIOLOGICAL SCIENCES CURRICULUM

The Associate of Arts degree requires a minimum of 60 semester units of post-secondary coursework. Students are required to complete a minimum of 15 semester units at

Cleveland Chiropractic College. Transfer credit may be accepted for equivalent coursework received from another nationally recognized institution at the discretion of the director of undergraduate studies. A minimum grade of “C” (2.0 on a 4.0 scale) or better must be received in all coursework to be eligible to complete the Associate of Arts degree. For first degree applicants, transfer coursework in science and math must have been completed within 15 years of the date of matriculation to the College.

All prospective students are encouraged to speak with an admissions advisor to be informed of any changes in the requirements. The Office of Admissions or the director of undergraduate studies reserves the right to evaluate and to determine acceptability of specific courses.

Foundation Skills: (9 semester units)

- English Composition I 3 semester units
 - College Algebra 3 semester units
 - Foundation Skills Electives* 3 semester units
- * Speech, Communications, English Composition, Logic, Computer Basics, Foreign Language, Statistics, Research or other approved coursework.

General Education: (15 semester units)

- American History or American Government 3 semester units
- Psychology 3 semester units
- Humanities/Social Science Electives 9 semester units

Physical and Life Sciences: (36 semester units)

- Biological Sciences with related labs 8 semester units
- Physics with related labs* 8 semester units
- Inorganic or General Chemistry with related labs 8 semester units
- Organic Chemistry with related labs** 8 semester units
- Biological Science Elective 4 semester units

* At least three semester units must be in physics (with one semester unit of related lab) and three semester units of an unduplicated physics course or three semester units in biomechanics, kinesiology, statistics or exercise physiology.

** A combination of three semester units of organic chemistry with related lab (one semester unit) and three semester units of biochemistry with related lab (one semester unit) is acceptable.

BACHELOR OF SCIENCE IN HUMAN BIOLOGY CURRICULUM

The Bachelor of Science degree requires a minimum of 124 semester units of post-secondary coursework. Students are required to complete 36 semester units and Advanced Topics in Human Biology at Cleveland Chiropractic College. Transfer credit may be accepted for equivalent coursework received from an institution accredited by a nationally recognized agency at the discretion of the dean of undergraduate studies. Acceptable transfer credit will only apply to the Bachelor of Science degree, but will not apply to the Doctor of Chiropractic degree unless approved by the dean of the Doctor of Chiropractic program. A minimum grade of “C” (2.0 on a 4.0 scale) or better must be received in all coursework to be eligible to complete the Bachelor of Science degree. For first degree applicants, transfer coursework in science and math must have been completed within 15 years of the date of matriculation to the College.

The dean of undergraduate studies or persons s/he designates reserves the right to determine acceptability of specific courses for transfer credit or advanced standing. Individual student needs are taken into consideration in developing a course schedule. In general, students will not be allowed to take more than two accelerated science courses per module. This limitation may be waived at the discretion of the dean of undergraduate studies.

Part I: B.S. Coursework

Foundation Skills (16 semester units)

- English Composition I* 3 semester units
- English Composition II** 3 semester units
- Oral Communications*** 3 semester units
- College Algebra 3 semester units
- Health Science Terminology 1 semester unit
- Foundational Skills Electives**** 3 semester units

* Students who earn a score of 30 or above on the ACT English subtest or 690 and above on the SAT Essay may substitute another Foundational Skills course for the English Composition I requirement.

** The course must contain a critical thinking component. Students may substitute any critical reasoning course that involves written argument and rhetoric, including courses in logic and argumentation.

*** Courses in public speaking, group discussion, argument and debate, or courses in communication studies that require oral presentations satisfy this requirement.

****Courses at the 100-level or higher, such as writing, logic, communication studies, voice and articulation, computer science, statistics, research methods, basic science literature, physical anthropology, and introduction to chemistry, physics, biology, or organic chemistry.

General Education: (27 semester units)

- American History or American Government 3 semester units
- Psychology 3 semester units
- Sociology 3 semester units
- Economics or Business Management 3 semester units
- Humanities*/Social Sciences** 15 semester units

* Humanities include such courses as art/art history, cinema/film studies, classical studies, drama/theater, fine arts, foreign languages, humanities, journalism, linguistics, literature, music, philosophy, radio/television, religious studies, as well as courses approved by the director of undergraduate studies, or by persons designated by the director.

** Social Sciences include such courses as business, cultural anthropology, child development, economics, education, ethnic or minority studies, political and economic geography, history, political science, urban studies, as well as courses approved by the director of undergraduate studies, or by persons designated by the director.

Foundational Sciences: (24 semester units)

- Physics I and II 8 semester units
- General Chemistry I and II with Labs 8 semester units
- Organic Chemistry I and II with Labs 8 semester units

Biological Sciences: (24 semester units)

- General Biology with Lab 4 semester units
- Anatomy and Physiology Coursework with Labs 8 semester units
- Microbiology with Lab 4 semester units
- Genetics 3 semester units
- Biological Science Elective 5 semester units

Part II: D.C./B.S. Coursework

Life Sciences (29 semester units):

- Embryology 3 semester units
- Histology 5 semester units
- Cell Physiology 3 semester units
- Biochemistry I 5 semester units

- Biochemistry II 5 semester units
- Basic Nutrition 4 semester units
- Immunobiology 3 semester units
- Introduction to Research 1 semester unit

Capstone (4 semester units):

- Advanced Topics in Human Biology* 4 semester units

* Enrollment requires a “C” (2.0 on a 4.0 scale) or better in all coursework leading to the Bachelor of Science in Human Biology degree.

Preparatory Elective Courses

Cleveland Chiropractic College recognizes that applicants may be non-traditional students. The College offers the following courses to help prepare the student for the rigorous pre-professional health sciences curriculum.

(lecture/lab/credit hour/contact hours)

CHEM 141 Introduction to Chemistry (3/2/4/75)

This course is an introduction to the principles of chemistry with emphasis on quantitative methods and calculations. This course covers principles, laws and nomenclature of both inorganic and organic chemistry. The laboratory component is designed to introduce activities in preparation for General Chemistry laboratory courses. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit.

Prerequisite: *College Algebra*

ENGL 099 Introduction to English Composition (6/0/3/48)

This remedial-level course prepares students for English Composition through study and exercises in grammatical and word usage, sentence composition, paragraph development, and basic essay structure. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit. **Prerequisite:** *English Placement Examination as determined by the dean or program director.*

MATH 051 Basic Mathematics (6/0/3/48)

The purpose of this course is to provide students a good foundation in arithmetic and geometry. In addition, it introduces the concepts required to learn higher mathematics such as intermediate and college algebra. The course covers the following topics: basic mathematical concepts such as integers and expressions, solving equations, decimals and equations, number theory, rational numbers, ratios and proportions, percentages, equations and inequalities, graphing, basic

geometry, probability, arithmetic and factoring polynomials, laws of exponents, solving and graphing linear equations, quadratic equations and their applications to word problems. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit. **Prerequisite:** *Math Placement Examination as determined by the dean or program director.*

MATH 091 Intermediate Algebra (3/0/3/45)

This course stresses the elementary concepts of algebra, including number systems, factoring solutions and inequalities, rational expressions, graphing and equations with two variables. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit.

PHYS 121 Introduction to Physics (3/0/3/45)

Applications of physics to modern life and physical laws of nature with a minimum of mathematical emphasis are offered in this course. This course is designed to introduce the student to physics. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit.

ASSOCIATE OF ARTS IN BIOLOGICAL SCIENCES/ BACHELOR OF SCIENCE IN HUMAN BIOLOGY

Hours are based on a 16-week format, but may be offered in an eight-week module.

Department of Humanities and Social Sciences

(lecture/lab/credit hour/contact hours)

ACST 190 Mastering Lifelong Learning (3/0/3/45)

This course prepares students for lifelong learning that is required in the Information Age. Attention will be focused on efficiently retrieving and effectively analyzing, evaluating and using reliable resources as well as articulating to others through oral and written communication.

BUSI 101 Introduction to Business (4/0/4/60)

This course is a general introduction to business opera-

tions in the contemporary world, including the study of the structure and organization of business enterprises, the role of management, finance, and marketing, with a special emphasis on small business models.

ECON 101 General Economics (4/0/4/60)

This course offers an introduction to concepts of economic analysis; economic principles, problems and policies; economic cycles including recession, unemployment and inflation; national income accounts; business organization; monetary and fiscal policy and international trade.

ENGL 101 English Composition I (3/0/3/45)

This is a course in expository writing that includes argument or persuasion, techniques of research, and a substantial reading component. Instruction in writing annotated papers is presented. **Prerequisite:** *Reading and writing skills (ENGL 099) or placement based on the English assessment test.*

ENGL 102 English Composition II (3/0/3/45)

This course stresses writing and critical analysis, interpretation, and evaluation of various types of argumentative and persuasive discourse. The course emphasizes critical thinking, reading and writing. This course requires a substantial persuasive research paper.

ENGL 203 American Literature (4/0/4/60)

This course offers a study of American writers and their relationship to major literary and intellectual movements from the Civil War to the present. Students must write a research paper on a focused topic relating to the course. **Prerequisite:** *English Composition I*

GSCI 101 Introduction to Basic Science Literature (1/0/1/15)

This course offers an introduction to reading university level basic science texts and in developing strategies to frame responses employing the concepts of recall, paraphrase, comprehension, synthesis and analysis. Emphasis is placed on development of academic vocabulary and editing for grammar and style. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit.

HIST 110 History of American Culture (3/0/3/45)

The significant events, movements, and issues that have played a role in shaping of modern-day America are the focus of this course. Attention will be given to major social and cultural developments as well as related political and economic influences. *(This course meets the California State requirements in American History.)*

HIST 205 History of Biological Sciences (4/0/4/60)

The course focuses on the biological sciences from ancient times into the modern era. From the Middle Ages, the Renaissance and early Scientific Revolution of the 17th and 18th centuries, the modern foundations of thought and reason, institutions and instrumentation will be traced. The course also will examine scientific advances from early 19th century evolutionary views and Darwinism to the 20th century discoveries in genetics and molecular biology. An individual research project is required. **Prerequisite:** *English Composition I*

POLS 101: United States Government (4/0/4/60)

A study of the general principles, structure and functions of American federal, state and local government, including a study of the United States Constitution, American political philosophies, political institutions, and the rights and responsibilities of citizens.

PSYC 101 General Psychology (4/0/4/60)

This course presents a scientific study of human behavior through an exploration of major concepts, methods and research findings. Topics include biological, physiological and cognitive processes; learning and motivation; life span development; individual differences; behavioral disorders and therapies; social behavior; and applied psychology.

SOCI 101 General Sociology (4/0/4/60)

Sociology is the study of the dynamics of people living in groups. This course will examine the dimensions of culture, the process of socialization, and the organization and structure of groups in the United States. Issues relating to the family, social class, health and medicine, and the elderly will be explored.

SOCI 205 Cultural & Ethnic Studies (4/0/4/60)

Various ethnic groups have made many contributions to our nation's culture, often after facing prejudice and overcoming discrimination. This course will provide an opportunity to explore perspectives on ethnic relations in the United States. An individual research project is required. **Prerequisite:** *English Composition I* **Recommended:** *General Sociology*

SOCI 301 Sociology of Health and Healing (4/0/4/60)

This course is designed to introduce students to the social dimensions of health, illness and health care. Much that happens when an individual has an injury, illness or disease is socially defined. The course will work extensively with basic concepts from general sociology such as stratification, alienation, power, social distance, prejudice, social class, etc., in the examination of such top-

ics as the social aspects of disease distribution in the population, social stress, sick-role behavior, medical education, the physician-patient relationship, health care technology, and the health care system. **Prerequisite:** *English Composition I, General Sociology*

SPCH 101 Speech (3/0/3/45)

This course offers principles and practices of public speaking, speech composition, organization, audience analysis and listening skills. **Recommended:** *Proficiency in spoken English*

SPCH 301 Effective Communication for Health Care Professionals (3/0/3/45)

This course applies the general concepts and principles of effective communication within the context of health care. Emphasis is placed on patient/health care professional relationships, focusing on relationship building, barriers to effective communication, verbal and nonverbal behavior, and cultural communication. Specific attention is paid to interviewing, community outreach and special populations.

Prerequisites: *Speech, English Composition I*

Department of Physical and Life Sciences

(lecture/lab/credit hour/contact hours)

BIOL 131 Introduction to Biology (3/0/3/45)

In this course the basic concepts of biology including the cell, nutrition, a survey of physiological systems, heredity, diversity of organisms, and environmental biology are presented. Students will learn the basic concepts needed to succeed in a college level biology course. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit.

BIOL 230 Principles of Biology (3/2/4/75)

This course is an introductory integrated lecture and laboratory course in biological science, which explores selected concepts and principles important in understanding how biological systems operate in an interrelated fashion for optimal function. In the exploration of biological processes, the scientific method and evolutionary concepts are emphasized. Biological events are studied and understood through chemical, cellular, genetic, and systemic processes. In addition, laboratory activities explore structure and function of biological organisms through the utilization of biological models, biological experiments, and visual aids exclusive to organic life.

BIOL 231L General Biology Lab (0/2/1/30)

As an introductory biological laboratory, this course explores structure and function of biological organisms through the utilization of biological models, biological experiments, and visual aids. **Prerequisite:** *Principles of Biology*

BIOL 232 Principles of Anatomy and Physiology (3/2/4/75)

This course is an integrated lecture and laboratory course which, provides the basic knowledge of the cohesive relationship between structure and function in the human organism, and how this cohesion is a necessity for optimal function within the organism. In the study of the human organism, structure and function is understood through anatomical models, visual aids, biological, physical, and chemical concepts. In addition, anatomical dissection will enhance lecture and laboratory materials. **Prerequisite:** *Principles of Biology*

BIOL 233L Anatomy and Physiology Lab (0/2/1/30)

This course explores anatomical and physiological processes through the use of anatomical models, visual aids, and anatomical dissection. **Prerequisite:** *Principles of Anatomy and Physiology* or *Anatomy* or *Physiology*

BIOL 250 Anatomy and Physiology I (3/2/4/75)

This course provides health science students with a comprehensive study of the interrelationship of structure and function of organ systems within the human body as well as the mechanisms used to maintain homeostasis. This is the first course of a two-semester sequence focusing on the study of cells, tissues and organ systems with emphasis on the integumentary, skeletal, muscular and nervous systems. The course is enhanced with hands-on laboratory activities, which reinforces one's understanding of the listed organ systems, how they are anatomically structured and how structure aids in each system's functionality. **Prerequisite:** *Principles of Biology*

BIOL 251 Anatomy and Physiology II (3/2/4/75)

This is the second course in a two-part sequence of courses designed to provide health science students with a comprehensive study of the interrelationship of structure and function of organ systems within the human body. Within the study of these systems, the concepts of metabolism, fluid, electrolyte and acid-base balance as well as human development will be introduced. The course is enhanced with hands-on laboratory activities, which reinforces one's understanding of the listed organ systems, how they are anatomically structured and how structure aids in each system's functionality. **Prerequisites:** *Anatomy and Physiology I*

BIOL 301 Microbiology (3/2/4/75)

This is a comprehensive course that covers the principles related to the system of identification and classification, morphology, physiology, genetics, ecology, and evolution of microorganisms. The laboratory covers an array of microbiological procedures, with experiments aimed to demonstrate major concepts of bacteriology, virology, and immunology.

Prerequisites: *Organic Chemistry I, Principles of Biology*

BIOL 302L Introduction to Microbiology Lab (0/2/1/30)

Characteristics of live microorganisms are studied in the laboratory with an emphasis on the use of proper aseptic techniques. **Prerequisite:** *Microbiology*

BIOL 306 Principles of Cell Biology (5/0/5/75)

This course refines previous biological knowledge for enhanced study in human cellular and biochemical processes. Cellular structure and function, protein structure and function, cellular metabolism, Mendelian and molecular genetics, are examined at the biological and biochemical levels. **Prerequisites:** *Principles of Biology, General Chemistry I*

BIOL 310 Human Anatomy (4/2/5/90)

This course is a comprehensive and systemic study of the structure of human body at the cellular, histological, and organ level. The emphasis of study includes microscopic and macroscopic (gross) anatomy of the integumentary system, skeletal system, muscular system, nervous system, endocrine system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary system, and reproductive system. The laboratory component of this course parallels and complements lecture, which comprises the use of models, histological slides, skeletal materials, and cadaver dissection and demonstration. Animal dissection complements cadaver dissection. **Prerequisites:** *Principles of Biology*

BIOL 311L Human Anatomy Lab (0/2/1/30)

This course focuses on laboratory-based study of human structure in terms of human microscopic and macroscopic (gross) anatomy using models, skeletal materials, histological slides, and human/animal cadaver dissection and demonstration. The use of microscope to study cells and tissues will be emphasized. **Prerequisite:** *Human Anatomy*

BIOL 312 Human Physiology (4/2/5/90)

This course encompasses the study of all physiological systems and how they function cohesively to accomplish homeostasis. The human physiology course places an emphasis on correlated studies in anatomical, biological, physiological and chemical sciences in order to comprehend the

complexity held within the human organism. The laboratory component complements the material covered in lectures and focuses on the study of human body parts and functions of all systems, with particular emphasis on urinary, cardiovascular, muscular and nervous systems. **Prerequisites:** *Principles of Biology*

BIOL 313L Human Physiology Lab (0/2/1/30)

The laboratory study of human physiology covers homeostasis and pH, molecular and Brownian movement, enzyme effects, human reflex, nervous and sensory systems, blood physiology, blood pressure, respiration, body fat and physical fitness. **Prerequisite:** *Human Physiology*

BIOL 340 Genetics (3/0/3/45)

This course presents detailed genetic concepts using Mendelian, molecular, and population genetics, and includes information on various inherited human diseases. **Prerequisites:** *Principles of Biology, College Algebra*

BIOL 350 Embryology (3/0/3/45)

This course presents an overview of the morphogenesis of the major human body systems from conception until birth. Emphasis is given to the development of the nervous and musculoskeletal systems. **Prerequisite:** *Principles of Anatomy and Physiology*

BIOL 351 Molecular Biology & Biochemistry (5/0/5/75)

This course provides a bridge between Organic Chemistry and Biochemistry with an emphasis on the integration of biological processes, including biochemical catalysis (enzymes), bioenergetics, acid/base in biological systems, and integration and control of metabolism. A general introduction to the structure and function of biological macromolecules, such as proteins, carbohydrate, lipids, and nucleic acids and their monomers, such as amino acids are an essential part of this course. **Corequisite:** *Organic Chemistry II*

BIOL 352 Histology (4/2/5/90)

This course presents an overview of the cells, tissues, and organs of the human body, with emphasis given to the microanatomy of the epithelial, connective, muscular and nervous tissues. Laboratory exercises complement and supplement lecture topics. **Prerequisite:** *Principles of Anatomy and Physiology*

BIOL 354 Cell Physiology (3/0/3/45)

This course presents an intensive study of cellular organelles and their functions. Topics include the structure of biomembranes, cellular respiration, and the electrophysiology of nerve and muscle cells. **Prerequisite:** *Principles of Cell*

Biology, Human anatomy or a director-approved course with cellular and histological components. Corequisite: Biochemistry I

BIOL 360 Introduction to Research (1/0/1/15)

This course presents an introduction to the professional literature and the skills necessary to use a research library. Topics include reading and critiquing professional literature and research reporting, terminology and statistics. **Prerequisites:** *English Composition I, Introductory Anatomy and Physiology, Organic Chemistry I, Algebra*

BIOL 400 Independent Studies in Health Sciences (varies)

This course provides the opportunity for the student to work independently on an approved research topic in the field of health sciences. The biological knowledge achieved in the course prerequisites is enhanced through this independent study of current biological developments. **Prerequisites:** *English Composition I, Principles of Biology, Introductory Anatomy and Physiology*

BIOL 460 Immunobiology (3/0/3/45)

This course presents the basic concepts of the body's immune system. Topics include resistance to infection, inflammation, immune hypersensitivity, blood groups, AIDS, histocompatibility, and self-tolerance. Current immunological concepts on cellular and humoral controls are included. **Prerequisite:** *Cell Physiology*

BIOL 495 Advanced Topics in Human Biology (4/0/4/60)

This course is the capstone experience for the Bachelor of Science degree. Each student will prepare a research paper and orally defend the project findings. The subject will be chosen by the faculty each trimester. **Prerequisites:** *All courses required for the degree or special permission by the program director*

CHEM 201 Introduction to Organic Chemistry (3/0/3/45)

This course introduces the chemistry of aliphatic and aromatic compounds with an emphasis on the functional groups. This course will not fulfill degree requirements for the undergraduate or the D.C. programs but may be used as general elective credit. **Prerequisite:** *Introduction to Chemistry*

CHEM 240 General Chemistry I (3/2/4/75)

An exploration of the quantitative and qualitative principles of modern chemistry, this course provides the foundational knowledge for further studies in chemistry as well as concepts essential to understanding biological processes. The periodic table serves as a focal point to help develop an understanding of the physical and chemical nature of subatomic particles, atoms, and molecules. Included is an integrated laboratory, which helps students visualize major concepts and develops

fundamental laboratory safety procedures and techniques. Topics include: analysis of the periodic table, atomic theory and structure, chemical bonding, physical properties, states of matter, solutions, stoichiometry, gases, thermochemistry.

Prerequisite: *Introduction to Chemistry**, *College Algebra*
**Introduction to Chemistry may be waived, with the permission of the dean of undergraduate studies, for students earning an "A" or "B" in College Algebra.*

CHEM 241L Principles of General Chemistry Lab I
(0/2/1/30)

An introduction to basic chemistry laboratory techniques and safety protocols, utilizing experimentation that complements and reinforces concepts learned in general chemistry lecture classes. **Prerequisite:** *General Chemistry I*

CHEM 242 General Chemistry II (3/2/4/75)

In the further exploration of concepts developed in General Chemistry I, this course investigates the interaction of molecules and the properties of chemical reactions. Related laboratory experiments and biological examples bring these concepts to life. Topics include: Oxidation reduction reactions, stoichiometry, theory of acids and bases, chemical kinetics, chemical thermodynamics, electrochemistry, and chemical equilibrium. **Prerequisite:** *General Chemistry I*

CHEM 243L Principles of General Chemistry Lab II
(0/2/1/30)

Building on the concepts developed in Principles of General Chemistry Lab I, students establish a deeper understanding of basic chemistry laboratory techniques and safety protocols. Experimentation that complements and reinforces concepts learned in general chemistry lecture classes is emphasized.

Prerequisites: *General Chemistry II, General Chemistry Lab I*

CHEM 300 Organic Chemistry I (3/2/4/75)

This course presents the fundamental concepts, theories and reactions of carbon-containing compounds. The course emphasizes properties, structure-reactivity relationships, and mechanisms of the major classes of carbon compounds, emphasizing those found in living systems. Laboratory experiments demonstrate the practical application of organic concepts. **Prerequisites:** *General Chemistry I and II or director's permission*

CHEM 301L Principles of Organic Chemistry I Lab
(0/2/1/30)

This lab is designed to facilitate understanding of techniques in three primary areas: synthesis of compounds, qualitative/quantitative analysis of organic compounds with emphasis on

functional groups, and extraction/purification of compounds from natural sources. **Prerequisite:** *Organic Chemistry I*

CHEM 302 Organic Chemistry II (3/2/4/75)

This course is a continuation of Organic Chemistry I, presenting the fundamental concepts, theories, and reactions of carbon-containing compounds. This course emphasizes properties, structure-reactivity relationships, and mechanisms of the major classes of carbon compounds. Special consideration is given to carbon compounds found in living systems. Laboratory experiments demonstrate the practical application of organic concepts. **Prerequisites:** *Organic Chemistry I, General Chemistry II*

CHEM 303L Principles of Organic Chemistry Lab II
(0/2/1/30)

Further exploration of organic techniques building on the concepts formulated in Principles of Organic Chemistry Lab I. Focus continues on the techniques in three primary areas: synthesis of compounds, qualitative/quantitative analysis of organic compounds with emphasis on functional groups, and extraction/purification of compounds from natural sources. **Prerequisite:** *Organic Chemistry II*

CHEM 346 Biochemistry I: Structure and Function of Macromolecules (4/2/5/90)

This course presents the chemistry and function of carbohydrates, lipids, nucleic acids and proteins. Concepts associated with bioenergetics, enzyme kinetics, catalysts, and the physiological role of acids, bases and buffers are also presented. Application of these concepts to cells and tissues in their relationship to the whole body is made throughout the course. Laboratory exercises complement and supplement lecture topics. **Prerequisites:** *Organic Chemistry II, Principles of Anatomy and Physiology*

CHEM 440 Biochemistry II: Digestion/Intermediary Metabolism (5/0/5/75)

This course presents the application of the concepts learned in Biochemistry I to the integration and control of cellular metabolism, including roles of minerals and vitamins. An overview of steroid chemistry as it relates to biological functions is also presented. **Prerequisites:** *Cell Physiology and Biochemistry I*

CHEM 480 Basic Nutrition (4/0/4/60)

This course presents the chemical composition of foods, the sources of nutrients, and their utilization within the body. Emphasis is given to the role of vitamins and minerals in maintaining or achieving nutritional health. Concepts of diet

related to health and disease are stressed throughout the course.

Prerequisite: *Biochemistry II*

HSCI 102 Health Science Terminology (1/0/1/15)

This course presents the basic scientific terminology. Topics include Greek and Latin roots of words, prefixes and suffixes, and the dissection of words to discover their meaning.

MATH 201 College Algebra (3/0/3/45)

This course explores polynomial, rational, exponential and logarithmic functions, relations and graphs, theories of equations, matrices, series, sequences and probability.

Prerequisite: *Intermediate Algebra or Math Placement Test*

PHYS 220 Physics I (3/2/4/75)

This algebra-based lecture with lab is designed primarily for life science and related majors. This course examines the fundamental concepts and laws of linear and rotational motion, force, torque, energy, momentum, and properties of solids and fluids. The laboratory will explore many of these concepts and laws through experimentation. **Prerequisite:** *College Algebra* **Corequisite:** *College Algebra with permission of undergraduate director.* **Recommended:** *high school physics*

PHYS 221L Principles of Physics I Lab (0/2/1/30)

The laboratory will explore the fundamental concepts and laws of linear and rotational motion, force, torque, energy and momentum through experimentation. **Prerequisite:** *Physics I*

PHYS 222 Physics II (3/2/4/75)

Designed primarily for life science and related majors this algebra-based lecture with lab is a continuation of Physics I and presents additional fundamental concepts and laws related to thermodynamics, waves, sound, electricity, light, and radiation. **Prerequisite:** *Physics I*

PHYS 223L Principles of Physics II Lab (0/2/1/30)

The laboratory will explore the fundamental concepts and laws of the physical universe related to thermodynamics, waves, sound, electricity, light, and radiation, through experimentation. **Prerequisite:** *Physics II*

GRADUATE STUDIES

Master of Science in Health Promotion

Master of Science Program Mission

The mission of the Cleveland Master of Science in Health Promotion program is to provide students with the knowl-

edge, skills and foundation to become leaders and educators in health promotion. Graduates are eligible for examination as a Certified Health Education Specialist (CHES).

Program Objectives

The objectives of the master's of science degree in health promotion are to enable qualified graduates to enhance community and public health through a focus on disease prevention, and to impact healthful lifestyle choices in areas such as diet, exercise, smoking cessation, healthy weight, stress management and related factors that affect the nation's health. In addition, a graduate completing the program will be eligible for examination as a Certified Health Education Specialist or specialize in another health-related professional certification. Such certifications expand employment opportunities with various community, services, government and corporate organizations and educational institutions. Courses are delivered through the School of Graduate Studies which has specific admission requirements.

Health Promotion Defined

Health promotion is the science and art of helping people and cultures change lifestyle behaviors that are conducive to health. Total wellbeing is influenced by physical, emotional, social, spiritual and intellectual components. Health promotion strategically creates awareness, changes behaviors and constructs environments to encourage healthy lifestyle practices as they relate to these components.

Students seeking the MS in health promotion may come from any undergraduate discipline and these commonly include health, wellness, exercise science, nutrition, physical education and recreation education, psychology, nursing, human resources, athletic training, chiropractic, marketing and other fields.

Completion of the degree allows the student to work in a variety of settings delivering health promotion programs, including colleges, schools, worksites, public health departments, philanthropies, private foundations, and athletic or rehabilitation training centers.

Philosophy

Health promotion is based on helping people and cultures change lifestyle behaviors that are conducive to health. We believe that these changes occur with one body and then a collective body. Health promotion penetrates through the core values of individuals, groups, communities, policymakers, employers and teachers. Health promotion strategically creates awareness, changes behaviors and constructs environments to motivate healthy lifestyle practices.

Cleveland College recognizes that “health promotion” encompasses a variety of methods and forms that lead to optimal health. It involves a belief that bodies function best when they are mentally, physically and spiritually healthy. As a growth process, we are educating students to develop a body of knowledge, understand the value of that knowledge and then to facilitate that knowledge into dynamic life experiences. Our graduates will impact individual lifestyle change for a lifetime by leading in these areas.

As an industry, “health promotion” is gaining momentum in changing a culture to believe in disease prevention and value health. Professionally, we understand how policies, organizations, economics, environmental interventions and other support groups influence the quality of life. We believe our collaboration and respect for these areas will train Cleveland College graduates to become leaders that influence a culture.

The Master of Science in Health Promotion Program

The Master of Science requires 36 hours of course work including 21 hours of core courses. The core course block is designed to provide students with advanced study in the foundations, planning, implementing, and evaluation of health education and promotion programs. These courses will be required in sequence and no transfer credits will be accepted for these hours. A brief course description is provided below followed by proposed elective offerings.

Health Promotion MS Core Courses **21 hours** (lecture/lab/credit hour/contact hours)

HEP 500 Advances in Health Promotion (3/0/3/45)

A review of history, principles, and philosophy of Health Education and Health Promotion. Key issues in health education and health promotion will be discussed for various age groups and settings, such as schools, communities, worksites, and medical care facilities.

HEP 510 Applied Health Behavioral Theory (3/0/3/45)

A careful review of the theories of health behavior. Emphasis is placed on how health behavior theory can explain health behavior and assist in program design. Case study examples of how health behavior theory has been successfully used in school, community, athletic, and worksite settings for health promotion interventions will be discussed.

HEP 520 Health Promotion Techniques (3/0/3/45)

This course examines various techniques used to deliver effective health education and health promotion programs

to a variety of audiences. The relationship of the design of health promotion programs to the needs assessment process will be discussed. Examples of successful interventions in school, community, health care, and worksite settings will be highlighted. **Corequisites:** HEP 500 and HEP 510

HEP 530 Introduction to Epidemiology (3/0/3/45)

This course presents the basic principles of epidemiology and statistical evaluation of the impact of microbial diseases upon the population’s health within the US and the world. In addition, an added emphasis is made on the epidemiology and prevention of chronic diseases. General statistical analysis and interpretation of epidemiological research is also included. **Prerequisites:** HEP 500 and HEP 510

HEP 540 Evaluation of Health Promotion Programs (3/0/3/45)

An overview of the processes and skills to effectively evaluate health education activities and programs. Formative, process and outcome evaluation measures will be discussed. Evaluation of programs in community, schools, healthcare and worksite settings will be examined. **Prerequisite:** HEP 520 and HEP 530

HEP 550 Implementation of Health Education and Health Promotion Programs (3/0/3/45)

This course provides background information on how to design and implement health education and health promotion programs in school, community, health care and worksite settings. Emphasis is placed on designing programs to address the problems, needs, and interests of target audiences or populations at risk. **Prerequisite:** HEP 520 and HEP 530

HEP 560 Research Methods in Health Promotion (3/0/3/45)

An introduction to the professional health literature and the skills necessary to use a research library are the focus of the course. Topics include reading and critiquing professional literature and research reporting, terminology and statistics. The second half of the course emphasizes the basic skills for research, an introduction to data management and analysis and how to prepare a research paper for publication in a professional journal. Activities include searching and review of appropriate literature and preparation of a research paper on a subject of interest, conforming to the publication format required for submission to a peer reviewed research journal. **Prerequisites:** HEP 520 and HEP 530

Electives

15 hours required

(lecture/lab/credit hour/contact hours)

GED 507 Health Science Terminology (1/0/1/15)

This course presents the basic rules of construction and interpretation of scientific terminology. Topics include Greek and Latin roots, prefixes and suffixes and the dissection of words to discover their meaning.

HEP 600 Nutritional Epidemiology (3/0/3/45)

Nutritional epidemiology will introduce the student to the principles of epidemiology, as applied to nutritional related disease prevention and prevention of chronic disease. A review of relevant large, epidemiological studies on diet and nutrition is a hallmark of the course. (Fall only)

Prerequisites: *HEP 500* and *HEP 510*

HEP 610 Seminar in Teaching and Learning (3/0/3/45)

This course is designed for those who may want to learn more about teaching others. It can be used to enhance knowledge learned at the BS/BA level in education or to use the MS degree in a college or university setting. This is a seminar course with an overview of various strategies in teaching along with a review of learning styles that vary by type of learner. An elective in the curriculum, this course may be structured into the degree program based on the focus of the student. (Fall only) **Prerequisite:** *HEP 540*

HEP 620 Seminar in Ecological and Environmental Health (3/0/3/45)

This course is an overview of environmental and ecological issues and their relationship to humans, health and disease. The dynamic interaction between both the social and physical environment is highlighted. (Fall only) **Prerequisites:** *HEP 540* and *HEP 550*

HEP 630 Laboratory and Field Experience (varies)

A structured field experience allowing students to design, implement and evaluate health educational or health promotion activities. Faculty and staff will provide technical assistance. (3-6 semester hours) **Prerequisites:** *HEP 540* and *HEP 550*

HEP 640 Independent Study in Health Promotion (varies)

Structured opportunities for students to pursue independent study and research in the area of health education, health promotion and community health. Faculty and staff will provide technical assistance. (3-6 semester hours) **Prerequisite:** *HEP 540* and *HEP 550*

HEP 650 Workshop in Health: the CHES Review Course (3/0/3/45)

This course will help prepare the student for designing, implementing and evaluating health promotion programs through stressing the competency areas needed to successfully complete the examination for Certified Health Education Specialist. (Spring only) **Prerequisite:** *All Core Courses*

HEP 660 Seminar in Clinical Health Promotion (3/0/3/45)

This course is a mixture of lecture and guest lecture opportunities featuring speakers with expertise in health promotion and clinical practice. Medical physicians, doctors of chiropractic, dental professionals and public health professionals will lecture on current topics in health promotion and disease prevention. (Spring only) **Prerequisite:** *All Core Courses*

HEP 670 Complementary and Alternative Health Systems (3/0/3/45)

One of the fastest growing areas of health care is complementary and alternative health systems or CAM. Health education and health promotion specialists will learn the basic premises behind several systems of healing including but not limited to naturopathy and herbal medicine, homeopathy, body work methods, acupuncture, and vitalistic-based health programs. Both the positive and negative aspects of various healing systems will be investigated to give the student a well-rounded concept of CAM systems as they pertain to health education and health promotion. (Spring only)

Prerequisite: *All Core Courses*

*** HEP 699 Thesis Research (varies)**

Research Study in an area of health promotion. **Prerequisite:** *All Core Courses*

* MS is competency-based but will allow for thesis research in some cases based upon advisor approval.

Academic Progress Specific to the MS Degree

Repeating Courses

Courses may not be repeated for graduate credit; this includes courses initially taken on an audit basis. However, a course that is required in a student's curriculum in which a "D" or "F" is earned may be repeated for credit, upon the recommendation of the major department or program area. Both grades will be considered in the computation of the grade point average.

Reinstatement

A person seeking reinstatement to the same degree program after being suspended from the College of Graduate Studies can initiate consideration for reinstatement by communicating with the academic unit from which the person was dismissed. The graduate faculty of the academic unit will consider the request for reinstatement and, if the faculty request reinstatement, they will identify in a written request to the Graduate Studies program director the compelling reasons for reinstatement and the conditions required of the student if reinstatement is granted.

Comprehensive Examination

The MS degree culminates with a comprehensive exam that is required of all candidates. Each part will consist of three hours and covers three core courses. Competency is tested in the core curriculum of the degree program and it is essay-based. The deadline for completion of the comprehensive exam is the second Wednesday of November, April, or June depending on the trimester in which graduation is planned. Students should prepare for the exam by individual review and study of course materials and focus on the core courses. Students should not assume a grade of "A" in course work is preparatory for successful completion of the comprehensive exam. This exam tests a mastery of concepts across the program areas of the core curriculum. Students may not bring outside resources into the examination.

Grading of the Comprehensive Exams

The exam is written and graded by the instructors for the core courses. Each section is graded in the following manner:

Passed—each section of the exam was passed successfully by the student

Passed with contingency—at least one but not more than two sections were failed

Failed—more than two sections were failed

Passed with contingency will allow for the student to complete extra work or an oral exam on the topic prior to contingency being lifted. Failed sections can be retaken once. If more than two sections were failed, all sections must be retaken and can only be retaken once. Failure of more than two topic areas on a second try will result in dismissal from the program.

Program sequence

- 1) Acceptance of admission
- 2) Completion of core curriculum
- 3) Completion of comprehensive examination

- 4) Completion of elective course work
- 5) Sit for professional certification exam
- 6) Application for graduation

Certification

Upon passing the comprehensive examination, students may then prepare for a professional certification that complements their field of interest. Students are asked to sit for the examination as a fulfillment of graduation requirements. Respected certifications include but are not limited to the Certified Health Education Specialist (CHES), Masters CHES, American College of Sports Medicine Health Fitness Specialist (ACSM CHFS), Certified Strength and Conditioning Specialist (CSCS), Certified Diabetes Educator (CDE) or a Wellcoaches Certified Wellness Coach or Certified Health Coach.

DOCTOR OF CHIROPRACTIC DEGREE PROGRAM

Cleveland Chiropractic College Mission

The mission of Cleveland Chiropractic College is to cultivate knowledge, to instill a lifelong passion for learning and professional competence, to enrich the human mind, body and spirit, and to advance chiropractic.

- The education mission of the institution is to prepare competent, entry-level doctors of chiropractic as primary health care providers and to offer continuing education for doctors of chiropractic.
- The scholarship mission of the institution is to conduct research and scholarly activities in areas related to chiropractic education and health care, and to collaborate with other institutions and health care providers in scholarly activities.
- The service mission of the institution is to provide health care and outreach services to the community, support services to alumni and other health care providers, and volunteer services to civic and professional organizations.

Chiropractic Science Defined

Chiropractic is the science that concerns itself with the relationship between structure, primarily the spine, and function, primarily coordinated by the nervous system, of the human body as that relationship may affect the restoration and preservation of health.

Purpose of Chiropractic Education

The purpose of Cleveland Chiropractic College's doctor of chiropractic program is to prepare students as primary health care providers, who emphasize the primacy of structure as related to function in maintenance of optimal health and recognize that appropriate structural management may influence nonstructural health issues. As providers of primary care, doctors of chiropractic also offer education and assistance to patients in the areas of health promotion and disease prevention, and participate when appropriate in activities designed to protect and increase the health of the public. The doctor of chiropractic provides primary health care based on appropriate diagnosis that is consistent with current evidence, clinical experience and patient preference, consults with other health care providers, and refers or co-manages when in the best interest of the patient.

Chiropractic Approach

Chiropractic health care focuses primarily on spinal function and its relationship to the nervous system and good health. The science of chiropractic is based on the premise that good health depends, in part, on a normally functioning nervous system. Chiropractic principle emphasizes that the body is a self-regulating, self-healing organism and that body function is controlled and coordinated by the brain, spinal cord and the nerves that branch throughout the body.

The movable bones of the spine offer protection to vulnerable communication pathways of the nervous system, specifically the spinal cord and the delicate nerve roots and spinal nerves that exit between the vertebral segments of the spinal column. A loss of normal motion or position of the spinal segments can irritate or impair nerve function, resulting in malfunction of the tissues and organs throughout the body. Doctors of chiropractic refer to this altered spinal function and its potential effect on the nervous system as the vertebral subluxation complex.

The chiropractic approach to better health is to locate and remove spinal dysfunction and nerve interference, returning the body to its natural state of health and wellness.

Cleveland Chiropractic College accepts the consensus definition of chiropractic established by the Association of Chiropractic Colleges (ACC). It states that "chiropractic is a health-care discipline which emphasizes the inherent recuperative powers of the body to heal itself without the use of drugs or surgery." Further, the ACC has characterized the distinct focus of chiropractic as follows: "The practice of chiropractic focuses on the relationship between structure

(primarily of the spine) and function (as coordinated by the nervous system) and how that relationship affects the preservation and restoration of health." Subluxation is the clinical entity proposed to link improper spinal function with improper nerve function, and the ACC has described it as a "complex of functional, structural and/or pathological articular changes that compromise neural integrity and may influence organ system function and general health."

Doctor of Chiropractic Degree Program

Cleveland Chiropractic College offers students a choice between a 12-trimester or 10-trimester course of study. The standard course of study leading to the Doctor of Chiropractic degree is comprised of 12 trimesters of four months each for a total of 48 months or four calendar years. The accelerated course of study (the same coursework as the 12-trimester course) consists of 10 trimesters of four months each for a total of 40 months or three calendar years plus four months. The maximum time allowed for completion of the program is 18 trimesters of enrollment (nine academic years; six calendar years). A student who fails to complete all degree requirements within 72 months from the date of original matriculation forfeits all credits and must reapply for admission to the program under the standards of the College in effect at the time of reapplication. Students transferring from another chiropractic college must complete at least one calendar year at Cleveland Chiropractic College. The academic terms begin in September, January and May, and a qualified student may initiate study at the start of any one of these three terms.

The curriculum is designed to qualify graduates for state licensure examination. Certain states may require additional degrees or special courses at the pre-professional or postgraduate level to qualify the applicant for examination. It is the responsibility of the student to contact the state examining board to determine any special requirements. The registrar at the College will assist the student with interpretation of state board regulations. A listing of states and their requirements is available in the *Federation of Chiropractic Licensing Boards (FCLB) Directory* in the Library or may be found at www.fclb.org.

The College offers the professional Doctor of Chiropractic degree. The College subscribes to the concept of the doctor of chiropractic as stated in Section II of the "Standards for Doctor of Chiropractic Programs and Requirements for Institutional Status," The Council on Chiropractic Education (January 2007 edition).

“A doctor of chiropractic is a primary care physician whose purpose, as a practitioner of the healing arts, is to help meet the health needs of individual patients and of the public, giving particular attention to the structural and neurological aspects of the body.

“The application of science in chiropractic concerns itself with the relationship between structure, primarily the spine, and function, primarily coordinated by the nervous system of the human body, as that relationship may affect the restoration and preservation of health.

Further, this application of science in chiropractic focuses on the inherent ability of the body to heal without the use of drugs or surgery.

“As a gatekeeper for direct access to the health delivery system, the doctor of chiropractic’s responsibilities as a primary care physician include wellness promotion, health assessment, diagnosis and the chiropractic management of the patient’s health care needs. When indicated, the doctor of chiropractic consults with, co-manages, or refers to other health-care providers.”

The Doctor of Chiropractic degree is a first professional degree in the healing arts based upon three years of post-secondary instruction and 10 to 12 trimesters of professional study. The curriculum requires 4,575 hours of classroom instruction and clinical experience, including the internship.

DOCTOR OF CHIROPRACTIC CURRICULUM

Model of 10 Trimester Curricular Progression

Course No.	Course Title	Weekly Lec.	Clock Hours Lab	Credit Hours	Trimester Clock Hours
Trimester I					
ANA 502	Systemic Anatomy	3	1	3.5	60
ANA 500	Embryology	3	0	3	45
ANA 504	Spinal Anatomy	4	1	4.5	75
ANA 514	Histology	4	2	5	90
PHY 506	Cell Physiology	3	0	3	45
CHE 508	Biochemistry I: Structure and Function of Macromolecules	4	2	5	90
PRI 510	Foundations in Chiropractic Philosophy and Science	2	0	2	30
PRA 525	Technique I: Introduction to Functional Analysis	<u>0</u>	<u>3</u>	<u>1.5</u>	<u>45</u>
		23	9	27.5	480
Trimester II					
ANA 530	Thorax/Abdomen/Pelvis Anatomy	4	2	5	90
ANA 540	Extremity Anatomy	4	2	5	90
PHY 532	Cardiovascular/Pulmonary Physiology	4	0	4	60
PAT 548	Immunobiology	3	0	3	45
PHY 546	Endocrine/Reproductive Physiology	3	0	3	45
CHE 534	Biochemistry II: Digestion/Intermediary Metabolism	5	0	5	75
MPH 562	Public Health I: The Health Care System	2	0	2	30
PRA 535	Technique II: Structural and Functional Spinal Assessment	<u>2</u>	<u>2</u>	<u>3</u>	<u>60</u>
		27	6	30	495
Trimester III					
PRI 550	Introduction to Research	1	0	1	15
ANA 566	Head/Neck Anatomy	4	2	5	90
PHY 560	Renal/Digestive Physiology	3	0	3	45
CHE 568	Basic Nutrition	4	0	4	60
MPH 570	Microbiology I: Bacteriology	3	2	4	75
PAT 572	General Pathology	4	0	4	60
DIM 518	Normal Radiographic Anatomy	3	1	3.5	60
PRA 545	Technique III: Cleveland Comprehensive Methods	<u>2</u>	<u>4</u>	<u>4</u>	<u>90</u>
		24	9	28.5	495
Trimester IV					
ANA 600	Neuroanatomy	5	1	5.5	90
PHY 602	Neurophysiology	4	0	4	60
MPH 616	Public Health II: Epidemiology	4	0	4	60
MPH 604	Microbiology II: Virology/Parasitology/Mycology	4	0	4	60
ACS 668	Toxicology I	1	0	1	15
PAT 606	Cardiovascular/Pulmonary/Gastrointestinal Pathology	5	1	5.5	90
PRI 612	History of Chiropractic and Techniques	2	0	2	30
PRA 625	Technique IV: Cleveland Comprehensive Methods	<u>2</u>	<u>4</u>	<u>4</u>	<u>90</u>
		27	6	30	495

Course No.	Course Title	Weekly Lec.	Clock Hours Lab	Credit Hours	Trimester Clock Hours
Trimester V					
PHY 630	Physiology Laboratory	0	2	1	30
PAT 632	Neuromusculoskeletal/Genitourinary Pathology	5	0	5	75
PAT 634	Pathology Laboratory	0	1	0.5	15
GED 638	Physical Diagnosis	3	1	3.5	60
NMS 644	Neuromusculoskeletal (NMS) Diagnosis I: Physical	2	3	3.5	75
DIM 678	Skeletal Radiology I	2	2	3	60
PRA 635	Technique V: Extravertebral Adjusting and Case Management	2	1	2.5	45
PRA 645	Technique VI: Soft Tissue Methods	1	2	2	45
PHT 648	Physiotherapy I/Rehabilitation	2	2	3	60
MPH 626	Public Health III: Wellness Care in Clinical Practice	1	0	1	15
CLI 610	Introduction to Clinic I	0	1	0.5	15
		18	15	25.5	495
Trimester VI					
GED 636	Clinical Laboratory Diagnosis	2	0	2	30
GED 640	Head/Eyes/Ears/Nose/Throat Diagnosis	2	1	2.5	45
NMS 670	Neuromusculoskeletal (NMS) Diagnosis II: Clinical	5	0	5	75
GED 660	Cardiopulmonary/Endocrine Diagnosis	4	0	4	60
NMS 676	Clinical Neurology	4	0	4	60
DIM 700	Skeletal Radiology II	2	2	3	60
TBD	Technique VII: Specialty Core	0	2	1	30
PHT 688	Physiotherapy II	2	2	3	60
PRA 692	Chiropractic Functional Assessment	1	2	2	45
CLI 650	Introduction to Clinic II	0	1	0.5	15
		22	10	27	480
Trimester VII					
ACS 712	Obstetrics/Gynecology (OB/GYN)	3	1	3.5	60
GED 664	Gastrointestinal/Genitourinary Diagnosis	3	0	3	45
ACS 720	Dermatology	2	0	2	30
DIM 702	Soft Tissue Radiology	3	1	3.5	60
DIM 726	X-ray Physics and Protection	2	0	2	30
DIM 728	X-ray Procedures	0	2	1	30
PRI 706	Clinical Application of Chiropractic Theory	2	0	2	30
PRA 710	Chiropractic Case Management	4	1	4.5	75
ACS 694	Emergency Methods/CPR	1	1	1.5	30
CLI 714	Clinic Internship I	2	2	3	60
TBD	Technique VIII: Specialty Core	0	2	1	30
		22	10	27	480
Trimester VIII					
GED 730	Clinical Nutrition	3	0	3	45
ACS 732	Toxicology II	3	0	3	45
GED 734	Differential Diagnosis	3	0	3	45
ACS 748	Psychiatry	3	0	3	45
DIM 738	Advanced Imaging	3	0	3	45
PRI 740	Research Methods	1	0	1	15
ACS 716	Pediatrics	3	1	3.5	60
ACS 718	Geriatrics	2	0	2	30
TBD	Technique IX: Specialty Core	0	2	1	30

Course No.	Course Title	Weekly Lec.	Clock Hours Lab	Credit Hours	Trimester Clock Hours
CLI 750	Clinic Internship II	0	4	2	60
		21	7	24.5	420
Trimester IX					
ACS 744	Chiropractic Practice/Business Management	3	0	3	45
ACS 746	Ethics and Jurisprudence	2	0	2	30
CLI 770	Clinic Internship III	0	12	6	180
ACS 784	Public and Professional Communications	2	0	2	30
DIM 736	X-ray Case Presentation	0	2	1	30
		7	14	14	315
Trimester X					
CLI 780	Clinic Internship IV	0	28	14	420
Grand Total		191	114	248	4,575

Model of 12-Trimester Curricular Progression

Trimester I

ANA 502	Systemic Anatomy	3	1	3.5	60
ANA 500	Embryology	3	0	3	45
ANA 504	Spinal Anatomy	4	1	4.5	75
CHE 508	Biochemistry I: Structure and Function of Macromolecules	4	2	5	90
PHY 506	Cell Physiology	3	0	3	45
PRI 510	Foundations in Chiropractic Philosophy and Science	2	0	2	30
PRA 525	Technique I: Introduction to Functional Analysis	0	3	1.5	45
		19	7	22.5	390

Trimester II

ANA 514	Histology	4	2	5	90
ANA 530	Thorax/Abdomen/Pelvis Anatomy	4	2	5	90
PHY 532	Cardiovascular/Pulmonary Physiology	4	0	4	60
PHY 546	Endocrine/Reproductive Physiology	3	0	3	45
CHE 534	Biochemistry II: Digestion/Intermediary Metabolism	5	0	5	75
PRA 535	Technique II: Structural and Functional Spinal Assessment	2	2	3	60
		22	6	25	420

Trimester III

PRI 550	Introduction to Research	1	0	1	15
PHY 560	Renal/Digestive Physiology	3	0	3	45
ANA 540	Extremity Anatomy	4	2	5	90
PAT 548	Immunobiology	3	0	3	45
CHE 568	Basic Nutrition	4	0	4	60
MPH 562	Public Health I: The Health Care System	2	0	2	30
PRA 545	Technique III: Cleveland Comprehensive Methods	2	4	4	90
		19	6	22	375

Course No.	Course Title	Weekly Lec.	Clock Hours Lab	Credit Hours	Trimester Clock Hours
Trimester IV					
ANA 566	Head/Neck Anatomy	4	2	5	90
MPH 570	Microbiology I: Bacteriology	3	2	4	75
PAT 572	General Pathology	4	0	4	60
PRI 612	History of Chiropractic and Technique Systems	2	0	2	30
PRA 625	Technique IV: Cleveland Comprehensive Methods	2	4	4	90
DIM 518	Normal Radiographic Anatomy	<u>3</u>	<u>1</u>	<u>3.5</u>	<u>60</u>
		18	9	22.5	405
Trimester V					
ANA 600	Neuroanatomy	5	1	5.5	90
PHY 602	Neurophysiology	4	0	4	60
MPH 604	Microbiology II: Virology/Parasitology/Mycology	4	0	4	60
PAT 606	Cardiovascular/Pulmonary/Gastrointestinal Pathology	5	1	5.5	90
PRA 635	Technique V: Extravertebral Adjusting	2	1	2.5	45
ACS 668	Toxicology I	1	0	1	15
MPH 616	Public Health II: Epidemiology	<u>4</u>	<u>0</u>	<u>4</u>	<u>60</u>
		25	3	26.5	420
Trimester VI					
PHY 630	Physiology Laboratory	0	2	1	30
PAT 632	Neuromusculoskeletal/Genitourinary Pathology	5	0	5	75
PAT 634	Pathology Laboratory	0	1	0.5	15
GED 638	Physical Diagnosis	3	1	3.5	60
NMS 644	Neuromusculoskeletal (NMS) Diagnosis I: Physical	2	3	3.5	75
DIM 678	Skeletal Radiology I	2	2	3	60
PRA 645	Technique VI: Soft Tissue Methods	1	2	2	45
MPH 626	Public Health III: Wellness Care in Clinical Practice	1	0	1	15
PHT 648	Physiotherapy I/Rehabilitation	<u>2</u>	<u>2</u>	<u>3</u>	<u>60</u>
		16	13	22.5	435
Trimester VII					
TBD	Technique VII: Specialty Core	0	2	1	30
GED 660	Cardiopulmonary/Endocrine Diagnosis	4	0	4	60
GED 636	Clinical Laboratory Diagnosis	2	0	2	30
GED 640	Head/Eyes/Ears/Nose/Throat Diagnosis	2	1	2.5	45
NMS 670	Neuromusculoskeletal (NMS) Diagnosis II: Clinical	5	0	5	75
DIM 700	Skeletal Radiology II	2	2	3	60
PHT 688	Physiotherapy II	2	2	3	60
PRA 692	Chiropractic Functional Assessment	1	2	2	45
CLI 610	Introduction to Clinic I	<u>0</u>	<u>1</u>	<u>0.5</u>	<u>15</u>
		18	10	23	420
Trimester VIII					
NMS 676	Clinical Neurology	4	0	4	60
GED 664	Gastrointestinal/Genitourinary Diagnosis	3	0	3	45
DIM 702	Soft Tissue Radiology	3	1	3.5	60
DIM 726	X-ray Physics and Protection	2	0	2	30
DIM 728	X-ray Procedures	0	2	1	30
PRI 706	Clinical Applications of Chiropractic Theory	2	0	2	30
PRA 710	Chiropractic Case Management	4	1	4.5	75
CLI 650	Introduction to Clinic II	<u>0</u>	<u>1</u>	<u>0.5</u>	<u>15</u>
		18	5	20.5	345

Course No.	Course Title	Weekly Lec.	Clock Hours Lab	Credit Hours	Trimester Clock Hours
Trimester IX					
ACS 712	Obstetrics/Gynecology (OB/GYN)	3	1	3.5	60
ACS 720	Dermatology	2	0	2	30
ACS 694	Emergency Methods/Cardiopulmonary Resuscitation (CPR)	1	1	1.5	30
CLI 714	Clinic Internship I	2	2	3	60
PRI 740	Research Methods	1	0	1	15
ACS 716	Pediatrics	3	1	3.5	60
TBD	Technique VIII: Specialty Core	0	2	1	30
		12	7	15.5	285
Trimester X					
GED 730	Clinical Nutrition	3	0	3	45
ACS 732	Toxicology II	3	0	3	45
GED 734	Differential Diagnosis	3	0	3	45
ACS 748	Psychiatry	3	0	3	45
DIM 738	Advanced Imaging	3	0	3	45
ACS 718	Geriatrics	2	0	2	30
TBD	Technique IX: Specialty Core	0	2	1	30
CLI 750	Clinic Internship II	0	4	2	60
		17	6	20	345
Trimester XI					
CLI 770	Clinic Internship III	0	12	6	180
ACS 784	Public and Professional Communications	2	0	2	30
DIM 736	X-ray Case Presentation	0	2	1	30
ACS 744	Chiropractic Practice/Business Management	3	0	3	45
ACS 746	Ethics and Jurisprudence	2	0	2	30
		7	14	14	315
Trimester XII					
CLI 780	Clinic Internship IV	0	28	14	420
		0	28	14	420
Grand Total		191	114	248	4,575
Electives					
GED 507	Health Science Terminology	1	0	1	15
PRA 607	Diversified Technique	0	2	1	30
PRA 617	Full Spine Specific Technique	0	2	1	30
PRA 627	Gonstead Technique I	0	2	1	30
PRA 637	Thompson Technique	0	2	1	30
PRA 647	Flexion-Distrraction Technique	0	2	1	30
PRA 657	Graston Technique	0	2	1	30
PRA 667	Sacral-Occipital Technique I	0	2	1	30
PRA 677	Motion Palpation and ChiroTechnique	0	2	1	30
PRA 707	Sacral-Occipital Technique II	0	2	1	30
PRA 717	Gonstead Technique II	0	2	1	30
PRA 727	Activator Methods Technique	0	2	1	30
PRA 737	Chiropractic Biophysics Technique (CBP)	0	2	1	30
PRA 747	Integrative Technique	0	2	1	30
PRA 757	Upper Cervical Technique	0	2	1	30
PRA 787	Graduate Preceptor Program			<i>variable</i>	
CLI 790	Special Topics in Clinic			<i>variable</i>	
CLI 807	Extended Preceptorship	0	28	14	420

DOCTOR OF CHIROPRACTIC DEGREE COURSE DESCRIPTIONS

All hours are based on a 15-week format.

(lecture/lab/credit hour/contact hours)

ACS 668 Toxicology I (1/0/1/15)

This course presents information on the effects of common types of drugs prescribed throughout the health care delivery system, with emphasis on modes of action, adverse effects, and iatrogenic manifestations. **Prerequisite:** *Biochemistry I*

ACS 694 Emergency Methods/Cardiopulmonary Resuscitation (CPR) (1/1/1.5/30)

This course presents basic principles of first aid with practical demonstrations and individual participation in the immediate care and disposition of conditions or circumstances constituting an emergency. Basic and advanced life support and cardiopulmonary resuscitation are covered. Laboratory sessions provide hands-on experiences and complement and supplement lecture topics. **Prerequisite:** *Physical Diagnosis*

ACS 712 Obstetrics/Gynecology (OB/GYN) (3/1/3.5/60)

This course presents the anatomy, etiology, symptomatology and clinical course of various gynecological conditions in relation to the practice of chiropractic. Topics include the anatomical and physiological processes of the normal menstrual cycle, pregnancy and its possible complications, sexually transmitted diseases and AIDS, and the care and safety of the pre-partum and post-partum woman. **Prerequisites:** *Cardiopulmonary/Endocrine Diagnosis*

ACS 716 Pediatrics (3/1/3.5/60)

This course presents the growth and development of the human being from newborn through adolescence and the differential diagnosis of common and significant diseases affecting this age group. Emphasis is given to chiropractic approaches to the evaluation and care of children. Laboratory sessions complement and supplement lecture topics.

Prerequisites: *NMS Diagnosis II, Cardiopulmonary/Endocrine Diagnosis, Gastrointestinal/Genitourinary Diagnosis*

ACS 718 Geriatrics (2/0/2/30)

This course presents the health problems of the elderly, with emphasis on conditions commonly seen in the practice of chiropractic. Case studies involving the physiology and pathology of geriatric conditions are presented.

Prerequisites: *NMS Diagnosis II, Cardiopulmonary/Endocrine Diagnosis, Gastrointestinal/Genitourinary Diagnosis, Clinical Neurology*

ACS 720 Dermatology (2/0/2/30)

This course presents the commonly encountered dermatological diseases with respect to etiology, symptomatology and significance within the scope of chiropractic practice. Diseases with dermatological symptoms, such as AIDS, are covered. **Prerequisite:** *Physical Diagnosis*

ACS 748 Psychiatry (3/0/3/45)

This course presents the history of psychology and the principles of various psychological theories. Emphasis is given to group discussions of the topics of doctor-patient relationship as it pertains to the practice of chiropractic, behavior problems, divorce, death, human sexuality, anxiety, depression, substance abuse, child abuse, domestic violence and abnormal behavior. Additional concepts that address issues from a psychological framework are also presented. **Prerequisites:** *Physical Diagnosis*

ACS 732 Toxicology II (3/0/3/45)

This course presents information on drugs in general, procedures involving initial testing, and eventual licensing. Topics also include the toxic effects of therapeutic, common household, nutritional, and environmental substances as well as antidotes and prevention of poisoning. **Prerequisites:** *Toxicology I, Basic Nutrition*

ACS 744 Chiropractic Practice/Business Management (3/0/3/45)

This course presents information on sound business practices and management. Topics include office design, demographics and location, startup, office procedures, report writing, loans, insurance forms and billing, record keeping, personnel, advertising, and the Chiropractic Act and State Health Department Radiological Health Certification rules and regulations. **Prerequisite:** *Within 12 months of graduation*

ACS 746 Ethics and Jurisprudence (2/0/2/30)

This course presents the ethical and legal aspects of chiropractic practice, professionalism, and office management. Topics include medico-legal fundamentals, including report writing, Worker's Compensation, scope of practice, business law and interprofessional communication. **Prerequisite:** *Within 12 months of graduation*

ACS 784 Public and Professional Communications(2/0/2/30)

This course assists the student learning how to effectively communicate with patients, the general public and other health care professionals. Effective written communication is also addressed. Students will practice performing patient histories, providing verbal reports of findings, simulated court-

room testimonies and lay-lecture presentations. **Prerequisite:** *Within 12 months of graduation*

ANA 500 Embryology (3/0/3/45)

This course presents an overview of the morphogenesis of the major human body systems from conception until birth. Emphasis is given to the development of the nervous and musculoskeletal systems.

ANA 502 Systemic Anatomy (3/1/3.5/60)

This course presents an overview of the structural and functional relationships of the musculoskeletal, cardiovascular, digestive, respiratory, endocrine, urinary, reproductive, and nervous systems to prepare the student for the advanced anatomy courses. Topographical anatomy significant to the practice of chiropractic is also presented. Laboratory exercises complement and supplement lecture topics.

ANA 504 Spinal Anatomy (4/1/4.5/75)

This course presents the macroanatomy of the human spine, focusing on the osteological, ligamentous, and muscular structures of the cervical, thoracic, lumbar, sacral and coccygeal regions. An introduction to the structure of the spinal cord and central nervous system is also presented. Cadaver dissection laboratories complement and supplement lecture topics.

ANA 514 Histology (4/2/5/90)

This course presents an overview of the cells, tissues, and organs of the human body, with emphasis given to the microanatomy of the epithelial, connective, muscular and nervous tissues. Laboratory exercises complement and supplement lecture topics.

ANA 530 Thorax/Abdomen/Pelvis Anatomy (4/2/5/90)

This course presents the detailed gross anatomy of the human thorax, abdomen, pelvis, and perineum, with emphasis on the respiratory, digestive, cardiovascular and genitourinary systems. Cadaver dissection laboratories complement and supplement lecture topics. **Prerequisites:** *Systemic Anatomy, Embryology*

ANA 540 Extremity Anatomy (4/2/5/90)

This course presents the detailed gross anatomy of the upper and lower extremities, with emphasis given to the musculature and neuroanatomy. Cadaver dissection laboratories complement and supplement lecture topics. **Prerequisites:** *Systemic Anatomy, Embryology*

ANA 566 Head/Neck Anatomy (4/2/5/90)

This course presents the detailed gross anatomy of the head

and neck, with emphasis given to the peripheral extensions of the cranial nerves. A brief introduction to the structure of the central nervous system is included, along with highlights of the autonomic nervous system of the head and neck. Cadaver dissection laboratories complement and supplement lecture topics. **Prerequisites:** *Systemic Anatomy, Embryology, Spinal Anatomy*

ANA 600 Neuroanatomy (5/1/5.5/90)

This course presents the detailed structure and function of the central nervous system. Emphasis is given to neuroanatomic principles and pathways, along with functional correlations, cross-sectional neuroanatomy, and the anatomy of special senses. Laboratory exercises complement and supplement lecture topics. **Prerequisite:** *Head/Neck Anatomy*

CHE 508 Biochemistry I: Structure and Function of Macromolecules (4/2/5/90)

This course presents the chemistry and function of carbohydrates, lipids, nucleic acids and proteins. Concepts associated with bioenergetics, enzyme kinetics, catalysts, and the physiological role of acids, bases and buffers are also presented. Application of these concepts to cells and tissues in their relationship to the whole body is made throughout the course. Laboratory exercises complement and supplement lecture topics.

CHE 534 Biochemistry II: Digestion/Intermediary Metabolism (5/0/5/75)

This course presents the application of the concepts learned in Biochemistry I to the integration and control of cellular metabolism, including roles of minerals and vitamins. An overview of steroid chemistry as it relates to biological functions is also presented. **Prerequisite:** *Biochemistry I*

CHE 568 Basic Nutrition (4/0/4/60)

This course presents the chemical composition of foods, the sources of nutrients, and their utilization within the body. Emphasis is given to the role of vitamins and minerals in maintaining or achieving nutritional health. Concepts of diet related to health and disease are stressed throughout the course. **Prerequisite:** *Biochemistry II*

CLI 610 Introduction to Clinic I (0/1/5/15)

This laboratory course presents an introduction to the clinic procedures and patient care, with emphasis on SOAP notes, record keeping and adjusting. **Prerequisite:** *Technique IV*

CLI 650 Introduction to Clinic II (0/1/.5/15)

This laboratory course presents a review of clinic procedures, with emphasis on assessment and rationale for choice of technique and treatment plan, utilizing the techniques covered in Cleveland Comprehensive Methods. **Prerequisites:** *Physical Diagnosis, Introduction to Clinic I*

CLI 714 Clinic Internship I (2/2/3/60)

This course presents an integration of all clinic procedures including examination, diagnosis, treatment, and management in the care of student and student family patients, utilizing approved procedures in the Student Health Center environment under the close supervision of licensed clinicians. **Prerequisites:** *All courses in Trimesters 1-6 of the 10-trimester progression and all courses in trimesters 1-8 of the 12-trimester progression.*

CLI 750 Clinic Internship II (0/4/2/60)

In this course the student begins his/her public clinic internship. The student intern examines and treats patients under the guidance and supervision of licensed chiropractors. Patient management, including referral when appropriate, and all aspects of record keeping are implemented. In addition, the student intern participates in sessions related to the chiropractic management of specific conditions and in other clinic-related activities. **Prerequisites:** *All courses in Trimesters 1-7 of the 10-trimester progression or 1-9 of the 12-trimester progression, successful completion of all of Part I of the NBCE Examination.*

CLI 770 Clinic Internship III (0/12/6/180)

In this course the student continues his/her health center internship. The student intern examines and treats patients under the guidance and supervision of licensed chiropractors. Patient management, including referral when appropriate, and all aspects of record keeping are implemented. In addition, the student intern participates in sessions related to the chiropractic management of specific conditions and in other clinic related activities. **Prerequisite:** *Clinic Internship II*

CLI 780 Clinic Internship IV (0/28/14/420)

In this course the student completes his/her health center internship. The student intern examines and treats patients under the guidance and supervision of licensed chiropractors. Patient management, including referral when appropriate, and all aspects of record keeping are implemented. In addition, the student intern participates in sessions related to the chiropractic management of specific conditions and in other clinic related activities. **Prerequisite:** *Clinic Internship III*

DIM 518 Normal Radiographic Anatomy (3/1/3.5/60)

This course presents an introduction to X-ray fundamentals, basic terminology, and technology. Topics include a detailed study of normal radiographic anatomy, normal variants, and lines of mensuration of the axial and appendicular skeleton. Laboratory exercises complement and supplement lecture topics. **Prerequisites:** *Thorax/Abdomen/Pelvis Anatomy, Extremity Anatomy, Spinal Anatomy*

DIM 678 Skeletal Radiology I (2/2/3/60)

This course presents the application of the principles of X-ray interpretation to skeletal pathology. Emphasis is given to an analytical approach to traumatic lesions of the bones and joints, metabolic diseases and related disorders, and hematological disorders and the skeletal dysplasias. Laboratory exercises complement and supplement lecture topics. **Prerequisite:** *Normal Radiographic Anatomy*

DIM 700 Skeletal Radiology II (2/2/3/60)

This course is a continuation of Skeletal Radiology I with emphasis on tumors of the skeletal system, bone and joint infections, and arthritides. Laboratory exercises complement and supplement lecture topics. **Prerequisites:** *Skeletal Radiology I, Neuromusculoskeletal/Genitourinary Pathology*

DIM 702 Soft Tissue Radiology (3/1/3.5/60)

This course presents the application of the principles of X-ray interpretation to disease processes and anomalies affecting the soft tissues of the chest and abdomen. Laboratory exercises complement and supplement lecture topics. **Prerequisites:** *Normal Radiographic Anatomy, Cardiopulmonary/Endocrine Diagnosis* **Corequisite:** *Gastrointestinal/Genitourinary Diagnosis*

DIM 726 X-ray Physics and Protection (2/0/2/30)

This course presents the physics of diagnostic X-rays, with emphasis on basic principles and technology. Topics include the use of X-ray machines, imaging systems, film processing, and control of radiographic quality. Proper patient, technologist, and general public protection against the biological effects of radiation and associated quality control requirements are presented. **Prerequisite:** *Normal Radiographic Anatomy*

DIM 728 X-ray Procedures (0/2/1/30)

Laboratory exercises complement and supplement lecture topics. The laboratory course teaches proper positioning of the patient for radiographic imaging of the spine, extremities, chest and abdomen. Radiation protection is stressed throughout the course. **Prerequisite:** *Normal Radiographic Anatomy* **Corequisite:** *DIM 726 X-Ray Physics and Protection must be taken prior to or concurrently with this course.*

DIM 736 X-ray Case Presentation (0/2/1/30)

This course presents a clinical approach to the relevant radiographic findings of conditions and anomalies commonly seen in chiropractic practice. Emphasis is given to case management through the correlation of radiologic findings with case history, physical examination and laboratory findings.

Prerequisites: *Skeletal Radiology II, Soft Tissue Radiology*

DIM 738 Advanced Imaging (3/0/3/45)

This course presents special imaging procedures that are available to assist in the evaluation and management of patients. Topics include the physics, technology and interpretation of scintigraphy, magnetic resonance imaging, computed tomography and ultrasonography. **Prerequisites:** *Skeletal Radiology II, Soft Tissue Radiology; X-Ray Physics, Procedures and Protection*

GED 636 Clinical Laboratory Diagnosis (2/0/2/30)

This course presents an approach to chiropractic diagnosis using clinical laboratory procedures, the physical and chemical basis of selected tests, the interpretation of these tests, and their correlation with clinical findings. **Prerequisites:**

Cardiovascular/Pulmonary/Gastrointestinal Pathology, Neuromusculoskeletal/Genitourinary Pathology

GED 638 Physical Diagnosis (3/1/3.5/60)

This course presents basic history-taking concepts and the standard physical examination. Emphasis is given to the evaluation of clinical data, the stages involved in deriving a clinical impression, and the chiropractic analysis and evaluation of the patient. Laboratory sessions provide hands-on experiences and complement and supplement lecture topics. **Prerequisite:**

Cardiovascular/ Pulmonary/Gastrointestinal Pathology

GED 640 Head/Eyes/Ears/Nose/Throat Diagnosis (2/1/2.5/45)

This course presents the examination techniques of the head, eye, ear, nose, mouth and throat, with emphasis on normal findings, significant disorders, and common disorders seen frequently in chiropractic practice. The use of appropriate instrumentation is also presented. The techniques of history taking are integrated throughout the course. Laboratory sessions provide hands-on experiences and complement and supplement lecture topics. **Prerequisite:** *Neuroanatomy*

GED 660 Cardiopulmonary/Endocrine Diagnosis (4/0/4/60)

This course presents the common disorders of the cardiovascular, respiratory and endocrine systems from the viewpoint of signs, symptoms, and etiology. Emphasis is given to the differential diagnosis of each topic in relation to physical

diagnosis and prognosis. Emphasis is given to the differential diagnosis as it pertains to the practice of chiropractic.

Prerequisite: *Physical Diagnosis*

GED 664 Gastrointestinal/Genitourinary Diagnosis (3/0/3/45)

This course presents the common disorders of the gastrointestinal and genitourinary systems and a survey of the various procedures used to diagnose these disorders. Emphasis is given to the differential diagnosis as it pertains to the practice of chiropractic. **Prerequisites:** *Physical Diagnosis, Neuromusculoskeletal/Genitourinary Pathology*

GED 730 Clinical Nutrition (3/0/3/45)

This course applies the nutritional principles presented in Basic Nutrition to dietary analysis, design and therapy. The roles of diet and specific nutrients in the etiology, prevention and management of common disorders seen in chiropractic practices, as well as in athletic training, weight control, and during various phases of the life cycle are presented.

Prerequisites: *Basic Nutrition, Gastrointestinal/Genitourinary Diagnosis*

GED 734 Differential Diagnosis (3/0/3/45)

This course presents clinical syndromes commonly seen in chiropractic practice. Emphasis is given to the systematic and methodical differentiation of symptoms of diseases relative to specific organs and systems utilizing the patient's history, physical examination, and diagnostic tests to arrive at a diagnosis. Case histories of common problems with specific reference to chiropractic principles, diagnoses, and appropriate treatment plans are presented. **Prerequisites:** *Skeletal Radiology II, Soft Tissue Radiology, Cardiopulmonary Endocrine Diagnosis, Gastrointestinal/Genitourinary Diagnosis, Neuromusculoskeletal Diagnosis II*

MPH 562 Public Health I: The Health Care System (2/0/2/30)

This course presents issues associated with the health of the population. Topics include health administration, health laws and regulations, the health care delivery system, health care financing, occupational and mental health issues, and the major causes of mortality within the U.S. population. Diversity and health care issues centering around health promotion, substance abuse, provider/patient relations, and maternal areas as they relate to the chiropractic professional are also presented.

MPH 570 Microbiology I: Bacteriology (3/2/4/75)

This course presents the taxonomy, ultrastructure, and morphology of bacteria and addresses the pathogenicity and

clinically related findings associated with bacterial diseases. Laboratory exercises complement and supplement lecture topics. **Prerequisite:** *Immunobiology*

MPH 604 Microbiology II: Virology/Parasitology/Mycology
(4/0/4/60)

This course presents the biology of viruses, fungi, protozoans and metazoans as they relate to clinically important diseases. **Prerequisite:** *Microbiology I*

MPH 616 Public Health II: Health Promotion and Epidemiology
(4/0/4/60)

This course presents the basic principles of risk assessment, health promotion and epidemiology. The leading causes of morbidity and mortality in the United States are examined, and primary, secondary and tertiary prevention strategies for each are presented. The emergence of HIV/AIDS in the U.S. is included to teach principles of both public health practice and outbreak investigation. Basic epidemiological concepts are included. **Prerequisite:** *Public Health I*

MPH 626 Public Health III: Wellness Care in Clinical Practice
(1/0/1/15)

This course assists the student in planning preventative care recommendations for the prevention of disease and disability. Appropriate screening tests and patient counseling methods are discussed. The role of chiropractic in the health care system with respect to wellness care is presented. **Prerequisite:** *Public Health II*

NMS 644 Neuromusculoskeletal (NMS) Diagnosis I: Physical
(2/3/3.5/75)

This course presents the evaluation and diagnosis of disorders of the neuromusculoskeletal system, with emphasis on conditions commonly encountered in the practice of chiropractic. Laboratory sessions provide hands-on experiences and complement and supplement lecture topics. **Prerequisites:** *Neuroanatomy, Extremity Anatomy*

NMS 670 Neuromusculoskeletal (NMS) Diagnosis II: Clinical
(5/0/5/75)

This course presents the etiology and clinical signs and symptoms of neuromusculoskeletal conditions and syndromes commonly encountered in a chiropractic practice. The process of differential diagnosis of these conditions is also presented. **Prerequisites:** *NMS Diagnosis I, Neuromusculoskeletal/Genitourinary Pathology*

NMS 676 Clinical Neurology
(4/0/4/60)

This course presents the common manifestations of neurological diseases and their differential diagnoses. Emphasis

is given to those conditions commonly encountered in the practice of chiropractic and includes disorders of the central and peripheral nervous systems, musculoskeletal disorders that affect nervous system function, and the myopathies. **Prerequisites:** *NMS Diagnosis I, Neuroanatomy, Neurophysiology*

PAT 548 Immunobiology
(3/0/3/45)

This course presents the basic concepts of the body's immune system. Topics include resistance to infection, inflammation, immune hypersensitivity, blood groups, AIDS, histocompatibility, and self-tolerance. Current immunological concepts on cellular and humoral controls are included. **Prerequisite:** *Cell Physiology*

PAT 572 General Pathology
(4/0/4/60)

This course presents the pathologic changes that occur in the cells that are injured. Topics include inflammation, regeneration/repair, hemodynamic disorders, neoplasms, and disorders associated with the endocrine system, immunity, and genetically related conditions. **Prerequisites:** *Histology, Immunobiology, Endocrine/Reproductive Physiology*

PAT 606 Cardiovascular/Pulmonary/Gastrointestinal Pathology
(5/1/5.5/90)

This course presents the pathologies of the heart, blood vessels, lymphatics, lungs, liver, and gastrointestinal tract. Emphasis is given to pathogenesis and the morphologic changes that occur. Laboratory exercises complement and supplement lecture topics. **Prerequisites:** *Cardiovascular/Pulmonary Physiology, General Pathology, Renal/Digestive Physiology*

PAT 632 Neuromusculoskeletal/Genitourinary Pathology
(5/0/5/75)

This course presents the pathologies of the musculoskeletal, nervous, genitourinary and reproductive systems. Emphasis is given to pathogenesis and the morphologic changes that occur. **Prerequisites:** *General Pathology, Neurophysiology, Renal/Digestive Physiology*

PAT 634 Pathology Laboratory
(0/1/0.5/15)

This laboratory course provides the student with the opportunity to observe systemic pathologies and develop clinical diagnostic concepts. **Prerequisite:** *General Pathology, Cardiovascular/Pulmonary/Gastrointestinal Pathology*

PHT 648 Physiotherapy I/Rehabilitation
(2/2/3/60)

This course presents an overview of physiologic modalities including soft tissue techniques and their indication and

contraindications. Topics also include functional assessment of the spine and extremities leading to exercise recommendations. Instruction addresses in-office and in-home rehabilitation procedures as well as the use of orthopedic supports and traction. Applications of these modalities are presented as an adjunct to chiropractic patient management. Laboratory sessions provide hands-on experiences in therapy application.

Prerequisites: *Neurophysiology* **Corequisite:** *NMS Diagnosis I*

PHT 688 Physiotherapy II (2/2/3/60)

This course presents the physiologic principles of electrical therapies, direct and alternating currents, middle frequency currents, traction techniques, superficial heat, deep heat, cryotherapy and Ultrasound. Laboratory sessions provide hands-on experience in therapy application. Applications of these modalities are presented as an adjunct to chiropractic patient management. **Prerequisite:** *Physiotherapy I*

PHY 506 Cell Physiology (3/0/3/45)

This course presents an intensive study of cellular organelles and their functions. Topics include the structure of biomembranes, cellular respiration, and the electrophysiology of nerve and muscle cells.

PHY 532 Cardiovascular/Pulmonary Physiology (4/0/4/60)

This course presents the detailed physiology of the cardiopulmonary system. Topics include the cardiac cycle, electrocardiograms, hemodynamics, neural and hormonal control of blood pressure, lymphatics, blood and hemostasis, ventilation and lung volumes, regulation of respiration, and gas diffusion and exchange. **Prerequisites:** *Systemic Anatomy, Cell Physiology*

PHY 546 Endocrine/Reproductive Physiology (3/0/3/45)

This course presents the detailed physiology of the inter-relationship between the nervous and hormonal systems and their regulation of body systems, metabolism and reproductive functions. Glandular structure and function are also presented. **Prerequisites:** *Cell Physiology, Systemic Anatomy*

PHY 560 Renal/Digestive Physiology (3/0/3/45)

This course presents the detailed physiology of the renal and digestive systems. Topics include nephron functions, renal acid-base balance, gastrointestinal functions, and the relationship of enzymes and hormones to gastrointestinal processes.

Prerequisites: *Systemic Anatomy, Cell Physiology*

PHY 602 Neurophysiology (4/0/4/60)

This course presents the detailed physiology of the central nervous system as it receives, integrates and responds to information from the periphery. Topics include synaptic

function, circuitry, and functional aspects of the various parts of the central nervous system. **Prerequisite:** *Cell Physiology* **Corequisite:** *Neuroanatomy Must be taken prior to or concurrently with Neurophysiology*

PHY 630 Physiology Laboratory (0/2/1/30)

This laboratory course provides the student with the opportunity to study and apply physiological concepts presented in the previous physiology courses. **Prerequisites:** *Cardiovascular/Pulmonary Physiology, Endocrine/Reproductive Physiology, Renal/Digestive Physiology; Neurophysiology*

PRA 525 Technique I: Introduction to Functional Analysis (0/3/1.5/45)

This course presents an integrated approach to functional assessment of the spine. Emphasis is placed on developing physical evaluation skills and an introduction to the concepts of doctor-patient interaction in the clinical setting. Laboratory sessions complement the lecture topics and provide the opportunity for the student to begin to develop palpation, psychomotor and interpersonal skills essential to the practicing chiropractor.

PRA 535 Technique II: Theory and Practice of Structural and Functional Spinal Assessment (2/2/3/60)

This course presents a continuation of the study of the philosophy, science and art of chiropractic. Emphasis is placed on the integration of functional assessments, including kinetic palpation, that are utilized in patient assessment, clinical evaluation and detection of neuromusculoskeletal disorders. Laboratory sessions complement and supplement lecture topics and provide opportunities for the student to practice and integrate functional assessment procedures utilized on a daily basis in the clinical setting. **Prerequisites:** *Technique I, Foundations in Philosophy and Science of Chiropractic, Spinal Anatomy*

PRA 545 Technique III: Cleveland Comprehensive Methods (2/4/4/90)

This course presents the philosophy and biomechanical approach to the evaluation and adjustment of individual vertebral segments. Emphasis is placed on spinal analysis, functional assessment and adjustment of the thoracic and lumbar spine, in which a diversity of adjusting techniques are introduced and practiced. The techniques used include recoil, diversified and Gonstead. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisite:** *Technique II*

PRA 625 Technique IV: Cleveland Comprehensive Methods (2/4/4/90)

This course presents the philosophy and biomechanical approach to the evaluation and adjustment of individual vertebral segments as well as the sacrum, ilia, coccyx and occiput. Emphasis is placed

on spinal analysis, functional assessment and adjustment of the cervical spine and pelvis, with review of the thoracic and lumbar spine in which a diversity of adjusting techniques are introduced and practiced. The techniques used include recoil, diversified and Gonstead. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisite:** *Technique III*

PRA 635 Technique V: Extravertebral Adjusting and Case Management (2/1/2.5/45)

This course presents the philosophy and biomechanical approach to the evaluation and adjustment of the extravertebral articulations of the body, including the upper and lower extremities. Emphasis is given to the biomechanical impact of these subluxations on the body as a whole. Laboratory sessions provide hands-on experiences in extravertebral adjusting. **Prerequisite:** *Technique IV, Extremity Anatomy*

PRA 645 Technique VI: Soft Tissue Methods (0/2/1/30)

This course introduces student to concepts of soft tissue diagnostic and treatment procedures. Emphasis is placed on correlation of soft tissue disorders with the vertebral subluxation complex. Functional assessment, differential diagnosis and case management of soft tissue lesions are presented. Laboratory sessions provide hands-on experiences in soft tissue methods. **Prerequisite:** *Technique III*

PRA 692 Chiropractic Functional Assessment (1/2/2/45)

This course presents the integration of physical assessment skills and clinical knowledge in the detection and evaluation of neuromusculoskeletal disorders. Laboratory sessions complement and supplement lecture topics and provide opportunities for the student to formulate logical thought processes. **Prerequisites:** *NMS Diagnosis I, Technique IV*

PRA 710 Chiropractic Case Management (4/1/4.5/75)

This course presents the clinical application of chiropractic to the management of common neuromusculoskeletal conditions presenting in the typical chiropractic practice. Laboratory sessions include comparison of adjustive techniques, physiologic therapeutic modalities and biomechanical considerations of specific clinical cases. **Prerequisites:** *Extravertebral Adjusting, Physiotherapy II, Chiropractic Assessment, Skeletal Radiology II, Neuromusculoskeletal Diagnosis II*

PRA 778 Visiting Lecture Series (varies)

This informative course exposes students to experts in a wide range of current topics in chiropractic, including technique, research, office procedures, philosophy, motivation, patient communication, and the positioning of chiropractic within the health care delivery system.

PRI 510 Foundations in Philosophy and Science of Chiropractic (2/0/2/30)

This course presents an introduction to the science, philosophy and art of chiropractic. Current issues in chiropractic and the profession's position as part of today's health delivery system are presented. An introduction to the components of Vertebral Subluxation Complex is provided. The course serves as a foundation for understanding the relationship of chiropractic to the basic and clinical science courses.

PRI 550 Introduction to Research (1/0/1/15)

This course presents an introduction to the professional literature and the skills necessary to use a research library. Topics include reading and critiquing professional literature and research reporting, terminology and statistics.

PRI 612 History of Chiropractic Profession and Technique Systems (2/0/2/30)

This course traces the history of the chiropractic profession from its founding through the present. The relationship between chiropractic's history and philosophy is explored, and technique systems are studied as an example of the profession's evolution and development. **Prerequisite:** *Foundations in the Philosophy and Science of Chiropractic Technique II*

PRI 706 Clinical Application of Chiropractic Theory (2/0/2/30)

This clinically focused course presents the characteristics and manifestations of the Vertebral Subluxation Complex, chiropractic hypotheses, including those relating to dysafferentation, fixation, nerve compression and somatoautonomic reflexes, and the correlation of scientific literature with the principles and practice of chiropractic. **Prerequisite:** *History of Chiropractic Profession and Technique Systems*, **Prerequisite (10-tri track):** *Clinical Neurology*, **Corequisite (12-tri track):** *Clinical Neurology*

PRI 740 Research Methods (1/0/1/15)

This course provides the student with the basic skills to prepare a research paper for publication in a professional journal. Activities include the search and review of appropriate literature and the preparation of a research paper on a subject of clinical interest, conforming to the publication format required for submission to peer reviewed chiropractic research journals. **Prerequisite:** *Introduction to Research*

To be determined Technique VII: Specialty Core (0/2/1/30)

The student may choose from any of the 600-level elective techniques to fulfill these hours.

To be determined **Technique VIII: Specialty Core (0/2/1/30)**
The student may choose from any of the elective techniques to fulfill these hours.

To be determined **Technique IX: Specialty Core (0/2/1/30)**
The student may choose from any of the elective techniques to fulfill these hours.

Electives for the Doctor of Chiropractic Degree (lecture/lab/credit hour/contact hours)

CLI 790 Special Topics in Clinic (varies)
This course allows the student to augment the clinical experience by participating in additional hours of internship. Special projects may be assigned by clinic leadership.
Corequisite: *Concurrent enrollment in CLI 750, CLI 770 or CLI 780*

CLI 807 Extended Preceptorship (0/28/14/420)
This one-trimester course provides the student with the opportunity to gain a trimester of clinical experience in a field doctor's office, working under that doctor's direct supervision. **Prerequisites:** *Completion of all graduation requirements; approval of the Preceptorship Committee*

GED 507 Health Science Terminology (1/0/1/15)
This course presents the basic rules of construction and interpretation of scientific terminology. Topics include Greek and Latin roots, prefixes and suffixes, and the dissection of words to discover their meaning.

PRA 607 Advanced Diversified Technique (0/2/1/30)
This course presents the philosophy and biomechanical approach to the Diversified Technique to the specific adjustment of individual vertebral segments, as well as the sacrum, ilia, coccyx and occiput. Laboratory sessions provide hands-on experience in the application of this technique. **Prerequisites:** *Techniques III and IV*

PRA 617 Full Spine Specific Technique (0/2/1/30)
This course presents the philosophy and biomechanical approach to the specific segmental recoil technique as applied to the spine adjusting procedures addressing the sacrum, ilia and coccyx are also present. Integration of the Meric System of analysis is also presented. Laboratory sessions provide hands-on experiences in the application of the technique.
Prerequisites: *Techniques III and IV*

PRA 627 Gonstead Technique I (0/2/1/30)
This laboratory course presents a survey of the Gonstead System for spinal and extraspinal corrections. Emphasis is given to

broadening and improving the adjusting competencies of the student. **Prerequisites:** *Techniques III and IV*

PRA 637 Thompson Technique (0/2/1/30)
This course presents the application of Thompson adjustive procedures utilizing the Terminal Point Drop Table. Topics include the objective analysis of structure and the correlation of biomechanical analysis to clinical presentation. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisites:** *Techniques III and IV*

PRA 647 Flexion-Distraction Technique (0/2/1/30)
This course presents the philosophy, analysis and corrective procedures of the Flexion-Distraction Technique. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisites:** *Techniques III, Techniques IV, Physical Diagnosis, NMS Diagnosis I*

PRA 657 Graston Technique (0/2/1/30)
This course presents the philosophy and application of the Graston method for evaluation and treatment of soft tissue disorders. This technique involves the use of specially designed instruments to detect and treat areas of soft tissue dysfunction. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisites:** *Techniques III, IV and VI*

PRA 667 Sacral-Occipital Technique I (0/2/1/30)
This course presents the philosophy and biomechanical approach of the Sacral Occipital Technique (SOT). Emphasis is given to analysis, evaluation, corrective procedures and the use of specialized equipment, such as SOT blocks and boards. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisites:** *Techniques III and IV*

PRA 677 Motion Palpation and Chiropractic Technique (0/2/1/30)
This course presents an overview of the fundamental concepts in the evaluation and application of the motion palpation technique, including the philosophy and biomechanical approach to this method. Laboratory sessions provide practical applications of the technique and methods of adjusting.
Prerequisites: *Technique III & IV*

PRA 707 Sacral-Occipital Technique II (0/2/1/30)
The course presents Chiropractic Manipulative Reflex Technique (CMRT) as it relates to Category I of the Sacral Occipital Technique. Laboratory sessions provide hands-on experiences in the application of the technique. **Prerequisite:** *Sacral-Occipital Technique I*

PRA 717 Gonstead Technique II (0/2/1/30)

This laboratory course presents the continued survey of the adjusting procedures of the Gonstead System. Emphasis is given to individual case management. **Prerequisite:** *Gonstead Technique I*

PRA 727 Activator Methods Technique (0/2/1/30)

This course introduces the student to the Activator Methods Chiropractic Technique including patient functional assessment, leg length analysis, patient placement and basic protocol adjusting procedures for the spine and extremities.

Prerequisites: *Techniques III and IV*

PRA 737 Chiropractic Biophysics (CBP) (0/2/1/30)

A full spine structural rehabilitative technique based on mechanical engineering principles. This technique utilizes mirror image adjustments, exercise and traction to affect global posture. This elective course is a non-clinic technique.

Prerequisites: *Techniques III and IV*

PRA 747 Integrative Technique (0/2/1/30)

This course presents an overview that integrates the various core techniques and patient assessment protocols. The

application of adjunctive procedures includes drop table mechanisms, pelvic blocking and myofascial techniques.

Prerequisites: *Must have completed all coursework through trimesters six of 10 or eight of 12*

PRA 757 Upper Cervical Technique (0/2/1/30)

This course presents one of several optional upper cervical adjusting classes, including appropriate assessment protocols.

Prerequisites: *Technique III and IV*

PRA 787 Graduate Preceptor Program (varies)

The Graduate Preceptor Program is an elective, one-trimester course that enables a graduate doctor of chiropractic to participate in elective coursework in the Doctor of Chiropractic degree program enrolled as a graduate student in a non-degree seeking status to fulfill a state licensing requirement or to complete a preceptor requirement. **Prerequisites:** *D.C. degree*

INTERNSHIP PROGRAM

Internship is the clinical experience at Cleveland Chiropractic College. All chiropractic services are provided under the supervision of licensed clinicians and are related to the clinical needs of the patient.

The requirement in hours is subject to change in relation to curricular changes or rules and regulations of governing or regulatory bodies.

In general, the student intern is on duty during regular clinical hours. Any hours missed in clinical service must be rescheduled and completed as a requirement for the degree.

The intern is required to complete certain minimal requirements in the Health Center prior to graduation. The quality of work represented within these requirements must be satisfactory and is indicated by regular evaluations and competency tests.

The clinical requirements for graduation are that the student successfully:

1. Passes the clinic entrance examination;
2. Passes the clinic competency examination;
3. Receives satisfactory evaluations from clinic faculty in the demonstration of all required clinical competencies; and
4. Completes all required quantitative requirements.

The internship program is also one of the major vehicles through which the College serves the community. The College regularly provides free physical examinations to various organizations, including scoliosis screenings for children. The Health Center also provides affordable chiropractic care to the community.

PRECEPTORSHIP PROGRAM

Preceptorship

The College's preceptorship program offers participants the opportunity to work off campus in a doctor of chiropractic's private practice. Interns must complete the patient care graduation requirements specified in the *Clinic Manual* to qualify for the preceptorship programs.

The overall objectives of the Preceptorship Program are to:

1. Provide practical experience for the student in a field office setting.
2. Provide the student with an avenue that will facilitate the transition from the College Health Center to the field practice environment.
3. Improve the overall educational program of the College in general and the clinical experience in particular by providing additional opportunities for learning.
4. Increase contact between the College and the field practitioner for the purpose of fuller utilization of available teaching skills and field experience.
5. Provide the field practitioner with the assistance of a competent, motivated intern, allowing the field practitioner to assess potential future associates.
6. Provide the field practitioner with a form of active contribution to the College, the community, and the profession.

To qualify for participation in the Preceptorship Program, the intern shall have:

1. Completed all clinical requirements with the exception of total clinic hours.
2. Completed all didactic coursework and be in good academic standing.
3. Received the approval of the College.
4. Completed CLI 770.

Extended Preceptorship

After the end of the final trimester and after completing all requirements for graduation, the student may be eligible to participate in the Extended Preceptorship Program, an elective one trimester extension. A student participating in this program continues to be an enrolled student of the College and must meet all Extended Preceptorship Program and College guidelines. The student will attend commencement exercises upon completion of the D.C. requirements, but will receive a diploma at the end of the Extended Preceptorship Program, which ends the last week of the trimester. Deadline for applying for the Extended Preceptorship is no later than the seventh week of the trimester prior to the preceptorship. Students on an Extended Preceptorship must complete all associated requirements by the Friday of the first week of the trimester following the Extended Preceptorship period.

DOCTOR OF CHIROPRACTIC PROGRAM POLICIES

Health Center Academic Policies

In compliance with the policy on clinical supervision of adjusting and treatment, patient care, including examination or treatment, is permitted only within the health centers or technique rooms and approved preceptorship sites under the appropriate supervision of authorized, licensed clinicians assigned or employed by the College.

Prerequisites to Enter Clinic

The following guidelines/criteria for entrance into the clinic sequence (either student clinic or outpatient clinic) are as follows:

- Prerequisite for entry into student clinic is completion of trimesters one through six of the 10-trimester progression and one through eight of the 12-trimester progression.
- Students must pass all sections of the NBCE Part I exam in order to enter the outpatient health center.
- Prerequisite for entry into the 10-trimester outpatient clinic sequence is completion of trimesters one through seven of the 10-trimester program.
- Prerequisite for entry into the 12-trimester outpatient clinic sequence is completion of trimester one through nine of the 12-trimester progression.
- If a student has failed (with a “D”) one course that is a prerequisite to the clinic sequence and is in good academic standing, that student may submit a written appeal requesting permission to enter the clinic and/or remain on the 10-trimester clinic sequence to the Scholastic Regulations Committee no later than the last day to add coursework in the applicable term. The Scholastic Regulations Committee evaluates each request in light of the student’s overall academic record, and other applicable College policies. If allowing the student to enter clinic and/or remain on the 10-trimester clinic sequence requires the violation of other academic policies, the appeal will be denied. Total course load may not exceed 35 hours.
- If a student has failed two or more courses that are prerequisites, that student may not enter the clinic sequence.
- A student who has withdrawn from a clinic sequence prerequisite course or has not taken a clinic

sequence prerequisite course may not enter the clinic sequence. This is not subject to appeal.

Clinic Examinations

At the end of the trimester (Kansas City) and at the beginning of the term (Los Angeles) prior to entering the outpatient Health Center, a student must take and pass the clinic entrance examination. Progression throughout the clinic experience is monitored by a clinical competency examination.

A student must demonstrate competency at all clinic levels before progressing to the next level and must pass the clinical competency examination in order to complete all clinic requirements. (See *Clinic Manual* for grading scale and remediation of failure of the clinical competency examination.)

Clinic Continuity

A student who is enrolled in Clinic Internship courses may not withdraw from the College without the approval of the chair of clinical sciences. If approval is granted, the chair of clinical sciences will also determine the conditions of re-admission to the program.

When a student withdraws from the College, his/her future financial aid eligibility, anticipated graduation date and/or eligibility to complete the degree program within the maximum time period allowed may be compromised.

Patient Recruitment

Education in the clinical theater has, in common with education in other areas of the chiropractic curriculum, a teaching component and a learning component. The teaching component is primarily the responsibility of the institution, and the learning component is primarily the responsibility of the student. Patient recruitment is a shared responsibility between the College and the student. Instruction in effective patient recruitment through sponsored activities is the responsibility of the College; implementation of this knowledge through participation in sponsored activities, individual contacts and recruitment of Health Center patients is the responsibility of the intern, with the guidance and assistance of the supervising clinicians.

National Board of Chiropractic Examiners

The National Board of Chiropractic Examiners was incorporated June 19, 1963. Its purpose is to prepare and administer to qualified applicants examinations of such high quality that legal agencies governing the practice of chiropractic within each state and other countries may accept, at their discretion, those who have successfully completed the examination of the National Board of Chiropractic Examiners without further written examination.

National Board examinations (Parts I, II, III, and PT) are given twice a year, in March and September, at several locations in the United States and Canada. Tests are also given in England, Australia and other countries on a less frequent basis. The exact test dates and locations are announced well in advance. For additional information consult www.nbce.org.

The National Board tests are described as follows.

Part I consists of the basic science subjects of General Anatomy, Spinal Anatomy, Physiology, Pathology, Chemistry, Microbiology and Public Health.

Part II contains the clinical science subjects of General Diagnosis, Neuromusculoskeletal Diagnosis, Diagnostic Imaging, Principles of Chiropractic, Chiropractic Practice and Associated Clinical Sciences.

The Physiotherapy (PT) section of the National Board tests may be taken upon successful completion of all of the physiotherapy courses.

Part III is the Written Clinical Competency Examination (WCCE). The WCCE test questions are not dependent on particular chiropractic philosophies or techniques, but rather are based on an objective assessment of necessary practice skills. Categories covered include the case history, physical examination, neuromusculoskeletal examination, roentgenologic examination, clinical laboratory and special examinations, diagnostic impression, chiropractic and supportive techniques and case management. Most states require or accept NBCE Part III in lieu of a written state clinical competency examination.

The Part IV examination is given twice a year in May and November. It consists of three major sections: X-ray interpretation and diagnosis, chiropractic technique and case management. Most states require or accept NBCE Part IV in lieu of a state board practical examination.

The College, as well as accrediting agencies, consider NBCE scores as a measure of the success of the doctor of chiropractic degree program, therefore, a student must demonstrate a high level of academic achievement before the College will approve his/her board applications. Eligibility criteria is available in the Registrar's Office.

Students required to pass all of Part I prior to entering the outpatient Health Center.

State Licensing

Enrollment in the educational program at Cleveland Chiropractic College does not constitute a guarantee of employment upon graduation.

All states require licensing for the practice of chiropractic. Each state may set its own standards and administer its own examinations before granting a license to practice. It is the student's responsibility to know and meet the requirements of the states in which she/he expects to seek licensure. The College library and the Office of the Registrar maintain address files of the state licensing boards, National Board and other information that may assist the student. A publication by the Federation of Chiropractic Licensing Boards is available in the library for students to consult to obtain information about state regulations. As part of their requirements, most states require the passing of National Board examinations. Students also may obtain information about state requirements at www.fclb.org.

RESEARCH PROGRAM

The primary goal of the Cleveland Chiropractic College Research Center is to conduct research and scholarly activities related to chiropractic health care and education, and to involve faculty and students in collaboration with other institutions and health care providers.

The College maintains a clinical research area for faculty and student use. Work-study jobs are available for qualified students who are interested in involvement in research activities.

The research courses foster basic research skills as well as an appreciation of the importance of research to the profession. Students are encouraged, and may be financially supported, in their pursuit of approved projects. These projects may result in institutionally funded attendance and presentation of papers at professional conferences. Scholarships, institutional grants and student research assistant positions are also periodically available.