

SCHOOL OF NATUROPATHIC MEDICINE

ADMINISTRATORS OF THE SCHOOL OF NATUROPATHIC MEDICINE

Jane Gultinan, ND, Dean

Joni Olehausen, ND, Associate Dean, Bastyr University California

Arianna Staruch, ND, Associate Dean

Jennifer Johnson, ND, Associate Dean, Naturopathic Clinical Education

Laureen Cullen, ND, Chair, Clinical Science

Sheila Kingsbury, ND, RH (AHG), Chair, Botanical Medicine

Dean Neary, ND, Chair, Physical Medicine

Brad Lichtenstein, ND, Chair, Homeopathy

Gary Garcia, MD, Director, Community and Post Graduate Medicine

Kristine Arena, Program Supervisor

Chrissy Atkins, Program Coordinator, Botanical Medicine

Donna Romeo, Administrative Assistant

Alexis Durham, Program Director, Certificate in Holistic Landscape Design

Darcy MacPherson, Supervisor, Bastyr University Gardens

Michele Milligan, Assistant Supervisor, Bastyr University Gardens

Kraetsch, Josh, Assistant Supervisor, Bastyr University Gardens

Crystal Hamby, Lab Coordinator, Practicum Coordinator, Botanical Medicine

Thombra Muhammad, Program Coordinator, Bastyr University California

MISSION

We educate future naturopathic physicians who care for the health and well-being of their communities and advance our profession.

VISION

The School of Naturopathic Medicine will be a leading academic center for inspired and scholarly learning in the cultivation of naturopathic doctors. It will accomplish this through education, research, professional leadership, community and clinical services that bridge the worlds of science, nature and spirit.

The School of Naturopathic Medicine offers a Doctorate in Naturopathic Medicine, a Bachelor of Science with a Major in Herbal Sciences and a

Certificate in Holistic Landscape Design. The departments in the School of Naturopathic Medicine include: botanical medicine, homeopathy, physical medicine, clinical sciences, clinical education, and community and post-graduate medicine.

PROGRAMS OFFERED

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DOCTOR OF NATUROPATHIC MEDICINE

DEFINITION AND DESCRIPTION OF NATUROPATHIC MEDICINE

Naturopathic medicine is a distinct profession of primary health care, emphasizing prevention, treatment and the promotion of optimal health through the use of therapeutic methods and modalities that encourage the self-healing process, the *vis medicatrix naturae*.

The U.S. Department of Labor defines naturopathic physicians as doctors who “diagnose, treat, and help prevent diseases using a system of practice that is based on the natural healing capacity of individuals. May use physiological, psychological or mechanical methods. May also use natural medicines, prescription or legend drugs, foods, herbs, or other natural remedies.”

Most naturopathic physicians provide natural medicine primary care through office-based, private practice. Many receive additional training in disciplines or modalities such as acupuncture and East Asian medicine.

Naturopathic diagnosis and therapeutics are supported by scientific research drawn from peer-reviewed journals from many disciplines, including naturopathic medicine, conventional medicine, European complementary medicine, clinical nutrition, phytotherapy, pharmacognosy, homeopathy, psychology and spirituality. Information technology and new concepts in clinical outcomes assessment are particularly well-suited to evaluating the effectiveness of naturopathic treatment protocols and are being used in research, both at naturopathic medical schools and in the offices of practicing physicians. Clinical research into natural therapies has become an increasingly important focus for naturopathic physicians.

PROGRAM OUTCOMES

A naturopathic medicine graduate of Bastyr University's School of Naturopathic Medicine will:

- Demonstrate an appropriate level of knowledge in both in basic, biomedical and clinical sciences.
- Demonstrate the ability to apply clinical skills in the care of patients to the standards of a primary care naturopathic physician as defined by the profession.
- Demonstrate the ability to apply the philosophy and principles of naturopathic medicine in the care of patients.
- Demonstrate a commitment to the highest levels of ethics and professionalism by behaving with honesty and integrity in all interactions with patients, their families, other health care professionals, and others they interact with in the course of their professional career.
- Demonstrate an ability to apply evidence informed practice efficiently and effectively in patient-care settings.

PRINCIPLES OF NATUROPATHIC MEDICINE

The underpinnings of naturopathic medical practice are embodied in six principles:

1. First Do No Harm – *primum non nocere*
2. The Healing Power of Nature – *vis medicatrix naturae*
3. Discover and Treat the Cause, Not Just the Effect – *tolle causam*
4. Treat the Whole Person – *tolle totum*
5. The Physician is a Teacher – *docere*
6. Prevention is the best “cure” – *praevenire*

SCOPE OF PRACTICE

Naturopathic medicine is defined by principles, rather than by methods or modalities. Diagnostic and therapeutic methods are diverse. The current scope of practice for a naturopathic physician varies by jurisdiction. However, the accredited naturopathic programs all train primary care physicians who diagnose, treat and manage patients with acute and chronic medical conditions and diagnoses. This may include, but is not limited to: nutritional science, natural hygiene, botanical medicine, naturopathic physical medicine, homeopathy, counseling, spirituality, minor office procedures and methods of laboratory and clinical diagnosis. The scope of practice is defined by state or provincial statute. The curriculum at Bastyr University matches the requirements listed by the Washington State Department of Health. Students have the responsibility to become

informed on licensure and scope of practice in the legal jurisdiction in which they choose to practice.

LEGAL STATUS OF NATUROPATHIC MEDICINE

Naturopathic physicians are licensed or registered as health care providers in Alaska, Arizona, California, Colorado, Connecticut, District of Columbia, Hawaii, Idaho, Kansas, Maine, Minnesota, Montana, New Hampshire, North Dakota, Oregon, Utah, Vermont, Washington, and the U.S. territories of Puerto Rico and the Virgin Islands. Legal provisions allow the practice of naturopathic medicine in several other states. Efforts to gain licensure elsewhere are currently underway. Forty-two states and territories in the United States have professional associations for naturopathic medicine. Naturopathic medicine is regulated in the following Canadian provinces: Alberta, British Columbia, Manitoba, Ontario and Saskatchewan. The Naturopathic Doctors Act of 2008 grants title protection for naturopathic doctors in Nova Scotia. There are 11 provincial and territorial professional associations.

NATUROPATHIC MEDICINE LICENSURE REQUIREMENTS

All states and provinces with licensure laws require completion of a residential program of at least four years and 4,100 hours of study from a college or university recognized by the Council on Naturopathic Medical Education (CNME). A copy of the CNME Handbook of Accreditation is available in the Bastyr Library and online at www.cnme.org. To qualify for a license, the applicant must satisfactorily pass the Naturopathic Physicians Licensing Examinations (NPLEX), which include basic sciences, diagnostic and therapeutic subjects, and clinical sciences. Applicants must satisfy all licensing requirements for the state or province to which they have applied. The Doctor of Naturopathic Medicine program is accredited by the Council on Naturopathic Medical Education (CNME).

PROFESSIONAL ORGANIZATIONS

The American Association of Naturopathic Physicians, based in Washington, D.C., represents the interests of the profession of naturopathic medicine in the U.S. The Canadian Association of Naturopathic Doctors is the professional association in Canada. Contact the appropriate national association for further information.

- American Association of Naturopathic Physicians, 4435 Wisconsin Ave. NW, Suite 403, Washington, D.C., 20016, www.naturopathic.org, 202.237.8150

- Canadian Association of Naturopathic Doctors, 20 Holly St., Suite 200, Toronto, Ontario, Canada M4S 3B1, www.cand.ca, 416.496.8633

NATUROPATHIC MEDICINE PROGRAM ADMISSIONS

For general information on the admissions process, please refer to the Admissions section in this catalog. The information below refers only to the naturopathic medicine program.

NATUROPATHIC MEDICINE PREREQUISITES

In selecting applicants for admission, the Bastyr University naturopathic medicine program seeks those qualities of motivation, intellect and character essential to becoming a physician. Applicants are considered on the basis of academic performance, maturity and demonstrated humanitarian qualities. Work and/or volunteer experience in health care, coupled with an awareness of the field of natural medicine, is strongly recommended. The following coursework is the minimum required preparation for the study of naturopathic medicine. Applicants may apply with coursework still in progress, but prerequisites must be completed prior to matriculation.

Please note: If in doubt about a specific prerequisite, contact an admissions advisor before taking the course.

The admissions office may require a course description to verify content. Descriptions may be emailed, faxed or sent by regular mail.

Overall Preparation

Completion of a bachelor's degree from a regionally accredited college/university is required. No specific major is advised. In addition to a strong preparation in the sciences, a broad background in the humanities and liberal arts is encouraged. Prerequisite coursework is used to determine a student's preparation for the naturopathic program. No credit is given for prerequisite coursework earning a C- or lower. Students submitting prerequisite coursework with grades of P (passing) may be required to submit additional information to demonstrate their competency in that subject.

Prerequisite Coursework

College-level Algebra 1 course
 Chemistry (science-major level).....at least 4 courses

Must include a minimum of either two sequential courses in organic chemistry or one course in organic chemistry and one course in biochemistry. The chemistry sequence should include an introduction to biological molecules. (The standard prerequisite for science-major level organic chemistry is one year of general chemistry.) Appropriate lab work required.

General Biology (science-major level).....2 semesters or 3 quarters
 Must cover concepts in cellular biology and genetics. Appropriate lab work required. Individual courses in the biological sciences may count if the above competencies are met, i.e., anatomy, physiology, microbiology and botany.

Physics 1 college-level course
 Course must be algebra-based; calculus-based is also accepted. Lab is not required.

Psychology 1 course
 Introduction to Psychology is recommended.

Strongly Recommended Courses

Though not required for admission, the faculty recommends that students complete biochemistry, anatomy and physiology, and botany coursework in addition to the prerequisite requirements. These courses will substantially enhance students' ability to master the naturopathic course material.

Other Suggested Courses

Biomedical ethics, philosophy of science, public speaking and English composition.

Age of Course

Required chemistry and biology courses not taken within seven years of matriculation into the program are subject to review by the admissions committee. Additional coursework may be required.

Credit by Examination

Applicants may submit AP, IB and CLEP scores for prerequisite consideration for math, psychology and physics. Students who have had prior AP or IB coursework in chemistry and biology may submit AP or IB scores for biology or chemistry exams. Students must submit either the original score received directly from the testing center, or a copy of their high school or college transcripts showing the score results. Since so few high school or college transcripts show score results, it may be most expedient to automatically request test scores be sent from the testing center. Decisions regarding credit are assessed on a case-by-case basis. The admissions committee reviews test scores within the context of an applicant's academic history. All equivalency decisions made by the admissions committee are final.

REQUIRED ABILITIES/SKILLS FOR NATUROPATHIC MEDICINE PROGRAM ADMISSION

Bastyr University is committed to providing equal opportunities for differently-abled people. The following policy has been adapted from the American Association of Medical Colleges guidelines to ensure

that prospective students have the physical and mental capacities to perform the required duties of a naturopathic physician:

A candidate for the naturopathic medicine degree must be able to demonstrate appropriate observational and communication skills, motor function, intellectual-conceptual, integrative and quantitative abilities, and behavioral and social maturity. Technological compensation can be made for some disabilities in certain of these areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate's judgment must be mediated by someone else's power of selection and observation.

Observation: The candidate must be able to observe demonstrations and experiments in the basic sciences, including but not limited to microbiologic cultures and microscopic studies of microorganisms and tissues in normal and pathologic states. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation. These are enhanced by the functional use of the sense of smell.

Communication: A candidate must be able to speak, hear and observe patients in order to elicit information, describe changes in mood, activity and posture, and perceive nonverbal communications. A candidate must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but also reading and writing. The candidate must be able to communicate effectively and efficiently in English in oral and written form with all members of the health care team.

Motor: Candidates should have sufficient motor function to elicit information from patients by palpation, auscultation, percussion and other diagnostic maneuvers. A candidate should have the manual dexterity to be able to perform diagnostic and therapeutic procedures such as blood draw, urinalysis, read electrocardiograms (ECGs) and X-rays, and be able to reposition a patient.

A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment required of physicians are cardiopulmonary resuscitation, the administration of intravenous medication, application of pressure to stop bleeding, the opening of obstructed airways and the suturing of simple wounds. Such actions

require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

Intellectual-Conceptual, Integrative and Quantitative Abilities: These abilities include measurement, calculation, reasoning, analysis and synthesis. Problem solving, a critical skill demanded of physicians, requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

Behavioral and Social Attributes: A candidate must possess the emotional health required for full utilization of her/his intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities attendant to the diagnosis and care of patients; and the development of mature, sensitive and effective relationships with patients. Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that are assessed during the admissions and educational processes.

ADMISSIONS CRITERIA

The admissions committee of the naturopathic medicine program determines the processes and procedures that guide the selection of candidates for the naturopathic program. The committee reviews undergraduate and graduate (if applicable) academic records and performance in the required prerequisite courses. The personal statement, references, resumes and in-person interviews are also evaluated for evidence of the abilities and skills required of naturopathic physicians. The interview also explores the candidate's awareness of the practice of naturopathic medicine. Bastyr University's naturopathic medicine program is academically challenging. While no minimum GPA is specified, the mean GPA for entering students in the last five years has exceeded 3.3 for both overall GPA and prerequisite course GPA.

INTERVIEWS

Qualified applicants who submit complete applications and meet the prerequisites may be invited to interview. Applicants are expected to interview at

the campus to which they apply, either in Kenmore or San Diego. A limited number of exceptions are made to accommodate special circumstances.

TRANSFER STUDENTS

Bastyr University accepts transfer students from naturopathic, medical, osteopathic and chiropractic schools, and other accredited professional programs, on a space-available basis. For transfer consideration, credits must be earned from an institution accredited by a regional accrediting agency or from an institution accredited by the Council on Naturopathic Medical Education (CNME). Transfer students are considered for admission in accordance with the following general guidelines:

- Applicants must meet the same entrance requirements as candidates for the first-year class.
- Applicants who wish to transfer credits from prior coursework must demonstrate satisfactory completion of courses that are equivalent in content and quality to courses given at the University. Satisfactory completion equals a grade of achieved competency, a C or above, or a 2.0 or above.
- Applicants must provide an official transcript from the college or program from which the transfer is being requested; it should demonstrate that they are leaving in good academic standing. They should be prepared to submit additional documentation to support a thorough evaluation.
- Transfer applicants must submit a \$150 transfer evaluation fee.

ADVANCED STANDING STATUS BASED ON PRIOR MEDICAL EDUCATION

Applicants who have completed professional programs may be considered for advanced standing status. Those applicants who graduated from accredited chiropractic, medical or osteopathic colleges may be eligible for advanced standing in the Bastyr University naturopathic medicine program. All advanced standing students must complete at least two-thirds of the program and do all of their clinical work at Bastyr University. They are eligible for a maximum of 103 credits toward advanced standing. In those instances where the maximum number of advanced standing transfer credits is granted, it will take a minimum of three years (11 quarters) to complete the program. Placement depends upon the amount of coursework completed in the original program, similarity of the course content and credits, age of the courses and performance in these courses. A student must provide documentation that shows the competencies of the

Bastyr University course have been met. Course waivers and/or credit transfers are considered only for those courses in which applicants demonstrate a grade of achieved competence, a C or above, or a 2.0 or above. An exam to determine competency may also be required. Advanced standing applicants must complete all of the course and credit requirements in effect at the time of their enrollment in the Bastyr University naturopathic medicine program. Final waiver and/or transfer credit decisions rest with the dean of the school in which the curriculum is taught.

Advanced standing is determined on a case-by-case basis and depends on the type of degree program completed, the courses taken and the number of years in practice.

Applicants who are eligible for advanced standing must submit a \$150 advanced standing evaluation fee.

Applicants must submit a catalog of course descriptions for the years they attended their professional program and should be prepared to submit additional documentation to support a thorough evaluation. Additionally, advanced standing students should submit a copy of their medical license and a copy of their medical board exam scores/certificates (if applicable). If an advanced standing student is found to be deficient in some area(s) of study, s/he may be required to complete additional courses at Bastyr University. For more information on advanced standing status admission policies and procedures, contact the admissions office.

INTEGRATED CURRICULUM DESIGN

The naturopathic medicine program at Bastyr University is taught in a systems-based approach designed to provide integration across scientific disciplines and between biomedical and clinical sciences. It fosters the development of critical clinical reasoning through an active learning environment. Naturopathic medical students are expected to be able to preview learning materials and gain a basic understanding before coming to class to apply the information (the “flipped classroom”). The integrated curriculum also takes advantage of hybrid learning in which online educational technologies provide the student with flexible learning time and varied methods of instruction to support different types of learners.

Students entering this program should be comfortable with computer technologies and programs. It is strongly advised to have a personal computing device with Internet access and the common word processing and associated programs in order to fully participate in hybrid learning.

BASIC SCIENCES CURRICULUM WITHIN NATUROPATHIC MEDICINE

Basic and biomedical science modules within the naturopathic medicine program provide integration across science disciplines and with clinical coursework. First year basic science modules provide a foundation of core principles in anatomy, histology, embryology, biochemistry and physiology that are integrated in the context of body systems. Second year modules use the systems approach to integrate the principles of pathology, immunology and infectious diseases. Throughout the curriculum, science concepts are applied to clinical situations through integrated case discussions.

The basic sciences faculty encourages and expects students to advance beyond the simple learning of scientific facts and to integrate systematically the information from basic science disciplines into a unified model of human organization and function. This educational scheme requires students to assume an active role in the learning process and encourages them to adopt this inquisitive behavior for a lifetime. Problem solving, clinical cases and examples are an integral part of the basic science curriculum. This educational process is an expression of Bastyr University's basic philosophy of a holistic approach to human behavior, health and therapeutics. The basic sciences faculty encourages students to become totally absorbed in an integrated approach to learning and understanding. Instructors are readily available to facilitate this process on an individual basis.

The department also offers science courses that satisfy prerequisite requirements, including courses in General Chemistry and Organic Chemistry.

COUNSELING AND HEALTH PSYCHOLOGY CURRICULUM WITHIN NATUROPATHIC MEDICINE

The counseling and health psychology curriculum serves naturopathic medical students in understanding and effecting change in the emotional, mental and spiritual dimensions of human functioning.

The naturopathic medicine program includes six core counseling and health psychology courses. These courses are designed to build the following competencies:

- Study of the nature and process of healing
- Development of therapeutic counselor characteristics and communication skills
- Development of comfort in the role of counseling physician and a sense of counseling style and skill
- Ability to select and implement holistic counseling interventions and strategies

- Ability to assess and stimulate psychological wellness
- Ability to understand and utilize the body/mind/spirit interaction in the healing process
- Ability to assess psychological functioning and make clinical judgments regarding the appropriateness of treating individuals in naturopathic practice
- Ability to make appropriate psychological referrals

Naturopathic principles and cross-cultural perspectives are woven throughout all counseling and health psychology courses in the naturopathic medicine program.

For additional counseling and health psychology courses available as electives to matriculated students, please see the course listings in this catalog or the current quarterly schedule of classes.

Note: The scope of practice for NDs in California does not allow for therapeutic counseling that is within the scope of licensed counselors. However, the skills and techniques needed for motivating life style change and supporting mind/body wellness are within the California ND scope.

DEPARTMENTS WITHIN THE NATUROPATHIC MEDICINE PROGRAM

BOTANICAL MEDICINE

(For Department of Botanical Medicine Mission and Vision, see page 74.)

Botanical medicine is a core modality for naturopathic physicians to use in optimizing the health and well-being of their patients. Medicinal plants have been used as food and medicine by all peoples on all continents. The importance of plants to humans has been recorded in cave paintings 60,000 years old. A contemporary renaissance in herbal medicine weds traditional use and wisdom with modern analytical methodologies for optimal medical applications for today. Empirical knowledge of plant therapeutics is based on Western and holistic thought, rather than reductionist paradigms, and is linked with contemporary scientific knowledge.

The core curriculum in botanical medicine for naturopathic medical students covers fundamental plant identification and nomenclature, pharmacognosy, therapeutic actions, extraction principles, dosage considerations, contraindications, toxicology, herb-drug interactions, clinical applications and treatment regimens. Clinical therapeutics draws from traditional uses, naturopathic formulae and use, and from international scientific and clinical research, as well as

advances in phytotherapy. Herbal medicine making is incorporated into the third year systems modules, which focus on treatment. Completion of the required curriculum, along with the required clinical experience, prepares the student for effective and safe clinical utilization of preventive and therapeutic botanicals.

A variety of botanical medicine elective and special topic courses are offered to students in the naturopathic medicine program and other programs, along with independent study options.

The Bastyr University Gardens are managed by the botanical medicine department, with support from the University and donations. They are maintained primarily by the garden supervisor, assistant supervisors and work-study students. The botanical medicine department continues to build an herbarium, although the vast University of Washington herbarium is used as one of Bastyr's teaching venues. The department supports a botanical medicine lab to expand class experience and provide a space for students to continue exploring their work and passion for herbs.

HOMEOPATHIC MEDICINE

Homeopathic medicine is a broad therapeutic modality that is integral to naturopathic medicine. Homeopathy is based on the law of similars. This principle states that a substance that is capable of producing symptoms of disease in a healthy person can cure an ill patient presenting a similar pattern of disease symptoms. Homeopathic medicines stimulate a person's inherent defense mechanism. The entire range of mental, emotional and physical symptoms is considered with each patient. A single medicine is then chosen that addresses the complex pattern of the patient, while emphasizing the uniqueness of the individual.

The homeopathic curriculum at Bastyr University includes the basic principles and philosophy of homeopathy, materia medica of commonly used homeopathic medicines, use of the homeopathic repertory, taking a homeopathic case and homeopathic case analysis. Practical therapeutics for common medical conditions are incorporated into the systems modules in the third year, focused on treatment.

PHYSICAL MEDICINE

Physical medicine is an integral part of naturopathic medicine. It includes various modalities, such as hydrotherapy, osseous and soft-tissue manipulation, sports medicine and therapeutic exercise. The

course of study and clinical training in physical medicine enable students to develop a solid foundation for entry into the practice of naturopathic medicine. The curriculum offers sufficient hours in manipulation to satisfy the state of Washington's licensing requirement as a naturopathic physician.

The physical medicine curriculum begins by teaching students the art of touch and palpation, introduction to basic Swedish massage techniques and soft-tissue manipulation, and then progresses to osseous manipulation.

SUMMER MASSAGE INTENSIVE

Bastyr University, Bellevue Massage School Center for Healing Arts and International Professional School of Bodywork in San Diego offer students a summer massage training program that allows them to apply coursework taken at Bastyr University toward the state requirements for massage licensure. This course cannot be audited.

Students interested in further information may meet with their academic advisor in the registrar's office or with their department's program supervisor to discuss program availability and the course prerequisites.

NATUROPATHIC MEDICINE CLINIC ENTRANCE PREREQUISITES

Naturopathic medicine students must complete and achieve competency in all required classes prior to entering clinical training. Questions about didactic prerequisites for clinical ND training should be addressed to the registrar's office on campus. Students must also have completed TB screening, received a hepatitis B vaccination or signed a waiver, have a current CPR card, and submit to a national criminal background check. The criminal background check will be conducted prior to enrolling in clinical shifts. For more information, see "Felony Conviction Disclosure and Background Checks" in the *Academic Policy and Procedure Manual*.

CLINIC REQUIREMENTS

Students in the four-year program will begin clinical training in their first year. Clinical training begins with observation, in which the student follows supervisors through their rotations. The next year clinical training builds to active observation, with clinical skills demonstrated by the student and evaluated by the supervisor. The training supports the students to gradually and continually develop

and expand their clinical skills and competence throughout their roles as early, intermediate and experienced student clinicians. Students are required to successfully complete a minimum of 1,208 hours of clinical training.

GRADUATION REQUIREMENTS

The curriculum of the naturopathic medicine program requires completion of 302 credits for graduation. This includes 242 core course credits, eight (8) elective credits and 52 clinical credits. Students must achieve competency (grade of AC) in all 302 credits required in the curriculum. Students must complete all required clinical competencies in order to graduate. Students must complete at least two-thirds of their credits in residence at Bastyr University.

ELECTIVES

Students in the naturopathic medicine program are required to complete eight (8) elective credits (included in the 302 credit totals) during their course of study. Up to five (5) of these credits may be satisfied by independent study. It is recommended that elective credits be spread out over the length of the student's program. Courses designated as elective and special topics may fulfill this eight-credit requirement, as well as additional clinic shifts during the student's clinical training. A maximum of five (5) elective credits from any one discipline may be used to satisfy the naturopathic medicine program elective requirement. The rule of a five-credit maximum does not apply to elective credits being taken to satisfy waived credits. Elective credits covering waived course credits may be from any discipline. A student may take elective credits from any program/department.

NATUROPATHIC MEDICINE PROGRAM TRACKS

Students who are accepted into the program and decide not to complete the program in four years must choose one of the following approved options:

- Extended Track-Option
- Extended Dual-Degree Option

At the time of enrollment, naturopathic medicine students are registered for the four-year track. Students in their pre-clinical training who wish to change to an extended track must complete the ND change of status form (available in the registrar's office) and then meet with their registrar advisor, room 249. Changes may affect financial aid packages as well as the sequencing of courses. This five-year track extends the first two years of pre-clinical training into three years. As long as a student remains on an

approved program track, there should be no course scheduling conflicts. Students must remain on track in order to graduate on time. Students may not register off track or ahead of track without approval from the Associate Academic Dean.

DUAL DEGREE OPTIONS

There are a number of dual degree options that allow students in the naturopathic medicine program to earn a second degree. Students in good standing wishing to pursue a dual degree are strongly encouraged to complete the biomedical sciences while on a four-year track. A second program will extend the time you will be at Bastyr and will most likely extend the time you spend in your original program by a year or more. Most of the dual degree programs enable graduating with the ND and a master's degree in a total of five (5) years, if the student stays on track. The midwifery dual track is a minimum of six (6) years.

Currently there are dual degree options with the following programs: Acupuncture, Acupuncture and East Asian Medicine, Ayurvedic Sciences, Counseling and Health Psychology and Midwifery. For additional information regarding the dual degrees, please contact the admissions department.

The following curriculum tables list the tentative schedule of courses each quarter. Next to each course are the number of credits per course (Crdt.), the lecture hours each week (Lec.), the lab/clinic hours each week (L/C) and the total contact hours for the course over the entire quarter (Tot.).

DOCTOR OF NATUROPATHIC MEDICINE PROGRAM 2014-2015

FOUR-YEAR TRACK YEAR 1

Qtr.Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
F BC5142	Fundamentals of Research Design ¹	2	2	0	22
BC5150	Integrated Structure & Function	8.5	8	1	99
BC5151	Integrated Musculoskeletal	6.5	6	1	77
BC5122L	Gross Anatomy Lab 1	1	0	2	22
NM5141	Naturopathic Theory & Practice 1	2	1	2	33
NM5140	Constitutional Assessment ²	2	2	0	22
PS5120	Therapeutic Alliance	1	1	0	11
SN5100	Clinical Skills Lab 1	1	0	2	22
SN5103	Integrated Case Studies 1	1	0	2	22
	Quarterly Subtotals	25	20	10	330
NM5820	Clinic Observation 1 ³	1	0	2	22

W	BC5152	Integrated Cardiovascular & Immune	5.5	5.5	0	60.5
	BC5153	Integrated Respiratory	4.5	4.5	0	49.5
	BC5154	Integrated Digestive	4.5	4.5	0	49.5
	BC5146	Physiology Lab 1	1.5	0	3	33
	BC5123L	Gross Human Anatomy Lab 2	1	0	2	22
	NM5142	Naturopathic Theory & Practice 2	2	1	2	33
	PM5315	Physical Medicine 1	1.5	1.5	0	16.5
	PM5315L	Physical Medicine Lab 1	1	0	2	22
	PS5121	Therapeutic Alliance 2	1	1	0	11
	SN5101	Clinical Skills Lab 2	1	0	2	22
	SN5104	Integrated Case Studies 2	1	0	2	22
		Quarterly Subtotals	24.5	18	13	341
S	BC5155	Integrated Endocrine & Metabolism	4.5	4.5	0	49.5
	BC5156	Integrated Renal & Reproductive	4	4	0	44
	BC5157	Integrated Nervous System	7	6	2	88
	BC5147	Physiology Lab 2	1	0	2	22
	BC5124L	Gross Human Anatomy Lab 3	1	0	2	22
	NM5143	Naturopathic Theory & Practice 3	2	1	2	33
	PM5316	Physical Medicine 2	1	1	0	11
	PM5316L	Physical Medicine 2 Lab	.5	0	1	11
	PS5109	Fundamentals of Counseling	3	3	0	33
	SN5102	Clinical Skills Lab 3	1	0	2	22
	SN5105	Integrated Case Studies 3	1	0	2	22
		Quarterly Subtotals	26	19.5	13	357.5

¹BC5142 offered Summer, Winter in Kenmore, Washington; fall and winter in San Diego, California

²NM5140 offered Summer both in Kenmore and San Diego

³NM5800 also assigned in winter or spring

FOUR-YEAR TRACK

YEAR II

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
F	BC6101	Integrated Immunology, Pathology & Infectious Diseases 1	5.5	5.5	0	60.5
	BC6102	Integrated Immunology, Pathology & Infectious Diseases 2	2.5	2.5	0	27.5
	BO6305	Botanical Medicine Lab	1	0	2	22
	HO6305	Homeopathy 1	1.5	1.5	0	16.5
	NM6110	Naturopathic Theory & Practice 4	.5	.5	0	5.5
	NM6310	Naturopathic Clinical Diagnosis 1	4	4	0	44
	NM6315	Physical Exam Diagnosis Lab 1	1	0	2	22
	NM6320	Clinical Diagnosis Lab 1	1	0	2	22
	PM6305	Physical Medicine 3	2	2	0	22
	PS6301	Counseling Theories & Interventions 1	3	2	1	33
	SN6100	Integrated Case Studies 4	.5	0	1	11
	SN6300	Integrated Therapeutics	3	3	0	33
		Quarterly Subtotals	25.5	21	8	319
	NM6811	Clinic Observation 2-1 ¹	1	0	2	22

W	BC6103	Integrated Immunology, Pathology & Infectious Diseases 3	3	3	0	33
	BC6104	Integrated Immunology, Pathology & Infectious Diseases 4	4	4	0	44
	HO6306	Homeopathy 2	2	2	0	22
	NM6111	Naturopathic Theory & Practice 5	.5	.5	0	5.5
	NM6311	Naturopathic Clinical Diagnosis 2	4	4	0	44
	NM6321	Clinical Diagnosis Lab 2	1	0	2	22
	NM6316	Physical Exam Diagnosis Lab 2	1	0	2	22
	PM6306	Physical Medicine 4	3	3	0	33
	PS6202	Psychological Assessment ¹	2	2	0	22
	SN6101	Integrated Case Studies 5	.5	0	1	11
	SN6303	Integrated Therapeutics 2	3	3	0	33
	TR6312	Nutrition Principles 1	3	3	0	33
		Quarterly Subtotals	27	24.5	5	324.5
	NM6812	Clinic Observation 2-2 ²	1	0	2	22
S	BC6105	Integrated Immunology, Pathology & Infectious Diseases 5	4	4	0	44
	BC6106	Integrated Immunology, Pathology & Infectious Diseases 6	2	2	0	22
	HO6307	Homeopathy 3	2	2	0	22
	NM6112	Naturopathic Theory & Practice 6	.5	.5	0	5.5
	NM6312	Naturopathic Clinical Diagnosis 3	4	4	0	44
	NM6322	Clinical Diagnosis Lab 3	1	0	2	22
	NM6317	Physical Exam Diagnosis Lab 3	1	0	2	22
	PM6307	Physical Medicine 5	3	3	0	33
	PS6302	Counseling Theories & Interventions 2	2	2	0	22
	SN6102	Integrated Case Studies 6	.5	0	1	11
	SN6304	Integrated Therapeutics 3	3	3	0	33
	TR6313	Nutrition Principles 2	2.5	2.5	0	27.5
		Quarterly Subtotals	25.5	23	5	308

¹NM6811 also offered in summer, may be assigned in fall or winter

²NM6812 may be assigned in winter or spring.

FOUR-YEAR TRACK

YEAR III

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
SU	BO7305	Botanical Medicine Formulation Lab 1	1	0	2	22
	NM7110	Naturopathic Theory & Practice 7	1	1	0	11
	NM7310	Musculoskeletal System & Orthopedics	3.5	3.5	0	38.5
	NM7326	Medical Procedures	2	1	2	33
	NM7332	Clinical Pharmacology 1	.5	0	1	11
	PM7310	Physical Medicine 6	3	3	0	33
		Quarterly Totals	11	8.5	5	148.5
F	BO7306	Botanical Medicine Formulation Lab 2	1	0	2	22
	HO7300	Homeopathy 4	1.5	1.5	0	16.5
	NM7111	Naturopathic Theory & Practice 8	.5	.5	0	5.5
	NM7321	Lifespan Considerations	3.5	3.5	0	38.5
	NM7318	Nervous System & Mental Health	5	5	0	55
	NM7319	Endocrine System	5	5	0	55
	NM7333	Clinical Pharmacology 2	.5	0	1	11
	PM7311	Physical Medicine 7	2	2	0	22
	PS7203	Addictions & Disorders	2	2	0	22
	SN7300	Advanced Case Studies 1	.5	0	1	11
		Quarterly Subtotals	21.5	19.5	4	258.5
	NM8801	Preceptorship 1	1	0	4	44
		1 Clinic Shift	2	0	4	44

W	BO7307	Botanical Formulations Lab 3	1	0	2	22
	HO7301	Homeopathy 5	1	1	0	11
	NM7112	Naturopathic Theory & Practice 9	.5	.5	0	5.5
	NM7142	Critical Evaluation of the Literature ¹	2	2	0	22
	NM7322	Digestive System	3.5	3.5	0	38.5
	NM7323	Cardiovascular	5	5	0	55
	NM7324	Respiratory	3	3	0	33
	NM7327	Environmental Medicine	1	1	0	11
	NM7334	Clinical Pharmacology 3	.5	0	1	11
	SN7301	Advanced Case Studies 2	.5	0	1	11
		Quarterly Subtotals	18	16	4	220
		1 or 2 Clinic Shifts	2.4	0	4.8	44-88
S	BO7308	Botanical Formulation Lab 4	1	0	2	22
	NM7113	Naturopathic Theory & Practice 10	1	1	0	11
	NM7328	Female Reproductive & Urology	5	5	0	55
	NM7329	Male Reproductive & Urology	2.5	2.5	0	27.5
	NM7331	Renal System	2.5	2.5	0	27.5
	NM7335	Clinical Pharmacology 4	.5	0	1	11
	NM7336	EENT	3.5	3.5	0	38.5
	SN7302	Advanced Case Studies 3	.5	0	1	11
		Quarterly Subtotals	16.5	14.5	4	203.5
		1 or 2 Clinic Shifts	2.4	0	4.8	44-88

¹NM7142 also offered spring quarter

FOUR-YEAR TRACK YEAR IV

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
SU	BO8301	Botanical Formulations Lab 5	1	0	2	22
	NM8100	Naturopathic Theory & Practice 11	.5	.5	0	5.5
	NM8301	Clinical Pharmacology 5	.5	0	1	11
	NM8305	Integumentary System	3	3	0	33
	NM8310	Medical Procedures 2	2	1	2	33
	SN8300	Advanced Case Studies 4	.5	0	1	11
		Quarterly Subtotals	7.5	4.5	6	115.5
		4 Clinic Shifts	8	0	16	176
F	NM8105	Advanced Business Practices 1	1.5	1.5	0	16.5
	NM8316	Advanced Topics in Public Health	1	1	0	11
	NM8317	Advanced Topics in Geriatric Medicine	2	2	0	22
	NM8815	Grand Rounds 1	1	1	0	11
		Quarterly Subtotals	5.5	5.5	0	60.5
	NM8802	Preceptorship 2	1	0	4	44
		4 Clinic Shifts	10	0	20	220
W	NM8106	Advanced Business Practices 2	.5	.5	0	5.5
	NM8309	Rheumatology	1.5	1.5	0	16.5
	NM8318	Advanced Topics in Clinical Ecology	1	1	0	11
	NM8319	Advanced Topics in Oncology	2.5	2.5	0	27.5
	NM8816	Grand Rounds 2	1	1	0	11
		Quarterly Subtotals	6.5	6.5	0	71.5
		4 Clinic Shifts	10	0	20	220
S	NM8107	Advanced Business Practices 3	.5	.5	0	5.5
	NM8817	Grand Rounds 3	1	1	0	11
		Quarterly Subtotals	1.5	1.5	0	16.5
	NM8803	Preceptorship 3	1	0	4	44
		4 Clinic Shifts	8	0	16	176

Summary of Clinic Requirements: Naturopathic Medicine Program

Qtr. ¹	Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
	NM5820	Observation 1	1	0	2	22
	NM6810	Observation 2 ²	2	0	4	44
	NM6811	Observation 2-1 ³	1	0	2	22
	NM6812	Observation 2-2 ⁴	1	0	2	22
variable	NM7820-29	Patient Care 1-10	20	0	40	440
variable	NM8801-3	Preceptorship 1-3	3	0	12	132
variable	NM8830-37	Patient Care 11-18	16	0	32	352
variable	NM8844	Interim Patient Care	2	0	4	44 ¹
variable	PM7801-2	Physical Medicine 1-2	4	0	8	88
variable	PM8801-2	Physical Medicine 3-4	4	0	8	88
		Clinic Totals	52	0	110	1210

¹Quarterly shift assignments are based on availability.

²Offered to California campus only

³Offered to Kenmore campus only

⁴Offered to Kenmore campus only

Elective Requirements: Naturopathic Medicine Program

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C	Tot.
variable	variable	Elective & Special Topics	8	8	0	88
		Elective Totals	8	8	0	88

Curriculum and course changes in the 2014-2015 Bastyr University Catalog are applicable to students entering during the 2014-2015 academic year. Please refer to the appropriate catalog if interested in curriculum and courses required for any other entering year.

Total Requirements: Naturopathic Medicine Program

	Crdt.	Lec.	L/C	Tot.
Total Core Course Credits and Hours	242	197.5	81	3,019.5
Total Elective Credits and Hours	8	8	0	88
Total Clinic Credits and Hours	52	0	170	1,210
Total Requirements	302	205.5	251	4,317.5

NATUROPATHIC MEDICINE/ ACUPUNCTURE AND ORIENTAL MEDICINE DUAL DEGREE

Students in the Bastyr University naturopathic medicine program who are academically in good standing have the opportunity to apply to the Master of Science in Acupuncture (MSA) or the Master of Science in Acupuncture and Oriental Medicine (MSAOM). This requires a formal application to the Acupuncture and Oriental medicine program through the admissions department, followed by a joint interview by both the School of Traditional World Medicines and the School of Naturopathic Medicine.

ND students who are considering applying to the School of Traditional World Medicines as their second program are strongly encouraged to be enrolled as four-year track students during their first two years of attendance. This dual-degree program requires that students have successfully completed their pre-clinical ND training before they add a second degree

program. Students with advanced medical training, e.g., DC, DO or MD, must successfully complete the first year of study in their original program before acceptance into dual status. Dual program applicants are able to utilize their basic science coursework in the naturopathic program toward their MSA or MSAOM.

Please note that some states require Chinese herbal training for acupuncture licensure. Please see the School of Traditional World Medicines master's program description for complete information on degree and licensing requirements.

DUAL-DEGREE ELECTIVE CREDITS

ND/MSAOM students must complete 10 elective credits. ND/MSA students must complete 13 elective credits. For all dual-degree students, five (5) of the elective credits must be from disciplines other than OM or CH. If a dual-degree student has waived a required course from either program, core course credit from the *opposite* program cannot be used to cover the waiver. Use of core credits would result in a shortage of overall credits.

WAIVED ACUPUNCTURE AND ORIENTAL MEDICINE CLASSES FOR DUAL-DEGREE STUDENTS

The following courses can be found in the curriculum for the acupuncture or acupuncture and East Asian medicine students. However, the content has been met through the prerequisites of, or the coursework for, the naturopathic medicine program; these courses are, therefore, exempted for dually enrolled students (shown in order, as found in the MSA/MSAOM curriculum tables):

Cat. No.	Course Title	Credits
BC3134	AOM Living Anatomy	4
OM4800	Clinic Entry	2
BC3100	Survey of Organic Chemistry	4
BC3104	Biochemistry	4
BC3135	Anatomy & Physiology 1 Lec/Lab	5
BC3136	Anatomy & Physiology 2 Lec/Lab	4
BC4105	Introduction to Western Pathology	3
BC4125	Pharmacology Overview for AOM	4
OM5321	Survey of Western Clinical Sciences 1	3
OM5322	Survey of Western Clinical Sciences 2	3
OM5324	Survey of Western Clinical Sciences 3	3
BC4104	Microbiology (AOM)	3
OM5302	Public Health Issues in AOM	2
OM6305	Survey of Biophysics/Electroacupuncture	2
PS5205	Patient Communications	3
TR6105	Nutrition & Dietary Systems	3
BC5140	Research Methods in AOM	3
OM6111	Practice Management 1	2
OM6112	Practice Management 2	1
CH6105	Chinese Herb Preparations	1
PS6100	Motivational Interviewing	2

Please contact the School of Traditional World Medicines for more information.

NATUROPATHIC MEDICINE/COUNSELING AND HEALTH PSYCHOLOGY DUAL DEGREE

Students in the Bastyr University naturopathic medicine program who are academically in good standing have the opportunity to apply to the Master of Arts in Counseling Psychology (MACP). This requires a formal application to the counseling and health psychology program through the admissions department, followed by an interview with the counseling and health psychology department and the School of Naturopathic Medicine.

ND students who are considering applying to the counseling psychology master's program as their second program are strongly encouraged to be enrolled as four-year track students during their first two years of attendance. Please contact the School of Natural Health Arts and Sciences for more information.

NATUROPATHIC MEDICINE/MIDWIFERY DUAL DEGREE

Students in the Bastyr University naturopathic medicine program who are academically in good standing have the opportunity to apply to the Master of Science in Midwifery (MSMW) program. This requires a formal application to the Department of Midwifery through the admissions department, followed by an interview for qualified applicants by the admissions committee of the Department of Midwifery.

ND students who are considering applying to the Department of Midwifery as their second program are strongly encouraged to be enrolled as four-year track students during their first two years of attendance. Students who are accepted into the Midwifery program must follow the dual degree program outline. ND students will: complete through their third year of the four-year track; then pause their ND program except for clinical training for one year while they complete their midwifery training; then return to complete the ND program requirements; then complete the MW requirements. The program takes a total of six (6) years for those who follow the ND/MW track.

Please see the Department of Midwifery's program overview for complete information on education objectives and the blended learning model.

BACHELOR OF SCIENCE WITH A MAJOR IN HERBAL SCIENCES

BOTANICAL MEDICINE DEPARTMENT MISSION

We inspire students and colleagues to carry forward the traditions and enrich the knowledge of botanical medicine with integrity.

BOTANICAL MEDICINE DEPARTMENT VISION

We facilitate learning about plants and plant-centered medicine, guiding students to apply this knowledge toward growing, harvesting, manufacturing and clinical practice. The inclusive range of knowledge runs from traditional wisdom to contemporary scientific information, emphasizing critical and creative thought and discovery.

The Bachelor of Science with a Major in Herbal Sciences is designed to provide a thorough, scientifically rigorous and inspiring exploration of herbalism and its applications. The curriculum of the herbal sciences major does not include the diagnosis and treatment of disease, but rather introduces the student to concepts of disease prevention and health maintenance using medicinal herbs. The curriculum addresses economic, historical and sociopolitical perspectives regarding herbal sciences. Additionally, issues related to herbal product manufacturing and quality assurance/quality control introduce the analytical aspects of herbs and herbal products. This program offers a substantial breadth of perspectives and approaches in the herbal sciences.

The program is based upon scientific inquiry in the herbal sciences. Students take courses in Anatomy and Physiology, Organic Chemistry, Biochemistry and Botany during the first year of this program. Beginning in the first year, and heavily concentrated in the second year, are courses exploring various aspects of the herbal sciences. Introduction to Herbal Sciences, Herbal Preparations, and Herbal Medicine History and Traditions lay a foundation in the junior year. In Research Methods for Herbal Sciences, students learn to interpret scientific literature on medicinal herbs. In Ethnobotany, the door opens to the connection between people and plants in indigenous cultures, old and new. The senior year includes Pharmacology, Pharmacognosy and Medicinal Actions of a core of *Materia Medica*, deepening the knowledge base. Northwest Herbs and First Aid for Herbalists lend hands-on experiences. In additional courses, students become familiar with environmental, economic and political issues surrounding the herbal sciences. There are electives

available that cover a wide array of topics including diverse field courses.

Additionally, students are required to complete a 44-hour practicum with herbal manufacturers, herb growers, wildcrafters, practitioners or researchers. Upon completion of this program, each student is uniquely qualified to enter the herbal industry, enter a clinically based program or pursue further education in a related field.

ADMISSION

For general information on the admissions process, please refer to the Admissions section in this catalog. The information below refers only to the herbal sciences program.

PREREQUISITES

Entering undergraduates must have at least a 2.75 cumulative GPA with a grade of C or better in all basic proficiency and science requirement courses. Prior to enrolling, students must have completed 90 quarter credits (60 semester credits), including a minimum number of credits in the basic proficiency, science and general education categories.

Note: Students may apply to the program while completing prerequisite coursework.

BASIC PROFICIENCY AND SCIENCE REQUIREMENTS

English Literature or Composition.....	9 quarter credits
General Psychology	3 quarter credits
College Algebra	4 quarter credits
General Chemistry (science-major level with lab)	8 quarter credits
General Biology (with lab)	4 quarter credits
Botany	3 quarter credits

GENERAL EDUCATION REQUIREMENTS

Natural Science and Mathematics	8 quarter credits
Arts and Humanities	15 quarter credits
Social Sciences	15 quarter credits
Speech Communication or Public Speaking... 3	quarter credits
Electives ¹	18 quarter credits

¹The number of elective credits may vary depending upon the exact number of quarter credits earned in the other prerequisite categories. Total prerequisite credits must equal at least 90 quarter credits.

BASIC SCIENCES CURRICULUM WITHIN HERBAL SCIENCES

Basic science courses within the herbal sciences program include Anatomy and Physiology, Organic Chemistry, Biochemistry, Microbiology, Pharmacology, and Disease Processes. These courses serve as a

foundation for an understanding of the human body and provide students with the necessary skills and competency to pursue coursework in their chosen field.

The basic sciences faculty encourages and expects students to advance beyond the simple learning of scientific facts and to integrate systematically the information from basic science disciplines into a unified model of human organization and function. Problem solving, clinical cases and examples are an integral part of the basic science curriculum.

GRADUATION REQUIREMENTS

Upper division Bachelor of Science students enrolled at Bastyr University must complete a minimum of 180 credits (inclusive of credits transferred into Bastyr). To graduate, Bachelor of Science students must have a minimum 2.0 grade point average with a minimum of 45 credits in residence at Bastyr University.

EXPECTED LEARNING OUTCOMES

Following are the learning objectives for students in the herbal sciences program:

- Identify most commonly used medicinal plants utilizing botanical, organoleptic and analytical methods of identification; and identify their medicinal indications and actions
- Convey understanding of current political issues and trends pertaining to herbal industry as well as history of traditional use of herbs in medicine
- Produce commonly used herbal preparations and discuss their potential in medicinal applications
- Analyze herbal products using knowledge of pharmacognosy and Quality Assurance Quality Control (QAQC) test methods, and apply this analysis to potential research applications
- Develop sound foundations in the sciences that prepare the student for science-based industry or graduate-level study, such as ethnobotany, pharmacology, pharmacognosy, clinical graduate work, research, herbal product development and QAQC, bulk herb supplier, or herbal agriculture
- Exhibit knowledge of safety parameters for use of medicinal plants

The following curriculum table lists the tentative schedule of courses each quarter. Next to each course are the number of credits per course (Crdt.), the lecture hours each week (Lec.) and the lab/clinic hours each week (L/C).

BACHELOR OF SCIENCE WITH A MAJOR IN HERBAL SCIENCES 2014-2015

JUNIOR YEAR (YEAR I)

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C
F	BC3123	Organic Chemistry for Life Sciences (Lec/Lab)	6	5	2
	BC3161	Anatomy & Physiology 1 (Lec/Lab)	3	2	2
	BO3103	Botany 1 (Lec/Lab)	3	2	2
	BO3108	Introduction to Herbal Sciences	3	2	2
	IS3111	Interdisciplinary Experiences in Natural Health Arts & Sciences 1	1	1	0
		Quarterly Totals	16	12	8
W	BC3162	Anatomy & Physiology 2 (Lec/Lab)	3	2	2
	BC4117	Biochemistry for Life Sciences 1 (Lec/Lab)	5	4	2
	BO3114	Herbal Preparations	3	2	2
	BO4102	Research Methods for Herbal Sciences	2	2	0
	BO4801	Herbal Sciences Practicum ¹	1	0	4
		Quarterly Totals	14	10	10
Sp	BC3163	Anatomy & Physiology 3 (Lec/Lab)	4	3	2
	BC4140	Biochemistry for Life Sciences 2	4	4	0
	BO3105	Plant Identification (Lec/Lab)	3	2	2
	BO3115	Herbal Medicine History & Traditions	2	2	0
	BO4129	Ethnobotany	2	2	0
		Quarterly Totals	15	13	4

¹Students may complete the practicum in any quarter after winter quarter of their junior year.

SENIOR YEAR (YEAR II)

Qtr.	Cat. No.	Course Title	Crdt.	Lec.	L/C
F	BC4104	Microbiology	3	3	0
	BC4114	Disease Processes	4	4	0
	BO4107	Materia Medica 1 for Herbal Sciences	5	4	2
	BO4111	First Aid for Herbalists	2	2	0
	BO4119	Pharmacognosy for Herbal Sciences	2	2	0
	BO4122	Test Methods for Botanical Authentication (Lab)	2	0	4
		Quarterly Totals	18	15	6
W	BC4115	Pharmacology Overview for Herbal Sciences	3	3	0
	BO4100	Herbs & Food	3	2	2
	BO4108	Materia Medica 2 for Herbal Sciences	5	4	2
	BO4128	QAQC - Quality Assurance/Quality Control	2	1	2
		Quarterly Totals	13	10	6
Sp	BO4103	Botany 2 (Lec/Lab)	3	2	2
	BO4109	Materia Medica 3 for Herbal Sciences	5	4	2
	BO4112	Northwest Herbs	1	0	2
	BO4125	Introduction to Herb/Drug Interaction	2	2	0
	BO4150	Research Applications	1	0	2
		Quarterly Totals	12	8	8

Total Requirements: BS with a Major in Herbal Sciences

	Crdt.	Lec.	L/C
Total Core Course Credits and Hours	88	68	42
Total Elective Credits and Hours	4	4	0
Total Requirements	92	72	42

Curriculum and course changes in the 2014-2015 Bastyr University Catalog are applicable to students entering during the 2014-2015 academic year. Please refer to the appropriate catalog if interested in curriculum and courses required for any other entering year.

CERTIFICATE IN HOLISTIC LANDSCAPE DESIGN (CHLD)

Mission: The Certificate in Holistic Landscape Design program allows students to build upon their knowledge of medicinal and edible plants and apply this knowledge to building sustainable landscape solutions that benefit the earth and the human community.

With the exception of the first summer quarter classes of Introduction to Botany, Herbal Medicine Making for All and Organic Gardening, the courses in this certificate program are offered on evenings and weekends. The program instructs students on permaculture concepts and cultivation of medicinal and edible plants. Students who complete the program will be able to develop sustainable landscapes that benefit the environment and provide utilitarian resources for the community as a whole.

PREREQUISITES

Applicants must have a minimum 2.75 cumulative GPA. Prior to enrolling, students must have completed 90 quarter credits (60 semester credits) of college-level coursework.

In order to be prepared for the concepts covered in the holistic landscape design program, coursework in the following areas is strongly recommended:

- Chemistry – survey-level to cover general inorganic and organic concepts, no labs required
- Biology – basic biological concepts desired, covering cell and plant biology, no labs required
- Public Speaking coursework or experience
- General Education material to round out the 90 college credits, including some Humanities, English, Natural Sciences and Social Sciences

EXPECTED LEARNING OUTCOMES

Following are the learning objectives for students in the holistic landscape design program:

- Ability to create a landscape design that enhances the natural landscape and reflects the health of all of the beings that utilize it, as well as the health of the planet
- Apply sustainable landscape measures creatively, designing for biodiversity, therapeutic utility and aesthetics
- Integrate permaculture techniques and principles for sustainably modifying land and implementing designs

- Understand importance and elements of soil science and how to utilize this knowledge in horticultural methods
- Enhance knowledge of practices that support seasonal and sustainable cultivation of food and medicinal plants
- Practice therapeutic plant propagation and cultivation from native and analogue climates for landscape design as well as nursery or market production

CERTIFICATE IN HOLISTIC LANDSCAPE DESIGN PROGRAM (CHLD) 2014-2015

YEAR I

Qtr.	Cat. No.	Course Title	Crdt.	Le.	L/C
Su	BO2101	Introduction to Botany	3	2	2
	BO3104	Organic Gardening	2	1	2
	BO 3106	Herbal Medicine Making for All	1	0	2
	Quarterly Totals		6	3	6
F	BO4123	Soil Ecology	1	1	0
	BO4127	Mycology	1	1	0
	BO4131	Permaculture 1	3	2	2
	BO4141	Medicinal & Edible Plants in the Landscape 1	1	0	2
	Quarterly Totals		6	4	4
W	BO4132	Permaculture 2	3	2	2
	BO4135	Organic Greenhouse & Nursery Mgmt	1	0	2
	BO4137	Horticultural Research & Grant Writing	1	1	0
	BO4142	Medicinal & Edible Plants in the Landscape 2	1	0	2
	Quarterly Totals		6	3	6
Sp	BO4124	Introduction to Biodynamic Agriculture	2	1	2
	BO4133	Permaculture 3	3	2	2
	BO4143	Medicinal & Edible Plants in the Landscape 3	1	0	2
	Quarterly Totals		6	3	6
Su	BO4134	Organic Seed Production	1	1	0
	BO4138	Biointensive IPM & Plant Health	2	2	0
	BO4139	Permaculture in a Global Context	1	1	0
	BO4144	Horticultural Business Practices	1	1	0
	BO4810	Holistic Landscape Design Practicum	1	0	4
	Quarterly Totals		6	5	4

Total Requirements: Certificate in Holistic Landscape Design (CHLD)

	Crdt.	Le.	L/C
Total Core Course Credits and Hours	30	18	26
Total Elective Credits and Hours	2	2	0
Total Requirements	32	20	26

Curriculum and course changes in the 2014-2015 Bastyr University Catalog are applicable to students entering during the 2014-2015 academic year. Please refer to the appropriate catalog if interested in curriculum and courses required for any other entering year

Current botanical medicine department electives: Cascade Herb Experience, Island Herb Experience, Herbal Medicine in Italy, Clinical Pharmacognosy, Flower Essences, Herbs and Ayurvedic Medicine, Herbal Medicine throughout Oregon, Plants in Ceremony, Clinical Formulations and Applications of Botanical Medicine, Herbal Medicine Making for

All, Plant Identification and Medicinal Field Botany, Foundations of Aromatic Medicine, Introduction to Gemmotherapy, Asian Medicinal Plant Horticulture, Botanical Studies in Costa Rica, Food and Medicinal Mushrooms, Appalachia Field Course, and Southwest Herbal Experience.

FACULTY

WITH HIGHEST DEGREES, LICENSES OBTAINED
AND DEPARTMENTAL AFFILIATION

Key

(AEAM)	Acupuncture and East Asian Medicine
(AY)	Ayurvedic Sciences
(BS)	Basic Sciences
(BTM)	Botanical Medicine
(EXS)	Exercise Science
(HO)	Homeopathy
(HS)	Herbal Sciences
(IS)	Interdisciplinary Studies
(MW)	Midwifery
(NM)	Naturopathic Medicine
(NTR)	Nutrition
(PM)	Physical Medicine
(PSY)	Psychology

CORE

Acosta Smith, Sarah, ND, Bastyr University (NM)
 Achterman, Rebecca, PhD, University of Washington (BS)
 Brammer, Debra, ND, Bastyr University (NM)
 Brignall, Matt, ND, Bastyr University (NTR, NM)
 Cho, Young, PhD, University of Wisconsin, Madison (BS)
 Cullen, Laureen, ND, Bastyr University (NM)
 Dazey, Jenn, ND, RH, (AHG), Bastyr University (HS, BTM, CHLD)
 Dodge, Christian, ND, MA, Stanford University, (MA, BS), Bastyr University (NM)
 Guiltinan, Jane, ND, Bastyr University (NM)
 Hibbs, John, ND, Bastyr University (NM)
 Johnson, Jennifer, ND, National College of Naturopathic Medicine (NM)
 Jones, Eric, ND, Bastyr University (NM)
 Kingsbury, Sheila, ND, RH (AHG), Bastyr University (BTM, HS, NM)
 Lair, Cynthia, BA, CHN, Wichita State University (NTR)
 Lichtenstein, Brad, ND, Bastyr University (NM, PM)
 Littleton, Kent, ND, Bastyr University, MS, University of Washington (BS)
 Lund, Kaleb, PhD, University of Minnesota (HS)
 Mann, Richard, ND, Bastyr University (HO)

Martzen, Mark, PhD, University of South Dakota School of Medicine (BS)
 Meng, Jing, MD, (China) Shandong Medical University, PhD, University of Alabama (BS)
 Messner, Don, PhD, University of Washington (BS)
 Modell, Harold, PhD, University of Mississippi Medical Center (BS)
 Neary, Dean E., Jr, ND, Bastyr University (PM, NM)
 Olehausen, Joni, ND, National College of Naturopathic Medicine (NM)
 Parkinson, Andrew, ND, Bastyr University (NM)
 Pittack, Catrin, PhD, University of Washington (BS)
 Raymer, Katherine, ND, MD, Southwest College of Naturopathic Medicine, University of Louisville School of Medicine (NM)
 Rosen, Daniel, PhD, Arizona State University (PSY)
 Rubinstein, Joshua, ND, Bastyr University (NM)
 Smith, Brendan, ND, Bastyr University (NM)
 Standish, Leanna, ND, Bastyr University, PhD, University of Massachusetts, LAc (NM)
 Staruch, Arianna, ND, National College of Naturopathic Medicine (NM)
 Steward, Rebecca Love, DVM, Washington State University (BS)
 Thomas, Aleyamma, PhD, (Canada) University of Manitoba (BS)
 Wallace, James, ND, Bastyr University (NM)
 Wenner, Cynthia, PhD, Washington University, St. Louis, MO (BS)
 Yarnell, Eric, ND, RH, (AHG), Bastyr University (BTM, HS, NM)
 Yasuda, Gregory T., ND, Bastyr University (PM)
 Yin, Phoebe, ND, Bastyr University (NM)

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Aasan, Candace, ND, Bastyr University (BTM)
 Alexander-Ozinkas, Andrew, BS, Bastyr University (HS)
 Allen, Jason, ND, Bastyr University (NM)
 Altman, Lela, ND, LAc, Bastyr University (BTM)
 Auerbach, Marisha, BA, The Evergreen State College (CHLD)
 Bauer, Kimberly, ND, Bastyr University (HS)
 Bean, Jessica, ND, Bastyr University (BS)
 Berman, Lisa, Heilpraktiker, (Germany) Berlin University (HS)
 Boehnlein, David, BS, University of Minnesota – Twin Cities (CHLD)
 Bohan, Heidi, Ethnobotanist (HS, CHLD)
 Bosted, Christopher, ND, Bastyr University (NM)
 Bower, Melinda, ND, Bastyr University (BTM)
 Chasse, Jaclyn, ND, Bastyr University (NM)

- Cochran, Brenden, ND, Bastyr University (NM)
- Connor, Kevin, ND, Bastyr University (NM)
- Cullen, Tamara, ND, Bastyr University (NM)
- Cusack, Cortney, ND, Bastyr University (NM)
- Darley, Catherine, ND, Bastyr University (NM)
- De Armas, Joseph, ND, DC, Bastyr University California (PM)
- DiPasquale, Robin, ND, RH (AHG), Bastyr University (HS)
- Dirks, Rebecca, ND, Bastyr University (NM)
- Durham, Alexis, BS, Bastyr University (CHLD, HS, BTM)
- Edwards, Louise, ND, National College of Naturopathic Medicine (NM)
- Fahoum, Mona, ND, Bastyr University (NM)
- Fasig, Amy, ND, Bastyr University (NM)
- Fenner, Tellur, BA, Prescott College (HS)
- Frederickson, Richard, PhD, University of North Dakota (BS)
- Fresonke, Jill, ND, Bastyr University (NM)
- Fulton-Kehoe, Deborah, PhD, University of Washington (BS)
- Gbedawo, Hatha, ND, Bastyr University (NM)
- Goldhamer, Alan, DC, Western States Chiropractic College (NM)
- Hamby, Crystal, BS, Bastyr University (HS, BTM)
- Harpster, Corinne, ND, Bastyr University (BTM)
- Harris, Jeff, ND, Bastyr University (NM)
- Honda, Kristine, ND, Bastyr University (NM)
- Hope, Cynthia, ND, Bastyr University (PM, NM)
- Huyck, Amy, ND, Bastyr University (PM)
- Ikeda, Margie, ND, Bastyr University (NM)
- Jaeggli, Angila, ND, Bastyr University (NM)
- Jordan, Suzanne, Herbalist/Wildcrafter (HS)
- Kaelin, Christian, Mycologist (CHLD)
- Khalsa, Karta Purkh Singh, RH (AHG), CN (HS)
- Klippel, Sarah Lukhang, ND, Bastyr University (NM, HO)
- Knutson, Charlene, MBA, BA, University of Washington (NM)
- Kolbo, Russell, ND, National College of Naturopathic Medicine, DC, National College of Chiropractic, Illinois (PM)
- Lamden, Mark, ND, Bastyr University (NM)
- Lee-Engel, Christy, ND, Bastyr University, LAc (NM)
- Lia, Barry, PhD, University of California – Davis (CHLD)
- Lorax, Kelda, BA, The Evergreen State College (CHLD)
- Maitlen, Donna, DC, Palmer College of Chiropractic West (PM)
- Martin, Katherine, ND, Bastyr University (BTM)
- Mariotti, Ronald, ND, Bastyr University (PM)
- Masterson, John, DC, Life West Chiropractic College (PM)
- McDaniel, Tracy, ND, LM, Bastyr University (NMW)
- Mercer, Nancy, ND, Bastyr University (HO, NM)
- Milkis, Steven, ND, Bastyr University (NM)
- Miller, John, DC, Western States Chiropractic College, Olympia, Washington, DACBR (NM)
- Mueller, Susan, ND, Bastyr University (NM)
- Nagel, Glen, ND, National College of Naturopathic Medicine (HS)
- Phipps, Stephen, ND, Bastyr University, PhD, University of Florida – Gainesville (HS, BTM)
- Pizzorno, Joseph, ND, National College of Naturopathic Medicine (President Emeritus) (NM)
- Ramanujam, Kumuthini, MD (India), Madras Medical College (BS)
- Reddeman, Robin, ND, Bastyr University (NM)
- Schmidt, Dawn, LMP, California State University Fullerton (PM)
- Shaff, Katie, ND, National College of Naturopathic Medicine (NM)
- Shepherd, Edwin, III, DC, Palmer College of Chiropractic (PM)
- Snider, Pamela, ND, Bastyr University (NM)
- Somol, Kris, ND, Bastyr University (NM)
- Stahlberg, Rainer, PhD, (Russia) Leningrad State University (HS)
- Takakura, Masahiro, ND, LAc, Bastyr University, DC, National School of Chiropractic (PM)
- Vlasuk, Susan, DC, National College of Chiropractic, Illinois, DACBR (NM)
- Walsh, Natalie, MS, Frostburg State University, Maryland (HS)
- Wool, Trinity Ava, Herbalist (HS)
- Zeff, Jared, ND, National College of Naturopathic Medicine (NM)
- Zajdel, Dominika, ND, Bastyr University (NM)
- Zorich, Dana, LMP, (PM)