

5 Year Combined B.S./M.D. Curriculum

Part 1: Bachelor of Science (B.S.) in Pre-Medical Studies

120 Standard U.S. Credits

2 Years 8 Months

Term 1: 15 Credits

English Writing- Writing a College Research Report with References. **3 Credits.**

Internet Research: Business and Technical- How to conduct internet research for technical information and product/software apps. **3 Credits.**

English Literature- Selected readings and study of English literature. **3 Credits.**

Communications 1- Introduction to Website Building. The course covers communicating via web presence, the importance of a scholarly digital fingerprint available for the world to see. The elements of web page design and kinds of content, including a review of CMS (content management systems) including Wordpress. **3 Credits.**

Communications 2 Lab- With staff guidance and supervision, the student will design and launch a personal website on the Wordpress platform to display their interests, hobbies, educational history and accomplishments. Video uploading, use of images also covered. **3 Credits.**

Term 2: 15 Credits

College Mathematics- College math including probability and statistics, analytical geometry, and basic algebra. The course also touches upon infinitesimal calculus and applied mathematics. **3 Credits.**

Financial Accounting- Accounting for non-accountants includes analysis of Financial Statements. Banking and Credit Card Issues, credit reporting and collections. **3 Credits.**

Art Appreciation- Foundational course in analyzing the emotional and visual impact of art. **3 Credits.**

History of Art- The course covers the history of art from the Egyptian Period to modern Pop Art. The course includes some text material, to be supplemented by the students internet research to expand topics in greater detail. **3 Credits.**

Religion- Study of the Quran and comparison to Bible texts. **3 Credits.**

Term 3: 15 Credits

World History- The course covers the high points of World History with emphasis on the world wars. Excerpts from Will Durant, "The History of Civilization" are studied. **3 Credits.**

Introduction to Science Careers- This course introduces the student to various science careers using various sources as well as a study of college and university course lists to assist the student in selecting a Major. After selection of a major, the student curriculum will be developed accordingly. **3 Credits.**

Business Law- Contracts, Negligence, Agency, UCC, and other business law topics. **3 Credits.**

Cultures- Main world cultures are studied, with emphasis on the lasting contributions to civilization made by various cultures, as described in the eleven volume treatise: Will Durant, "The History of Civilization".
3 Credits.

Biology Field Studies- This course introduces the student to biology field studies in microbiology, insect classification and mounting, and conducting simple experiments with a microscope. The collection and review of field data is emphasized. A bacterial investigation is included. The purpose of the course is to understand scientific data collection as well as hands on field experience. **3 Credits.**

Term 4: 15 Credits May, 2022

Research Methodology and Writing- The Scientific Method is studied along with scientific report writing and referencing. **3 Credits.**

Home Chemistry Experiments [or Home Biology Experiments]- Instructor guided experiments that students complete at home with special illustrated text. Nominal cost for purchase of supplies and equipment required. **3 Credits.**

Diversity in Weddings and Marriage Customs Worldwide- A comparative study of U.S. and International weddings and marriage customs. **3 Credits.**

Foreign Language - Thai language. Exercises to improve oral and written skills via native Thai speaker. **3 Credits.**

Computer Skills- A course teaching basic computer skills in word processing, image handling, spreadsheets, slide presentations, video production and other relevant topics. **3 Credits.**

End of General Education Courses: 60 Credits

**Term 5: 15 Credits
Begin Major Program of Studies: Pre-Medical Major**

Anatomy. 3 Credits

Physiology. 3 Credits

Blood. 3 Credits

Molecular Biology. 3 Credits

Cancer Biology. 3 Credits

Term 6: 15 Credits

Medical Math. 3 Credits

Mathematics Review-Powers of 10. 3 Credits

Biostatistics with Emphasis on Survival Curves. 3 Credits

Public Health. 3 Credits

Public Health Records. 3 Credits

Term 7: 15 Credits

Environmental Health Sciences. 3 Credits

Epidemiology. 3 Credits

CBD Oils. 3 Credits

Hemp Derivatives, Regulations, and Sales. 3 Credits
Tinctures and Tinctures Lab. 3 Credits
Term 8: 15 Credits
Forensic Medicine. 3 Credits
Forensic Lab. 3 Credits
Homeopathic Cosmetic Chemistry. 3 Credits
Homeopathic Cosmetic Chemistry Lab. 3 Credits
Research Methodology and Writing. 3 Credits
Total Number of Credits This Program: 120
Final Grade Average: ___ [Equivalent to __ , or ___ on 4 point Scale]
Degree Awarded _____ Bachelor of Science (B.S.) Pre-Medical Studies

Begin Part 2: MD Curriculum:

<p>Title of Program: Fast Track Combination BS/MD 2 Year 4 Month Medical Curriculum for 5 Year Combined B.S./M.D. Program [Follows 120 Credit Bachelor Degree Program]</p>
Year 1: Term 1
<p>Anatomy and Physiology: The study of the human body and its parts. Structure and functions of organs and tissues, nerve and muscle feedback mechanisms, biological defense mechanisms. Also covered in depth is Blood-Typing, fractionation, and physiology. 3 Credits</p>
<p>Pathology (1)- General: General Pathology topics include Cellular response to injury, inflammation, Hemodynamic disorders, Diseases of the Immune System, Neoplasia, Infectious disease. 3 Credits</p>
<p>Pathology (2) – Systemic: Topics include Blood Vessels, Heart, Diseases of White Blood Cells, Lung, Pancreas, Urinary Tract, Bones, Skin, Eye. 3 Credits</p>
Term 2
<p>Medical Devices- A special part of the practice of medicine and the development of new procedures is the highly regulated field of medical devices, which are mechanical and other devices used in medical practice. The field is studied with representative examples, and an overview of regulatory control is presented. 3 credits</p>
<p>Radiology and Imaging- x-ray, CAT scan, MRI, ultrasound, and other equipment is reviewed as to type of data obtained with representative examples and with emphasis on clinical practice. 3 Credits</p>
<p>Hospital Management- The practice of medicine is summarized in terms of practice management, as well as essentials of Hospital Management. The program is closed out with a presentation of setting up a small clinic, equipment leasing and financing, appropriate computer systems, and employment procedures. 3 Credits</p>

Term 3

Clinical Medicine – This course presents the elements of taking a patient “history”, and performing “physical examination”. We review the basic steps based upon what symptoms or complaints the patient presents with. This course establishes taking the patient history as the heart of clinical medicine, and though the student may not be involved directly with patient treatment, these elementary concepts are central to good medical management. **3 Credits**

Clinical Skills-Here we continue with the foundation in “patient encounter” covered in the previous Clinical Medicine course, and concentrate on the use of basic medical examination equipment and patient interaction, through the presentation of instructive “how to” videos as well as additional study materials. Also included in this course is a study of **Skin-Dermatology and Cosmetic Techniques**. We emphasize Aesthetic Dermatology, which generally relies on the use of various medical equipment such as lasers to achieve a result without the use of surgery. In many countries, aesthetic dermatology clinics are operated by non-physicians, or alternatively, rely largely on technical staff trained in the use of equipment by the manufacturer. Also included are the new procedures with stem cell injections to the face and other facial rejuvenation techniques. **3 Credits**

System Disorders -In this course we will look at disease presentations at the patient level. We will use one of the most popular and most widely used training texts in the world, **Kumar and Clark’s Clinical Medicine**. Selected chapters are covered that involve the systems irregularities most often presented in the family practice or out patient clinic. **3 Credits**

Year 2: Term 1

Stem Cell Biology – The course begins with an overview of stem cells and the early history of embryonic stem cell research. We then proceed to a review of the techniques of using stem cells derived from human fetal tissue, and what diseases can be particularly controlled or cured. The course also includes a review of the current status of human embryonic stem cell treatments, why the international medical community has abandoned its interest in using embryonic stem cells, and also covering the two major drawbacks to embryonic stem cell therapy: Tendency toward proliferation (differentiation), making stem cells almost impossible to control once injected into another body, resulting in a differentiated cell ball of many types referred to as a teratoma; and the problem of cell rejection due to having “foreign” cell membrane antigenic determinants requiring a patient to take immune suppressing drugs. **3 Credits**

Autologous Stem Cell Therapy- The course covers international treatments available using autologous stem cells (collected from the patient). The primary international treatment centers are reviewed. The mechanism of action is studied. The purpose of the course is to bring to light the many curative techniques being used internationally, such as the repair of severed spinal cord using neural stem cells isolated from the patients nose. It is hoped that the student can gain insight to the fact that these current international treatments are no longer “hypothetical”, and hopefully will inspire the students to generate their own ideas for future work in their careers **3 Credits**.

Mixed Cell Regenerative Medicine and the 21st Century Cures Act-The Law Authorizing Stem Cell Treatments in the United States. The course further develops the student’s understanding of developing practices in the US, focusing on the fact that most stem cell procedures involved mixed cell types, as well as the new companion therapies involving Platelet Rich Plasma (PRP) and Stromal Vascular Fractions (SVF). **3 Credits**.

Term 2

Stem Cell Therapy Without the Stem Cells: This course, added for 2024, presents the new methods of stem cell therapy which seek to stimulate dormant stem cells in situ, using light sources and the new High Dose Light Activated PRP preps for systemic (IV) therapy. **3 Credits**.

Medical Laboratory Techniques- Rather than presenting a cook-book style rendition of numerous laboratory tests, the course covers basic set up of a medical lab, types of tests done, how some representative medical lab tests are performed, and manual vs automated blood analysis, Laboratory values and Concentrations. **3 Credits**

Pharmacology and Pharmacy – Distinction between Pharmacy and Pharmacology, drug names and classes, generic drugs, bio-identical hormones, steroids, antihistamines, anti-inflammatory drugs, pharmacy dispensing, compounding pharmacies, therapeutics. Included is a study of Hormone Replacement therapy including Bio-Identical Hormones. **3 Credits**

Term 3

Medical Embryology, Obstetrics and Gynecology– The course is challenging in its undertaking. For the Medical Embryology section: Consideration of the development of a complete organism from a single fertilized zygote, with emphasis on the development and identification of human stem cells. The course covers differentiation, types of early developmental cells, in vitro fertilization, the development of blast cells and germ layers, as well as the development of antigenic determinants as related to fetal stem cells. The Obstetrics and Gynecology portion is more clinically oriented toward issues of the sort encountered in a general practice, with emphasis on complications of child birth, as well as vaginal infections and vaginal cancer. Typical equipment for an OB/GYN practice is reviewed. **3 Credits**

Infectious Disease- The 4 main types of infectious agents are studied: Bacteria, Virus, Fungus, Parasites, including some aspects of infection at the molecular level, as well as clinical presentations and treatments. **3 Credits**

Pediatrics and Family Medicine- Case studies and patient health encounters typical of a pediatric and family practice clinic. May include overview of a family practice clinic and/or introduction to critical care medicine. **3 Credits**

Year 3 Term 1

Medical Negligence Claims and Procedures- All about medical malpractice, standard of care, malpractice insurance, going without insurance, techniques for risk management at various levels (individual, clinic, small hospital). **3 Credits**

Medical History and Records Management- Medical history and records are revisited from the angle of storage, indexing, retrieval, regulatory compliance and privacy. **3 Credits**

Alternative Medicine – Introduction to the growing field of alternative medicine, by which we mean the alternative to allopathic medicine as practiced today in most countries. Allopathic medicine is what is taught in medical schools and revolves around medicines and procedures to effectuate “cures” or control disease. This course introduces alternative approaches toward healing including botanical medicine and herbology, including transdermal and patch technology for delivering botanicals. Example botanicals such as Cannabidiol and Kratom (Thai Red Baca) for pain, are studied in depth. **3 Credits**

Total Number of Semester Credits: 63
[60 US Credits Needed for Typical PhD Degree]

**Completion of Above Courses Over 5 Year Period
Results in Award of B.S./M.D. Degrees**