VIDYASAGAR UNIVERSITY

PARAMEDICAL COURSES

Diploma in Opthalmic Clinical Assistance (DOCA)

Revised Syllabus
(w. e. f. 2022-2023)

Vidyasagar University
Midnapore 721102
West Bengal

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REGULATIONS

1. Title and Commencement:

1.1 These Regulations shall be called The Academic Regulations for '**Diploma in Ophthalmic Clinical Assistance (DOCA)** Programme, 2022-23 UNDER VIDYASAGAR UNIVERSITY' for obtaining Diploma in Ophthalmic Clinical Assistance under Semester system.

1.2 These Regulations shall apply to the students admitted in D.O.C.A. from the Academic Year **2022 – 2023** onwards.

2. Degree Nomenclature:

Diploma in Ophthalmic Clinical Assistance (D.O.C.A.)

3. Duration of the Degree Programme

3.1 The duration of the Programme is of **TWO (02) YEARS** i.e. Four (04) Semester with **SIX (06) MONTHS COMPULSORY INTERNSHIP**.

3.2 A candidate shall have to clear all Semesters maximum within **FOUR YEARS** from the academic year of his/her first admission and registration to the DOCA Programme under Vidyasagar University failing which enrolment of the candidate shall stand cancelled.

3. Definitions

Programme: An educational programme leads to award of a Degree or Diploma or Certificate.

Academic Year: The 'Academic Year' shall ordinarily be formed as per Vidyasagar University rules.

Semester: An academic term consisting of not less than 90 instructional days, excluding days of final theory examinations.

Credit Hour: Each credit hour will be equivalent to one-hour lecture of theory or two hours of laboratory work for practical per week. It is also known as semester credit or credit.

Course: A course is a unit of instruction or a segment of subject to be covered in a semester. It has a specific number, title and credits.

Grade Point of a Course: Each course will be evaluated for 100 marks irrespective of the credits (theory or practical or theory and practical combined as per credits) for awarding grade point. The grade point shall be rounded to the second decimal place.

Credit Point of a Course: The product of credit hours and grade point obtained by the student in each course.

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Cumulative Grade Point Average (CGPA) : It is a measure of overall cumulative performance of a students' over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal points.

4. Admission

4.1 The admission to undergraduate degree programmes in DOCA will be governed by the guidelines of the Vidyasagar University as laid down from time to time.

4.2 The candidate must pass the **Higher Secondary (10+2) examination** of WBCHSE or its equivalent examinations from any other registered Board/Council **preferably with Bio-science** as one of the subjects in H**.S.**

4.3 The selection of students for admission will be done as per the merit list. The merit list will be prepared according to percentage of total marks obtained in the subjects of H.S. (10+2) or its equivalent examinations or through written test followed by personal interview or as laid down by Vidyasagar University from time to time.

5. Registration

5.1 Registration is mandatory for prosecuting studies. The registration for DOCA programme will be governed by the University Regulations relating to Registration.

7. Curriculum and Credits Requirement

The total credit requirement for the DOCA programme shall be **124 credits.** Students shall have to complete **Compulsory Internship** to obtain the final degree certificate.

8. Examination and Evaluation System

8.1 Examination and types of assessment & Eligibility:

i. In each semester, there shall be two types of examinations: Internal Assessment **(IA)** and End Semester Examination **(ESE).**

ii. A student must have at least **75% class attendance** (theory and practical separately). Student must complete internal assessment.

iii. i. A candidate shall have to complete each semester examination **within 3 (THREE) consecutive chances** including his / her first appearance in the concerned End Semester Examination.

8.2 Hour of End Semester Examination:

a. **Theoretical** papers of full marks up to **50,** duration **2** hours.
b. **Theoretical** papers of full marks more than **50,** duration **3** hours.

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c. P**ractical** papers of full marks up to **50,** duration **3** hours.
d. P**ractical** papers of full marks above **50,** duration **5** hour

8.3 Pass/Fail:

i. **Pass marks** in all examination in DOCA course shall be **40% in each paper**.
ii. Each student must sit for and Pass separately in every paper of the different examinations.
iii. Non-appearance in any paper shall be count as failure in that paper.
iv. A student shall be promoted to the next semester if he/she sits for all papers of the previous end-semester examination and does not have more than Two (02) back (supplementary) papers (theoretical) out of the previous Odd and Even semester examinations. Each candidate must satisfactorily complete and pass all the practical examinations of the semester and must obtain 40% marks in of the practical paper.
v. Examination of the back paper(s), if any, will be held along with next end-semester examination for the respective Odd and Even semester. The candidates having valid chance shall be eligible to sit in the examination through applying to the examination form fill-up.
vi. Students who fail to promotion to next higher semester due to having more back papers than stipulated in 8.3 (iv) regulation may seek re-admission or re-enrolment as casual student in the same classes in the following year and appear at the next appropriate examination to clear the back papers provided the candidate the has passed the Internal Assessment and practical papers.

8.4 Evaluation / Grading System:

a. Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

Based on the performance of the students, each student will be awarded Grade in subjects at the end of the semester examination following grading system on the base of TEN (10). On the basis of Cumulative Grade Point Average the student shall be awarded the Division to corroborate with the traditional scoring system.

10 Point scale

Qualification	**Letter Grade**	**% of Marks**	**Grade Point**
Outstanding	O	90-100	10
Excellent	A+	80-89	9
Very Good	A	70-79	8
Good	B+	60-69	7
Average	B	50-59	6
Poor	C	40-49	5
Fail	F	Below40	0
Absent	Ab	Absent	0

Further there shall be another grade 'I' (with point 0) for students for whom disciplinary action remains pending.

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The Semester Grade point Average (SGPA) will be computed in each semester as per the following formula:

$$SGPA = \frac{\sum_{i=1}^{n} {}^{*}C_i G_i}{\sum_{i=1}^{n} C_i}$$

C_i = The number of credits allotted for a particular course.

G_i = This is the Grade points corresponding to the grade awarded for the course

i = 1, 2.., n represent the number of courses in which a student is registered in the concerned semester. The SGPA is rounded off to two decimal places.

The Cumulative Grade Point Average (CGPA) will be computed at the end of semester as per the following formula

$$CGPA = \frac{\sum_{i=1}^{n} {}^{*}C_i S_i}{\sum_{i=1}^{n} {}^{*}C_i}$$

${}^{*}C_i$ is the total credits of the corresponding semesters. S_i is the SGPA of the corresponding semesters.

i = 1, 2,...., n represent the number of the course in which a student is registered in the concerned semester. The CGPA is rounded off to two decimal places.

8.5 Question pattern

Theory

	FM 60	**FM 50**
Essay	**10**	**10**
Short Notes	**30 (5 marks each)**	**20 (5 marks each)**
MCQ	**20 (2 marks each)**	**20 (one marks each)**

Practical

	FM 60	**FM 40**
Practical Knowledge	**40 (10 marks each)**	**20 (10 marks each)**
Viva	**15**	**15**
Log Book	**5**	**5**

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REVISED CURRICULUM AND SYLLABUS

(DOCA)

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VIDYASAGAR UNIVERSITY

Curriculum for Diploma in Ophthalmic Clinical Assistance (DOCA)

Revised syllabus w.e.f. 2022-23

Year	Semester	Course Code	Course title	Credit	L-T-P	Marks		
						IA	ESE	FM
	SEMESTER – I							
1ST YEAR	1st Semester	DOCA 101	General Anatomy, Physiology, Biochemistry - Theory	6	5-1-0	15	60	75
		DOCA 102	General Anatomy, Physiology, Biochemistry - Practical	6	0-0-12	15	60	75
		DOCA 103	Ocular Anatomy and Physiology - Theory	6	5-1-0	15	60	75
		DOCA 104	Ocular Anatomy and Physiology - Practical	6	0-0-12	15	60	75
		DOCA AECC –1	English Communication (Theory)	2	1-1-0	10	40	50
		SEMESTER – I : TOTAL		26				350
	SEMESTER – II							
	2nd Semester	DOCA 201	Ocular pharmacology and Microbiology - Theory	6	5-1-0	15	60	75
		DOCA 202	Ocular pharmacology and Microbiology - Practical	6	0-0-12	15	60	75
		DOCA 203	Optics and Refraction - Theory	6	5-1-0	15	60	75
		DOCA 204	Optics and Refraction - Practical	6	0-0-12	15	60	75
		DOCA AECC - 2	Environmental Studies	2	1-1-0	10	40	50
		SEMESTER – II : TOTAL		26				350

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Year	Semester	Course Type	Course title	Credit	L-T-P	Marks		
						IA	ESE	FM
2nd YEAR	SEMESTER – III							
	3rd Semester	DOCA 301	Medical Ophthalmology - Theory	6	5-1-0	15	60	75
		DOCA 302	Medical Ophthalmology - Practical	6	0-0-12	15	60	75
		DOCA 303	Surgical Ophthalmology - Theory	6	5-1-0	15	60	75
		DOCA 304	Surgical Ophthalmology - Practical	6	0-0-12	15	60	75
		DOCA SEC-1	Bio ethics - Theory	2	1-1-0	10	40	50
		SEMESTER – III : TOTAL		26				350
	SEMESTER – IV							
	4th Semester	DOCA 401	Hospital Administration - Theory	6	5-1-0	15	60	75
		DOCA 402	Hospital Administration - Practical	6	0-0-12	15	60	75
		DOCA 403	Community Ophthalmology - Theory	6	5-1-0	15	60	75
		DOCA 404	Community Ophthalmology - Practical	6	0-0-12	15	60	75
		DOCA SEC-2	Computer applications - Theory & Practical	2	1-0-2	10	40	50
		SEMESTER – IV : TOTAL		26				350
DOCA SIP (Practical)- COMPULSORY INTERNSHIP (6 Months)				20	-	-	-	100
TOTAL IN ALL SEMESTER				124				1500

AECC - Ability Enhancement Compulsory Course, **SEC** - Skill Enhancement Course**, L** - Lecture**, T –** Tutorial**, P –** Practical

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DETAILED SYLLABUS

SEMESTER - I

DOCA 101: General Anatomy, Physiology, Biochemistry (Theory) **Credits: 06**
FM- 75

Contents:

a. Basic neuro-anatomy including visual pathway
b. Cranial nerves
c. Basic Cardio and Respiratory anatomy and Physiology including Basic and advanced life support
d. Metabolic pathway in Lens, cornea and retina

DOCA 102: General Anatomy, Physiology, Biochemistry (Practical) **Credits: 06**
FM- 75

Contents:

a. Identification of organ and viscera (Respiratory and cardiovascular)
b. Identification of cranial bones
c. Viva
d. Log Book

DOCA 103: Ocular Anatomy and Physiology (Theory) **Credits: 06**
FM- 75

Contents:

a. Orbit and eyelid
b. Cornea, conjunctiva and Tear film
c. Aqueous dynamics
d. Uveal tissue
e. Lens and cataract
f. Retina and optic nerve

DOCA 104: Ocular Anatomy and Physiology (Practical) **Credits: 06**
FM- 75

Contents:

a. Identification of different components of eye ball
b. Identification of different ocular muscles
c. Viva
d. Log Book

DOCA AECC –1: English Communication (Theory) **Credits: 02**
FM- 50

Contents:

1. **Communication Skills**
   a) Theory and Types of Communication
   b) Verbal and Non-verbal Communication
   c) Workplace Communication

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d) Telephone Communication

2. **Speaking Skills**
   a) Group Discussion
   b) Interview

3. **Reading Skills**
   a) Close Reading
   b) Comprehension
   c) Summary
   d) Paraphrasing

4. **Writing Skills**
   a) Report Writing
   b) Making notes
   c) Letter writing
   d) Business Communication

SEMESTER - II

DOCA 201: Ocular pharmacology and Microbiology (Theory) **Credits: 06**
FM- 75

Contents:

a. Various preparations of ophthalmic drugs.
b. Tear substitutes
c. Anti-glaucoma drugs
d. Antibiotics with reference to ocular infections
e. Ocular Anesthetics
f. Ocular Microbiology, sterilization and disinfection
g. Infections of cornea, conjunctiva, Endophthalmitis
h. Concepts of sterilization and disinfections

DOCA 202: Ocular pharmacology and Microbiology (Practical) **Credits: 06**
FM- 75

Contents:

a. Gram's stain
b. KOH test
c. Identification of different drugs
d. Viva
e. Log Book

DOCA 203: Optics and Refraction (Theory) **Credits: 06**
FM- 75

Contents:

a. Optics of the eye
b. Objective refraction
c. Subjective refraction and binocular balancing
d. Use of Auto refraction and noncontact tonometer.

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e. Design of spectacle.
f. Basic concepts of IOL power measurement

DOCA 204: Optics and Refraction (Practical) **Credits: 06**
FM- 75

Contents:

a. Patient's refraction (simple myopia or hypermetropia)
b. Glass power prescription
c. IPD measurement
d. Viva
e. Log Book

DOCA AECC –2: Environmental Studies (Theory) **Credits: 02**
FM- 50

Contents:

1. Basic idea about environment, Relation between environment and health.
2. Water pollution-Water related diseases (biological and chemical), water pollution law, purification of water (large scale and small scale), water quality criteria and standards, surveillance of drinking water quality, controlling measures of water pollution.
3. Air pollution- Sources of air pollutants, types, Health hazards by air pollutants, ventilation and its standards, controlling measures of air pollution, air stress indices- heat stress, cold stress, global warming, humidity.
4. Solid waste disposal system- Methods of disposal, modern sewage treatment- primary and secondary treatment.
5. Hospital waste management- Generation of hospital waste, health hazards of hospital wastes, disposal and treatment of hospital wastes, bio-medical wastes.

SEMESTER - III

DOCA 301: Medical Ophthalmology (Theory) **Credits: 06**
FM- 75

Contents:

a. Basic concept of conjunctivitis, corneal ulcer, Glaucoma, Anterior uveitis, endophthalmitis.
b. Medicine counselling.
c. OPD management
d. Ward management

DOCA 302: Medical Ophthalmology (Practical) **Credits: 06**
FM- 75

Contents:

a. Basic Identification of anterior segment disease
b. Cataract
c. Medicine counselling and drop applications instructions
d. Managing ward
e. Nursing of pediatric and geriatric patients

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f. Basic life support
g. Viva
h. Log Book

DOCA 303: Surgical Ophthalmology (Theory) **Credits: 06**
FM- 75

Contents:

a. Surgical counselling including concepts on various types of Intra ocular lens.
b. Cataract surgery: Types, steps, complications
c. Other common surgical procedure steps and complications: keratoplasty, trabeculectomy, retinal detachment, Squint.
d. Ophthalmic instruments and Machines.

DOCA 304: Surgical Ophthalmology (Practical) **Credits: 06**
FM- 75

Contents:

a. Practical: knowledge regarding preparation of surgical fields, Sterilization of instrument, identification and uses of specific instrument, maintenance of machines and microscopes.
b. Knowledge about CSSD
c. Viva
d. Log Book

DOCA SEC –1: Bio ethics (Theory) **Credits: 02**
FM- 50

Contents:

a. Concepts of Nightingale pledge
b. Concepts of Medical Negligence.
c. Ethics of organ transplantation: with reference to cornea transplantation

SEMESTER - IV

DOCA 401: Hospital Administration (Theory) **Credits: 06**
FM- 75

Contents:

a. Hospital Environment and Healthcare
b. Introduction to the concept of NABH
c. Attending an unhappy patient: concept and practical approach.
d. Understanding the need of geriatric age group

DOCA 402: Hospital Administration (Practical) **Credits: 06**
FM- 75

Contents:

a. Practical approach of handling a visually challenged patient
b. Maintaining medical records
c. Planning & Management of Hospital inventory

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DOCA 403: Community Ophthalmology (Theory) **Credits: 06**
FM- 75

Contents:

a. Concept of community ophthalmology
b. Concepts of NPCB and Vision 2020
c. Concepts of eye camps
d. Screening of Cataract and Refractive error.
e. School screening programme.
f. Eye banking
g. Prevention of blindness from diabetes

DOCA 404: Community Ophthalmology (Practical) **Credits: 06**
FM- 75

Contents:

a. Eye collections instructions and procedure
b. Mass Vision screening
c. Process in eye camps
d. Viva
e. Log book (Activity in eye camps)

DOCA SEC –2: Computer applications (Practical) **Credits: 02**
FM- 50

Contents:

a. MS Office (Word, Excel etc.)
b. Power Point Presentation (PPT)
c. ERP of Hospital Applications
d. Viva

STUDENT'S INTERNSHIP PROGRAMME (SIP)

DOCA SIP: Internship (Practical) **Credits: 20**
FM- 100

1. Six (06) months compulsory internship in Hospital/ Nursing home/ Eye clinic
2. Log book (Activity in Internship)
3. Report submission
4. Viva

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