

# SCHOOL OF OPTOMETRY AND VISION STUDIES

## B.SC OPTOMETRY – HAND BOOK

### TO COMMENCE DELIVERY AT: THE ANTIGUA STATE COLLEGE FOR EVENTUAL INTEGRATION TO THE UWI 4<sup>TH</sup> LANDED CAMPUS A RIGHT TO SIGHT INITIATIVE BY

### THE GOVERNMENT AND PEOPLE OF ANTIGUA AND BARBUDA AND CARIBBEAN COUNCIL FOR THE BLIND AND VISUALLY IMPAIRED

Preventing blindness and visual impairment; while restoring sight and creating opportunities for persons whose sight cannot be restored

- a) Developed in coordination with: Ministry of Education and Antigua State College.
- b) Antigua State College Act No. 20 of 2013: Published in the Official Gazette Vol. XXXIV No.13, dated 13 February 2014. ref: Part 11 :4(1d) “**The objectives of the College shall be to grant certificates, diplomas, associate degrees and other awards and certifications.**”
- c) Approved by the Ministry of Education, Monday, October 15th 2018
- d) Approved for implementation by Cabinet, July 3<sup>rd</sup>-10<sup>th</sup>, 2019.
- e) In Antigua & Barbuda, the graduates will practice under the Medical Act of 1937, CAP 269, Part V sections 33-38. The act regulates Opticians and Optometrists.
- f) Programme: Bachelor of Science – Optometry (Complemented by associates in: Clinical Techniques and Low Vision and Blindness)
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## Contents

	<b>Page</b>
1. Didactic acknowledgements and Purpose	3
2. Philosophy	4
3. Rationale and Intent	5
4. Goal	5
5. Over-arching Intentions of the programme	6
6. Specific Objectives of Care	6
7. Advertisement, application, Selection and Matriculation	7
8. Educational approaches	11
9. Curriculum design	14
10. Programme Requirements and Evaluation	15
11. Graduation and Classification of the BSc Optometry Degree	16
12. Curriculum Outline: List of the 41 Core optometry courses and 156 credits which make up the degree	17

## 1. Didactic acknowledgements and Purpose:

1.1 The authors of this degree document, wish to extend acknowledgement and appreciation to a number of institutions, for their strident and dogged commitment to and promotion of Vision 2020 (The Right to Sight), global initiative. These organizations include:

- a) The World Health Organization and the World Health Assembly  
<https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment>,  
<https://www.who.int/blindness/actionplan/en/>
- b) The International Agency for the Prevention of Blindness <https://www.iapb.org/vision-2020/who-facts/>
- c) PAHO-WHO –  
[https://www.paho.org/hq/index.php?option=com\\_content&view=article&id=244:prevention-on-blindness-eye-care-home&Itemid=42437&lang=en](https://www.paho.org/hq/index.php?option=com_content&view=article&id=244:prevention-on-blindness-eye-care-home&Itemid=42437&lang=en)
- d) The General Optical Council, United Kingdom for providing strong leadership in a Genre of Optometry training and practice best suited for the Caribbean-  
<https://www.optical.org/en/Education/core-competencies--core-curricula/>
- e) The College of Optometry, United Kingdom for offering competent technical guidance(online) in the areas of optometry training and practice <https://www.college-optometrists.org/qualifying/scheme-for-registration.html>.
- f) The University of the West Indies, Optometry Programme, for offering a UK style Optometry training programme from its St. Augustine campus-  
<https://sta.uwi.edu/fms/vet/documents/MedSciUndergrad.pdf>
- g) The University of Guyana, Optometry Programme for collaborating with the Caribbean Council for the Blind in delivering a regional Optometry training programme to people from across the Caribbean, including Haiti – <https://fhs.uog.edu.gy/department-public-health/optometry-programme>

These organizations and programmes served as invaluable resources to us in thinking through and structuring this Bachelor of Science in Optometry, to be offered in Antigua & Barbuda.

This degree is only the 3<sup>rd</sup> Optometry Programme, to be offered in the Caribbean; the others being in: Guyana and Trinidad & Tobago. – <https://worldcouncilofoptometry.info/non-member-optometry-schools/>.

It is a critical component of the broader national, regional and international effort to train and deploy a cadre of primary eye care providers that complements and supports the work of all other categories of health care providers. A strong cadre of optometrist gives Antigua-Barbuda and the OECS, the capacity to provide a comprehensive range of eye care at Primary, secondary and tertiary levels of the country's health services.

**1.2** This degree is in the genre of the B.Sc. (Optometry) offered in England. As such, it complies with the core curriculum requirements for the training of Optometrists as prescribed by the General Optical Council in England.

Further, the instruments undergirding examinations, clinical attachments and supervised practice are identical to those prescribed by the General Optical Council, England Et Al – <https://www.optical.org/en/Education/core-competencies--core-curricula/>

**1.3** It is anticipated that graduates with grades (usually 70% or better) or a GPA of equivalent standard, will be able to access online or face-to-face postgraduate training in the United Kingdom and elsewhere, should they wish to undertake specializations in Optometry, and qualify to practice across much of the Commonwealth.

## **2. Philosophy:**

The 2011 national census (in Antigua & Barbuda) counted more than seven thousand people who identified themselves as blind in 1 or both eyes.

- a) At the time, the figure represented almost 10% of the country's population. The fact of almost 10% of any population being blind in 1 or both eyes is compelling evidence that there is a major service gap in the delivery of primary eye care services.

- b) Around the World, Optometrist are the cadre of health care providers responsible for the delivery of primary eye care services.
- c) At last count, there were 3 indigenous optometrists in Antigua; Around 1 to 33 thousand people. Therefore, it could take the existing cadre of Optometrists close to ten years to examine the last citizen or resident, if everyone demands an eye examination at least every 2 years.

### **3. Rationale and Intent:**

**3.1.** At the time of writing this degree, the ratio of Optometrist to the population in the UK was about one optometrist to approximately 5 thousand. <http://www.aop.org.uk/>

In Antigua and Barbuda, the ratio is closer to 1 Optometrist to 33,000. This is significantly outside the ratio required to guarantee each person living in Antigua & Barbuda, a comprehensive eye exam (at least) every 2 years.

**3.2.** Consistent with the Vision 2020 priorities for the Caribbean; the Caribbean Council for the Blind and the government of Antigua & Barbuda, are committed to providing optimum eye care; accessible, affordable and available to all citizens and residents of Antigua and Barbuda.

### **4. Goal:**

**4.1.** To advance Vision 2020 (The right to sight) by training Optometrists to the Bachelor of Science (UK Genre); Helping Antigua-Barbuda and the Eastern Caribbean achieve a ratio of 1 Optometrist to every 5-6 thousand persons. This requires close to 25 Optometrist in Antigua and 120 across the OECS. The degree will (also) guarantee a continued supply of newly trained Optometrists to account for losses in attrition and other human factors.

## **5. Overarching Intentions of the Programme:**

The B.Sc. in Optometry will

- 5.1 Explore theories and principles that assist problem-solving as part of the learning experience.
- 5.2 Discuss, accept and demonstrate attitudes, values, and ethics associated with the profession,
- 5.3 Conduct reflective exercises to evaluate each student's performance during clinical practice.
- 5.4 Form graduates with the professional competencies to contribute to the quantity and quality of care available to members of the public who require eye health services.
- 5.5 Equip graduates to apply: Biological, social, Psychological, Emotional and Sociological factors across the human life span in eye care management programmes.
- 5.6 Help graduates develop a research-oriented approach to their professional work.

## **6. Specific Objectives of the Programme:**

Guided by values of inclusion and equity, the graduates will be able to work independently to

- 6.1. Investigate and examine the eye and adnexa, and associated systemic factors, to detect, diagnose and appropriately manage-refer eye conditions.
- 6.2. Advise, counsel and coach patients on management and prevention of eye diseases
- 6.3. Understand and apply the clinical and related pharmacological requirements.
- 6.4. Understand and apply the mathematical principles behind refraction, ophthalmic and geometric optics.
- 6.5. Provide comprehensive primary eye care, including full refractive and low vision care, binocular vision assessment and contact lens fitting for both children and adults.
- 6.6. Understand-treat the physiological and clinical implications of binocular vision complaints
- 6.7. Grasp and practice the clinical and advocacy requirements of Occupational Optometry.
- 6.8. Manage all aspects of optometric practice and eye care clinics, consistent with national laws and general standards of ethics.
- 6.9. Develop-maintain district-community outreach eye care and awareness programmes.

**6.10.** Undertake effective counselling-coaching of the patient and significant other.

**6.11.** Have the skills and motivation to conduct new research and development in the field.

**6.12.** The objectives of care will be accomplished through a multifaceted educational programme, including theoretical and practical components, regular clinical attachments, extended clinical practice and supervised research activities.

## **7.. Publication, Advertisement, application, Matriculation:**

### **7.1. Publication:**

A summary of the degree including a list of the courses which make up the degree (by credits) is to be published on the website of the offering institution. That done, CCB will assist with promotion of the programme using traditional and new media.

### **7.2. Advertisement:**

The ASC or its successor will advertise the programme using its normal channels of communications, in time for the start of classes in Autumn and or Spring of each year.

### **7.3. Application:**

Once applications are being invited:

- a). The application form and accompanying information sheet may be found at-optometry@ASC....
- b). There will be an opportunity to complete and submit your application online.
- c). Paper copies may be collected at:
  - Antigua state college Golden Grove campus and
  - National Vision Centre, Blackburn Building, Holberton.

d). The biometric data; Qualifications and other application material of all applicants will be made available to the School of Optometry and Vision Studies (by Student Affairs) in the comparative electronic and hard-print format generated by the online application algorithm.

#### **7.4. Selection- The Board of Optometry Selection and Studies:**

a). Essential to the presentation of this degree (and its supporting certificates-programmes) shall be the Board of Optometry Selection and Studies (BOSS), operating within the School.

The board shall consist of at least 3 (three) lecturers of core optometry courses; And shall be responsible for, regulating all matters relating to delivery of the degree and supporting programmes, including: interviewing, processing and final selection of all students to be matriculated.

b). Because the Bachelor of Science in Optometry is based on the UK's genre of Optometry, the Programme Coordinator (Head of the School of Optometry and Vision Studies) must be an Optometrist with postgraduate training in Public health and or epidemiology and must have UK post-graduate certification in Optometry or a UK-based subspecialisation in Diabetic Retinopathy or other subspecialties in Optometry.

c). The School of Optometry's Board of Optometry Selection and Studies, shall:

I). Consist of at least the 3 (three) most senior lecturers of core Optometry courses, including the Head of the School of Optometry and Vision Studies; Who shall serve as its secretary.

II). Be chaired by an Optometry Lecturer (teaching 1 or more of the core Optometry courses) and having a good knowledge of current affairs in Antigua-Barbuda along with at least two years prior experience, teaching an Optometry Degree Programme (UK Genre) presented by a University in the Caribbean.

III). Observe applicable Parliamentary procedures (United Kingdom) in the management, conduct, and control of its meetings, including use of the casting vote.

IV). Select its Chairperson and any other officer(s) at its first meeting, having been convened by the Head, School of Optometry and Vision Studies.

d) As a complement to the criteria for matriculation (section 7.5 below) the Board of Optometry Selection and Studies, shall process-examine suitable applicants to matriculate based on, but not limited to:

I). Evaluation of the applicant's relevant qualifications and experiences.

II). A graded interview (face-to-face or online) in writing or orally.

III). The results of a medical exam to be conducted (at each applicant's expense) after the applicant received a written offer of a place in the programme.

IV). A comprehensive eye exam conducted and verified by 2 optometry members of the Department's Board of Optometry Selection and Studies, one of whom must be the Head of the School of Optometry and Vision Studies.

V). Evaluation of impairments which could undermine safe optometric practice, including:

- Skin condition / Communicable
- Interruption of consciousness/ seizures
- Upper limb function / Require functional use of both arms.
- Vision / Require good binocular vision, with or without eyeglasses.

\* Hearing / Require good hearing with or without hearing aids.

e) In determining suitability for matriculation, The BOSS shall consider:

I). Gender equity

II). Inclusiveness

III). Superior academic achievements, especially in prerequisite courses

IV). Maturity and relevant experience working in: Health, education, Industrial relations, health and safety; or Social services.

V). The absence of criminal record or pending police matters

### **7.5. Matriculation Criteria:**

- a) Applicants must be at least 18 years of age in the year of admission; and must meet at least one of the following criteria. Students must do all courses which make up the

programme. There shall be no exemptions from any of the courses which make up the degree.

- b) The authors (of this degree) and the offering institution) are cognisant of the social and economic factors which tend to determine whether or not students (are able to sit multiples of CXC or cape courses. With those realities in mind, the following system of 5 criteria was developed as paths to possible matriculation.
- c) The prerequisite courses are: English-A (Communications) Math, Biology and Physics at 3 or better. Applicants with Chemistry plus the 4 foundation courses (along with the other requirements) will have an advantage, if the programme is over subscribed.
- d) Criteria for possible matriculation:

Seq. #	Criterion	courses	# of sittings	Special Considerations
1	Criterion1	At least 4 capes including prerequisites	1	
2	Criterion2	At least 7 CXCs-GCEs,	1 sitting	
3	Criterion3	At least 8 CXCs-GCEs	no more than 2 sittings	
4	Criterion4	Mature students 26 or older; at least 5 CXCs-GCEs	1 sitting	with at least 5 years' experience in: Health, Education, Industrial relations, health and safety or Social Services
4.1	Criterion 4.1	Mature students 26 or older		Any other combination of qualifications and unique experiences which the School considers sufficient to prepare the applicant for the academic rigours of the programme.
5	Criterion 5	Holders of an undergraduate degree		with award and including 2 or more quantitative courses.

f). The Head, School of Optometry and Vision Studies, shall make the names and prescribed information of applicants to be matriculated, available to the Head of Student Affairs or the Registrar, for letters of invitations and other admission procedures to be advanced. The list of candidates to be matriculated must be counter-signed by the Chair of the Board of Optometry Selection and studies.

## **8. Educational approaches**

**8.1** This degree will be delivered using a mix of learning approaches including: Group based (Classroom activities and group assignments) one-to-one (as is in simulated and or supervised clinic practice) and individualized learning (assignments, research and rehearsal of certain techniques).

**8.2.** The dress code (for the classroom, clinic-based, out-reach and other formal sessions-activities shall be:

a). White scrubs, black bottoms and black shoes.

b). Other dress and conduct codes enforce at the Antigua State College (and not in conflict with the prescribed optometry dress code) shall apply to optometry students registered with the college.

c). Because optometrists are in constant contact with the faces of their clientele, all students are required to wear well cropped nails, removing all risk of scratching or other injury to their colleagues (in simulated practice) or patients in their care. The wearing of finger nails extending beyond fingertip(s) will lead to removal of offending students from the programme of studies, leading to the B.Sc in Optometry.

**8.3** Class times will vary including:

a). Afternoons, evenings and on weekends.

b). Classes requiring students to attend clinics, will be conducted during regular clinic hours.

c). All students are required to attend 8 weeks of clinic attachments (at their own expense) Mondays to Fridays, between June and August of each year.

d). The 4<sup>th</sup> and final year of this degree requires all students to attend full-time supervised clinic practice (at their own expense) Mondays to Thursdays, for 12 months September to August. This is a prerequisite to qualify for the B.Sc in Optometry.

**8.4.** A technical supervisor, being an Optometrist, Ophthalmologist, Medical doctor or Public Health Specialist, will be assigned to the students during the practical components of the programme.

**8.5.** The students will engage in a variety of learning experiences in order to achieve the desired outcomes. Critically, the role of the lecturer will be that of facilitator as students take responsibility for their learning.

**8.6.** Emphasis will be placed on theories, principles and best practices, thereby assisting students to become independent problem solvers with a grounding in evidence-based practice.

**8.7.** CCB's suite of online seminar rooms will be placed at the disposal of each student as part of a paid package including printed-bounded notes for optometry courses and portable practice instruments, for those who do not wish to purchase their practice kits independently.

**8.8** In addition to: Course notes, text books and Internet enabled lap top; all students are required to have the following practice equipment: Sphygmomanometer, stethoscope & pen light (by start of year (I). White lab coat, Ophthalmoscope and Retinoscope (by start of semester (II) year (I).

**8.9.** Course material will be presented face-to-face and online, using: Lectures, seminars, tutorials, case studies and discussion.

\* Some courses may be made available in pre-recorded format online.

\* Additionally, lecturers (with specialization in various areas of optometry) will teach modules or parts of modules (online) from around the World.

**8.10.** Students and lecturers will be encouraged to make full use of education technology (audio visuals, power point, and other projection systems). There will be presentations by students to provide opportunities for discussion and evaluation. Simulations and Drama (Role Play) will also be encouraged where appropriate. Students and Lecturers will be encouraged to refer to Caribbean popular culture as part of the learning and education experiences.

**8.11.** There will also be one-on-one discussions and supervision between the lecturers and the student based on the assignments submitted for process, formative and summative evaluations.

**8.12.** Research projects serve to integrate theory with practice. Therefore, emphasis will be placed on developing analytical and problem-solving skills using problem-based learning, based on the case study approach and broader research methods.

**8.13.** Since the aim of the programme is to train eye care professionals who employ best practices based on an appropriate understanding of theory and relevant clinical experiences, the theoretical and practical aspects of training will be evaluated using: Core clinical competencies and patient episode experiences prescribed by the General Optical Council, England.

**8.14** In addition to a rigorous menu of classroom-based academic programme, annual clinic attachments and a 4<sup>th</sup> year of supervised practice assignment will be essential components of the learning process:

\* The clinical attachments will provide opportunities for feedback through evaluation by supervisors; and self-reflection by the student.

\* The year-4 supervised practice, will help the student develop and calibrate professional and clinical self-confidence; while refining competencies in the domain areas of the: cognitive, affective and psychomotor, before qualification.

**8.15** In order to enhance and continuously sharpen the students understanding of current themes in the field of Ophthalmic science, the School of Optometry and Vision Studies, aims to facilitate at least 1 academic forum per semester, at which current research and results are presented by: Guests, (competent in the field) Optometry faculty or Optometry students. It shall be a requirement that all Optometry students attend presentations unless specifically excused by the Head of the School of Optometry and Vision Studies.

**8.16** While this degree will commence its offering at the Antigua State College, it is anticipated that articulation and related arrangements required for integration to the 4<sup>th</sup> landed campus of the UWI, will be affected as soon as practicable.

## **9. Curriculum Design**

**9.1.** The B.Sc. (Optometry) will use an explicit stated curriculum to educate clinicians who can competently and autonomously meet the needs of persons with the range of eye disorders. Ref: section 12 of the full degree document. The delivery will employ at least 3 different approaches: Subject, student and problem focussed.

9.2 Promotion, prevention, early detection, management and control of eye conditions play a crucial role in preventing avoidable visual impairment and blindness. Therefore, the programme is designed to expose the students to the theories and practices of optometry, relevant to working in Rural or urban centres; Hospitals, Polly clinics, community health centres, industrial or commercial workplaces, and other domiciliary locations.

**9.3.** To achieve this mandate for Antigua-Barbuda, The Eastern Caribbean and the wider CARICOM space, the Bachelor of Science Degree in Optometry has been structured to provide three years of academic grounding and practical work, each year culminating with 8 weeks of supervised clinical attachment and a full 4<sup>th</sup> year of supervised practice. The programme will, therefore, provide the opportunity for students to intensify and integrate their education, knowledge, and practice of optometry, both horizontally and vertically.

**9.4.** Throughout the programme, all courses will demand a high level of academic work with a rigorous commitment to clinical scholarship. To ensure a strong vertical and horizontal integration (of theory, academics and clinical skill-sets) the courses offered are designed to integrate the previous years' knowledge and skills with unfolding material and learning; While reinforcing the principles, theories and practice of optometry. To that end, in all instances, allied courses are scheduled to flow contiguously and supported by a symmetrical menu of clinical attachments and supervised practice activities.

**9.5.** To achieve this level of symmetry and process, lecturers (in core optometry courses) will have strong orientation in optometry and related fields. After successful completion of the full programme (41 courses and 156 credits) in the prescribed time(s) each graduate will be awarded the Bachelor of Science Degree in Optometry.

## **10. Programme Requirements and Evaluation**

**10.1.** A student must have a cumulative GPA of at least 2.0 at the end of each Academic Year, in order to be considered eligible to continue in the programme.

**10.2.** Students with a GPA below 2.0 will be reviewed by the Board of Optometry Selection and Studies and a recommendation made to the: Head of Student Affairs- Registrar. A decision will then be made as regards what courses of the year need to be repeated, if the student is to continue in the programme.

### **10.3. Failures and supplementals:**

A student will only be allowed to take a maximum of two supplemental examinations at the end of each academic year – Summer programme. The cost of summer courses will vary depending on the number of students repeating a course.

- a). A student who fails two (2) or more courses at any end of semester final exams, will be required to pass the failed course(s) before proceeding to the schedule for the following year.
- b). Students repeating courses will not be entitled to any Government-funded financial allowances or bursaries until she or he passes the courses being repeated and authorized to resume normal traction by the School of Optometry and Vision Studies.
- c). After review by the School of Optometry and Vision Studies, a student may be permitted to carry over two (2) failed courses to the following year, if the student has a GPA of 2.8 or better.
- d). A student who fails any semester course on two occasions will be asked to withdraw from the Optometry Programme.

e). A student shall not be allowed to spend more than two years in any one year of the programme. In such circumstances, student(s) will be discontinued from the programme, and not allowed to resume at a future date.

**10.4.** The School's Board of Optometry Selection and Studies shall review the performance of all students annually. Where the board deems, as a result of such review, that a student's performance indicates unsuitability for the study of Optometry, the student's file shall be referred to the Office of Student Affairs (Registrar) for a final determination, consistent with the rules and regulations of the institution.

**11. Grading, Graduation and Classification of the BSc Optometry Degree**

**11.1** Each course will be marked out of 100%. Scores and grades attained by the student will be assigned and aligned as follows:

<b>SCORES %</b>	90-100	80-89	75-79	70-74	65-69	60-64	55 - 59	50 - 54	40-49	30-39	0-29
<b>GRADES</b>	A <sup>+</sup>	A	A <sup>-</sup>	B <sup>+</sup>	B	B <sup>-</sup>	C <sup>+</sup>	C	F1	F2	F3
<b>GPA</b>	4.30	4.00	3.70	3.30	3.00	2.70	2.30	2.00	1.7	1.3	0

Keys to scores, grades and Grade Point Averages are as follows:

\*UWI's Grading Policy – <https://sta.uwi.edu/fmsvet/documents/MedSciUndergrad.pdf>

\*The Carnegie Guidelines for instruction and credit hours equivalent:

[https://www.winona.edu/registrar/Media/Instruction\\_and\\_credit\\_Equivalencies\\_chart\\_20130411.pdf](https://www.winona.edu/registrar/Media/Instruction_and_credit_Equivalencies_chart_20130411.pdf)

**11.2** To be eligible for graduation, a student must have achieved a cumulative (at least) 2.0-grade point average for all semester hours of required courses. Students who do not meet this standard (in 4 or 5 years) will be required to upgrade their work in the 6<sup>th</sup> year.

**11.3** In addition, for graduation, students must complete all clinical attachments and one year of clinical practice with at least a minimum pass level.

Seq. #	Qualifying levels	Required GPA	Maximum study period	# of fail grades
1	First Class Honours	3.60 and above	Four years	One fail grade
2	Upper Second-Class Honours	3.00 - 3.59	Four years	Two fail grades
3	Lower Second Class Honors	2.50 - 2.99	Four years	Two fail grades
4	Pass	2.00 - 2.49	Six years	

## **12. Curriculum Outline Bachelor of Science Degree in Optometry programme**

**12.1** List of Core optometry courses and supporting foundation courses outline by year. Where the school considers appropriate, a course or courses may be presented over weeks or across the semester. Students will be assessed using the core competencies and minimum patient episode experiences prescribed (for the training of Optometrist) by the General Optical Council, England. Ref: Appendices 1,2,3 and 4 of full degree document.

**See full degree document (Section 12.2 for summary of core optometry courses) and 12.3 for detailed week-by-week description of each optometry course).**

<b>Year 1</b>	<b>Code or ASC-Equiv.</b>	<b>Credits</b>	<b>Hours-to be defined</b>
<b>Semester I</b>			
<b>General human Anatomy and physiology</b>	<b>BSc-O 1101/ ASC Equiv.</b>	<b>4</b>	
<b>Clinical Techniques Theory</b>	<b>BSc-O 1102</b>	<b>4</b>	
<b>Introduction to Use of English</b>	<b>BSc-O 1103/ ASC Equiv.</b>	<b>4</b>	
<b>Basic Microbiology</b>	<b>BSc-O 1104/ ASC Equiv.</b>	<b>3</b>	
<b>Ocular Anatomy and Physiology</b>	<b>BSc-O 1105</b>	<b>4</b>	
<b>TOTAL</b>		<b>19</b>	
<b>Semester 2</b>	<b>Code-ASC-Equiv.</b>	<b>Credits</b>	
<b>Neurophysiology of Vision</b>	<b>BSc-O 1201</b>	<b>4</b>	
<b>Clinical Optometry 1</b>	<b>BSc-O 1202</b>	<b>4</b>	
<b>Pathophysiology or ASC equiv.</b>	<b>BSc-O 1203/ ASC Equiv.</b>	<b>4</b>	
<b>Ophthalmic Optics 1</b>	<b>BSc-O 1204</b>	<b>3</b>	
<b>Community Optometry 1</b>	<b>BSc-O 1205</b>	<b>3</b>	
<b>Subtotal</b>		<b>18</b>	
<b>Clinical Attachment1, 6 hrs. per day 4 days for 8 weeks</b>	<b>BSc-O 1206</b>	<b>3</b>	
<b>TOTAL</b>		<b>21</b>	

**Year 1 credits 40**

<b>Year 2</b>	<b>Code or ASC-Equiv.</b>	<b>Credits</b>	<b>Hours-to be defined</b>
<b>Semester 1</b>			
<b>Dispensing Optics 1</b>	<b>BSc-O 2101</b>	<b>3</b>	
<b>Clinical Optometry 2</b>	<b>BSc-O 2102</b>	<b>4</b>	
<b>Ocular Disease 1</b>	<b>BSc-O 2103</b>	<b>4</b>	
<b>Low Vision and Blindness 1</b>	<b>BSc-O 2104</b>	<b>4</b>	
<b>Management for Health Professionals</b>	<b>BSc-O 2105/ASC. Equiv.</b>	<b>3</b>	
<b>Medical Biochemistry or ASC equiv.</b>	<b>BSc-O 2106/ASC Equiv.</b>	<b>4</b>	
<b>TOTAL</b>		<b>22</b>	
<b>Semester 2</b>	<b>Code/ ASC-Equiv.</b>	<b>Credits</b>	
<b>Dispensing Optics 2</b>	<b>BSc-O 2201</b>	<b>3</b>	
<b>Clinical Optometry 3</b>	<b>BSc-O 2202</b>	<b>4</b>	
<b>Ocular Disease 2</b>	<b>BSc-O 2203</b>	<b>4</b>	
<b>Low Vision and Blindness 2</b>	<b>BSc-O 2204</b>	<b>4</b>	
<b>Ophthalmic Optics 2</b>	<b>BSc-O 2205</b>	<b>3</b>	
<b>Community Optometry 2</b>	<b>BSc-O 2206</b>	<b>3</b>	
<b>Physiological Optics</b>	<b>BSc-O 2207</b>	<b>4</b>	
<b>Subtotal</b>		<b>25</b>	
<b>Clinical attachment 2, (8weeks/ 6 hrs. per day/4 days/wk.)</b>	<b>BSc-O 2208</b>	<b>3</b>	
<b>TOTAL</b>		<b>28</b>	

**Year 2 total credits 50**

<b>Year 3</b>	<b>Code or ASC-Equiv.</b>	<b>Credits</b>	<b>Hours-to be defined</b>
<b>Semester 1</b>			
Contact lens 1	BSc-O 3101	3	
Clinical Optometry 4	BSc-O 3102	4	
General and Ocular Pharmacology	BSc-O 3103	4	
Binocular Vision 1	BSc-O 3104	4	
Ophthalmic Optics 3	BSc-O 3105	3	
Physical and Geometric Optics	BSc-O 3106	4	
Occupational Optometry	BSc-O 3107	3	
<b>TOTAL</b>		<b>25</b>	
<b>Semester 2</b>	<b>Code or ASC-Equiv.</b>	<b>Credits</b>	
Contact Lenses 2	BSc-O 3201	4	
Legal and Ethical Issues	BSc-O 3202/ ASC Equiv.	2	
Pediatric Optometry	BSc-O 3203	4	
Binocular Vision II	BSc-O 3204	4	
Research Methodology and Biostatistics	BSc-O 3205/ASC Equiv.	4	
Sexually Transmitted Infections and HIV/AIDS or ASC equiv.	BSc-O 3206/ ASC Equiv.	3	
<b>Subtotal</b>		<b>21</b>	
Clinical attachment 3, (8 wks. / 6 hrs. Per day/5 days/wk.)	BSc-O 3207	4	
<b>TOTAL</b>		<b>25</b>	

**Year 3 total credits 50. At this juncture students receive the Certificate of Clinical Competence, valid for 12 months, transitioning them to Supervised Practice throughout year 4.**

### Pre-registration year Applied Research and Supervised Practice

Year 4	Code or ASC-Equiv.	Credits	Hours-to be defined
Semester 1			
Research Project Part 1	BSc-O 4101	3	
Supervised Practice Part 1, 6hrs per day/ 4 days per week.	BSc-O 4102	5	
<b>TOTAL</b>		<b>8</b>	
Semester 2	Code or ASC-Equiv.	Credits	
Research Project Part 2	BSc-O 4201	3	
Supervised Practice Part 2 -6hrs per day/ 4 days per week.	BSc-O 4202	5	
<b>TOTAL</b>		<b>8</b>	

**Year 4 total credits 16**

**Total Credits 156**

At this stage, the student qualifies for the Bachelor of Science in Optometry, with or without honours or awards.

This degree is a gift to the Government and People of Antigua & Barbuda for the sole purpose of training Optometrists at the Antigua State College and the 4<sup>th</sup> Landed Campus of the UWI.

Full degree document available upon request.

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