

Republika ng Pilipinas
(Republic of the Philippines)
KAGAWARAN NG EDUKASYON, KULTURA AT ISPORTS
(DEPARTMENT OF EDUCATION, CULTURE AND SPORTS)
Maynila

DECS O R D E R
No. 17, s. 1989

March 1, 1989

POLICIES AND STANDARDS FOR OPTOMETRY EDUCATION

To: Bureau Directors
Regional Directors
Presidents, State Colleges and Universities
Heads of Private Schools, Colleges & Universities
Deans, Colleges of Optometry

1. The inclosed set of policies and standards approved by this Office, upon recommendation of the Council of Deans of Philippine Colleges of Optometry, the Samahan ng mga Optometrista sa Pilipinas, the Philippine Academy of Optometry, Inc., the Board of Optometry of the Professional Regulations Commission and the Bureau of Higher Education, and the Association of Chiefs of Higher Education embodies the general principles and guidelines for the establishment and operation of Optometry Education Programs.
2. Each school of optometry, in order to align its programs to the goals and mission of the institution and the nation and to make Optometry Education responsive to the demands for manpower in the allied health services, should have a built-in mechanism for continuous self-assessment of its instructional, research and extension service capabilities and program thrusts and the necessary flexibility and adaptability to improve its internal operation and curricular programs towards meeting the diverse needs of students, community and the nation.
3. All concerned institutions are enjoined to review and revise their curricular offerings to conform with the provisions and requirements set forth in these guidelines.
4. This Order supersedes all existing guidelines which may relate to Optometry Education and shall take effect immediately.
5. Compliance with this Order by all concerned is desired.

(SGD.) LOURDES R. QUISUMBING
Secretary

Incl.: As stated

Reference: D.Ps. Circular No. 4, s. 1973

Allotment: 4--(M. 1-87)

To be indicated in the Perpetual Index under the ff. subjects:
Course of Study, COLLEGIATE CURRICULUM
RULES & REGULATION

POLICIES AND STANDARDS FOR OPTOMETRY EDUCATION

The following policies and standards shall govern the operation of Optometry Education programs in schools, colleges and universities in the Philippines.

Article I

AUTHORIZATION

SECTION 1. Only schools, colleges and universities authorized by the Department of Education, Culture and Sports shall operate the Optometry Education Program.

SECTION 2. All curricular program in Optometry must have prior approval from the Department of Education, Culture and Sports.

SECTION 3. Visitation of schools of optometry to insure compliance with required Policies and Standards should be in accordance with the Department of Education, Culture and Sports procedure.

Article II

MISSION STATEMENT

SECTION 1. The main objective of the Optometry Education is to provide the country with Optometrists who are scientifically competent to deliver the full spectrum of optometric services.

SECTION 2. To realize this objective, there shall be a well-planned basic optometry education program and that conforms with current and international standard. Specifically, this curriculum should:

- 2.1 Provide optometry students the right environment that will enable students to acquire basic knowledge and skills essential to the practice of optometry.
- 2.2 Provide students with basic learning activities in order that they may be prepared for research works.
- 2.3 Produce optometry graduates endowed with professionalism, and attitudes conducive to interprofessionals, extraprofessional understanding and cooperation.
- 2.4 Inspire and instill into the students the value of service to humanity.

Article III

ADMINISTRATION

SECTION 1. The Optometry School shall be under the administration of a duly appointed Dean with the following qualifications:

- 1.1 Must be a registered Doctor of Optometry preferably with a Master Degree in Optometry and/or appropriate Degree in Administration and Management.
- 1.2 Must have served the academe for at least five years with scholastic excellence.
- 1.3 Must have contributed significantly for the improvement of Optometry Education.
- 1.4 Must be a person held in high esteem in the community.

SECTION 2. The general functions and responsibilities of the Dean of the Optometry school are:

2.1 Administrative

- 2.1.1 To supervise the proper implementation of the guidelines and policies of the Department of Education, Culture and Sports and the Institution.
- 2.1.2 To supervise the proper implementation of the curriculum and its enrichment.
- 2.1.3 To plan a general development program including curriculum development.
- 2.1.4 To attend administrative meetings.
- 2.1.5 To prepare the school program before each semester.
- 2.1.6 To exercise supervision over all activities curricular co-curricular and extra-curricular and to create committees whenever the need arises.
- 2.1.7 To recommend appointment, promotions or separation of faculty members in his college.

2.1.8 To recommend subject assignments of faculty members in his college.

2.1.9 To enforce the policies, rules and regulations regarding the admission and registration of students, transfer of credits, subject-loads and subject sequence, scholarship, residence, promotion, etc.

2.1.10 To approve the list of candidates for graduation of his college.

2.2 Academic

2.2.1 To plan for the basic academic needs of the faculty and students.

2.2.2 To encourage faculty and students to come up with suggestions and proposals for educational and professional development.

2.2.3 To encourage faculty members to formulate syllabi for each subject.

Article IV

FACULTY

SECTION 1. Each faculty member shall have academic preparation appropriate to teaching assignments:

1.1 Must be a Registered Optometrist for professional subjects.

1.2 Preferably a holder of a master's degree or at least completed 18 units in education.

1.3 Must keep abreast with current developments through continuing education program in Optometry.

1.4 Must have at least two years of practice of the profession.

SECTION 2. The faculty shall be assigned academic ranks in accordance with their academic training and scholarly maturity.

The recognized ranks are: Instructor, Assistant Professor, Associate Professor and Professor. The ranking criteria are based on:

- a. academic credentials
- b. professional experience
- c. teaching abilities and responsibilities
- d. scholarly productivity
- e. continuing educational and research experience
- f. other criteria which the institution seems fit

SECTION 3. The following conditions of employment should be observed:

3.1 Salary rates of faculty members shall be commensurate with their ranks, academic preparation, teaching experience and comparable with others who teach other baccalaureate.

3.2 Faculty members on full-time basis may carry a minimum load of 15 lecture units or its equivalent in laboratory hours, while a part-time faculty may carry a maximum load of 14 units.

SECTION 4. Faculty Development Program. - For an effective operation of the school, institution, college or university offering Optometry, there should be a faculty development program to improve the profession. This program shall be carried out through:

4.1 Scholarship grants to full-time or part-time permanent faculty members with excellent performance.

4.2 Educational loans or fee discounts to faculty members enrolled in the graduate schools.

4.3 Subsidized attendance in Continuing Education programs, conferences, professional and scientific meetings, etc.

4.4 The institution should encourage and subsidized research activities among its faculty members for the improvement of the optometry profession.

SECTION 5. Each college/university shall have a faculty manual containing information and policies of all matters pertaining to the faculty.

Article V

INSTRUCTIONAL STANDARDS

SECTION 1. The institution must maintain a high standard of instruction, utilizing appropriate and updated syllabi and instructional procedures which contribute to sound optometry education. A system of supervision should be instituted and implemented for the purpose of evaluating teaching competence.

SECTION 2. The institution must have a competent instructional staff of good moral character, classified into various professional ranks on the basis of academic and intellectual qualifications.

SECTION 3. The institution shall provide for a systematic and continuing plan of evaluation of the student's progress through a grading system that is consistent with the standards set by the institution.

SECTION 4. No student shall be given credit for a course unless he completed prerequisites in all subjects.

SECTION 5. The institution must provide the basic and standard textbooks to be used which are of current trends in the optometry profession.

SECTION 6. The Dean should see to it that the students are provided with the necessary textbooks and instructional materials. If the students cannot acquire said textbooks, the Dean should make arrangements with the administration so that sufficient textbooks may be placed in the library for the students use.

SECTION 7. The institution must provide the necessary instructional materials like anatomy models, teaching slides, charts, etc. including audiovisual equipment for the use of the students for a more effective teaching-learning process.

SECTION 8. The ratio of faculty to student in lecture classes must not exceed 1:50 while in practicum clinical or laboratory classes must not exceed 1:10.

SECTION 9. The institution should provide a training program where the students develop professional skills by a systematic application of scientific knowledge to actual clinical situations in the community. The following conditions should be observed:

9.1 There must be a well-planned program of field experience in optometry.

9.2 The school should be connected/affiliated with a hospital and a community health agency.

- 9.3 Health centers chosen for affiliation must be accredited by the Department of Health with the coordination of the Optometry Committee, DECS Technical Panel for Health Related Programs.
- 9.4 The institution must provide students and health centers and with Manual of Clinical Training including minimum training requirements and evaluation procedures for the students' performance.
- 9.5 The maximum ratio of clinical instructor to optometry students in training must be 1:10.
- 9.6 The optometry student in training must be exposed and allow to handle a variety of clinical cases.
- 9.7 Clinical experience should include the use of diagnostic device and treatment of a wide variety of patients with refractive errors or visual anomalies of various age groups and of both sexes.
- 9.8 The optometry student in training should have at least four (4) hours a week health center affiliation for a period of one year as part of the practical requirement for the subject clinic and conference.
- 9.9 The clinical instructor must periodically evaluate the optometry students in training in the health center. The student must be informed of the results.

Article VI

LIBRARY

SECTION 1. Every college offering the Optometry Program should have library resources, adequate in quality and quantity necessary to optometry education. This should progressively develop and grow to meet the needs for research of students and faculty.

SECTION 2. The library should be managed by a full-time librarian. It should be open at least eight hours a day on school days.

SECTION 3. There should be sufficient number of books of recent edition relevant to optometry subjects.

SECTION 4. There should be adequate subscriptions to scientific journals and periodicals for the different optometry subject disciplines.

SECTION 5. The quantity of books and reference materials in the library should be in proportion to the enrollment and should be responsive to needs of optometry students.

Article VII

CLINICAL AND LABORATORY FACILITIES

SECTION 1. The school, institution, college or university offering Optometry Course should have a fully equipped clinical and laboratory facilities for the purpose of providing instruction and practice to the students in the proper application of the instruments.

SECTION 2. The specific requirements of the optometry clinical facilities are as follows:

- 2.1 There should be an adequate working space, a well-lighted and ventilated clinical facilities.
- 2.2 For refraction, the following instruments should be available:
 - a. Refracting unit (Optical chair and stand with phoropter head)
 - b. Ophthalmoscope and Retinoscope set
 - c. Lensmeter
 - d. Trial cases with accessories
 - e. Illuminated Snellen Chart
- 2.3 For contact lens fitting, the following instruments should be available:
 - a. Ophthalmometer or Keratometer
 - b. slit lamp or biomicroscope
 - c. Trial lenses - Hard and Soft Contact lenses
 - d. Bracket Lamp
 - e. Fluorescein Strips and Contact Lens Solution
- 2.4 For Visual Field Charting, the following instrument should be available:
 - a. Perimeter
 - b. Campimeter
 - c. Tangent Screen
 - d. Targets
 - e. Other Visual Field Devices

2.5 For Visual Training and Orthoptics, the following instruments should be available:

- a. Synoptophore
- b. Amblyoscope
- c. Stereoscope
- d. Glides/Targets
- e. Prisms, red, green, blue filters, etc.
- f. Vision stimulator for amblyopic cases
- g. Other visual training devices

2.6 Special Cases:

- a. Auto-refractor
- b. Tonometer

2.7 The ratio of student per refraction unit is 1:10.

SECTION 3. The laboratory room for optometry practicum should be adequately lighted and ventilated and should meet the following requirements:

3.1 There should be an adequately equipped and separate laboratories for chemistry and physics.

3.2 There should be an adequately equipped laboratory for basic medical and pre-clinical subjects and:

- a. Biochemistry
- b. Anatomy
- c. Physiology
- d. Pharmacology
- e. Pathology and Microbiology

3.3 There should be an adequately equipped ophthalmic laboratory with the following equipment:

a. Grinding machines for spherical and cylindrical surfaces.

- 1. Roughing
- 2. Fining
- 3. Polishing

b. Laps, gauges

c. Emerys or compounds use for roughing, fining and polishing

- d. Edging machines
- e. Lensmeter
- f. Pliers (a variety)
- g. Alcohol lamps and denatured alcohol
- h. Pitch (Binding agent)
- i. Variety of ophthalmic lenses

Article VIII

ADMISSION, SELECTION AND RETENTION

SECTION 1. The institution shall establish its own set of admission criteria, policies and standards in consonance with the policies and standards of the Department of Education and other government agencies.

SECTION 2. A basic criteria for admission shall however include the following:

- 2.1 The applicant in the undergraduate optometry course must have graduated from a general secondary course authorized by the government and must have passed the National College Entrance Examination. Graduates of foreign schools must have clearance from the Department of Education, Culture and Sports.

SECTION 3. The requirements in the promotion and retention of students shall be determined according to the criteria established by the institution offering the course.

Article IX

CURRICULUM

SECTION 1. The curriculum for the degree of Doctor of Optometry shall consist of 64 academic units in General Education and 107 units of professional subjects. Any alteration or revision of the entire curriculum; addition or deletion of courses, is subject to the approval of the Department of Education, Culture and Sports.

FOUR-YEAR COURSE LEADING TO THE DEGREE OF
DOCTOR OF OPTOMETRY

FIRST YEAR

First Semester

	Lec.	Lab.	Units
English 1 (Comm. Arts & Skills 1)	3		3
Math 1 (College Algebra)	3		3
Chem 1 (General & Inorganic Chemistry)	6	6	6
Psycho 1 (General Psychology)	3		3
Pilipino 1 (Sining ng Pakikipagtalastasan)	3		3
Zoology 1 (General Zoology)	3	6	6
P.E. 1 (Physical Education)	1	1	(1)
C.M.T.			(1.5)
	18	12	22

Second Semester

English 2 (Comm. Arts & Skills 2)	3		3
Math 2 (Trigonometry)	3		3
Physics 1 (College Physics)	3	6	6
Hist. 1 (Philippine History & Government)	3		3
Social Science & Population Education	3		3
Pilipino 2 (Panitikang Pilipino - Isang Pagpapahalaga)	3		3
Introduction & History of Optometry	3		3
P.E. 2 (Physical Education)	1	1	(1)
C.M.T.			(1.5)
	20	6	22

SECOND YEAR

First Semester

English 3 (Advance Composition)	3		3
Life & Works of Rizal	3		3
General Anatomy & Physiology I	3	3	3
Physiological Optics I	3	3	3
Theoretical Optics 1	3	3	3
Microbiology	3	3	3
P.E. 3 (Physical Education)	1	1	(1)
C.M.T.			(1.5)
	17	12	21

Second Semester

English 4 (Speech & Oral Communication)	3		3
General Anatomy and Physiology II	4		4
Organic & Biochemistry	4		4
Ocular Anatomy & Histology	3		3
Physiological Optics 2	3		3
Theoretical Optics 2	3		3
P.E. 4 (Physical Education)	4		4
C.M.T.	1		(1)
	1		(1.5)
	16	15	22

THIRD YEAR

First Semester

General Pathology	3		3
Optometry 1A (Theoretical Optometry)	3		3
Optometry 2A (Practical Optometry)	3		3
Optometry 3 (Binocular Vision & Fusion)	3		3
Ophthalmic Optics I (Theory & Methods)	3		3
Political Science (Phil. Gov't. & Const.)	3		3
	17	12	21

Second Semester

Ocular Pathology	3		3
Optometry 1B (Theoretical Optometry)	3		3
Optometry 2B (Practical Optometry)	3		3
Optometry 4 (Symptomatology in Clinical Cases)	3		3
Ophthalmic Optics 2 (Theory & Methods)	3		3
Taxation & Agrarian Reform	3		3
	17	15	22

FOURTH YEAR

First Semester

General Pharmacology	3		3
Hygiene & Public Health (Opto. Hygiene)	3		3
Clinic & Conference	2		2
Visual Analysis	3		3
Applied Visual Psychology	3		3
Visual Training & Orthoptics	3		3
Opto Ethics, Practice & Management	2		2
	19	12	22

Professional Subjects

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Introduction to Optometry	2
Gen. Anatomy & Histology	4
Physiological Optics 1	4
Theoretical Optics 1	4
General Physiology	3
Ocular Anatomy & Histology	4
Physiological Optics 2	4
Theoretical Optics 2	4
General Pathology	4
Optometry 1a	3
Optometry 2a	5
Optometry 3	3
Ophthalmic Optics 1	4
Ocular Pathology	3
Optometry 1b	4
Optometry 2b	5
Optometry 4	3
Ophthalmic Optics 2	4
General Pharmacology	3
Hygiene & Public Health	3
Clinic & Conference 1	5
Visual Analysis 1	3
Applied Visual Psychology	3
Visual Training & Orthoptics	3
Opto. Ethics, Practice Mgt.	2
Ocular Pharmacology & Therapeutics	3
Contact Lens	4
Clinic & Conference 2	5
Visual Analysis 2	3
Optometry 5	3

Article X

EFFECTIVITY AND IMPLEMENTATION OF THESE
POLICIES AND STANDARDS

Section 1. The effectivity and implementation of the curriculum for Optometry Course shall be on the following schedule:

1.1	First Year	
1.2	Second Year	SY 1989-1990
1.3	Third Year	SY 1990-1991
1.4	Fourth Year	SY 1991-1992
		SY 1992-1993

COURSE DESCRIPTION

Four-Year Course Leading to the Degree Doctor of Optometry

First Year

First Semester

- ENGLISH 1** (Communication Arts & Skills I) The course is a reinforcement of the communication skills learned in the elementary and High school. Having in mind the College freshmen as adolescents, the course makes use of the integrated two-strand approach in grammar (Form and function) and the thematic arrangement (the overview and readings) in its hope to strengthen the students' speaking, listening, reading and writing skills in English. (3 hours lec. a week; 3 Units)
- MATHEMATICS 1** (College Algebra) Fundamental Algebraic notions and operations; linear equations; functional concept and graph, variation; exponents and radical complex numbers; binominal theorems; quadratic equations; progressions. (3 hours lec. a week; 3 Units)
- CHEMISTRY 1** (General & Inorganic Chemistry) A study of the fundamental principles and concepts of chemistry. It includes molecular and atomic structure of matter, orbital and molecular geometry, mole concepts, nature of chemical bonds, chemical reactions and kinetics, stoichiometry and equilibrium calculations. Emphasis is given to the Chemistry of non-metals from oxygen to silicone and the practical applications to industries and everyday life. (3 hours lec. and 5 hours lab. a week; 5 Units)
- PSYCHOLOGY 1** (General Psychology) It is a study of the human organism - his psychobiological development, his psychophysical equipment and modes of adjustment to conflicts and frustrations. Human heredity, the nature of personality, sensation, perception, the socialization process, learning process and individual differences are also studied. Attention also is given to man's emotion and motivations and his acquisition and development attitudes. (3 hours lec. a week; 3 Units)

ZOOLOGY 1

(General Zoology) This is an introduction to Zoology which deals with the general principles of animal biology. It includes fundamental concepts in molecular biology which is necessary in the understanding of living organism. There are chapters dealing with the finer structures of the body and their organization for carrying on essential life processes. The more general phases of animal life such as heredity, distribution and adaptation are also included. The frog is studied as typical animal. (3 hours lec. and 6 hours lab.; 3 Units)

FILIPINO 1

(Sining ng Pakikipagtalastasan) Ang Penderloosang Sining ng Komunikasyon para sa Inalawang Bahagi ay naglalaman ng mga aralin sa detalye at panatilihan pangkalahatan. May apat na bahagi ang aklat.

Una: Mga Piling Babasahin ukol sa Paggapanalod

Pangalawa: Mga Piling Pambalarila

Pangatlo: Pagbabuo ng Katawan

Pangapat: Kaugalangang Materyales

(3 hours lec. a week; 3 units)

First Year

Second Semester

ENGLISH 2

(Communication Arts & Skills 2) The course is concerned with the study of sentence elements, composition and literature. The stress is not on the memorization of rules and principles, but on the oral and written practice of communication. Part II deals with literature, which come as an offshoot of poor reading performance (interpretation and oral) of the students. Vocabulary study receives due stress, as it may be the root of student poor word power and poor academic performance. (3 hours lec. a week; 3 Units)

MATHEMATICS 2

(Trigonometry) Theory of equations; conic and trigonometric functions, solution of right triangles, graph of trigonometric functions, logarithms, fundamental identities; radian measures; inverse trigonometric functions and oblique triangles. (3 hours lec. a week; 3 Units)

PHYSICS

(General Physics) A general college course, covering the mechanics, molecular physics and heat. Topics of special values are emphasized. (3 hours lec. a week, 6 hours lab.; 5 Units)

HISTORY 1

(Philippine History and Government) A study of the Philippine History and the government. (3 hours lec. a week; 3 Units)

SOCIAL SCIENCE & POP. EDUCATION

- It is an introduction to the theoretical and methodological foundation of Sociology. It includes the principles involved in the analysis of society, cultural behavior patterns and value systems with more emphasis in the Philippine setting. It also emphasizes the advantages and the reasons why married couples should practice family planning. The different methods of contraceptives are discussed. (3 hours lec. a week; 3 Units)

PILIPINO 2

(Panitikan Pilipino - Isang Pagpapahalaga) Pag-aralan ang mga katutubo at nangangailangan ng panitikan Pilipino sa loob ng iba't-ibang panahon ng kasaysayan ng kultura ng Pilipinas. Matutuhan ang mga tradisyong bumubansay sa panitikan ng mga Pilipino at mapapahalagahan ang mga ito sa pamamagitan ng pagpapahalaga sa ibang makabuluhang katangiang kumakatawan sa mga panahon ng kasaysayan ng panitikan. (3 hours lec. a week; 3 Units)

INTRODUCTION & HISTORY OF OPTOMETRY

- It covers briefly an understanding of Optometry as a profession. It deals with a study of the history of optometry in general with emphasis on the historical development of Optometry in the Philippines. (2 hours lec. a week; 2 Units)

Second Year

First Semester

ENGLISH 3

(Advance Composition) A study of Philippine Literature by Filipino Authors. The essay is taken up as a literary type and the students are guided to understand and appreciate the wealth of suggestions in literary prose. The course is concerned with the study of advance composition and literature. (3 hours lec. a week; 3 Units)

LIFE & WORKS OF RIZAL - The course covers an appreciation and critical study of the life and labors of Dr. Jose Rizal, with emphasis on his career, political reforms, his novels, writings and his devotion and service to his country. His two novels, numerous articles, poems and other works revealed his talents, literary genius, philosophy of life and sentiments that are worthy of imitation. (3 hours lec. a week; 3 Units)

GENERAL ANATOMY & PHYSIOLOGY I - This course deals with the study of the gross and microscopic parts of the human body, including gross and microscopic cellular features. It also includes the study of the functions, activities and processes of the tissues, organs and systems individually and in relation to each other. In the laboratory, the students learn to appreciate the physiology of the body through actual clinical experiments performed on amphibians, mammals and man. (3 hours lec. & 3 hours lab. a week; 4 Units)

MICROBIOLOGY

A study of the general principles of microbiology, covering morphology, physiology and biochemistry of bacteria, fungi and viruses, with emphasis on pathogens affecting the visual organ. (2 hours lec. & 3 hours Lab.; 3 Units)

PHYSIOLOGICAL OPTICS I - A one year course that deals with the study of the optical processing of visual stimuli by the human eye is presented with emphasis on detailed analysis and application of the principles of optics to the refractive media of the eye. The role of axial length and refractive power in vision defects and their effects on illumination and blur retinal image, the Stiles-Crawford Effect and quality of peripheral images are studied. Anatomical factors, neurological consideration and mechano-rotational specifications are discussed and defined. System of accommodation, convergence, eye movements and the classification of abnormalities in these systems. The ocular image forming mechanism, aberrations, stray light entopic phenomena, shape, size, distortion, retinal illumination. Fixation disparity, photoreceptors, luminosity, color mixing, retinal cortical transmission; simultaneous contrast; visibility; adaptation and after image. (3 hours lec. and 3 hours lab. a week; 4 Units)

THEORETICAL OPTICS 1

This one-year course deals with the nature and properties of light and its behaviour, as waves and rays, as it strikes a surface and as it passes from one medium to another. Special emphasis on the phenomena of light, the basic concept and laws of reflection and refraction, the formation of images by light rays and influence of mirrors, refractors, curved surfaces, lenses and prisms upon light. The subject includes photometry and principles of optical instruments (3 hours lec. & 3 hours lab.; 4 Units)

Second Year

Second Semester

ENGLISH 4

(Speech & Oral Communication): It is concerned with the understanding of the basic principles of speech and voice production and proficiency in their use. Speech skills common to all forms oral communication, the selection of materials for speech organization, thought, voice, action and the speaker-listener relations. (3 hours lec. a week; 3 Units)

GENERAL ANATOMY & PHYSIOLOGY II - Continuation of General Anatomy and Physiology I. (2 hours lec., 3 hours lab.; 3 Units)

ORGANIC & BIOCHEMISTRY - A simplified study of the concepts and principles of organic chemistry and their connection with the chemistry of life processes. Emphasis is given to the classification, occurrence properties and uses of organic compounds and bi-molecules in life sustenance. (3 hours lec. & 3 hours lab.; 4 Units)

OCULAR ANATOMY & HISTOLOGY - Gross and microscope anatomy of the eye and adnexia, including blood supply, drainage and innervation. Includes neuro-anatomy of sensory motor and autonomic visual pathways and embryology of the visual apparatus. (3 hours lec. & 3 hours lab.; 4 Units)

PHYSIOLOGICAL OPTICS 2 Continuation of Physiological Optics 1 (3 hours lec. & 3 hours lab.; 4 Units)

THEORETICAL OPTICS 2 Continuation of Physiological Optics 1 (3 hours lec. & 3 hours lab. a week; 4 Units)

Third Year

First Semester

GENERAL PATHOLOGY

A course dealing with disease processes and system disorders with emphasis on ocular implication and manifestation. Includes study of inflammation, repair, immunology, circulatory disturbance and neoplasia. Basic techniques of physical examination and interpretation of common symptoms and signs relating to major disease processes. (2 hours lec. & 3 hours lab. a week; 3 Units)

THEORETICAL OPTOMETRY

(Optometry 1A) Study of the nature, theories, causes, symptoms, distribution and prognosis of the different refractive errors with an application of contemporary research in physiological optics to clinical Optometry; accommodation - convergence relationships, subnormal vision, asthenopia and headaches. Study of the entire clinical procedure, techniques and equipments used in routine optometric examination to prepare the student for direct patient care services, cerebral training in diagnosis and correction of all types of refractive errors and other anomalies of the eye; plus a study of the art of patient management. (3 hours lec. a week; 3 Units)

OPTOMETRY 2A

(Practical Optometry) This course deals with theories, principles, procedures and techniques of the different steps in monocular and binocular subjective examination, including case history. Detailed studies on visual acuity tests, ocular dominance, determination of sphere to fog, determination and verification of astigmatic correction under monocular subjective routine. In the binocular testing routine includes phoria testing, amplitude of accommodation and convergence, near points and other visual tests. Practical training is enhanced by student exercises applying this tests. (3 hours lec & 5 hours lab. a week; 5 Units)

OPTOMETRY 3

(Binocular Vision & Fusion) Descriptive aspects of eye movements and their control mechanisms. Physiological and anatomical characteristics of extra-ocular muscles and eye movements, accommodation and pupillary responses. Special emphasis on the analysis of geometric, psycho-physical and

physiological approaches to binocular projection, fusion, activity, stereopsis, and rivalry. Consideration is given to the requirements of fusion, fusional movements and characteristics, obstacles to fusion and spatial distortions associated with aniseikonia and stereoscopic depth perception. (3 hours lec. a week; 3 Units)

OPHTHALMIC OPTICS 1 - This course is intended to give the students an understanding of the principles and applications of the basic optical devices such as lenses, prisms and other visual aids, the proper care and manipulation of optical instruments and laboratory apparatus, the accurate interpretation, verification and preparation of prescription lenses and spectacles, and develop the skill in the art of ophthalmic dispensing and fitting of eyeglasses and other visual aids. A certain number of requirements are accomplished by students in the form of laboratory exercises and experiments, reports, projects, instrumentation and actual fitting up of prescription lenses from the optometry clinic. (3 hours lec. & 3 hours lab. a week; 4 Units)

POLITICAL SCIENCE (Philippine government and Constitution) A study of the Constitution of the Philippines, its nature, construction and interpretation, its adaptation and amendments; the organization and operation of the government and its limitations; the relations of the people to the government and their rights and liberties with special emphasis on their duties and the recent political developments taking place. (3 hours lec. a week; 3 Units)

Third Year

Second Semester

OCULAR PATHOLOGY Etiology, histopathology, clinical manifestation and diagnosis of ocular diseases and abnormalities. Emphasis on symptomatology signs and management of common ocular diseases. Initial study of clinical examination procedures for detection and diagnosis of ocular diseases. (2 hours lec. & 3 hours lab. a week; 3 Units)

OPTOMETRY 18

(Theoretical Optometry) Special emphasis is made on the important features of a complete examination methods in Optometry which includes subjective testing and chorometry. This course is supplemented by demonstration and practice exercises in preparation for actual clinical practice. An analytical study of the significance of the various visual tests. Interpretation of symptoms and signs related to anomalies of the sensory, motor and optical components of the visual systems. (3 hours lec. & 3 hours lab. a week; 4 Units)

OPTOMETRY 28

(Practical Optometry) This course deals with the study of optical principles and mechanics employed in the construction and application of objective and non-objective instruments. These include ophthalmoscope, retinoscope, optometer, slit lamp, perimeter and others. The proper techniques in using these instruments plus evaluations of findings are emphasized. Substantial laboratory exercises using models or schematic eye and student patients are undertaken to fully prepare the students in performing clinical works in the senior year. (3 hours lec. & 5 hours lab. a week; 5 Units)

OPTOMETRY 4

(Symptomatology in Clinical Cases) An intensive study of visual pathways, analysis of defects of visual fields and related problems, symptomatology and patient handling in clinical cases. An exposition of the role of optometry in diagnosis, treatment and prognosis of ocular and cerebral disease. Stress is likewise given to the interpretation of ocular manifestations of some systemic diseases. (3 hours lec. a week; 3 Units)

OPHTHALMIC OPTICS 2

- The students are trained to perform mechanical procedures in the processing of lenses. This involves surfacing and polishing, centering, setting, and edging. Grading of lenses and basic adjustments of the finished spectacles to conform with the patients' physiognomy. (3 hours lec. & 3 hours lab.; 4 Units)

TAXATION & AGRARIAN REFORM

A combination of taxation and agrarian reform is introduced to the students by sequential methods starting from definition, distinctions and principles on

taxation and proceeding to the study of agrarian reform in the Philippines. (3 hours lec. a week; 3 Units)

Fourth Year

First Semester

GENERAL PHARMACOLOGY Basic principles of drug and drug action, Pharmacodynamics, mechanism of action, toxicology with emphasis on the study of systemic drugs which commonly affects the eye. (3 hours lec. a week; 3 Units)

OPTOMETRIC HYGIENE & PUBLIC HEALTH This is a study of health rules and habits with emphasis on those which pertain directly to the care of the eye. The course deals with optometric participation in multi-disciplinary community health delivery systems including participation in community health planning, consumer health education and screening programs. General and specific nutritional, environmental and social factors of home, school, industry and business pre-disposing vision anomalies or decreased visual efficiency; philosophies and rationales for pre-emptive vision health care intervention; preventive intervention strategies. (3 hours lec. a week; 3 Units)

CLINIC AND CONFERENCE 1 - The clinic portion of this course involves intensive training on the various phases of optometric practice. Routine visual tests and auxiliary procedures are performed on actual patients and the findings are analyzed to determine the proper disposition of any particular case. Clinic and laboratory forms are accomplished. In the conference portion, presentation of cases handled in clinic work are made for group discussion and study. In analyzing the cases the students are drawn into extemporaneous discussions in which their knowledge is correlated with actual test findings. Development of the student's ability in analytical thinking and in self-expression is an important objective of this course. Also the student is encouraged to bring out difficulties and problems encountered in clinic work for group discussion. (2 hours lec. & 9 hours laboratory; 5 Units)

VISUAL ANALYSIS - An analytical study of clinical findings with the end view of arriving at the proper disposition of any case. It utilizes different methods of analysis such as the C.R.T. procedure which is based on norms and expected values and the Graphical Analysis whose mechanics involves different accepted criteria and philosophies such as Sheard's, Percival's and Neumuller's and others. Articulated with this study is the evaluation of symptoms and case history. (3 hours lec. a week; 3 Units).

APPLIED VISUAL PSYCHOLOGY - This course underscores the role of psychology in modern optometry as it probes deeply into the behavioural patterns of man. The study of visual psychology involves the investigation of what the observer sees in comparison with the actual stimulus constellation. The significance of any differences is considered in terms of basic principles, mechanisms and theoretical issues in human visual perception, including peripheral organization, discrimination of distance, direction and orientation; form perception; perceptual adaptation and perceptual constancies (form and size); motion perception; visual illusions; and the Gestalt theories and their principles. (3 hours lec. a week; 3 Units).

VISUAL TRAINING & ORTHOPTICS - This course covers the various techniques and instrumentation utilized in the analysis of motility anomalies; interrelationship of accommodation and convergence functions, fusional amplitudes, stereopsis, diagnosis and prescription for the management and development of cases requiring vision training and orthoptics. Consideration is given on the improvisation of vision training and orthoptics tests devices and gadgets to facilitate special cases and anomalies. (2 hours lec., 3 hours lab.; 3 Units a week)

OPTOMETRIC ETHICS & PRACTICE MANAGEMENT & JURISPRUDENCE - Optometry Ethics deals with the study of the standards of professional conduct, ethical practice, legal codes and Code of Ethics in Optometry.

Practice Management and Jurisprudence deals with practice establishment, management and development. It is intended to

familiarized the students with the methods of establishing a professional practice, efficient technique in handling of patients, the organization of office record system, professional methods of fee charging and the incidental legal requirement in the practice of Optometry. (2 hours lec. a week; 2 Units).

Fourth Year

Second Semester

OCULAR PHARMACOLOGY & THERAPEUTICS - It deals with action, uses, contraindications of ophthalmic preparations with emphasis on diagnostic drugs and contact lens solutions used in clinical practice. Students shall observe the use of therapeutic drugs and apply diagnostic drugs as well under the supervision. (3 hours lec. & 3 hours lab. a week; 3 Units).

CONTACT LENS

A study of the kinds and optics of contact lenses and their designs in relation to topography and reaction of the cornea. The study considers in detail, instrument and diagnostic lens fitting techniques and evaluation of fitting parameters through the use of Fluorescein, biomicroscopy and gross observation. (3 hours lec., 3 hours lab., 4 Units).

CLINIC & CONFERENCE 2 (Continuation of Clinic & Conference 1) - A course built on lectures on special cases and differential diagnosis. Research methodology is included and a student pursuing this course must submit a research work to be presented before the class. (6 hours lec. & 9 hours lab. a week; 3 Units).

VISUAL ANALYSIS 2 (Continuation of Visual Analysis 1) - (3 hours lec. a week; 3 Units).

OPTOMETRY 5

(Low Vision & Geriatric Optometry) Clinical management of the visual problems of geriatric patients with particular emphasis on the examination, diagnosis and subsequent treatment of the low vision patient. Emphasis is placed on the prescribing of contact lenses, conventional spectacles, telescopic and microscopic spectacles. Television readers and special magnifying devices for the low vision patient. Epidemiology of relevant ocular and visual anomalies. (3 hours lec. a week; 3 Units).