

Assessment Report

**International Program Accreditation
Clinical Laboratory Science (B.Sc.),
Radiologic Sciences (B.Sc.), Optics and
Optometry (B.Sc.), Forensic Science
(B.Sc.)**

**at the University of Science and
Technology
Beirut, Lebanon**

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Imprint

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I. Introduction

EVALAG's international program accreditation constitutes a rigorous external quality assurance procedure designed to evaluate the academic quality, structures, and effectiveness of higher education programs. It involves a structured peer-review process, comprising a written self-assessment report and an on-site visit conducted by an independent panel of academic and professional reviewers.

Through this procedure, international accreditation confirms that the study programs align with the Standards and Guidelines for Quality Assurance in the European Higher Education Area¹ (ESG), thereby evidencing their commitment to internationally recognised principles of academic quality and transparency. The reviewers evaluate the degree of compliance with each criterion in relation to the ESG by offering an external, independent, expert-based perspective, applying assessment levels, and providing conditions or recommendations aimed at the continued enhancement of the study programs. Upon successful completion, institutions are granted a quality seal and formal accreditation valid for a period of six years.

¹ https://www.engq.eu/wp-content/uploads/2015/11/ESG_2015.pdf (accessed 17th July 2025).

II. HEI (profile)

Description of American University of Science & Technology (AUST)²

The present-day American University of Science & Technology (AUST) began its operations in 1989 under the name American Universal College (AUC) and applied for licensure from the Lebanese government. In August 2000, the institution was renamed American University College of Science & Technology (AUCST). Finally, in August 2007, the current name American University of Science & Technology (AUST) was officially confirmed, granting it all the rights, privileges, and responsibilities of a fully accredited university.

The American University of Science and Technology (AUST) is a secular, private, and independent institution. Unlike many universities in Lebanon, AUST was not established by a religious order and receives no funding—neither partially nor fully—from any governmental agency or religious organization. AUST is an equal opportunity employer and upholds a strict non-discrimination policy across all areas of governance and administration. The university follows an American-style educational philosophy, requiring all students—regardless of their academic major—to complete a broad-based liberal arts curriculum. This curriculum includes mandatory coursework in languages, social sciences, humanities, as well as mathematics and natural sciences.

The main campus of the university is located in Beirut. Additionally, the university operates two smaller regional centers in Zahlé and Sidon and a new branch (licensed in 2022) in Bhamdoun; Mount Lebanon.

AUST offers undergraduate (32) and graduate programs (16) in four faculties:

- Faculty of Arts and Sciences (FAS)
- Faculty of Business and Economics (FBE)
- Faculty of Engineering (FOE)
- Faculty of Health Sciences (FHS)

Nature: Independent, Private, coeducational and secular
Official Address: Achrafieh, Alfred Naccash Ave. P.O. Box 16-6452; Beirut, Lebanon
Locations: 1. Beirut; Ashrafieh 2. Zahle; Bekaa Valley 3. Sidon; Southern Lebanon

² Facts and Figures, AUST; Academic Year 2022-2023 (figures quoted are for Fall 2022)

4. Bhamdoun; Mount Lebanon (New branch licensed in 2022)
Number of Students: Total 3666 HC; FTE: 2582 UG; 380 G ³ Beirut 2494 (2100 undergraduates-UG- in Fall 2022) ⁴ Zahle 833 ⁵ Sidon 339 ⁶ Bhamdoun (enrolment is embedded in Zahle)
Number of Faculty: 240 HC; FTE 174 FTE Student FTE Faculty=17.02
Number of Faculties (Schools): 4*
Number of Academic Departments: 24
Number of Degree Granting Programs (Undergraduate): 32
Number of Degree Granting Programs (Graduate): 16
Number of Credit Hours: Needed for a Bachelor's Degree (starting Freshman class) 135 Needed for a Bachelor's Degree (starting Sophomore class) 105 Needed for a Master's Degree: 30-39
Number of Students who Graduated in July 2022 with BA/BS: 918
Number of New Students who Enrolled in October 2022: 1129
Number of Students who Graduated with Master's Degrees in July 2022: 159
Number of Students who Graduated with MBA Degrees in July 2022: 99
Faculty of Health Sciences (FHS); Dean: Gretta Abou Sleiman; Ph.D.

The Faculty of Health Sciences (FHS) at the American University of Science and Technology (AUST)⁷

FHS is committed to providing high-quality education in sciences and health care professions. The FHS does not deliver majors in areas that have reached career saturation but strives to offer majors of applied nature where professional development is key in advancing the academic process. Through its comprehensive programs, dedicated faculty, and state-of-the-art facilities,

³Male 2078 (56.7%), Female 1588 (43.3%).

⁴Male 1466 (58.8%), Female 1028 (41.2%).

⁵Male 420 (50.4%), Female 413 (49.6%).

⁶Male 192 (56.7%), Female 147 (43.3%).

⁷ Reference: AUST Registrar excel sheet.

the FHS plays a vital role in advancing healthcare services and education in Lebanon and the Middle East.

The FHS encompasses several departments offering a diverse range of undergraduate programs:

- Clinical Laboratory Science (CLS)
- Optics and Optometry (OAO)
- Radiologic Sciences (RAD)
- Forensic Science (FOR)
- Nutrition and Food Science (NFS)
- Nursing (NUR)

Number of study programs: Undergraduate: 6 Graduate: 8 Postgraduate: 0
Number of students in the faculty: Undergraduate: 450 Graduate: 25 Postgraduate: 0
Part-time students: Grad: 22, Undergrad: 210
1st year students (faculty level): 101 (undergrad: 95 Grad: 6)
Graduate (faculty level): 43 undergraduate students and 5 graduates
Drop-out rate (faculty level): 15.4%

Name of the Study Program: BS in Clinical Laboratory Science
Founding year: 2007
Final degree: Bachelor of Science
Duration of study: 3 years minimum, after freshman or beginning of sophomore
Credits (ECTS or other system): 120 cr.hr
Capacity per semester/study year: 30 students
Number of Students (actual semester): 85
Full-time: 40
Part- time: 45
Number of graduate (from the beginning): 285
1st year students (actual semester): 18
% International students: 7%

Drop-out rate (actual semester): 11.8%
Drop-out rate (average in last 5 years): 12.76%
Full-time academic staff in the program: 3
Part-time academic staff in the program: 10

Name of the Study Program: BS in Optics and Optometry
Founding year: 2007
Final degree: Bachelor of Science
Duration of study: 3 years minimum, after freshman or beginning of Sophomore
Credits (ECTS or other system): 120 cr.hr
Capacity per semester/study year: 50 students
Number of Students (actual semester): 109
Full-time: 76
Part- time: 33
Number of graduate (from the beginning): 180
1st year students (actual semester): 22
% International students: 14 out of 109: 12.8%
Drop-out rate (actual semester): 13.39%
Drop-out rate (average in last 5 years): 11.22%
Full-time academic staff in the program: 4
Part-time academic staff in the program: 8

Name of the Study Program: BS in Radiologic Sciences
Founding year: 2011-2012
Final degree: Bachelor of Science
Duration of study: 3 years minimum, after freshman or beginning of Sophomore,
Credits (ECTS or other system): 105 cr.hr
Capacity per semester/study year: 40 students
Number of Students (actual semester): 66
Full-time: 36
Part- time: 30

Number of graduate (from the beginning): 117
1st year students (actual semester): 10
% International students: 4 out of 66: 6.06%
Drop-out rate (actual semester): 15.15%
Drop-out rate (average in last 5 years): 13.26%
Full-time academic staff in the program: 2
Part-time academic staff in the program: 6

Name of the Study Program: BS in Forensic Science
Founding year: 2017
Final degree: Bachelor of Science
Duration of study: 3 years minimum, after freshman or beginning of Sophomore
Credits (ECTS or other system): 106 cr.hr
Capacity per semester/study year: 70 students
Number of Students (actual semester): 116
Full-time: 56
Part- time: 60
Number of graduate (from the beginning): 294
1st year students (actual semester): 17
% International students: 3 out of 116: 2.58%
Drop-out rate (actual semester): 18.18%
Drop-out rate (average in last 5 years): 19.91%
Full-time academic staff in the program: 3
Part-time academic staff in the program: 11

III. Assessment procedure

On 12th December 2024, EVALAG was commissioned by the American University of Science and Technology in Beirut to carry out the international program accreditation for the following study programs:

- Clinical Laboratory Science (B.Sc.)
- Optics and Optometry (B.Sc.)
- Forensic Science (B.Sc.)
- Radiologic Sciences (B.Sc.)

The assessment followed a two-stage process, consisting of a written self-evaluation report, which was handed in on May 26th, 2025, by the university. In light of the prevailing political circumstances in Lebanon, the site visit took place remotely rather than on site, on June 30th, and July 2nd, 2025 (for further details, see Annex 4). During the visit, the expert panel held discussions with representatives of the university and department leadership, academic and administrative staff, as well as students and alumni. A comprehensive impression of the on-site facilities was conveyed to the reviewers through the video and image material provided by the institution.

Following the site visit, the expert panel submitted the assessment report to AUST for factual review and institutional statement on October 20th, 2025. The university's response is included in chapter VI. Statement of the university.

The reviewers and EVALAG sincerely thank the university for the open and constructive discussions, and for their excellent and highly professional support during the preparation of the meetings, throughout the site visit, and beyond.

Composition of the review panel

The study programs were evaluated by qualified and experienced university professors and industry professionals as well as one student representative. The group of reviewers offering an external, expert-based perspective consists of:

- Prof. Dr. Walburgis Brenner, Head of scientific laboratories, University Medical Center of the Johannes Gutenberg University Mainz, Germany
- Dr. Sigrid Müller-Schotte, Lecturer at the University of Applied Sciences Utrecht, the Netherlands
- Prof. Iuliana Toma-Dasu, Professor in Medical Physics at the Department of Physics, Stockholm University and the Head of the Medical Radiation Physics division at Stockholm University, Sweden
- Prof. Robert Green OBE, Professor of Forensic Science, Director of Student Engagement, University of Kent, UK

- Dr. Beatriz Atienza Carbonell, Lecturer at the Faculty of Health Sciences, International University of Valencia, Spain
- Nick Merlin Assmann, Studies in Medicine (State Examination) at Justus Liebig University, Gießen, Germany

All reviewers declared to be free of any conflict of interest. Ms. Amanda Erd acted as the official representative of EVALAG throughout the procedure with organizational support by Inga Brak.

Criteria and Assessment Levels

The criteria guiding EVALAG's international program accreditation have been formally endorsed by the EVALAG Foundation Board (for further details, see Annex 1). Rooted in the European Standards and Guidelines (ESG, for further details, see Annex 2) for Quality Assurance in the European Higher Education Area, they incorporate a thorough analysis of Part 1 of the ESG. Where necessary, additional national frameworks and regulatory requirements may also be applied.

Through its international accreditation process, EVALAG verifies that the study programs conform to the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, as of 15 May 2015), thus evidencing their alignment with European acknowledged standards of academic quality. The accreditation criteria encompass the following:

- Program profile
- Curriculum
- Student assessment
- Program organization
- Resources
- Quality assurance

Beyond ensuring compliance with academic standards commonly accepted within the European Higher Education Area⁸ (EHEA), the process also promotes the continuous improvement and strategic development of the programs. The reviewers assess the extent to which each criterion is fulfilled in accordance with the ESG, applying the following assessment levels:

- passed
- passed subject to conditions
- suspension of the accreditation procedure
- failed

Based on the degree of compliance with the accreditation criteria, the institution may be granted full accreditation, accreditation subject to conditions, or accreditation may be denied.

⁸ The European Higher Education Area is an alliance of currently 49 countries that have agreed on common standards and goals in higher education as part of the so-called Bologna Process.

If the program does not meet certain relevant criteria, but it appears likely that the institution will be able to address the shortcomings within 18 months following the assessment, the accreditation procedure may be suspended until a new application is submitted.

The final decision on accreditation is taken by the independent EVALAG Accreditation Commission, drawing on the reviewers' final report. Following a positive outcome of the external review process, the Accreditation Commission awards the EVALAG quality label and submits a formal recommendation to the competent national authorities. The institution is issued an official certificate and authorized to use the EVALAG quality seal for communication and promotional purposes. The accreditation is granted for a fixed term of six years, contingent upon ongoing compliance with the established quality standards. The evaluation report will be published on EVALAG's website.

This assessment report is structured according to the six accreditation criteria applied by EVALAG. Each section provides a brief criterion overview, summarizes the current status based on the university's self-assessment and site visit findings, and presents the reviewers' evaluation and recommendations for improvement.

IV. Program assessment

1. Program profile

The program's objectives should align with the institution's profile and strategic goals. The reviewers evaluate the clarity, accessibility, and appropriateness of the intended learning outcomes, ensuring these outcomes correspond to the type and level of qualification awarded. Furthermore, the reviewers examine whether the learning outcomes are informed by academic and professional standards, societal needs, and labor market demands, and whether they enhance graduates' employability.

In addition, the reviewers consider the integration of research within the programs - specifically, the application of scientific methods in both theory and practice, as well as the extent to which teaching is research-based. They assess whether the program's profile and objectives meet internationally recognized standards. The international orientation of each program is also reviewed, as is the adequacy of academic staff qualifications in relation to the program's objectives and overall profile.

BS in Clinical Laboratory Science

Current status

The Clinical Laboratory Science (CLS) program is the first one that was offered at the FHS. It is committed to delivering high-quality education that meets the ever-growing demands of the healthcare sector. It prepares students for a professional career in the field by exposing them to the theoretical foundations and practical skills involved in the various disciplines of laboratory medicine. CLS graduates work as healthcare professionals.

Through student-centered learning that emphasizes scientific rigor, quality assurance, interprofessional collaboration, and lifelong learning, the mission of the CLS program is to prepare competent, ethical, forward-thinking professionals, and critical thinkers. Graduates are equipped with theoretical knowledge, technical skills, and clinical experience required for success in diagnostic, specialty, and research laboratories as well as in various types of public health settings.

AUST envisions its CLS program as a nationally, regionally, and internationally recognized center of excellence in CLS education. The program is committed to fostering innovation and upholding the highest standards of ethical practice, with the overarching goal of advancing biomedical sciences and contributing to improved healthcare outcomes.

Program objectives

- Prepare students for a professional career in the field by exposing them to the theoretical foundations, practical skills, and clinical applications in the

major disciplines of clinical laboratory science including microbiology, clinical chemistry, immunology, hematology, and molecular genetics.

- Equip students with knowledge on quality control and assurance in various laboratory environments, such as diagnostic laboratories, research centers, and specialty laboratories.
- Empower students to analyze, interpret results and correlate them to patients' diagnosis and treatment.
- Promote students' self-confidence, and necessary communication skills in both Arabic and English.
- Emphasize the value of confidentiality, ethics, and integrity in the clinical laboratory profession.
- Encourage students to collaborate effectively with all stakeholders in the healthcare system.
- Engage students to cooperate with relevant agencies and advance the clinical laboratory field.
- Inspire a mindset of continuous education and lifelong professional development through proper certifications in line with the rapidly evolving technologies.
- Foster building students' healthy self-confidence within the educational process.

Learning outcomes

Students graduating from the B.S. in Clinical Laboratory Science should be able to:

- Apply foundational knowledge of cell biology and molecular genetics, microbiology, clinical chemistry, immunology, and hematology to the practice of clinical laboratory science.
- Perform laboratory procedures with accuracy and precision in clinical and research settings.
- Comply with safety standards and quality control/assurance practices in clinical and research settings.
- Analyze and interpret laboratory data to support diagnostic decision-making and patient management.
- Identify and solve problems encountered in clinical and basic research using appropriate procedures and modern tools.
- Demonstrate effective communication skills verbally and in writing, both in Arabic and English, to convey technical information, support patient care, and work in partnership with healthcare professionals.
- Comply with principles of ethical practice including respect for patient confidentiality and integrity in clinical decision-making and reporting.
- Work in multidisciplinary teams demonstrating initiation, collaboration, and leadership.
- Commit to professional development by seeking certification and engaging in lifelong learning.
- Recognize contemporary public health challenges, bioethics, and the impact of evolving technologies.

The program and research

The CLS program adopts a research-based teaching approach across the majority of its courses. Students are engaged in research activities through various projects. In theoretical courses, 15% of the final course grade is allocated to a research project. These projects may take the form of research oral presentations or written scientific articles based on literature review.

Similarly, laboratory courses emphasize the importance of research. Students are required to submit detailed laboratory reports which follow the same structure of original scientific articles. Furthermore, students are assigned projects whose topics are related to recent advancements in the practical field, thereby broadening their scientific knowledge and enhancing their research competencies.

The development of research skills is further supported by core research courses, including BIO 320 – Biostatistics and Epidemiology, CLS 470 – Process of Research, and CLS 472 – Special Topics in Clinical Laboratory Science.

The Biostatistics and Epidemiology course emphasizes the practical application of statistical and epidemiological methods within various health science disciplines. Through this course, students acquire the ability to organize, describe, and analyze statistical data; select appropriate statistical tests; and understand the key principles of epidemiology.

In the Process of Research course, students are guided in the development of their own research proposals and papers, thereby strengthening their research proficiency. Upon completion of this course, students are expected to identify research purposes; locate major library resources which directly relate to selected topics; select resources based on their authority, accuracy, currency and relevance; compose and organize an outline; cite, format and document the research paper following the APA's latest directives; and identify different kinds of research and methods of data collection.

In their final year, students' research abilities are further assessed through the Special Topics in Clinical Laboratory Science course. In this capstone-style course, students select a scientific topic, conduct an in-depth literature review, analyze and interpret the findings, and present them to their peers and faculty. The primary objectives of this course are to enable students to read and critically judge literature, present scientific findings, and develop their presentation skills.

In addition, the CLS Department places significant emphasis on the **research capabilities of its faculty members**. Regular departmental meetings are conducted to review recent scientific publications, explore emerging research opportunities, and foster interdisciplinary collaboration. Furthermore, as a part of the faculty recruitment process, instructors are required to have a minimum number of publications to join the FHS. The CLS department also conducts research evaluation meetings to assess the research potential of prospective instructors in disciplines related to CLS.

Most importantly, full-time faculty members are actively engaged in a series of research topics including:

- Testing for Genetically Modified Organisms and Gene Edited Crops
- Human Identification based on DNA Analysis
- Human Genetics
- Cancer Biology and Molecular Oncology
- Public Health and Epidemiology

The program in relation to internationally accepted standards

Since its foundation, the CLS program has been designed in compliance with national and international standards. At the national level, the program graduates laboratory technologists who are eligible to take the national colloquium exam set by the Ministry of Education and Higher Education (MEHE) and the Ministry of Public Health (MPH). This exam, supervised by the MEHE, is designed to assess students' knowledge and readiness for entering the job market. All curriculum changes are carefully revised and approved by MEHE before being implemented. In addition, the CVs of the faculty members are submitted to MEHE on a regular basis to ensure that the academic qualifications and the expertise of the instructors are in line with the stipulated regulations.

At the international level, the CLS program undergoes continuous evaluation to ensure alignment with global academic and professional standards. The curriculum is regularly benchmarked against both national and international programs to support ongoing enhancement and ensure relevance in a rapidly evolving field.

In addition, students benefit from exposure to a diverse range of international educational opportunities, including courses, seminars, and workshops.

The international dimensions of the program

Over the past few years, CLS students and graduates have joined internationally recognized universities to pursue their studies. Some students were able to join an exchange program for one or two academic semesters. Others are enrolling in a double degree program. In this regard, an affiliation between the FHS and Université Catholique de Lille (UCL) is established for CLS students. Students can pursue their studies at both institutions and receive a Bachelor of Science in Life Science from UCL and a Bachelor of Science in CLS from AUST. The cooperation is based on a Memorandum of Understanding (MoU), which was duly concluded and made available to the panel. This document sets out the respective responsibilities of both institutions.

Moreover, several CLS graduates have completed their MS or PhD degrees in reputable universities including:

- University of California, Berkeley
- University of Toronto
- University of Leeds

- Université de Lausanne
- Cleveland State University

Qualification of academic staff

It is of great importance to highlight the role of the academic staff of the Laboratory Science and Technology (LST) Department in building the essential foundations for CLS students. The LST department, the service department at the FHS, is responsible for offering all the Biology and Chemistry courses. The academic staff of the LST department hold M.Sc., MD, or PhD degrees in the following disciplines:

- General Chemistry
- Analytical Chemistry
- Organic Chemistry
- Biochemistry
- Biological and Medical Sciences
- Physiology
- Biotechnology
- Cellular Biology
- Microbiology

The Department of Clinical Laboratory Science has full-time and part-time instructors with different academic backgrounds including M.Sc., MD and PhD holders. Major courses are usually delivered by PhD or MD holders who have extensive clinical experience in the fields of the courses they teach. Their fields of expertise include:

- Molecular Biology and Genetics
- Clinical Biology
- Clinical Microbiology
- Clinical Hematology
- Clinical Immunology
- Laboratory Analysis
- Biotechnology
- Public Health

For further details, see chapter 5. Resources.

Assessment

Assessments that apply to all degree programs are summarized here in a general section. Subsequent assessments refer to these overarching assessments, while program-specific assessments are discussed in detail within the main text.

The reviewers find that the programs' objectives are well aligned with the institution's profile and strategic goals, thereby ensuring coherence with the university's overall mission and vision. The programs' profiles and objectives are substantiated by intended learning outcomes that span the full spectrum of knowledge and skills required to address the multifaceted challenges of the respective subject area. These learning outcomes are structured into subject-specific competences, research skills, and transferable skills, with a

strong emphasis on the integration of generic competences into the curriculum. The reviewers have seen evidence of careful planning to ensure that students were able to make connections across disciplines.

The reviewers further note that the learning outcomes are informed by academic and professional standards, societal needs, and labor market demands. This ensures that graduates are well prepared for employment locally and, where applicable, internationally in their respective fields, and possess the competencies necessary for professional success. However, for certain specializations such as Radiologic Sciences or Optometry, additional certification may be required to practice in some countries.

Nevertheless, the reviewers consider the intended learning outcomes not to be described clearly enough for all programs. Therefore, the reviewers recommend that the syllabus of each program include more detailed, clearly defined, and differentiated module content as well as explicitly articulated learning outcomes. This will enhance the clarity and transparency of the programs' structure and further strengthen their meaningful focus on learner autonomy. The reviewers appreciate that a dedicated workshop on syllabus development and enhancement was scheduled for September 2025. Moreover, they positively welcome that the university has already announced that the revision of all syllabi by course instructors, program coordinators, chairpersons, and the dean will be completed shortly.

The programs demonstrate sufficient integration of research by applying scientific methods in both theory and practice. Research-based teaching exposes students to the latest developments and methodologies in their discipline. The reviewers commend this approach, as it ensures a high academic standard, fosters critical and analytical thinking, and prepares students to actively contribute to ongoing scholarly debates and innovation within the field.

Moreover, the strong emphasis on laboratory work was highlighted as a key strength, offering valuable hands-on experience throughout the course of study. In the discussion with students and alumni, it became evident that the study programs offer a highly practice-oriented education, which they consider providing sound preparation for entering the labor market.

The reviewers find that the programs meet internationally recognized standards and thus possess a clear international dimension, preparing students for global opportunities.

The qualifications of the academic staff are deemed adequate in relation to the programs' objectives and overall profiles, ensuring high-quality teaching by qualified professionals.

The reviewers wish to emphasize the importance of familiarizing students with different laboratory systems and equipment, as each hospital uses its

own system and the devices operate differently. This has proven to be challenging for students. The reviewers acknowledge AUST's argument that graduates will need to become familiar with the respective systems once they enter the workforce. Even though, it might be helpful to optionally provide students with support or informational materials on handling laboratory equipment and systems - for example, by making manuals for various systems available for reference.

For the CLS program, the reviewers were convinced that the Double Degree Program with Université Catholique de Lille constitutes a well-designed and valuable element. The arrangement contributes meaningfully to the development of international competences, intercultural awareness, and professional mobility of graduates. Furthermore, the collaboration is structured in such a way that students were able to progress smoothly through both curricula without undue extension of the study period. It strengthens the international orientation of the program, broadens students' academic and professional perspectives, and demonstrates the institution's commitment to international cooperation.

Moreover, the reviewers wish to draw the university's attention to this matter, which relates to the CLS program. With respect to laboratory management, the reviewers note that it may be advantageous to explore the introduction of a course covering laboratory operations, administration, and management at a macro level, thereby complementing the current emphasis on micro-level, day-to-day laboratory activities.

In conclusion, the review panel judges that the programs show a high degree of compliance with academic and professional requirements, societal needs, and internationally accepted standards.

Apart from the identified area for improvement, all other criteria are considered to have been met according to the relevant standards.

Recommendation

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

BS in Optics and Optometry

Current status

The Optics and Optometry Program was one of the first majors established in the FHS. The program was developed to shape the graduates as outstanding practitioners, researchers, innovators and educators. It provides students

with latest advancements in the optometry field, direct involvement in patients clinical care since the first year, involvement in research in ongoing projects, and continuous input in program updates. The program links academia with hands-on experience through various internships in leading optometry centers in Lebanon, and through recruitment of instructors that are considered leaders in the optometry profession.

Through the optics component of the program, students are introduced to dispensing skill, ophthalmic lenses technologies, geometric optics and physiological optics, while the other component of the program deals with basic and latest advancements in the optometry field including refraction, contact lenses, therapeutics, binocular vision, low vision, and sports vision. This holistic approach is in line with the vision of the department to develop leaders in the field of optometry.

The above approach aligns with the university mission to equip students with modernized theoretical knowledge combined with hands on training and experience to create future leaders in the field of optics and optometry.

The mission is to mold students into competent, research oriented, compassionate primary eye care providers. According to the SER this mission is achieved by providing high quality teaching that integrates evidence-based clinical experience, community service, collaboration with leading professionals in the field, promoting continuous education, and actively contributing locally to visual eyecare.

The Optics and Optometry program aims to be the leading program in the Middle East and North Africa (MENA) region and to be recognized globally by its excellence in education, research, community service, and ocular health care.

Program objectives

- Equip students with the needed skills to become leading practitioners in the field of opticianry, optometry and to become primary eye health care providers.
- Develop the necessary skills to enable students to become outstanding eye care practitioners, researchers, educators and managers in the field of optics and optometry through holistic program design.
- Provide students with the necessary tools to become self-confident, and excellent communicators.
- Promote critical thinking and evidence based clinical experience.
- Prepare students to become effective team workers in the field of optometry.
- Create eye care professionals with strong drive to community service.
- Enable students to examine and refract patients with contact lenses, of different ages.
- Qualify students to address different clinical situations and advise patients on proper ways to address them.

- Enable students to perform contact lens fitting, advise on proper lens material for each type and patient condition, and handle contact lens complications.
- Encourage students to become professionals who engage in continuous development.
- Introduce students to ethical practice in optometry.
- Handle subspecialties in optometry field such as low vision and low vision aids, allowing students to have hands on experience in this domain

Learning outcomes

Upon successful completion, students will be able to:

- Become leading optometrists in the various fields of the domain from simple refraction to handling complicated cases.
- Prescribe and treat various conditions utilizing different types of contact lenses that are targeted to various diseases.
- Become active researchers in the field of optometry by actively participating in the ongoing research projects and campaigns.
- Provide tailored treatment approach depending on the patient's condition and requirements.
- Work in hospital settings and in specialized optometry clinics or ophthalmic centers.
- Assess low vision patients in a systemic and tailored approach.
- Handle binocular vision patients, from assessment to treating various binocular conditions and patients of different ages.
- Manage optical shops and optometry centers.
- Develop a sense of social responsibility and actively participate in public health and awareness campaigns.
- Abide by the ethical code of practicing optometry.
- Communicate effectively with patients of different ages and in different settings

The program and research

Students in the Optics and Optometry Department are actively involved in ongoing research in the department. They are equipped with the necessary soft skills by the courses that introduce students to research. Courses offered include process of research, special topics in optics and optometry, and health sciences seminars.

Students will learn research utilization tools that includes different research methodologies, how to write a research proposal, different research techniques, and other elements of research like design, data collection, interpretation of results, and ethical considerations in research.

The Optics and Optometry program is a highly dynamic research-oriented program. The program main research topics of interest are:

- Uveitis

- Dry eye
- Refractive errors and obesity (in collaboration with Nutrition and Food Science Department)
- Prevalence of refractive errors in the Lebanese population

The program in relation to internationally accepted standards

The Optics and Optometry program is designed to meet the standards that are set by both the Lebanese laws and the international standards. AUST is an affiliate member of the World Council of Optometry and is actively participating in designing, updating and implementing curricula changes that meet with the latest updates in the optometry profession.

The international dimension of the program

AUST was awarded the affiliate membership of the World Council of Optometry in the year 2024. Graduates work all over the Middle East, France and Canada. Moreover, they pursue higher education in different countries. Currently four of them are seeking PhD in South Africa, Malaysia, and Scotland.

Qualification of academic staff

The academic staff in the Optics and Optometry Department are specialized professionals, holders of PhD, OD, MD, and master's degrees.

- Ophthalmologists
- PhD in Biochemistry
- PhD in Physiology
- PhD in Chemistry
- PhD in Biology
- Masters in Optometry
- Doctor of Pharmacy (PharmD)
- Doctor of Optometry

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

The reviewers consider it particularly positive that the program provides opportunities for students to work as teaching assistants and supports them in securing practical experience in optical stores and/or ophthalmology settings. During the site visit, students reported that they feel well prepared to pursue professional careers in optics and optometry.

Recommendation

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

BS in Radiologic Sciences

Current status

The Radiologic Sciences program prepares graduates to perform radiologic procedures as entry-level Radiologic Technologists. They assist radiologists, radiation oncologists, and other physicians by imaging and treating parts of the body through the use of ionizing and non-ionizing radiation as well as other techniques, specialized imaging and treating equipment, and manipulation of patient positions.

The program consists of a comprehensive curriculum that provides students with a broad base of knowledge and skills to perform a full range of radiologic procedures. A variety of support courses are offered to provide students with skills to communicate effectively, to develop skills in critical thinking, and the ability to problem solve in the practice of Radiologic Technology.

Opportunities for application of imaging principles and concepts are provided by affiliations done by the FHS with major and prestigious university hospitals, diagnostic centers, and treating centers in the capital of Lebanon, Beirut, as well as other major cities of the country such as Sidon and Zahle. Experience in local clinical education settings enables students to develop clinical and practical skills. The program focuses not only on performing procedures competently but also encompasses patient education and care of the patient during imaging procedures, application of ethical principles, and professional development.

After successful completion of the curriculum, the graduate is eligible to become licensed by the Ministry of Higher Education and the Ministry of Public Health in Lebanon with the eligibility to join the Lebanese Syndicate of Radiographers. The program is designed to provide a sufficient foundation so the graduate with additional post-graduate experience and continued education may advance in career paths appropriate to their own interests and abilities.

The mission of the Radiologic Technology Education at the AUST is to recruit and provide quality individuals with an ambitious, extensive education that equips them with knowledge, skills, and abilities to provide ethical, high-quality, compassionate medical imaging and treatment. The students will be adaptable to varied healthcare settings with diverse patient populations and effectively interact with other members of the healthcare team to provide the best possible patient care.

The vision of the Department of Radiologic Sciences at AUST is to be a leader in providing timely, cost-efficient, and high-quality Medical Imaging and image-guided therapy services for a diverse patient population. According to the SER the department will also play a major and vital role in the education of patients, trainees, healthcare providers, and healthcare administrators, conveying the important and critical function that medical imaging and image-guided therapy serves in improving the outcomes and advancing the care of patients.

Program objectives

The purpose of the B.S. in Radiologic Sciences is to:

- Encourage students to communicate effectively in the healthcare setting with effective written and oral communication skills.
- Equip the students to develop problem-solving and critical thinking skills.
- Enable students to evaluate radiographic images with respect to technique-specific qualities.
- Train students to modify standard procedures for non-routine imaging examinations.
- Prepare students to work ethically in healthcare professions and respect patient dignity and show compassion for patients.
- Equip students with clinical skills and competency appropriate to the entry level medical imaging profession by positioning patients for routine radiographic examinations and practicing radiation safety.
- Conduct a program committed to the continued improvement of education in the Radiologic Sciences.

Learning outcomes

Career opportunities exist in hospitals, diagnostic imaging centers, and private physicians' offices. The Radiologic Sciences degree also provides graduates opportunities for career advancement in administration, medical sales, education, quality management, and public health facilities.

Graduates will be prepared to:

- Apply radiation protection principles in radiographic examinations.
- Correctly apply patient positioning for radiographic examinations.
- Manipulate radiographic equipment.
- Demonstrate medical written communication skills.
- Provide patient specific verbal and nonverbal communication skills.
- Accurately adjust procedural factors for various examinations and treatments.
- Assess the quality of radiologic images..
- Demonstrate professional conduct consistent with AUST values.
- Displace ethical behavior.
- Demonstrate skills to conduct research, analyze data, and evaluate evidence-based practices in radiology and radiotherapy.
- Develop leadership and management skills to work in various professional settings, including public health, medical equipment marketing, and research.

The program and research

During the BS in Radiologic Sciences, many courses that introduce the students to the world of science and research are offered. The main course is Process of Research in which the methodology of research and the scientific

approach is covered. This course is intended to give students a comprehensive view of the research process, from formulating research questions to presenting findings. It includes the critical elements of research methodology including but not limited to problem definition, literature review, research design, data collection, results analysis and interpretation. The students will learn qualitative and quantitative research techniques, the ethical considerations of research and how to communicate research findings.

In addition, the Biostatistics and Epidemiology course in the General Science section allows students to understand in depth statistical methods used to analyze and interpret extracted data.

Finally, every major course and even some in the general science section require, in addition to the exams, a project based on a literature review using scientifically relevant references. These projects initiate the students to the practice of scientific research and represent a considerable part of the final grade.

In the Radiologic Sciences department, all the instructors are involved in a research project. The main axes of research in the department are:

- Epidemiology of major diseases.
- Advanced technology of diagnostic imaging and treatment used worldwide and in Lebanon.

The program in relation to internationally accepted standards

Based on the SER the program follows international standards, organizations and academic bodies that provide frameworks for quality education in radiologic sciences, radiation therapy, and radiation protection:

- World Health organization (WHO): offers recommendations and guidelines for radiology, radiation therapy, and radiation protection related education and practices on a global scale. These guidelines focus on encouraging the right of every individual to be diagnosed and treated especially for cancer patients.
- American Society of Radiologic Technologists (ASRT): advance and elevate the medical imaging and radiation therapy profession and to enhance the quality and safety of patient care.
- International Atomic Energy Agency (IAEA): The International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (BSS) establish requirements on the legal persons responsible for designing, running and decommissioning practices involving ionizing radiation.

The international dimensions of the program

The radiologic technology program has significant international dimensions, as it prepares students to work in a globally connected healthcare environment. With standardized imaging protocols and advanced technologies like

MRI, CT, and digital radiography being used worldwide, graduates must understand international radiology practices, safety regulations, and patient care standards. Many courses incorporate cross-cultural training, global health perspectives, and opportunities for international clinical rotations to enhance adaptability. Additionally, professional organizations such as the International Society of Radiographers and Radiologic Technologists (ISRRT) promote collaboration, knowledge exchange, and best practices across borders. As medical imaging continues to evolve, radiologic technologists must stay informed about global advancements, ensuring high-quality care for diverse populations while adhering to universal radiation safety guidelines set by organizations like the IAEA and WHO.

Qualification of the academic staff

The academic staff in charge of the courses in the BS in Radiologic Sciences is based on medical doctors MD, PhD holders, and master's degree holders.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

Recommendation

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

BS in Forensic Science

Current Status

Aligned with the AUST strategic vision, the FHS established the Department of Forensic Science to extend its curriculum and respond to the evolving needs of both the community and relevant institutions. In this connection, the department is the first academic sector in Lebanon to offer a multi- and interdisciplinary program that equips students with the knowledge and skills necessary for careers in Forensic Science. This initiative reflects AUST's proactive approach to curricular development and the growing demand for forensic expertise within judicial and governmental institutions by offering a high-quality education at an affordable cost.

The Department of Forensic Science aims to cultivate a dynamic and analytical-thinking environment where aspiring forensic scientists are encouraged to think outside the box and to link between different sub-disciplinary in this field. The program seeks to empower students to lead the way in shaping the future of forensic science.

Additionally, the program aims to provide forensic education that aligns with both academic and professional standards, ensuring that graduates are prepared to meet the public needs and the job market demands in the forensic science field. This program equips students with scientific background, ethical principles and the professionalism required to serve the criminal justice community effectively. Through its curriculum, the program integrates theoretical knowledge of various forensic disciplines with hands-on training in advanced laboratories, enabling students to apply their learning directly to real-world scenarios.

The Department of Forensic Science aspires to become a leading center of excellence in all the fields in forensic science education, research, and professional practice, recognized for its academic and scientific rigor, innovation, and meaningful societal impact in Lebanon and across the MENA region.

The Forensic Science Program envisions to nurture a new generation of highly skilled forensic professionals, equipped with interdisciplinary expertise, ethical integrity, and a strong commitment to justice, human rights, and the rule of law. Through cutting-edge research, strategic partnerships, and experiential learning, AUST strives to bridge the gap between science and the legal system, supporting both criminal justice and humanitarian efforts - while upholding international standards and addressing local and regional needs.

Program objectives

The program's objectives include:

- Provide a rigorous and multidisciplinary education that integrates natural sciences, forensic sciences, and legal principles, enabling students to approach forensic investigations with scientific depth and contextual awareness.
- Maintain curriculum alignment with the latest developments, standards, and best practices in forensic science, both regionally and internationally.
- Develop advanced practical skills through laboratory-based instruction, simulated crime scene investigations, and field training, ensuring students gain real-world, hands-on experience.
- Foster interdisciplinary collaboration by offering co-taught courses that draw on expertise from multiple academic and professional domains, including science, medicine, and law.
- Prepare graduates for impactful careers in forensic laboratories, law enforcement agencies, governmental institutions, and private consultancy firms through applied learning and career-focused training.
- Ensure graduates meet and exceed national and international forensic science standards, equipping them to contribute effectively to diverse professional environments.

- Enhance critical thinking, analytical reasoning, and problem-solving skills, empowering students to navigate complex forensic challenges and deliver evidence-based conclusions.

Learning outcomes

The learning outcomes are clearly defined, publicly accessible, ensuring that graduates at the end of the program will be able to:

- Integrate foundational knowledge from the humanities, social sciences, biological and natural sciences, and ethics to inform evidence-based forensic practice.
- Develop technical and professional skills required to improve forensic processes and outcomes, supporting both successful careers and readiness for graduate-level education.
- Apply critical thinking and analytical reasoning to evaluate forensic evidence using advanced methodologies, instrumentation, and statistical tools.
- Perform hands-on laboratory procedures, crime scene investigations, forensic imaging, and biometric analyses in compliance with international safety, quality, and ethical standards.
- Master the systematic processes of securing, analyzing, documenting, and preserving crime scenes to ensure the integrity, reliability, and admissibility of physical evidence.
- Exhibit a clear understanding of ethical principles, legal systems, and professional responsibilities relevant to forensic investigations and reporting practices.
- Communicate forensic findings effectively—both orally and in writing—to diverse audiences, including legal, scientific, and law enforcement professionals in English and Arabic.
- Engage in independent research and demonstrate a commitment to lifelong learning to remain current with emerging trends, technologies, and best practices in forensic science.
- Collaborate effectively within interdisciplinary teams, recognizing and respecting the roles of all professionals involved in forensic and health-related investigations.

The program and research

The program integrates scientific research and practical applications, providing students with opportunities to:

- Engage in forensic case simulations and field investigations.
- Develop research projects on emerging forensic science challenges.
- Apply scientific methodologies in forensic pathology, digital forensics, and toxicological analysis.
- Participate in faculty-led forensic research, contributing to regional forensic advancements.
- Prepare a research proposal on a forensic topic and present it.

The program in relation to internationally accepted standards

The AUST Forensic Science bachelor's program follows international forensic science education standards and incorporates best practices from organizations such as:

- American Academy of Forensic Sciences (AAFS)
- European Network of Forensic Science Institutes (ENFSI)
- United Nations Office on Drugs and Crime (UNODC) forensic guidelines
- ISO/IEC quality standards
- Lebanese and Middle Eastern forensic standards

These international standards are integrated into the courses as follows:

Major Courses linked to international standards

AUST Course	International Standard	Relevance
FST 310 – Forensic Science	AAFS, ENFSI, UNODC	Foundation in forensic principles and multidisciplinary practices. Aligned with AAFS core curriculum.
FST 430 – Crime Scene Management and Investigation	ENFSI, UNODC	Covers ENFSI best practices on evidence handling, scene security, contamination prevention; also aligns with UNODC protocols
FST 470 – Human Identification	AAFS, UNODC, Lebanese Standards	Focuses on anthropological and genetic methods; critical for humanitarian forensics in the MENA region.
FST 420 – The Judicial Process	AAFS, Lebanese Standards	Covers court procedures, admissibility of evidence, and chain of custody relevant to Lebanese legal frameworks.
FST 460 – Forensic Medicine	UNODC, Lebanese Standards	Addresses medico-legal investigations, postmortem protocols, and cultural considerations in the MENA region.
FST 495L – Chemistry Applied to Forensic Lab	ENFSI	Applies analytical chemistry in a forensic context using validated techniques and QA systems.
CLS 497 – Toxicology	AAFS, ENFSI	Focuses on analytical techniques, chain of custody, and interpretation for judicial use.
FST 480 – Special Topics in Forensic Science I	AAFS, UNODC	Offers emerging or region-specific topics like disaster victim identification or conflict-related forensics.
FST 499 – Practicum	UNODC, Lebanese Standards	Field experience in Lebanese forensic labs or judicial institutions; develops contextualized skills.

FST 330L – Forensic Imaging Lab	ENFSI	Follows documentation standards and digital evidence handling used in European forensic labs.
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Supporting science & laboratory courses

AUST Course	International Standard	Relevance
CLS 320 – Molecular Genetics	AAFS	Teaches genetic analysis relevant to human identification and paternity/missing persons cases.
CLS 495 & CLS495L – Instrumental Chemistry	ENFSI	Includes techniques like GC, HPLC, MS used in European forensic labs.
CLS 493 – Pharmacology & CLS 497 – Toxicology	AAFS, ENFSI	Emphasizes drug metabolism and poison detection in judicial contexts.
BIO 320 – Biostatistics & Epidemiology	UNODC	Teaches evidence interpretation and prevalence analysis, useful in forensic epidemiology.

Behavioral and legal science electives

Elective Courses	International Standard	Relevance
SOS 260 – Introduction to Criminology	AAFS, UNODC	Introduces criminal behavior theories essential for forensic interpretation.
SOS 270 – Introduction to Law & FST 420 – The Judicial Process	UNODC, Lebanese Standards	Addresses legal systems, admissibility, and legal reporting.
FST 450 – Investigative Methods in Criminology	UNODC	Encourages integrative approaches to criminal investigations.
SOS 280 – Crime and Criminal Justice	Lebanese Standards	Grounds students in local judicial and penal frameworks.

Technical electives

Elective Courses	International Standard	Relevance
FST 455 – Forensic Entomology	AAFS	Aligns with AAFS Entomology Section guidelines on PMI estimation and casework applications.
FST 415 – CBRN	UNODC	Relevant to mass fatality/disaster scenarios and chemical/biological hazards.

BIO 325 / CLS 496 – Genet- AAFS ics & Recombinant DNA	Enables advanced techniques in human ID and population studies.
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According to the SER it is ensured that graduates are equipped with knowledge and skills recognized globally, enabling them to pursue careers both in Lebanon and internationally.

The international dimension of the program

The program offers an internationalized curriculum, exposing students to global forensic methodologies by integrating instructors studied and/or trained abroad.

The program enables students to study MSc and PhD degrees abroad. Several BS students graduated from Lausanne University (Switzerland), University of Tennessee, Knoxville (USA), Arden University (United Kingdom), University of Roehampton (United Kingdom), INSECC (Paris) and other respected universities.

Throughout the program, students are encouraged to participate in local and international forensic science conferences, webinars workshops, and research collaborations; the Special Tribunal for Lebanon, in collaboration with the TMC Asser Institute (Netherlands), offers an inter-university program on International Criminal Law and Procedure in Beirut, providing students with valuable legal and forensic expertise.

Qualification of academic staff

The instructors teaching in the forensic science program have extensive research backgrounds and practical experience in all the fields mentioned in the curriculum; ensuring that the students receive industry-relevant training. Moreover, faculty members actively engage in forensic consultancy, crime scene investigation training, and expert witness testimony in cases such as:

- Human identification in both routine casework and in complex scenarios such as mass disasters and armed conflicts (2006 and 2024-2025)
- Forensic involvement in high-profile cases, including the assassination of Prime Minister Rafik Hariri, which was investigated and prosecuted in the International Criminal Tribunal.
- Investigations into missing persons cases linked to the Lebanese Civil War (1975–1990) and its aftermath.
- Forensic support in cases of sexual violence, providing documentation, analysis, and expert testimony.
- Collaboration with the Military and Scientific Police in criminal investigations and human identification.
- Recovery, documentation, and analysis of human remain in both judicial and humanitarian contexts.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

Recommendation

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

2. Curriculum

The second criterion pertains to the curriculum as well as the teaching and learning methods applied within the program. The reviewers assess whether the curriculum is coherently structured to support the achievement of the intended learning outcomes and whether it imparts the requisite subject-specific knowledge and methodological competence relevant to the discipline(s) concerned.

Furthermore, the reviewers evaluate the organization of the learning process, with particular attention to the implementation of student-centered teaching and learning approaches that foster active learner engagement. They also consider the extent to which the program accommodates student diversity and responds to the varied needs of the learner population.

Current Status

Cross-disciplinary aspects: applicable to all degree programs

The academic calendar of AUST is based on two semesters per year each of a 15-week duration. Students accumulate a minimum of 105 credit hours to qualify for a bachelor's degree starting the Sophomore class. Because the General Secondary Certificate is the result of 13 years of education, students who join AUST after successfully completing the 13 years may be given up to 30 credit hours of first year (Freshman) courses depending on their performance in the placement exams. In total a student needs 135 credit hours to receive a bachelor's degree which is equated to the License degree awarded by the Lebanese University.

The Lebanese Law stipulates that students joining universities must have passed successfully the General Secondary Certificate exams or equivalent.

One credit hour is defined as 15 hours of face-to-face interaction between the student and the faculty member. Most courses are designated as 3-credit-hour courses, which means that students and instructors meet for a total of 45 hours per semester. A normal full-time load is 15 credit hours per semester (5 courses). Graduating students and students with a GPA ≥ 3.00 may be allowed to register for up to 21 credit hours. Grades given at the end of a semester are letter grades (A, B, C, D, F, W, AW). A grade of A carries 4 points, B carries 3 points, C carries 2 points, D carries 1 point and F carries 0 points. A student is considered in good standing if his/her grade point average (GPA) is $\geq 2.00/4.00$.

Since the evaluation of performance is based on class participation, attendance of class sessions is obligatory and only a few absences per course are

allowed. Academic rules and procedures are set out in the Student Handbook 2023-2025.

Since knowledge and understanding of rules and procedures are essential for success in academic life, AUST has established an academic course (HMS 201) in which students are advised as to the academic rules and regulations, the proper ways of taking notes, drafting a curriculum vita, preparing for an interview and having full knowledge of how to calculate the Grade Point Average etc. This course also introduces the Mission Statement to the students who are tested on its content.

In 2021, the HMS 201 course was reengineered, and its scope of action was enlarged. The new course is now entitled “Work Ready Now” (HMS 300) and goes beyond HMS 201 in preparing the student in what is useful and necessary in preparation for a job search. HMS 300 is the result of an educational outreach program funded by USAID and it is now taught in several private universities in Lebanon.

Each course syllabus includes detailed course objectives, learning outcomes, assessment methods, and recommended readings.

AUST ensures affiliations with key centers in Lebanon, including the University of Beirut and major hospitals, providing students with access to the latest technology across all programs. AUST maintains partnerships with the most important clinical centers and hospitals, though for forensic science, affiliations are primarily with national institutions. Memoranda of Understanding (MoUs) are in place. These collaborations enable students to complete extensive internships and practical training relevant to their majors at various centers, hospitals, or institutions. Many part-time faculty members are also practicing professionals at these affiliated hospitals, which further strengthens the connection between academic teaching and clinical practice. For the CLS program, appropriate laboratories are provided on campus. See also Chapter “Resources” for further details.

BS in Clinical Laboratory Science

Current status

Please refer also to the cross-disciplinary aspects outlined above: applicable to all degree programs.

Program in Relation to the Intended Learning Outcomes

The curriculum of the B.Sc. in CLS at AUST consists of 120 credits starting the sophomore year. The duration of study ranges between 3 and 4 years depending on the pace of the student and whether he/she is required to complete remedial courses. The foundation of the CLS students is built in the General Sciences courses offered by the LST department. The fields include Cell Biology, Anatomy and Physiology, Biostatistics, General and Organic

Chemistry, and Biochemistry with their associated laboratory courses. Students are exposed to the different disciplines of Clinical Laboratory starting with the basics of Molecular Biology, Immunology, Hematology, Clinical Chemistry, and Microbiology before moving towards the clinical perspectives of the mentioned disciplines. For example, students first receive a general course in Immunology (CLS 350) which will serve as a prerequisite for the Clinical Immunology course (CLS460).

Most of the courses are associated with laboratory courses to enhance the practical skills of the students. In addition, 12 out of the 120 credits are internship courses. Students spend more than 500 hours of training in a wide variety of clinical lab settings including: private clinical lab internship, hospital internship, molecular biology internship, and analytical chemistry internship.

To ensure that the intended learning outcomes are achieved, students are assessed through a variety of ways including projects which test the student's research and presentation skills; quizzes to ensure that students are studying on regular basis and are ready for their exams; and exams which account for around 65% of the final grade. For laboratory courses, a percentage of the final grade is accounted for lab reports to make sure that students understand and can re-perform the experiment on their own. In addition, written and practical exams are incorporated in the grade distribution of the lab courses ensuring that students are well prepared on the theoretical and practical aspects respectively. As for the internship courses, students' grades are based on the evaluations they receive, the reports they write and the presentations they perform. Prior to graduation, the knowledge of the students is further tested through an internal colloquium exam. The exam also serves as training for the national colloquium exam.

The 120 credits of the program are divided as follows:

- College Requirements: 18 Credits
- Free Electives: 6 Credits
- General Sciences: 29 credits
- Major Requirements: 64 credits
- Technical Electives: 3 credits

Contact Sheet Template

MAJOR REQUIREMENTS			64 Cr.Hours	Prerequisite Courses	Corequisite1	Corequisite2
CLS 210	Laboratory Safety & First Aid	1	0	0	ENG 001	
CLS 212	Fundamentals Of Lab Analysis	3	0	0	ENG 001	
CLS 213	Phlebotomy	1	0	0	ENG 001	
CLS 320	Molecular Genetics	4	0	0	BIO 210	CLS320L
CLS 330	Clinical Chemistry	3	0	0	CHE 220	
CLS 340	Hematology & Hemostasis	3	0	0	BIO 210 & BIO 220	CLS340L
CLS 350	Immunology & Immunoematology	3	0	0	CLS 320	CLS350L
CLS 370	Clinical Bacteriology	3	0	0	BIO 310	CLS370L
CLS 430	Clinical Chemistry II	3	0	0	CLS 330	
CLS 440	Clinical Hematology & Hemostasis	3	0	0	CLS 340	CLS440L
CLS 450	Clinical Parasitology	3	0	0	BIO 310	CLS450L
CLS 452	Clinical Virology	3	0	0	BIO 310	CLS457L
CLS 455	Clinical Mycology	2	0	0	BIO 310	CLS457L
CLS 460	Clinical Immunology & Immunoematology	3	0	0	CLS 350	CLS460L
CLS 470	Process of Research	1	0	0	ENG 202	
CLS 472	Special Topics in Clinical Laboratory Science	1	0	0	ENG 205 & CLS 470	
CLS 480	Biological Samples & Body-Fluidsanalysis	3	0	0	SENIOR STANDING	
CLS 481	Internship I	2	0	0		
CLS 483	Internship II	2	0	0		
CLS 486	Internship III	3	0	0		
CLS 487	Internship IV	5	0	0		
CLS320L	Molecular Genetics Laboratory	1	0	0		
CLS340L	Hematology & Hemostasis Laboratory	1	0	0		
CLS350L	Immunology & Immunoematology Lab	1	0	0		
CLS360L	Histopathology Laboratory	1	0	0	BIO 220	
CLS370L	Clinical Bacteriology Lab	1	0	0		
CLS440L	Clinical Hematology & Hemostasis Lab	1	0	0		
CLS450L	Clinical Parasitology Lab	1	0	0		
CLS457L	Clinical Virology & Mycology Lab	1	0	0		
CLS460L	Clinical Immunology & Immunoemato Lab	1	0	0		
FHS 220	Infections and Prevention in the Workplace	0	0	0		
FHS 230	Health Sciences Seminars	0	0	0		

FRESHMAN 0 Cr.Hours Prerequisite Courses Corequisite1 Corequisite2

COLLEGE REQUIREMENTS 18 Cr.Hours Prerequisite Courses Corequisite1 Corequisite2

CSI 200	Computer Literacy	3	0	0	ENG 000	
ENG 201	Composition & Rhetoric I	3	0	0	ENG 100 OR ENG 200	
ENG 202	Composition & Rhetoric II	3	0	0	ENG 201	
ENG 205	English Communication Skills	3	0	0	ENG 202	
HMS 300	Work Ready Now	3	0	0		
HMS 301	Western Civilization	3	0	0	ENG 201	

FREE ELECTIVES 6 Cr.Hours Prerequisite Courses Corequisite1 Corequisite2

ENG 200	Writing Skills	3	0	0	ENG 001	
MAT200X	College Algebra	3	0	0	PLACEMENT	

GENERAL SCIENCE 29 Cr.Hours Prerequisite Courses Corequisite1 Corequisite2

BIO 210	Cells & Molecules	3	0	0	ENG 001	BIO210L
BIO 213	Introduction To Physiology	3	0	0	ENG 001	BIO213L
BIO 220	Cytology & Histology	3	0	0	ENG 001	
BIO 310	Introduction To Microbiology	3	0	0	BIO 210 OR BIO210H	
BIO 320	Biostatistics & Epidemiology	3	0	0	(ENG 001 & MAT200X) OR (ENG 001 & MAT 105)	
BIO210L	Cells & Molecules Laboratory	1	0	0		
BIO213L	Introduction To Physiology Laboratory	1	0	0		
BIO220L	Cytology & Histology Lab	1	0	0		
CHE 205	Chemical Principles & Analysis	3	0	0	ENG 001	CHE205L CHE205P
CHE 215	Principles of Organic Chemistry	3	0	0		
CHE 220	Introduction To Biochemistry	3	0	0	CHE 210 OR CHE 215	
CHE205L	Chemical Analysis Laboratory	1	0	0		
CHE205P	Chemical Principles and Analysis Problem Solving	0	0	0		
CHE210L	Organic Chemistry Lab	1	0	0	CHE 210 OR CHE 215	

TECHNICAL ELECTIVES		3 Cr.Hours			Prerequisite Courses	Corequisite1	Corequisite2
BIO 325	Genetics: A Molecular Approach	3	0	0	BIO 210		
CLS 380	Nutrition in the Life Cycle	3	0	0	NFS 201		
CLS 382	Molecular Epidemiology	3	0	0	CLS 320		
CLS 420	Advanced Molecular Cell Biology	3	0	0	CLS 320		
CLS 474	Clinical Trials for Laboratory Sciences	3	0	0			
CLS 475	Health Awareness	3	0	0	NONE		
CLS 484	Reproductive Biology	3	0	0			
CLS 485	Biotechnology	3	0	0	CLS 320 & CHE 220		
CLS 488	Human Cytogenetics	3	0	0			
CLS 490	Advanced Organic Chemistry	3	0	0	SENIOR STANDING		
CLS 491	Medicinal Chemistry	3	0	0	CHE 220		
CLS 492	Education & Mgt In The Clinical Lab	3	0	0	SENIOR STANDING		
CLS 493	Introduction To Pharmacology	3	0	0	BIO 213 & CHE 220		
CLS 494	Chromatography	3	0	0	CHE 220		
CLS 495	Instrumental Chemistry	3	0	0	CHE 205		
CLS 496	Recombinant DNA	3	0	0	CLS 320		
CLS 497	Toxicology	3	0	0	BIO 213 & CHE 220		
CLS 498	Web Based Bioinformatics	3	0	0	CLS 320 & CHE 220		
FHS 395	Special Topics in HS : Molecular Diagnostics	3	0	0	CLS 320 & CLS 350		
FST 310	Forensic Science	3	0	0	NONE		
FST 420	The Judicial Process	3	0	0	ENG 200		
FST 430	Crime Scene Management and Investigation	3	0	0	ENG 200		
FST 450	Investigative Methods in Criminology	3	0	0	ENG 200		
REMEDIAL REQUIREMENTS		42 Cr.Hours			Prerequisite Courses	Corequisite1	Corequisite2
BIO 200	Introduction to Biology	3	0	0	ENG 001		
CHE 200	Introduction to Chemistry	3	0	0	ENG 001		
ENG 000	Intensive English I	9	4	9	ENG 00 OR PLACEMENT		
ENG 001	Intensive English II	9	0	9	ENG 000 OR ENG000S OR PLACEMENT		
ENG 00A	Basic English I	9	0	0	PLACEMENT		
ENG000S	Special Intensive	9	0	0			

Total Cr.Hr 120

For detailed study plans, see Annex 3.

Knowledge and methodological expertise

The CLS Program is a multidisciplinary program where students get exposed to the different disciplines of laboratory sciences, develop the necessary theoretical and technical skills, along with the required soft skills. The main focus of the program is to prepare Laboratory Technologists knowledgeable in the following disciplines:

Molecular Genetics (CLS 320 – Molecular Genetics, CLS320L – Molecular Genetics Laboratory): This 4-credit course combines Mendelian genetics, molecular biology, and recombinant DNA technology principles. The practical applications are covered in the laboratory course enabling students to accurately prepare solutions; get acquainted with the different DNA and protein extraction protocols and the different types of gel electrophoresis; differentiate between conventional and real time PCR; and discover different recombinant DNA techniques.

Clinical Chemistry (CLS 330 – Clinical Chemistry, CLS 430 – Clinical Chemistry II): In the CLS 330 course, students explore the basic clinical chemistry laboratory tests, principles of quality assurance and quality control, and the pathophysiological correlations. Building on this, students are enrolled in CLS 430 course which focuses on the diagnosis of various metabolic and endocrine abnormalities within different organ systems. In addition, students will be able to interpret the results of different tests and correlate results with different clinical conditions.

Clinical Immunology (CLS 350 – Immunology & Immuno-hematology, CLS350L – Immunology & Immuno-hematology Laboratory, CLS 460 – Clinical Immunology & Immuno-hematology, CLS460L – Clinical Immunology & Immuno-hematology Laboratory): the theoretical aspects of immunology and the physiology of the immune responses are discussed in the CLS 350 course. In CLS350L, students learn the principles and acquire hands on skills to perform various immunological and serological techniques. On the other hand, CLS 460 course covers the theoretical aspects of clinical immunology, immuno-hematology and blood banking as well as the clinical laboratory testing. It also covers the inflammatory response, the hypersensitivity reactions, the immune responses to infectious diseases, vaccines, the primary and acquired immunodeficiencies, autoimmunity, transfusion, transplantation and cancer immunology. The CLS460L course provides a survey of immunological methods used for the screening and quantification of antigens and antibodies, detection of infectious diseases, blood typing and pre-transfusion testing.

Clinical Hematology (CLS 340 – Hematology & Hemostasis, CLS340L – Hematology & Hemostasis Laboratory, CLS 440 – Clinical Hematology & Hemostasis, CLS440L – Clinical Hematology & Hemostasis Laboratory): the CLS 340 course covers the structure and function of normal blood cells with changes observed in some disorders. Mechanisms of hemostasis, fibrinolysis and hemostatic control are discussed in detail as well. The CLS340L course allows students to gain the practical skills necessary in hematology and coagulation laboratories. In addition, it enables students to diagnostically assess blood cells and hemostatic functions. Building on this, students cover the clinical aspects of advanced hematology and hemostasis in CLS 440. Students also acquire in-depth knowledge of hematopoietic disorders. The course enables students to integrate laboratory data with clinical findings to support the diagnosis and treatment of complex hematologic and hemostatic disorders. In CLS440L, students will be able to diagnose the different types of anemia and leukaemia and identify a patient's clinical case through different laboratory tests.

Clinical Microbiology (BIO 310 – Introduction to Microbiology, CLS 370 – Clinical Bacteriology, CLS370L – Clinical Bacteriology Laboratory, CLS 450 – Clinical Parasitology, CLS 450L – Clinical Parasitology Laboratory, CLS 452 – Clinical Virology, CLS 455 – Clinical Mycology, CLS457L – Clinical Virology & Mycology Laboratory): During their BS, students get exposed to the different disciplines of clinical microbiology including bacteriology, parasitology, virology, and mycology. Students start with a general overview of the basic principles of medical microbiology. Bacterial, viral, fungal, and parasitic classifications, structure, metabolism, genetics, regulatory mechanisms, growth and replication are also discussed in the BIO 310 course. Students then delve deeper in each discipline through enrolling in a course and a laboratory course specific for the mentioned discipline. In CLS 370 course, students learn about the theoretical aspects of clinical bacteriology and infectious diseases. The course focuses mainly on the classification and identification of

the most common clinically significant bacteria. It also covers the different bacterial classifications and the principles of specimen collection, preservation, storage and transport.

In the CLS370L course, students will be able to practically perform the different techniques used in clinical bacteriology including media preparation, staining protocols, different culturing techniques, and antimicrobial susceptibility testing.

The CLS 450 course explains the basic features of the different groups of parasites; the different life cycles of various etiologic parasitic groups; the symptoms associated with parasitic infections, the methods of detection and commonly used anti-parasitic therapies; the various routes of transmission and how outbreaks can be prevented.

In the CLS450L course, students get acquainted with the laboratory identification tests of different parasites including protozoa, cestodes, nematodes, trematodes, as well as some arthropods

CL 452 is a course that presents the principles of Clinical Virology. It includes viral classification, structure, replication, gene expression, virus-cell interactions and pathogenesis of the major classes of viruses involved in human diseases.

The CLS 455 course covers the different types of fungi, their growth, physiology, behavior and their roles in biotechnology. The main activities of fungi as human pathogens, their mode of infection, methods of identification, different mycotic diseases, and treatment and susceptibility testing are also discussed.

The CLS457L course combines the practical applications of clinical virology and mycology. Students explore the different diagnostic virology methods including ELISA, Western Blotting, and Real-time PCR. In addition, the lab covers different mycological diagnostics methods starting from culture preparation to yeast and fungi identification.

Students' technical skills are enhanced with specific lab courses such as CLS 210 – Laboratory Safety & First Aid, CLS 213 – Phlebotomy, and CLS360L – Histopathology Laboratory. The very nature of the Clinical Laboratory Science profession requires students to come in contact with potential hazardous materials or situations and face accidents or injuries. For this reason, the CLS 210 is the first lab course students enrol in. Its objective is to expose the students to laboratory safety and standards of good laboratory practice including handling and processing of chemicals and biological material. The main emphasis is placed on laboratory risks, first-aid and remedial measures. In the CLS 213 course, students acquire skills in phlebotomy, beginning with the necessary ethical behavior to maintain professional appearance, relieve

patient anxiety, and maintain patient confidentiality, progressing to the practice of vein and capillary puncture procedures using a variety of methods and equipment.

Finally, the CLS360L course involves a review of the basic pathological changes including various human diseases with special concentration on neoplasia. Also, disease processes are evaluated through an introduction to the basic techniques applied for the handling and preparation of pathological tissues and cytology specimen, including staining and post-resection processing. The course emphasizes the application of immunochemistry, immunofluorescence and advanced molecular techniques applied on formalin fixed paraffin embedded (FFPE) tissues.

The practical skills of the students are further enhanced through the internship courses. In the CLS 481 course, students acquire the basic knowledge of molecular biology testing. The course consists of supervised clinical laboratory experience in DNA testing including Human Profiling and analysis of Genetically Modified Organisms. Students perform tests routinely done in these areas of the clinical laboratory. In CLS 483 course, students get introduced to a variety of Analytical Chemistry procedures including clinical, pharmacological, and forensic testing. During their senior year, students perform an internship in different lab sections including serology, bacteriology, parasitology, hematology, chemistry, and blood banking in a private lab and in hospital settings in CLS 486 and CLS 487 courses. Throughout the various internships, students demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communication

Several technical electives courses are offered to CLS students based on the rapidly evolving nature of clinical laboratory and the labor market needs. Some of the technical electives offered by the Department of Clinical Laboratory Science in the past few semesters include: CLS 485 – Biotechnology, CLS 484 – Reproductive Biology, FHS 445 – Epidemiology and Public Health, and FHS 444 – Artificial Intelligence in Health Sciences. Students have the right to choose the technical elective they want based on their interest. Students can also enroll in technical electives offered by other departments at the FHS such as NFS 310 – Food Microbiology, CLS 493 – Introduction to Pharmacology, CLS 497 – Toxicology, and CLS 495 – Instrumental Chemistry.

In addition, safety of CLS students is a priority for the department. During the practical and internship courses, students come in contact with various biological fluids. For this reason, the department incorporates in the curriculum the FHS 220 – Infections and Prevention in the Workplace course. This 0-credit course provides the student with adequate information on the risks of infectious diseases in the workplace. The modes of transmission and methods of prevention are also discussed. Emphasis is placed on vaccination against Hepatitis B Virus (HBV). Students are guided to implement HBV vaccination in order to comply with the safety rules for the prevention of transmission of blood-borne infectious diseases in the healthcare settings. Every

student should be tested and immunized. FHS 230 – Health Sciences Seminars is another 0-credit course offered by the department. Throughout their journey, students attend a minimum of ten seminars delivered by visiting scientists, and submit a final report listing the date, title and name of the speaker, along with a one paragraph summary of each seminar. The aim of this course is to broaden the knowledge of the students in topics related to the Health Sciences sector.

Student-centered teaching and learning methods

According to the SER all courses offered by the CLS Department, the primary focus is on student-centered learning. Courses are delivered in an engaging manner that encourages student-instructor interaction, active participation, and critical thinking. Particularly, major courses incorporate a variety of case study discussions to promote real-life application of theoretical knowledge. The Learning Management System (LMS) is an integral part of course delivery. It allows students to track assignments and projects, access course materials, and view recorded sessions when absent with a valid excuse. This is intended to ensure that students remain up to date with course requirements and content.

The CLS program incorporates diverse instructional strategies tailored to course type. Theoretical courses are delivered through lectures, group discussions, seminars, and guest speaker sessions. These formats not only foster a dynamic classroom environment but also develop students' analytical and communication skills. Practical and internship-based courses emphasize hands-on experience, allowing students to acquire essential problem-solving and laboratory skills for their future careers.

Teaching methods are adapted to accommodate the diverse learning needs of students. Those experiencing academic challenges are encouraged to attend dedicated office hours - typically one hour per week for each 3-credit course, receiving individualized support.

Beyond classroom, the program aims to encourage students' development. Students are actively involved in extracurricular activities such as volunteering with NGOs, participating in community service projects, and engaging in events organized by the Faculty of Health Sciences. These opportunities help students cultivate essential soft skills including communication, teamwork, leadership, and adaptability.

On the other hand, the department focuses on the professional development of the academic staff through continuous development opportunities including national and international conferences and workshops. This is intended to ensure that instructors stay up to date with the different advancements in the field and delivers content that aligns with the needs of the industry.

Students' role in the learning process

CLS students play an active and essential role in the learning process. Students conduct evaluation for their instructors every semester. The results of

the evaluation, among other factors, contribute to decisions regarding instructor retention and future course assignments. In addition, AUST adopts an open-door policy at the department ensuring that students can share their concerns with their advisor and other faculty members. Students are also encouraged to submit students petitions on the Student Information System for any issue that may interrupt their learning process. The petition is carefully reviewed by the chairperson and the dean who takes appropriate measures to address the matter in a timely and fair manner.

Beyond the regular course evaluations and petitions, graduating students share their feedback about the various aspects of the program including curriculum, teaching methodologies, and internships during their senior presentations. Students are also asked to suggest modifications that they think can enhance the overall learning experience. Their feedback and suggested modifications are documented and reviewed by the academic committee of the faculty for future implementation.

Assessment

The reviewers assess that the curriculum of the study program is coherently structured and effectively supports the achievement of the intended learning outcomes. It imparts the requisite subject-specific knowledge and methodological competences relevant to the disciplines covered.

The organization of the learning process demonstrates a clear commitment to student-centered teaching and learning approaches, fostering active learner engagement. According to the reviewers, the program appropriately accommodates student diversity and addresses the varied needs of the learner population.

The curriculum is designed to integrate diverse academic disciplines and expertise, supporting a progressive educational trajectory. The structure of the program presents a logical sequence from introductory courses, through elective options, to the final examination phase. The reviewers appreciate this interdisciplinary approach and consider the curriculum philosophy to be well-conceived.

The reviewers note a well-balanced integration of theory and practice, with a clear link between basic and applied sciences. The use of university laboratories provides students with valuable hands-on experience.

The reviewers find that the CLS program includes sufficient scientific component, with numerous courses dedicated to core sciences, which strengthens the program's practical orientation and academic depth.

The reviewers thank the university for providing access to the MoUs, which they regard as an important and effective framework for collaboration that supports practical training. The list of institutional affiliations was not fully available for review, and the Memoranda of Understanding (MoUs) with universities, hospitals, and industry partners could not be comprehensively as-

sessed due to language barriers. Nevertheless, during the site visit, the review panel observed a strong commitment among the staff to ensuring the effective delivery of the applied components of the programs. The existing governance structure and cooperative arrangements appear to cover all essential aspects required to establish, manage, and implement the study program as a joint effort between the participating partners. Furthermore, as many academic staff are simultaneously employed in hospitals and medical centers, the panel considers the implementation of the MoUs to be credible and trusts in their practical effectiveness. For further details, reference is made to the remarks in the Quality Management chapter of this report.

The reviewers confirm that the European Credit Transfer System (ECTS) is applied appropriately, with a clear and transparent distribution of credits. Student feedback indicates confidence and enthusiasm for the program, highlighting the interdisciplinary focus, opportunities for integration with other fields, and a balanced combination of mandatory and elective components.

Overall, the panel regards the curriculum as coherent, well-structured, and aligned with the intended learning outcomes, providing a strong foundation for academic and professional development.

BS in Optics and Optometry

Current status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

The Optics and Optometry program at AUST is a four-year program followed by an internship year. The curriculum includes courses that cover all the major topics in the optometry field from basic to advanced refraction handling binocular and low vision patients, basic and advanced contact lenses to manage patients with corneal dystrophies and traumatic corneal injuries, ocular therapeutics, and pharmacology. Thus, enabling students to have more access to the work field or to pursue higher education in different domains.

The program is divided into four major categories.

- College requirements which include English courses, computer course, and work ready now which provides students with the opportunity to prepare for the work field.
- Free electives (2 courses).
- General science requirements with main focus on providing students with the necessary biology and chemistry background information with two main goals: First, to provide them with better understanding of the body functions and the necessary information needed to understand the advanced optometry courses. Second, to provide them with the opportunity to pursue higher education in research.

- Major requirements which cover basic and advanced optometry courses. These courses are divided into three major categories: Theoretical, Laboratory, and Practicum courses. The practicum courses include rotations in different optical shops, ophthalmology centers, and mobile clinics, in addition to attending different seminars and workshops.

The program is covered in four years with a total of 120 credits starting the sophomore year, and with an average of 30 credits per year. The credits are divided into 15 credits college requirements, 6 credits electives, 25 credits of general science requirements and 74 credits of major requirements.

The following courses are part of the curriculum:

OPT 201: Optics I

This course is designed to provide the student with the basic knowledge and principles of geometrical optics. Topics to be discussed include basic principles of geometrical optics, reflection at plane surfaces, refraction at plane and spherical surfaces, thick and thin lenses, aspherical mirrors and aberrations. Mathematical tools and ray tracing techniques predict and analyze these results and observation of everyday optical phenomena. Mathematics clarifies the principles of reflection, refraction, image formation, interference, diffraction and the design of optical instruments.

OPT 210: Ocular Anatomy

Ocular anatomy is designed to provide students with the theory in the anatomy of the eye and its associated structures. Students should be able to identify the components of the eye and the structure-function relation of various eye components. Emphasis will be on normal anatomy which will provide students with a good fund of knowledge to address various eye pathologies.

OPT 215: Ocular Physiology

This course involves an understanding of the major mechanisms of the physiology of the eye. The student will learn the principles of light perception at the retinal level, the transmission of vision perception from the retina to the brain through the optical pathways, the secretion of the aqueous humor and its elimination through the trabecular meshwork, the secretion, distribution and drainage of tears as well as the physiology of the lens and accommodation.

OPT222: Technology of Ophthalmic Lenses I

The course leads the student to the world of spectacles, frames and ophthalmic lenses. It will cover the physical characteristics and biological compatibility of frame materials, specification and nomenclature of spectacle frame components, optical and spectacle frame consideration of high-powered lenses, physical characteristics of ophthalmic lenses and edger used in lens fitting.

OPT222L: Dispensing Laboratory I

Application of fundamental techniques in ophthalmic dispensing, focusing on the mechanical and optical aspects of spectacle fabrication and fitting. Through a combination of demonstrations and hands-on exercises, students will learn to identify and handle a variety of ophthalmic frames and ophthalmic lenses. Focus will be on precision in ophthalmic lens measurement via lensometers, lens edging via manual edgers and frame adjustment through the necessary tools, based on frame material. Additional focus is given for troubleshooting common fitting and alignment issues encountered in clinical and optical workshop settings.

OPT 270: Clinical Practice Guidelines, Ethics and Professional Development

This course will offer the student guidance on ethical obligations and issues in optometric patient care, as well as address several practice management questions that impact quality of care. It will provide the student with the chance to understand basic optometric and professional skills required for the practice of optometry. Students' personal and professional growth will be enhanced by acquiring the necessary skills for analytical and clinical processes. Students will acquire the knowledge needed, will be acquainted with basic optometric terms and display a professional attitude to dealing with patients. Different clinical cases will be presented that will expand the ethical scope of clinical practice.

OPT 298: Practicum I

This course will provide the students with the chance to observe and understand the process of merchandise, sales and customer service in the optical showrooms. Each student will be assigned to a certain number of shops where the student will practice under the supervision of an assigned employee or a group of employees in the optical showroom.

OPT 302: Optics II

This is an introductory course comprising theoretical aspects of fundamental optics aiming at being functional in the science of optometry. The course mainly covers physical optics, which manages the physical character and behavior of light as well as its interaction with matter, and covers areas such as wave optics, interferometers, polarization, Fourier optics and quantum optics.

OPT 322: Technology of Ophthalmic Lenses II

This course will cover the physical characteristics, power specification, power measurement of ophthalmic lenses, as well as the lens thickness calculation, the understanding of the lens meter and the lens clock properties, adding to the lens characteristics for high refractive errors will also be covered

OPT322L: Dispensing Laboratory II

Implementation of optical theory and practical skills required for lens evaluation, prescription interpretation, ophthalmic lens fabrication and optical frame maintenance. Techniques of power testing for spherical and spherocylindrical lenses will be applied, through hands-on exercises, in addition to prescription analysis, lens thickness evaluations and transposition exercises. A significant part of practice will be allocated for tinted lenses and tinting procedures where students are taught the techniques and knowledge of using dyes with different ophthalmic lenses. Welding metal frames and frame maintenance are addressed, as well, with emphasis on frame material and characteristics to differentiate different techniques of maintenance.

OPT 330: Introduction to Contact Lenses

This course is designed to introduce the student to the contact lens field allowing an understanding of contact lenses and how they are prescribed and fitted. Gain an understanding of the anatomy of the human eye and the different materials and composition of contact lenses. Students will be introduced to manufacturing techniques, physical properties and oxygen transmission through contact lens materials. Topics will also cover the corneal biophysics and the different instrumentation used for contact lens fitting

OPT330L: Introduction to Contact Lenses Laboratory

This course is designed to introduce the student to the contact lens field allowing an understanding of contact lenses and how they are prescribed and fitted. Gain an understanding of the anatomy of the human eye and the different materials and composition of contact lenses. Students will be introduced to manufacturing techniques, physical properties and oxygen transmission through contact lens materials. Topics will also cover the corneal biophysics and the different instrumentation used for contact lens fitting.

OPT 340: Contact Lenses

This course is designed to introduce the student to the Contact Lens field allowing an understanding of contact lenses and how they are prescribed and fitted. Gain an understanding of the anatomy of the human eye and the different materials and composition of contact lenses. Students will be introduced to manufacturing techniques, physical properties and oxygen transmission through contact lens materials. Topics will cover also the corneal biophysics and the different instrumentation used for contact lens fitting.

OPT340L: Contact Lenses Laboratory

This course aims to fortify the practice of several instruments included in both soft and hard contact lens fitting journey. Students will learn the skills of insertion and removal of contact lenses, in addition to evaluation and assessments of static and dynamic fitting of soft lenses and rigid gas permeable lenses. Care and maintenance of lenses, including troubleshooting, are also addressed in a practical manner.

OPT 350: Introduction to Optometry

This course presents a review of anatomy and physiology of the visual system of the human eye, basic optical principles as well as the importance of early ocular health and visual assessment. Refractive error types will be introduced along with Primary Eye Care procedures. The various types of visual acuity will be defined, and a range of acuity tests will be described.

OPT350L: Introduction to Optometry Lab

Understanding the importance of case history and acquiring the proper flow of the procedure in addition to differentiating major points and red flags versus basic standard complaints in patient screening. Developing technical skills in recording visual acuity through the understanding of angle of resolution, optotypes and the available tests used in diagnosing refractive errors.

OPT 365: Introduction to Ocular Pharmacology

After completing the course, the student should be able to:

Describe fundamental principles and concepts of ocular pharmacology. Understand ocular drugs formulation, drug delivery systems and legal aspects of drug usage. Understand different pharmacological categories of ocular drugs. Apply the course material to improve critical-thinking, problem-solving and decision making in optometry.

OPT 390: Optometric Clinical Applications

This course will provide the students with the chance to examine and apply clinical techniques and didactic knowledge to understand the process of clinical assessment and management of ophthalmic patients. Each student will have to complete 15 four-hour clinical assignments whether at the University Eye Clinic or at the Mobile Clinic. The student will practice under the supervision of an assigned optometrist to provide full optometric care or vision screenings for patients.

OPT 398: Internship in Contact Lenses Workshops

This course will provide the students with the chance to observe and understand the process of merchandise, sales and customer service in the optical showrooms. Each student will be assigned to a certain number of shops where the student will practice under the supervision of an assigned employee or a group of employees in the optical showroom

OPT 410: Optical Instrumentation

This course will introduce students to the application and integration of theory and technical skills in Ophthalmic and optical instruments including Lensmeters, Keratometers, Slit-Lamps, Microscopes, Auto-Refractometer, Magnifiers, corneal topography, OCT, fluorescein angiography, B Scan, A Scan, and other instruments used in Ophthalmic dispensing, refraction and contact lens fitting.

OPT410L: Instrumentation Laboratory

Application and integration of theory and technical skills in Ophthalmic and optical instruments including Lensmeters, Keratometers, Slit-Lamps, Microscopes, Auto-Refractometer, Magnifiers and other instruments used in Ophthalmic dispensing, refraction and contact lens fitting.

OPT 422: Technology of Ophthalmic Lenses III

A course leading the student to the world of both bifocals & progressive ophthalmic lenses, measurements and solving problems, lens surfacing, prism, polarized lenses, photo-chromic lenses, methods of remedying reflections, scratches and secondary images, absorptive lenses and different types of coating.

OPT422L: Dispensing Laboratory III

Application of theoretical and technical concepts required for precise verification and fitting of complex ophthalmic lenses. Students will be required to assess and verify bifocal, multifocal and progressive lenses in addition to prismatic lenses. Significant emphasis on advanced edging techniques, drilling, and mounting of specialized and frameless eyewear, as well as advanced frame adjustments to ensure optimal fit and visual performance for complex optical design ophthalmic lenses.

OPT 450: Optometry

A clinical study of different types of main refractive errors: Myopia, Hyperopia, Astigmatism and Presbyopia. Clinical aspects of binocular vision anomalies and their investigation will be developed in this course. Pediatric and geriatric optometry, mainly low vision will be introduced.

OPT450L: Optometry Lab

Application and integration of theory and technical skills in full eye examination and subjective refraction. Practical application of objective refraction and initial patient screening. Understanding the importance of available refractive tests and the indication of each in the process of refraction. Application of accessory tests of binocularity, stereopsis and color vision. Furthermore, pediatric and geriatric eye examination techniques will also be introduced.

OPT 461: Visual Impairment

This course will introduce optometry students to the concept of visual impairment and low vision. The course will start by defining and discussing in depth the major causes of visual impairment according to World Health Organization. Low vision will be addressed later in this course with emphasis on major causes according to different age groups, in depth clinical approach to low vision patients, low vision aids and a personalized approach to low vision patients.

OPT 462: Introduction to Physiologic Optics

This course covers the basic concepts of visual perception: Space perception, form perception, light perception, motion perception, temporal perception,

measurement of absolute and difference thresholds. The student will learn also the methods of limits, adjustment and constant stimuli.

OPT 480: Binocular Vision

This course covers the Basic Principles and Concepts of Binocular Vision, stereoscopy, three-dimensional vision as well as the different tests used to measure the binocular vision.

OPT480L: Binocular Vision Lab

This course covers the Basic Principles and Concepts of Binocular Vision, stereoscopy, three-dimensional vision as well as the different tests used to measure the binocular vision.

OPT 485: Ocular Therapeutics I

Ocular therapeutics I is designed to introduce students to the diseases of the anterior segment of the eye as well as how to clinically manage these diseases in a wholesome approach. The course will begin with a brief introduction to basic pharmacological concepts in ophthalmic drug diseases, and mode of drug delivery, and it will proceed to give students a good fund of knowledge of deferential diagnosis of common diseases of the eyelids, orbit, conjunctiva, sclera, cornea, iris and lens as well as treatment recommendations.

OPT 490: Process of Research

This course is designed to familiarize students with the wide range of research purposes and methods. It involves both understanding and application of skills, such as evaluating sources and formatting the finished paper following the latest APA directives and requirements.

OPT 492: Special Topics in Optics and Optometry

The course is open to senior students. Each student chooses a specific topic during the first few weeks of the semester and works on it independently throughout the semester. Students will investigate or review the topic and present their ongoing research during class hours. Midterm and final presentations are required. The specific topics covered should be related to advanced subjects of current interest in the laboratory sciences.

OPT 495: Ocular Therapeutics II

This course will address ocular diseases of the posterior segment of the eye. This course will give students an in-depth of the most common diseases affecting the vitreous cavity, retina, choroid, and optic nerve. Emphasis will focus on etiology, epidemiology, signs, symptoms, differential diagnosis, recent medical and surgical treatment for posterior segment diseases and infection.

OPT 498: Internship in Ophthalmology Centers

This course will provide the students with the chance to observe and understand the process of clinical assessment and management of ophthalmic patients. Each student will be assigned to a certain clinic/hospital where the student will practice under the supervision of an assigned ophthalmologist or a group of paramedical employees in the ophthalmology center.

The internship year includes

- Four-month rotation in optical shops/centers
- Two-month rotation in hospitals
- Two-month elective:
 - Optical shops
 - Optometry centers
 - Hospitals
 - Research and community-based service

For a detailed study plan, see Annex 3.

Assessing students in order to ensure that the learning outcomes have been satisfied and in alignment with the learning objectives includes:

- Written exams and quizzes
- Oral exams and clinical examination of patients
- Assignments and clinical cases presentations
- Evaluation of practicum and internship year
- Evaluation of the instructor from the coordinator/ chairperson to insure all the material have been covered and in alignment with program objectives

Knowledge and methodological expertise

The adopted teaching methodology is a high-tech, student-centered model that employs the delegator teaching style. This method allows the instructor to act as a resource to foster autonomy in the learning process, especially during the last two years. In a practical domain like optometry, hands-on training is essential for the students to develop the necessary characteristics to become the leading professionals in the field. The program includes nine laboratory courses divided into three courses in dispensing, two in optometry, two in contact lenses, one lab instrumentation, and one in binocular vision. Students also attend three trainings: the first one in optical shops, the second in contact lens, and the third in ophthalmic clinics. In addition, students also participate in mobile clinics organized by the program in which they learn the examination process starting from history taking to examining and evaluating patients, and they are supervised by the instructor in charge. Also, the university has a clinic for the public with different subspecialties in which students can fully examine patients, and to discuss the cases with the supervising attending ophthalmologist. The university adopted this method which proved to be the most effective method in reaching the learning outcomes that align with the learning objectives.

Student-centered teaching and learning methods

Active participation and engagement of students are prioritized by formulating convenient educational methods for this matter. Other main used methods are case and project presentations done as individual or group work. Based on the SER this method has been successful in keeping students engaged by always igniting fruitful discussions and debates in class. Other methods include peer teaching and pre-class material delivery to allow students prepare the material beforehand. This stimulates their responsibility to explain to the rest of the class the way they understood certain topics which are usually domain-related extracurricular topics. Traditional in-class quizzes and group assessments are also done to encourage group work and knowledge sharing as they enhance their problem-solving skills and critical thinking.

Off-campus practicum requirements are also an area of importance. The department has agreements with the top optical shops, clinics and ophthalmology centers to ensure the students gain practical experience from the best in the country. Students are often visited by faculty members at the training sites and follow-up is kept with the personnel responsible for the students' training. This follow-up aims at understanding any deficiencies or limitations the students may face when it comes to off-campus learning and training. This allows the department to monitor students' academic standards that it holds as a responsibility towards the students and the optometric community.

Following the site visit, AUST responded to the review panel's targeted condition regarding clear standards for the number and types of patient cases students should observe:

For the practicum courses (OPT298, OPT398, OPT498) students are asked to present the patient cases they have encountered through a final project presented once all the required hours are fulfilled. Based on the EVALAG committee's feedback, an updated practicum booklet will be adapted with specific log forms. Students are asked to fill in the case reports of a minimum of 50 patients encountered in each practicum, in addition to detailed case reports that include refractive status, diagnostic tool/imaging used, diagnosis and plan of treatment for specific cases of cataract, glaucoma, various retinal conditions, various corneal conditions and various ocular surface conditions. The total number of specific cases adds up to a total of 80 patients divided as a minimum number of 10 patients for cases like cataract and glaucoma plus a minimum of 20 patients for the various retinal, corneal and general ocular surface conditions.

Students' role in the learning process

Students are involved in the learning process through their participation in the education process itself. Participation is addressed by activities such as holding responsibility of the optometry clinic found on campus. This allows hands-on experience for students seeking supervised practice related to

eye-health, organizing community-based projects, and participating in social work related to vision and eye health. One example of community-based project is the collaboration with World Patriarch Foundation in the campaign “Eye See Clear” where we examined a total of 2700 patient and distributed more than 700 spectacles.

Students also evaluate instructors based on material relevance and delivery. Furthermore, students are encouraged to organize and attend continuing education seminars and conferences that present health care topics in general, or in eye health care. They understand their image as health care professionals with social responsibilities towards their community in preventing health or vision threatening conditions which plays a role in encouraging them to participate in such extracurricular activities.

As part of the responsibility to monitor and ensure students’ involvement in this learning process, a graduation requirement was set for these students. To graduate, students are expected to attend a minimum number of healthcare-oriented seminars and participate in a minimum number of community work campaigns that usually include vision screenings and spectacles fitting in various regions of the country. Satisfactory completion of these two requirements allows them to graduate.

Assessment

Please refer to the cross-program assessment provided under the bachelor’s degree program in CLS above.

The reviewers note several strengths in the OAO program. From the reviewers’ perspective, although, legally, optics and optometry are classified at Level 2 of the WCO (optics and refractive), the curriculum effectively prepares students at Level 3, particularly in diagnostics through laboratory sessions.

The reviewers particularly appreciate the program’s structure, with 120 credits dedicated to the major followed by one year of rotations across all key areas - including low vision, binocular vision, contact lens practice, therapeutics, and pharmacology - which ensures broad and comprehensive practical and theoretical training. The reviewers consider this design to provide students with a solid foundation for both academic and professional development. Furthermore, the program is very well organized for the bachelor level and appears fully appropriate for the intended learning outcomes.

The reviewers acknowledge that the range of optometric diagnostic equipment is divers, costly, and subject to rapid technological developments. Consequently, AUST’s laboratories have limited equipment on-site and heavily relies on external partners to familiarize students with the function, handling and interpretation of specialized equipment. In addition, not all external partners may possess the full range of equipment subject to their specialty, meaning that students’ access to certain diagnostic tools depends on the

specific internship site. Therefore, the reviewers suggest exploring possibilities to obtain the equipment on loan or for the duration of a course from different manufacturers, or alternatively, organizing dedicated laboratory sessions at an external site where all required equipment is available. This would help ensure that all students gain consistent hands-on experience with the full range of diagnostic tools.

The reviewers noted that, while the theoretical aspects of optometry are very strong and the curriculum is comprehensive, there was insufficient control over the clinical training experience. It was unclear how many patients' students are required to see or whether all students gain exposure to the full range of relevant conditions. To ensure consistent learning outcomes and quality of practical training, reviewers issued the condition that the program should define a minimum number and variety of patient cases covering all areas of optics and optometry that each student must encounter during internships or rotations. This measure would safeguard that all students acquire comparable practical experience and fully meet the educational objectives.

The reviewers thank the university for the prompt revision based on the requirement to implement a structured optics and clinical training logbook to ensure quality control of the patient experiences of all students. They welcome the newly developed booklet with the addition of specific log forms of cases on the following topics:

- Dispensing of spectacles shall be added as requirement (it should contain cases of monofocal, prismatic prescription, multifocal/bifocal, etc)
- Fitting and dispensing of contact lenses (hard & soft) shall be added as requirement.
- Binocular vision abnormalities (and/or children) shall be added as requirement.

However, the reviewers note that not all aspects were considered when designing the booklet. Prior to implementation and distribution of the booklet, the reviewers issue the condition to

- add **patient case history** to all case reports to assure that used diagnostic tools, findings, and plan of treatment are appropriate for the patients complaint. Currently, it is missing on case reports of cataracts, glaucoma, retinal conditions, corneal conditions, and binocular vision
- comply with patient privacy and data protection (GDPR), the current field '**DOB**' should be replaced by '**AGE**'.
- replace the field '**gender**' by '**sex**', as the biological reference is required in the clinical context.
- explicitly clarify in the booklet what procedure will be followed if, during practical rotations, students do not succeed in meeting the mini-

minimum required number of patient cases for each pathology. This measure is necessary to safeguard that all students achieve the defined learning outcomes and acquire comparable practical experience.

Concerning the minimum number and variety of patient cases to be exposed to during the internship or rotations, the reviewers thank the university for clarifying the learning outcomes and defining a minimum number and variety of patient cases students are required to be exposed to. The adjustments provide sufficient exposure to all the areas of optics and optometry. The reviewers take a positive note of the scheduled implementation of this process in Spring 2026. This newly implemented measure will safeguard that all students acquire comparable practical experience and fully meet the educational objectives.

Thus, the current version of the booklet is not yet sufficient to fully meet the condition, however if the booklet is adjusted the condition will be met.

Condition

- C1 The practicum booklet, including specific case log forms, shall be extended to incorporate the following items:
- Patient case history shall be added to all case reports.
 - The current field 'DOB' shall be replaced by 'AGE'.
 - The field 'gender' shall be replaced by 'sex'.
 - The booklet shall explicitly clarify what procedure will be followed if, during practical rotations, students do not succeed in meeting the minimum required number of patient cases for each pathology.

The original recommendation R2 has been fulfilled through the university's revisions. The reviewers had recommended that students maintain a separate record of the patient cases they encounter during their externship, ensuring that patient identities are anonymized in the logbook.

BS in Radiologic Sciences

Current Status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

The BS Degree in Radiologic Technology consists of 105 total credit hours of which 15 credit hours are college-requirement courses, six credit hours are free elective courses, 26 credit hours general sciences required courses, three credit hours technical elective courses, and 55 credit hours are Radiologic Technology program courses. The program is designed to be completed in six semesters, in which the students enroll full-time. The learning outcomes and teaching methods are mentioned for each course and each session in the corresponding syllabus.

The methods used to assess student's progress and achievement of learning outcomes are structured and divided to reflect the efforts demonstrated by the students. These include:

- Examinations and quizzes to test theoretical knowledge
- Practical assessments involving lab-based evaluations or clinical practices
- Assignments, reports and presentations based on research, case studies or projects to demonstrate analytical and communication skills
- Internship evaluation to assess practical experience through supervisor feedback and performance evaluation during internship

In order to continuously improve and evaluate the program, regular surveys and meeting with the students are conducted to assess the effectiveness of the curriculum. Annual curriculum review by the chairperson and the advisory board is conducted to incorporate new industry developments, research updates and global health challenges.

Contact Sheet Template

College Requirements (15 Credits)

Code	Description	Credits
CSI 200	Computer Literacy	3
ENG 201	Composition & Rhetoric I	3
ENG 202	Composition & Rhetoric II	3
ENG 205	English Communication Skills	3
HMS 300	Work Ready Now	3

General Science Requirements (26 Credits)

Code	Description	Credits
BIO 213	Introduction to Physiology	3
BIO 217	Sectional Anatomy	3
BIO320	Biostatistics & Epidemiology	3
BIO 420	General Pathology	3
BIO 210 H	Cells and Molecules	3
BIO 213 L	Introduction to Physiology Laboratory	1
BIO 220 H	Cytology & Histology	3
BIO 360 L	Histopathology Laboratory	1
CHE 200	Introduction to Chemistry	3
CHE 301	Organic Chemistry for Health Sciences	3

Major Requirements (55 Credits)

Code	Description	Credits
FHS 200	Introduction to Health Sciences Professions	3
RAD 201	Fundamentals of Radiologic Sciences	3
RAD 210	Radiologic Imaging and Processing	3
RAD 301	Physics of Medical Imaging I	3
RAD 302	Physics of Medical Imaging II	3

RAD 304	Contrast Agents and Radiopharmaceuticals	3
RAD 305	Imaging Procedures I	3
RAD 306	Imaging Procedures II	3
RAD 310	Radiological Pathology	3
RAD 402	Computer Applications in Imaging	3
RAD 405	Imaging Procedures III	3
RAD 406	Special Procedures in Radiological Sciences	3
RAD 470	Process of Research	1
RAD 472	Special Topics in Radiologic Sciences	1
RAD 210L	Radiologic Imaging and Processing Laboratory	1
RAD 301L	Physics of Medical Imaging I Laboratory	1
RAD 302L	Physics of Medical Imaging II Laboratory	1
RAD 305L	Imaging Procedures I laboratory	1
RAD 305P	Clinical Imaging Practicum I	3
RAD 306L	Imaging Procedures II laboratory	1
RAD 306P	Clinical Imaging Practicum II	3
RAD 405P	Clinical Imaging Practicum III	3
RAD 410L	Quality Assurance Laboratory	3

Free Electives (6 Credits)

Code	Description	Credits
ENG 200	Writing Skills	3
MAT 200X	College Algebra	3

Technical Electives (3 Credits)

Code	Description	Credits
BME 340	Computer-aided Design in Biomedical Engineering	3
CLS 485	Biotechnology	3
FST 310	Forensic Science	3
RAD 480	Clinical Epidemiology for Radiologists	3
RAD 482	Risk Management in Radiology	3
RAD 485	Molecular Imaging	3
RAD 487	Clinical Decisions in Radiology	3
RAD 490	Special Medical Diagnosis Studies	3
RAD 495	Biotechnology for Radiological Sciences	3
RAD 406P	Clinical Imaging Practicum IV	3

The following courses are part of the curriculum:

FHS 200: Introduction to Health Sciences Profession

This is a “multidisciplinary course” that deals with basic issues in clinical and non-clinical laboratories. Students will acquire basic knowledge about professional development, scientific communication and presentation skills, scientific resources, chemical, biological and instrumental concepts, quality assurance, laboratory mathematics, safety, health care systems, regulatory issues, clinical laboratory divisions and laboratory management.

RAD 201: Fundamentals of Radiologic Sciences

An introduction into radiological sciences profession and provides an orientation to different medical imaging modalities. Emphasis is placed on principles of radiation production and protection, interaction of radiation with matter, and patient care in medical diagnostic imaging.

RAD 210: Radiologic Imaging and Processing

The field of medical imaging has been revolutionized by advances in computing technologies and systems resulting in new and expanded image systems finding their way into the medical environment. This course is intended to guide students into understanding the different medical systems ranging from those devoted to planar imaging using x-rays to imaging technologies that are just emerging. Emphasis is placed on discovering the different principles of radiologic imaging, reading and interpreting images and understanding the function of each imaging system in routine hospital use.

RAD 301: Physics of Medical Imaging I

In this course, students will be introduced to the basic concepts of physics relevant to the radiologic science, the course covers the instrumentation, physical principles and engineering. Topics include equipment function and image formation of different medical imaging modalities, Ultrasound, X-ray, CT scan and Mammography.

RAD 302: Physics of Medical Imaging II

In this course, students will be introduced to the basic concepts of physics relevant to the Radiologic Science, the course covers the instrumentation, physical principles and engineering. Topics include equipment function and image formation of different medical imaging modalities, MRI, Sonography and Nuclear medicine.

RAD 304: Contrast Agents and Radiopharmaceuticals

Study of contrast agents, drugs and radiopharmaceuticals commonly used in medical imaging with emphasis on pharmacokinetics and pharmacodynamics. The course provides the students with the basic principles and methods of preparation and administration of contrast media (oral, intravenous, intraarterial, intraductal and intrathecal routes), radiopharmaceutical including production and labeling (oral, aerosol, intravenous), and medical drugs used with different medical imaging techniques.

RAD 305: Imaging Procedures I

The course provides knowledge and skills to radiologic sciences students to practice medical imaging in a clinical environment. Focus on patient positioning for different routine radiographic procedures and proper operation of imaging equipment. Emphasis is placed, throughout the course, on the radiography of extremities, spine, chest, abdomen, and skull.

RAD 306: Imaging Procedures II

An overview of the special positions of radiographic procedures done mainly in the conventional, fluoroscopy and mammography rooms.

RAD 310: Radiological Pathology

In this course, students will be introduced to the basic concepts of the disease and their application in the medical imaging domain.

RAD 402: Computer Applications in Imaging

The course provides the students with the principles and applications of computer in digital imaging. Topics include acquisition of digital images in different imaging modalities, image processing and reconstruction techniques used in various digital imaging modalities: Digital radiography, CT, SPECT, PET, and MRI. Management of data, archiving and transmission of digital images in a medical environment is also covered.

RAD 405: Imaging Procedures III

In this course, students will have a strong knowledge of advanced radiographic studies as it relates to the field of radiography and the radiology department. They will be able to demonstrate advanced patient positioning and have a broad knowledge of sectional human anatomy using ultrasound, CT and MRI.

RAD 406: Special Procedures in Radiological Sciences

An overview of the special clinical applications of medical imaging in diagnostic and therapeutic techniques. Introduction to the medical modalities used in molecular imaging (SPECT/CT, PET/CT, PET/MRI).

RAD 470: Process of Research

This course is designed to familiarize students with the wide range of research purposes and methods. It involves both understanding and application of skills, such as evaluating sources and formatting the finished paper following the latest APA directives and requirements.

RAD 472: Special Topics in Radiologic Sciences

The course is open to senior students. Each student chooses a specific topic during the first few weeks of the semester and works on it independently throughout the semester. Students will investigate or review the topic and present their ongoing research during class hours. Introduction, Midterm and final presentations are required. The specific topics covered should be related to advanced subjects of current interest in Radiologic Sciences/Optics and Optometry.

RAD210L: Radiologic Imaging and Processing Laboratory

This lab is intended to allow the students to gain the basic skills in the formation and the processing medical images using MATLAB. It introduces fundamental concepts, notation, and terminology associated with image repre-

sentation and basic image processing operations. A broad range of image enhancement techniques will be introduced and various skills in manipulating digital images will be acquired by the students.

RAD301L: Physics of Medical Imaging I Laboratory

In this course, students will be introduced to the basic concepts of physics relevant to the Radiologic Science, the course covers the instrumentation, physical principles and engineering. Topics include equipment function and image formation of different medical imaging modalities: Ultrasound, Fluoroscopy, Radiation detectors...

RAD302L: Physics of Medical Imaging II Laboratory

In this course, students will be introduced to the basic concepts of physics relevant to the Radiologic Science, the course covers the instrumentation, physical principles and engineering. Topics include equipment function and image formation of different medical imaging modalities; Nuclear medicine, Mammography, Fluoroscopy, Radiotherapy...

RAD305L: Imaging Procedures I Laboratory

An overview of the routine radiographic examinations and procedures and artifacts that affect the image quality. Introduction to Imaging Principles, Chest and bony thorax, Upper limbs, Lower limbs, and Spine.

RAD306L: Imaging Procedures II Laboratory

An overview of the ultrasound definition, types, procedures and interventional procedures. Introduction to Ultrasound, Thyroid Ultrasound, Breast Ultrasound, Abdominal Ultrasound, Pelvis Ultrasound, and Extremities Venous Doppler Ultrasound.

RAD410L: Quality Assurance Laboratory

In this course, students will be introduced to the basic concepts of quality assurance programs relevant to the radiologic science, the course covers the instrumentation, physical principles and engineering. Topics include equipment's quality control and accuracy testing for different machines, Xray, MRI, CT scan, Nuclear Medicine, etc.

RAD305P: Clinical Imaging practicum I

Students must cover 150 hours of training in the Ultrasound and X-ray sections.

RAD306P: Clinical Imaging practicum II

Students must cover 150 hours of training in the CT scan and Mammography sections.

RAD405P: Clinical Imaging practicum III

Students must cover 150 hours of training in the MRI and Sonography sections.

RAD406P: Clinical Imaging practicum IV

Students must cover 150 hours of training in the nuclear medicine and Radiotherapy sections.

RAD 440: Radioprotection and Quality Assurance

Following the site visit, AUST has developed a new standalone course titled “Radioprotection and Quality” and has provided the syllabus. This course will be offered as a technical elective, and all Radiologic Science students will be expected to enroll in it. It provides comprehensive knowledge of radiation protection principles and quality assurance (QA) in diagnostic and therapeutic radiology. Students will learn about radiation risks, international safety standards, dose optimization techniques, regulatory requirements, and the implementation of quality assurance programs in clinical settings.

For detailed study plan, see Annex 3.

Knowledge and methodological expertise

The radiologic technology program equips students with comprehensive knowledge and methodological expertise essential for delivering high-quality diagnostic imaging services. Students gain a strong foundation in anatomy, physiology, radiation physics, and pathology, enabling them to accurately position patients and optimize imaging techniques. They develop technical proficiency in operating advanced equipment such as X-ray machines, CT scanners, MRI systems, and ultrasound devices while adhering to radiation safety protocols (ALARA principle). The curriculum emphasizes critical thinking, problem-solving, and evidence-based practice, ensuring students can adapt to diverse clinical scenarios. Additionally, they learn patient care skills, ethical considerations, and effective communication, which are vital for interdisciplinary collaboration. Through hands-on clinical training, students refine their methodological precision, mastering imaging procedures, quality control, and diagnostic accuracy to meet both national and international healthcare standards. This expertise ensures graduates are prepared to contribute effectively to the evolving field of medical imaging.

Students’ learning experience

The program aims to prepare technologists specialized in advanced modality such as Diagnostic Medical Sonography, Magnetic Resonance Imaging, Computed Tomography, Nuclear Medicine, Radiation Therapy, and more.

As an integral part of the healthcare team, graduates work to provide patient care while limiting radiation exposure to patients, themselves, and others. Radiologic technologists perform medical imaging procedures to help diagnose diseases and injuries and interfere directly in the treatment of certain diseases. Technologists perform a variety of challenging and interesting examinations on a diverse patient population. Those procedures include conventional radiography, fluoroscopy, and surgical studies which are all covered by both theoretical courses and clinical trainings. Although many graduates seek employment as diagnostic radiographers, this program prepares all the graduates to be able to specialize in advanced imaging modalities, such as

magnetic resonance imaging, computed tomography, sonography, radiation therapy, nuclear medicine, mammography, vascular imaging, and quality management. In addition to the listed fields, radiology technologists can play a major role in sales and medical products presentations.

Another priority in the curriculum is the development of research skills. Students are encouraged to participate in research projects within the faculty, allowing them to develop critical thinking, making evidence-based decisions, and contributing to the progression of their discipline. Faculty members will guide the students throughout their studies to cultivate a fruitful educative atmosphere and environment through discussions, counselling, and constructive feedback regarding their academic performances and career path.

Finally, the program emphasizes on inclusive and differentiated learning, in which teachers modify their methods according to each student's unique needs. This point is particularly crucial at AUST since the students come from various backgrounds with different learning styles and language skills. Additional office hours, academic advising, tutoring or language assistance are offered by the faculty to guarantee that every student can engage fully in the curriculum. The program also integrates online learning platforms and assistive technologies, offering to students the easiest ways to interact with peers, access course materials, and participate in every module in a flexible and accessible way.

The BS in Radiologic Science program's overall learning experience is intended to be cumulative, up-to-date, and involving advanced technical clinical training ensuring that graduates have the competencies, knowledge, and skills needed in the labor market.

In its statement, the university notes that, in compliance with Lebanese regulations, the total number of credits for a program already accredited by the Ministry of Education and Higher Education must remain unchanged. Accordingly, they have removed FHS 200 (Introduction to Health Sciences Professions) from the curriculum and replaced it with RAD 440 (Radioprotection for Radiologic Science) as a major course. The essential content of FHS 200 has been integrated into RAD 201, the foundational introductory course for all radiology courses. The curriculum changes are documented in Annex 3.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

In discussions with the program coordinators, the reviewers learned that students do not only perform research through literature reviews but also gain practical experience, learning both basic techniques and new methods. Some students are additionally offered research internships. The reviewers consider this a strong aspect of the program, as it provides students with valuable hands-on research experience, fosters independent scientific thinking, and enhances their preparedness for both academic and professional careers.

The reviewers welcome that the program collaborates with major hospitals, medical centers, and universities and has established corresponding MoUs defining the responsibilities of both AUST and the respective hospitals. After completing their second year, students begin to work part-time in radiology departments, gaining practical experience alongside their studies, which the reviewers consider valuable and positive. See also the chapter on Quality Management in the present report.

The reviewers note that, while the courses are generally well-structured and strongly application-oriented - contributing to a high level of student satisfaction - they would like to point out that the mix of procedures across different courses is currently not presented in a fully logical sequence. The panel suggests clarifying and organizing the procedural content to enhance the coherence of the curriculum and support consistent learning outcomes.

After the site visit, the reviewers concluded that the program requires the topics dedicated to radiation protection to be clearly separated with respect to therapy techniques and proposed the following condition: Radiation protection shall be established as a standalone course within the curriculum. Given its significance for both patient and practitioner safety, the topic should not be embedded within other courses but instead offered as a separate, dedicated course to ensure comprehensive coverage and appropriate emphasis.

The reviewers thank AUST for the prompt implementation of a new standalone-course Radiation protection within the curriculum. The course includes a combination of principles, recommendations, and quality assurance procedures, with both theoretical and practical components. The course is listed as a major course noting that all Radiologic Science students will be expected to enroll in it. This change has adequately addressed concern of the reviewers. The original requirement to establish this course has therefore been met.

BS Forensic Science

Current Status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

The bachelor program in Forensic Science follows a content-based curriculum. According to the SER, the teaching and learning methods follow a student-centered approach with the focus on prioritizing the learner's needs and interests and thus shifting the focus from teacher-led instruction to active student participation. This involves project-based learning, collaborative activities, and personalized learning experiences. This approach aims to enhance students' engagement, critical thinking and problem-solving skills by empowering them to take ownership of their learning.

The program in relation to intended learning outcomes

To ensure coverage of all learning outcomes by the curriculum, mapping allows identifying which courses address each of the learning outcomes.

The program includes core courses in forensic science disciplines, such as crime scene management, processing and analysis, forensic toxicology, forensic anthropology, DNA analysis, and trace evidence collection and examination. Multiple instructor courses were created to ensure that students are gaining all the necessary knowledge and skills.

As practical training the program has crime scene investigation, and laboratory skills in the following areas:

- Forensic Entomology
- Forensic DNA
- Forensic Toxicology
- Forensic Chemistry
- Forensic Anthropology
- Digital Forensics
- Document Examination
- Forensic Accounting
- Forensic Photography

Additionally, the program offers internships and capstone projects to provide real-world forensic experience such as:

- Internal Security Forces (ISF) Training at ISF Aramoun training facility
- Internal Security Forces – Forensic Scientific Division,
 - Crime Scene Unit
 - DNA Lab
 - Fingerprinting
- Lebanese Army – Forensic Division
- Private Companies
- Forensic Laboratories
- International and/or non-governmental organizations

The forensic science practicum (FST 499) is a three-credit course designed exclusively for senior forensic science students. It offers a comprehensive learning experience that combines theoretical knowledge, hands-on practical training and exposure to real forensic casework. FST 499 equips students with the skills and knowledge necessary to pursue careers in forensic laboratories, crime scene units or to continue their education in the area of forensic science in which they demonstrate the greatest competency.

The practicum is divided into the following sections:

- Training modules:
 - Phlebotomy section.
 - Crime scene section.
 - Internal Security Force section.
 - DNA section.
 - Toxicology section.

- Autopsy section.
- Court section.
- Forensic psychology section.

- Evaluation Module
 - Preceptor/Student evaluation.
 - Crime scene practical exam.
 - Exit Exam.
 - Final report and presentation exam.

Hence, the program is the foundation for forensic sciences where the students are exposed to all the different branches of forensics and then students will specialize in a particular field at the graduate level.

The study plan is structured to ensure students' progress from fundamental concepts to advanced forensic techniques. Based on the SER, it includes a balance of theoretical coursework and practical application. Courses are updated regularly to align with emerging forensic technologies (further details, see Annex 3).

Total Number of Credits	106 credits
College Requirement	18 credits
Free Electives	6 credits
General Sciences	29 credits
Major Requirements	47 credits
Technical Electives	6 credits

Course Flow Chart

College Requirements (18 credits)

Code	Description	Corequisite	Prerequisite	Credits
CSI 200	Computer Literacy		ENG 000	3
ENG 201	Composition & Rhetoric I		ENG 100 OR ENG 200	3
ENG 202	Composition & Rhetoric II		ENG 201	3
ENG 205	English Communication Skills		ENG 202	3
HMS 300	Work Ready Now		ENG 200 OR ENG 100	3

HMS 301	Western Civilization		ENG 201	3
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Free Electives (6 credits)

Code	Description	Corequisite	Prerequisite	Credits
ENG 200	Writing Skills		ENG 001	3
MAT200X	College Algebra		PLACEMENT	3
SOS 233	Basic Psychology I		ENG 100 OR ENG 200 OR ENG 105	3
SOS 260	Introduction to Criminology		NONE	3
SOS 270	Introduction to Law		NONE	3
SOS 280	Introduction to Crime and Criminal Justice		ENG 200	3
SOS 333	The Criminal Mind			3

General Science (29 credits)

Code	Description	Corequisite	Prerequisite	Credits
BIO210	Cells & Molecules	BIO210L	ENG 001	3
BIO213	Introduction To Physiology		ENG 001	3
BIO320	Biostatistics & Epidemiology		(ENG 001 & MAT200X) OR (ENG 001 & MAT 105)	3
BIO210L	Cells & Molecules Laboratory			1
BIO213L	Introduction To Physiology Laboratory	BIO213		1
CHE205	Chemical Principles & Analysis		ENG 001	3
CHE210	Organic Chemistry I		CHE 205	3
CHE220	Introduction To Biochemistry		CHE 210	3
CHE205P	Chemical Principles and Analysis Problem Solving			0
CHE210L	Organic Chemistry Lab		CHE 210	1
CLS495	Instrumental Chemistry		CHE 210 OR CHE 215	3
CLS495L	Instrumental Chemistry Laboratory		BIO205L & CHE210L	1
PHY235	Physics for Forensic Science		MAT200X OR PLACEMENT	3

Major Requirements (47 credits)

Code	Description	Corequisite	Prerequisite	Credits
CLS210	Laboratory Safety & First Aid		ENG 001	1
CLS212	Fundamentals Of Lab Analysis		ENG 001	3
CLS320	Molecular Genetics		BIO 210	4
CLS493	Introduction To Pharmacology		BIO 213 & CHE 220	3
CLS497	Toxicology		CLS 493	3
CLS320L	Molecular Genetics Laboratory	CLS320		1
FST310	Forensic Science		BIO 213 & (CHE 215 OR CHE 210)	3
FST370	Crime and Security of Information Technologies		CSI 200 & FST 310	3
FST380	Introduction to Biometrics		FST 310	3
FST420	The Judicial Process		FST 310	3

FST430	Crime Scene Management and Investigation		FST 310	3
FST442	Principles and Applications of Trace Analysis		FST 310 & CLS 320 & CHE 220	3
FST460	Forensic Medicine		FST 310	3
FST470	Human Identification		CLS 320 & FST 310	3
FST 480	Special Topics in Forensic Science I		Senior standing	1
FST499	Practicum		Senior standing	3
FST330L	Forensic Imaging Laboratory	FST430	FST 310	1
FST495L	Chemistry Applied to Forensic Lab		CLS 495 & CLS495L	3

Technical Electives (6 credits)

Code	Description	Corequisite	Prerequisite	Credits
BIO325	Genetics: A Molecular Approach		BIO 210	3
CLS420	Advanced Molecular Cell Biology		CLS 320	3
CLS494	Chromatography		CLS 320	3
CLS496	Recombinant DNA		CLS 320	3
CLS498	Web Based Bioinformatics		CLS 320 & CHE 220	3
FST435	Blood spatter Analysis		FST310	3
FST450	Investigative Methods in Criminology		FST310	3
FST455	Forensic Entomology		FST310	3
FST415	CBRN		FST310	3

Knowledge and methodological Expertise

The Forensic Science curriculum at AUST is strategically designed to provide students with comprehensive knowledge and hands-on methodological expertise across all core areas of modern forensic practice. Through foundational science, specialized courses, laboratory training, and practicum experience, students develop competencies aligned with national and international forensic standards.

Expertise Areas and Aligned Courses

- **Crime Scene Management**
 - *FST 430* – Crime Scene Management and Investigation
 - *FST 330L* – Forensic Imaging Laboratory
 - *FST 495L* – Chemistry Applied to Forensic Lab
 - *FST 499* – Practicum
- **Evidence Collection, Packaging, and Analysis**
 - *CLS 212* – Fundamentals of Lab Analysis
 - *FST 430* – Crime Scene Management and Investigation
 - *FST 442* – Principles and Applications of Trace Analysis
 - *CLS 495* – Instrumental Chemistry
 - *CLS 495L* – Instrumental Chemistry Lab
 - *FST 499* – Practicum
- **Forensic Serology and DNA Profiling**
 - *CLS 320* – Molecular Genetics
 - *CLS 320L* – Molecular Genetics Laboratory
 - *FST 470* – Human Identification
 - *Technical Electives:*

- CLS 494 – Chromatography
 - CLS 496 – Recombinant DNA
- **Fingerprint Analysis and Comparison**
 - FST 380 – Introduction to Biometrics
 - FST 470 – Human Identification
 - FST 499 – Practicum
- **Forensic Chemistry and Toxicology**
 - CHE 205 – Chemical Principles and Analysis
 - CHE 210 – Organic Chemistry I
 - CHE 220 – Introduction to Biochemistry
 - CLS 493 – Introduction to Pharmacology
 - CLS 497 – Toxicology
 - FST 495L – Chemistry Applied to Forensic Lab
 - *Technical Electives:*
 - CLS 494 – Chromatography
 - CLS 498 – Web-Based Bioinformatics
 - FST 455 – Forensic Entomology
- **Human Identification and Biometrics**
 - FST 470 – Human Identification
 - FST 380 – Introduction to Biometrics
 - CLS 320 – Molecular Genetics
 - *Technical Electives:*
 - BIO 325 – Genetics: A Molecular Approach
- **Toolmark and Trace Analysis**
 - FST 442 – Principles and Applications of Trace Analysis
 - FST 430 – Crime Scene Management and Investigation
 - FST 495L – Chemistry Applied to Forensic Lab
- **Forensic Photography**
 - FST 330L – Forensic Imaging Laboratory
 - FST 430 – Crime Scene Management and Investigation
- **Blood spatter Analysis**
 - *Technical Elective:*
 - FST 435 – Bloodstain pattern analysis
 - FST 499 – Practicum

Methodologies are reinforced through case studies, laboratory simulations, and forensic report.

Students' learning experience

AUST provides a structured curriculum designed to align with international forensic science education standards while remaining responsive to local and regional demands. The program integrates multidisciplinary courses across biology, chemistry, law, and digital forensics, offering students the flexibility to pursue electives tailored to their specific interests and career aspirations. Courses are sequenced logically to build foundational knowledge in the first year, followed by advanced, hands-on, and specialized learning in later semesters.

Recognizing the practical nature of forensic science, the program places a strong emphasis on laboratory training, crime scene simulations, and field-based learning. Facilities are well-equipped, and students have access to

modern instrumentation and forensic software, allowing them to develop real-world competencies. The Practicum course in the final year serves as a capstone experience, giving students exposure to professional environments and reinforcing their preparedness for the labor market.

The Forensic Science Program integrates modules on ethics, professional responsibility, and human rights, reflecting AUST's broader values and responding to the expectations of students aiming to work in justice and humanitarian sectors.

Student-centered teaching and learning methods

The Forensic Science Program adopts diverse student-centered approaches that promote active learning, critical thinking, and practical skill development aligned with real-world forensic applications.

- Problem-based learning (PBL): Students engage with real or simulated forensic problems that require critical thinking, hypothesis formulation, and scientific reasoning.
- Case-study analysis: In-depth examination of actual or hypothetical forensic cases fosters analytical thinking and the practical application of theoretical concepts.
- Practical forensic case reconstructions: Students reenact crime scenes and investigative procedures to bridge classroom learning with real-life scenarios.
- Use of forensic software and digital tools: Exposure to industry-standard platforms enhances students' digital literacy and data analysis capabilities.
- Laboratory-based learning: Hands-on experiments and technical exercises build proficiency in evidence processing, forensic imaging, and biometrics.
- Guest lectures and expert panels: Engagements with practicing forensic scientists, legal professionals, and law enforcement officers offer interdisciplinary insights and career perspectives.
- Collaborative learning and peer discussion: Group activities and peer review sessions encourage teamwork, communication, and shared problem-solving.

Students' role in the learning process

Students participate in group research projects, mock crime scene investigations, and courtroom testimony simulations. Internships with forensic laboratories, law enforcement agencies, and legal institutions provide industry exposure.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

The Forensic Science program is generally well-structured. It meets the essential requirements and provides a coherent educational framework. The mandatory internship is particularly noteworthy and has been evaluated very

positively by the students. According to the experts, it is clearly a multi-specialized degree program with substantial scientific content. The reviewers see room for improvement regarding the essential aspects of professional practice, which give the program its distinctive forensic focus and unique orientation.

The reviewers assess that the Forensic Science program needs to strengthen the connection between scientific principles and theoretical knowledge to better enhance students' practical skills. They suggest that incorporating more practice-oriented and reflective elements would make the program more relevant and unique in the field of forensic science. Currently, the program's forensic focus mainly revolves around crime scene management and biometrics, with a significant emphasis on quality standards and proper laboratory practices.

While there are specific forensic modules within the curriculum, the reviewers believe that adding case studies, diverse methodologies, and applied contexts would help differentiate the program further. To address these issues, they recommend that the Forensic Science program emphasize professional practice more significantly by integrating real-world applications, a focus on quality standards and hands-on experiences, thus better equipping students for their future careers in the field. The reviewers note positively that AUST announced in its response that the Forensic Science Department will strengthen its collaboration with forensic institutions and the Internal Security Forces to enhance students' practical exposure.

As a point of consideration for further enhancing the program's forensic orientation, the reviewers would like to suggest exploring the potential integration of additional modules or content covering topics such as bias, ethics, statistics, and critical thinking. Placing greater emphasis on these areas could help to further strengthen the program's forensic profile and provide a clearer distinction from general science programs.

In terms of career opportunities, while employment in laboratory work is possible, options remain constrained due to limited governmental support and the relatively small number of relevant programs and positions. Many graduates initially find employment in hospital laboratories, often as laboratory assistants, with the option of later progressing to roles as medical technologists. In some cases, faculty members and supervisors actively support graduates in securing employment.

Furthermore, graduates frequently pursue advanced studies, particularly master's programs, often abroad, as the range of specialized forensic master's programs available locally is still limited. International university partnerships and institutional affiliations provide additional perspectives in this regard.

Recommendation

- R2 The Forensic Science program should place greater emphasis on professional practice by integrating real-world applications, a focus on quality standards and practical experience into the curriculum to enhance its relevance and better prepare students for the profession.

3. Student assessment

The third criterion relates to the organization of student assessment. The assessors review how the assessment of intended learning outcomes is structured and whether the number, type, and scope of assessments are appropriate in relation to the program objectives. In addition, the reviewers evaluate whether the requirements for the final thesis are aligned with the qualification level of the degree. The transparency and consistent application of assessment criteria are also examined. Further aspects under review include the qualifications of teaching staff responsible for conducting assessments, as well as the examination regulations—particularly with regard to the clarity and fairness of rules concerning student absence, illness, and other mitigating circumstances.

Current Status

Cross-disciplinary aspects: applicable to all degree programs

Organization of learning outcomes

In the FHS, each program has its own clear and defined learning outcomes that, according to the SER, align with its objectives, the mission of the university, and the qualifications set by the Lebanese Ministry of Education and Higher Education.

Prior to the start of the semester, each program chairperson or coordinator conducts a meeting with its respective faculty members. This meeting focuses on reviewing the nature, objectives, and learning outcomes of each course, ensuring alignment between the syllabus and the course content. The meeting also focuses on discussing the assessment methods to be applied throughout that specific semester. In addition to the standard three exams per course, assessment methods may include quizzes, term papers, oral presentations, and/or projects.

The Registrar's Office is responsible for setting the examination schedule for all four faculties at AUST. The scheduling process considers all courses registered by each student to ensure that no student has more than two exams on the same day. This standardized protocol is applied consistently across all three examination periods: Exam 1, Exam 2, and the final Exam.

Two weeks before the exams, the chairperson or coordinator collects all exam papers from the instructors. Exams are reviewed to ensure alignment with the course content and appropriateness for the students' academic level. After the exams are administered and graded, the committee reconvenes to review

the results. This post-exam review includes verifying student grades and evaluating the fairness and consistency of the grading process.

To ensure the clarity, rigor, and measurability of learning outcomes, instructors will incorporate the three domains of Bloom’s taxonomy: The cognitive, affective, and psychomotor domains with their respective levels. The six cognitive levels of the Bloom’s taxonomy – Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating courses. Whereas the levels of the affective domains are: Receiving, Responding, Valuing, Organizing, Characterization, the psychomotor domain focuses on student’s ability to physically accomplish tasks and to communicate non-verbally. As a result, assessments will be designed to align with this taxonomy and to be course sensitive. At the cognitive level exams are structured as follows:

- Part 1: (lower-order thinking, covering Remembering and Understanding): This section may be assessed using multiple-choice and short-answer questions.
- Part 2: (higher-order thinking, covering Applying, Analyzing, Evaluating, and Creating): This section may include assessments such as case studies and problem-solving exercises.

Student theory course assessment, in all programs, follows the 4 scale Grade Point Average (GPA) system, using the letter grading system. Each letter is associated with a certain number of points from which the GPA is calculated. The table below explains the meaning of the letter grade.

Letter Grade	Numerical Grade	Equivalent Assessment	Points
A	90-100	Excellent	4.00
B	80-89	Good	3.00
C	70-79	Satisfactory	2.00
D	60-69	Passing	1.00
F	Below 60	Fail	0.00

The following grades or connotations are not counted in the GPA

- I - Incomplete: It is given when a major part of the course has not been completed
- P- Pass: It is a credit granted for remedial courses.
- R- Repeat: It appears next to repeated courses.
- T- Transfer: It appears next to transferred courses.
- W- Withdrawal: It is given when withdrawal takes place by the student within the withdrawal period deadline
- AW- Academic Withdrawal: It is given by the instructor for excess absenteeism.
- AU- Audit: This appears next to an audited course.
- IP - In Progress: It appears next to currently registered courses.

The GPA is the sum total of all points accumulated, divided by the total number of credits for which the points were earned.

$$\text{Cumulative GPA} = \frac{\text{Sum of points for all courses taken}}{\text{Total number of credit hours for the above courses}}$$

When a student repeats a course, the higher grade obtained will be used in computing the grade point average.

At the FHS learning outcomes are assessed at both the course and program levels to ensure academic rigor and continuous improvement, and the program curriculum is mapped out in a matrix which displays the program learning outcomes and the courses which satisfy these learning outcomes.

Course assessment

During the first week of the semester, instructors provide students with the syllabus for the course, laboratory course, or practicum and the student evaluation form. The syllabus serves as a contract between the university and the student in which the description, objectives, learning outcomes, deadlines, examination type and schedule, and grade distribution of the course are stated clearly. Usually, the syllabus and evaluation form are discussed in the classroom during the first session.

Theoretical course grade distribution

The grade distribution of all 3 credit courses at the FHS is shown below:

Attendance & Participation	05%
Drop Quizzes	15%
Assignments	15%
Cumulative Exam Grade (Exam 1 and Exam 2)	30%
Final Comprehensive Exam	35%

The Cumulative Exam (CE) grade is calculated using the results of exams 1 and 2. The highest grade between exams 1 and 2 will account for 70% of the CE grade, and the lowest will account for 30%.

Laboratory course grade distribution

Most of the 1 credit labs at the FHS follow the below grade distribution:

Attendance & Participation	05%
Reports	20%
Drop Quizzes	10%
Midterm Exam	25%
Final Exam	30%
Practical Exam	10%

Practicum grade distribution

The grade distribution for practicum courses varies among the different majors of the FHS.

The practicum syllabus for senior-level practicums in Clinical Laboratory Science, Optics and Optometry, Radiologic Sciences, and Forensic Science, and the student evaluation forms are provided as an attachment.

Attendance & participation

Students registered at AUST are expected to attend all classes and laboratory sessions. Any student who absents herself/himself from any class or laboratory session will be held responsible for the work done, and for all announcements made in the class or in the laboratory session. Individual instructors must keep attendance records for all classes and laboratory sessions and must report absences to the administration on a weekly basis. Make-up work is only allowed in case of major illness or emergency, and after the approval of the Office of the Dean of Students and Admissions. Students cannot miss more than the equivalent of 3 weeks of instruction in a course and still receive credit for the course. However, instructors have the right to impose specific attendance regulations in their classes provided that the number of absences allowed does not exceed nine class sessions. AUST has the right to contact the student's parents or guardians for issues related to unexcused absenteeism.

In addition to attendance, students must actively participate in class. Class may include responses to pop-up questions, preparation for lectures, engagement in class discussions, and involvement in debates – all of which are strongly encouraged.

Drop quizzes

Instructors are required to administer around 8 quizzes throughout the semester. In line with the assessment policy, the lowest quiz grade is dropped from the final average. Quiz formats typically mirror the variety of question types used in exams, helping students become familiar with exam-style assessments.

Assignments

In addition to research skills, the FHS is committed to developing students' communication abilities, critical thinking, problem-solving skills, and the practical application of theoretical knowledge to real-life and real-world scenarios. The faculty also prioritizes fostering teamwork, collaboration, and nurturing creativity and innovation.

These essential skills are cultivated through a wide range of assignments integrated into FHS courses. This systematic approach is intended to ensure that students are not only meeting course-specific objectives but are also progressively acquiring the broader graduate attributes.

Program assessment

The table below represents the passing grade for all FHS majors:

College Requirements	Require-	The minimum passing grade for the college requirements is "D" except for the ENG 201 and ENG 202 courses (minimum passing grade is "C").
Free Electives		The minimum passing grade for the free electives is "D".
General Sciences		The minimum passing grade for the general sciences is "C"

Major Requirements	The minimum passing grade for the major requirements is "C"
Technical Electives	The minimum passing grade for the technical electives is "C"

Exam procedure

Proctoring regulations

During exams period, the registrar's office finalizes all exams schedule and proctoring schedule. Part-time instructors are required to proctor exams per the below:

Every 3-credit course	2 exams to be proctored	3 hours in total	Condition for exams 1 and 2
Every 3-credit course	1 exam to be proctored	2 hours in total	Condition for final exam
Laboratory courses	The laboratory course instructor is responsible for proctoring his/her midterm, final and practical exams.		

Accordingly, AUST team, staff, part-time instructors, and full-time instructors, are responsible for the success of each exam period. This integrity in proctoring schedule is maintained by regular staff trainings and workshops. In addition, meetings for the staff and the full-timers are held prior to each exam period in order to clarify any conflicting points.

Make up exams

Approval of student petitions for a make-up exam requires a three-step process. First, the petition is reviewed by the dean of students who forwards it to the relevant chairperson or coordinator for recommendation. Following their review, the petition is then forwarded to the dean of the FHS who provides the final decision on the matter.

In accordance with the university's rules and regulations, make-up exams are permitted only under the following conditions:

- Admission to Hospital (Emergency)
- Death of a parent or a close relative
- Accident on the way to the University
- Court appearance
- Emergency travel

Academic regulations

Probation regulations

New students admitted to the university will not be placed on academic probation irrespective of the grades they obtain during their first semester of study at AUST. Probation regulations will be applied when a student has completed a minimum of 12 credit hours, excluding the Remedial and Intensive courses.

- A student will be placed on probation if his/her cumulative average (while carrying a minimum of 12 credit hours) falls below 2.00.
- The student can remove the first probation in the following semester if he/she receives a minimum cumulative GPA of 2.00.
- A student is placed on second probation if he/she fails to remove the first probation in the following semester, i.e., earns a cumulative GPA below 2.00.
- The student can remove the second probation in the following semester if he/she receives a minimum cumulative average of 2.00.

Probation regulations will not be applied while students are registered during summer sessions. Probation may also be given for disciplinary reasons upon the recommendation of the Disciplinary Council and the approval of the Executive Council.

Academic suspension

A student is suspended from the university for the following reasons:

- Failure to remove a probation in two consecutive semesters
- Obtain a cumulative average, for his/her second semester on probation, below the cumulative average obtained at the end of the previous semester
- Found in serious breach of AUST's regulations as per the decision of the Executive Council (Breaching of university regulations, cheating on exams and quizzes, plagiarism...)
- Failure to complete a minimum of 12 credit-hours successfully during the first academic year (Excluding all preparatory courses) of his/her tenure at AUST.

Students on probation are not subject to suspension at the end of any semester in which they achieve a GPA of 2.00 or more, even if the cumulative GPA is still below 2.00.

A student will not be suspended in the event that he/she earns a cumulative GPA which is below 2.00 during the 2nd probation period, provided that a considerable improvement in the cumulative average has been achieved.

Suspension may also be given for disciplinary reasons upon the recommendation of the Disciplinary Council and the approval of the Executive Council.

Graduation

After completing all the requirements for graduation, students are then placed on the prospective graduate list. The department checks all the names and confirms the list to the registrar's office.

Graduating students can be placed in either of the below 4 categories:

- Graduation requires completion of all requirements with a cumulative GPA ranging between 2.00 and 2.99.

- Graduation with honors requires completion of all requirements with a cumulative GPA ranging between 3.00 and 3.49.
- Graduation with distinction requires completion of all requirements with a cumulative GPA ranging between 3.50 and 3.79, in addition to a recommendation by the concerned department.
- Graduation with high distinction requires completion of all requirements with a cumulative GPA ranging between 3.80 and 4.00, in addition to a recommendation by the concerned department.

The overall examination procedures and regulations are set in the program handbooks. Comprehensive information on examinations, requirements, recognition, repetition of examinations, and the grading system is outlined in the student handbook, which is made available to all students from the outset of their studies. The Students' Handbook is also available on the AUST website⁹.

BS Clinical Laboratory Science

Current Status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

For the CLS major, students have to complete 120 credits to graduate. The final assessment for the students in the CLS program is based on the following:

- Internal colloquium exam: The preparatory exam for CLS students which mimics the National colloquium assessment examination.
- Laboratory assessment: Students need to cover 315 hours of training in private laboratories. The Human Resources personnel in the private laboratories and the head of HR department fill in an assessment for each student.
- Hospital assessment: Students need to cover 250 hours of training in a hospital laboratory. The Human Resources personnel in the hospital and the head of HR department fill an assessment for each student.
- Final report: Students have to write a laboratory report summarizing the major clinical cases, procedures and technicalities learned during the practicum.
- Final presentation: Students have to present an oral presentation summarizing their work in the internships, and the final report.

Assessment

The assessments are organized in a transparent and well-structured manner, responsibilities are clearly defined, and students are adequately informed about the assessment methods through the syllabi and at the beginning of

⁹ www.aust.edu.lb

each semester. The academic freedom of lecturers in designing assessments and their individual components is maintained.

The reviewers further note that the number, type, and scope of examinations are appropriate in relation to the intended learning outcomes. The requirements for the final examinations of the bachelor's degree are clearly outlined in the students' handbook and relevant regulations and adequately reflect the qualification level of the degree. Assessment criteria are applied transparently and consistently, with reliability further ensured by using the American grading scheme.

The reviewers also confirm that the teaching staff are suitably qualified to conduct assessments, as evidenced by the CVs and discussions during the site visit. Formal rules governing the examination procedure are in place, including clear and equitable provisions for student absences, illness, and other mitigating circumstances. According to the reviewers, these measures ensure that assessment procedures are conducted fairly, reliably, and transparently.

The reviewers consider that all the requirements of the third criterion regarding student assessment are fully met.

BS Optics and Optometry

Current Status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

For the OAO major, students have to complete 120 credits to graduate. The final assessment for the students in the OAO program is based on the following:

- The three internships for OAO students are distributed based on the below:
 - 100 hours in optical shops
 - 100 hours in contact lens fitting centers
 - 100 hours in ophthalmology centers
- The assessment of each practicum is based on:
 - Attendance and completing all required hours.
 - Supervisors at each site will fill their assessment based on the practical training booklet. (Appendices 21 and 22)
 - The student submits a report for each of the three internships that includes clinical cases, all methods and trainings observed, and explaining all of the acquired skills.
 - A final presentation for each internship will be prepared in which the student explains her/his report and has a clinical debate with their supervisor.

- Students are also assessed in their final internship year (fifth year) – OAO Internship Year Evaluation Booklet
- Internal colloquium exam: The preparatory exam for OAO students which mimics the National Colloquium assessment examination.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Radiologic Sciences

Current status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

For the RAD major, students have to complete 105 credits to graduate. The three internships for RAD students are distributed as follows:

- 150 hours in ultrasound & X-ray training.
- 150 hours in CT scan & Mammography training.
- 150 hours in MRI and Sonography training.

Interested students may opt to complete a fourth internship, consisting of 150 hours of training in nuclear medicine and radiotherapy, as a substitute for their technical elective course.

Assessment of each practicum is based on:

- Attendance and completion of all required hours.
- Supervisors at each site will fill their assessment based on the practical training booklet. (Appendices 21 and 22)
- Five case studies must be reported for each practicum/internship following a specific template provided by the supervisor.
- A final presentation for each internship will be prepared, in which the student explains her/his reports, and has a clinical debate with the supervisor.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Forensic Science

Current status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

For the FOR major, students have to complete 106 credits to graduate. The final assessment of students in the FOR program is based on the following:

- The FOR-practicum course is distributed as follows:
 - 80 hours in DNA analysis training
 - 40 hours in Toxicology training
 - 80 hours in Crime Scene training
 - 10 hours in medical examination training
- Assessment of the practicum is based on:
 - Attendance and completion of all required hours.
 - Supervisors at each site fill their assessment based on the practical training booklet.
 - Students are also evaluated during their ISF training.
 - Analyzing and solving the final mock crime scene including processing the scene, collecting evidence, and later analyzing the evidence in the DNA and Toxicology labs.
 - The grade of the final crime scene will be based on:

Overall, Team Performance	Teamwork	10%
	DNA Report	10%
	Toxicology Report	10%
	Final Group Report	10%
	Final Presentation	10%
Personal Performance	Performance in the final crime scene	20%
	Responsibility in the final crime scene	10%
	Laboratory Performance	10%
	Knowledge of presented subject	10%

The crime scene practical examination is administered after the student has completed all practicum modules. It features a simulated crime scene that integrates sub-disciplines from each module covered during the training. This examination is entirely practical and is designed to assess the student's ability to evaluate a crime scene, apply proper evidence search techniques, perform evidence collection and packaging, maintain the chain of custody, and conduct appropriate laboratory analyses. Additionally, it evaluates the methods used in the laboratory, the interpretation of findings, and the conclusions drawn in each relevant section of the investigation.

Following the completion of the simulated crime scene, the student is required to submit a comprehensive final written report within one week, detailing all findings across each section of the investigation. Subsequently, the student must deliver an oral presentation before a jury, during which he or she will present the assigned case, reconstruct the sequence of events, and

provide final conclusions identifying the likely perpetrator. The evaluation is based on the student's presentation skills, critical and analytical thinking, and her or his ability to respond effectively to the jury's questions.

Exit exam: A comprehensive exam administered to students at the end of their academic journey assessing their knowledge of major subjects, critical thinking skills, and overall readiness for graduation. The exam is structured in a multiple-choice format, allowing for an objective assessment of the student's background and knowledge.

Assessment

Please also refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

4. Organization of the study program

This criterion addresses the implementation of the study program. The reviewers evaluate the appropriateness of the admission requirements as well as the regulations for the recognition of qualifications, particularly in accordance with the principles of the Lisbon Recognition Convention. They examine whether the structure and organization of the program enable students to achieve the intended learning outcomes.

In addition, the reviewers assess to what extent the university administration and teaching staff consider the diversity of the student body and respond to students' individual needs. The allocation of roles and responsibilities in the management of the program is reviewed, along with whether the workload is appropriate in relation to the intended learning outcomes and the standard period of study. Furthermore, the reviewers consider the organization of the student life cycle - from enrolment through to graduation - including both administrative processes and the quality of interaction between students and the institution. Student support services, such as academic advising and counselling, as well as cooperation with internal and external stakeholders (where applicable), are also part of this assessment.

Current Status

Cross-disciplinary aspects: applicable to all degree programs

According to the SER, AUST fosters a safe and inclusive environment where academic integrity, ethical conduct, and diversity are emphasized.

Admission requirements

AUST is in full compliance with the Lebanese government's rules on admission to universities and graduation from universities.

The list below summarizes each acquired degree and specifies whether remedial courses are required to meet the entry qualification criteria for the FHS.

	Life Sciences	No remedials
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Official Lebanese Government Secondary Certificate (Previously Lebanese Baccaulaureate part II)	General Sciences	BIO 200
	Economics & Sociology	BIO 200 CHE 200
Technical Baccaulaureate BT3		Only candidates who passed the BT3 official degree in scientific tracks allowed to join the scientific majors at the FHS. Four remedial courses are required: PHY 101 CHE 101 BIO 101 MAT100X
TS Degrees		All students who have successfully completed the TS program within the scope of the majors present in the FHS, may apply for those majors in the FHS. (a maximum of 50% of passed courses may be transferred, if the grade is 12 or above, and the remaining 50% of the credits required for a bachelor's degree must be completed at AUST).
Freshman		Freshman students need to fulfill the below conditions in order to be qualified for an FHS major. <ul style="list-style-type: none"> - 4 obligatory science courses - SAT score equivalent to 950 or more

The programs include students with different basis of admission including Lebanese Baccaulaureate, French Baccaulaureate, and/or Freshman. In addition to holding a secondary degree, applicants seeking undergraduate admission are required to take placement tests in English and Mathematics and must achieve the required scores, or equivalent. The Admissions Committee reviews applications based on academic performance over the final two years of high school and successful completion of the National General Secondary Exams. Once admitted, students attend an orientation session that introduces them to academic policies and university life, which are all outlined on the AUST website¹⁰. To ensure that all students are on the same educational level, several entry criteria have been established. Students holding a Lebanese Baccaulaureate other than the Life Sciences section should complete Biology and Chemistry remedial courses. In addition, students with language difficulties receive English remedial courses.

Each program has a dedicated page on the university website containing all essential information. The admissions section clearly outlines entry requirements, application procedures, and necessary documentation. The FHS works closely with the university's IT department to regularly update the faculty's web pages, ensuring that changes to courses, academic policies, or admission timelines are communicated promptly and accurately to current and prospective students.

Each student is assigned an academic advisor and receives a program contract sheet detailing the courses required for graduation. Additionally, all new

¹⁰ www.aust.edu.lb.

students are required to complete training on the university's learning management system, Blackboard, before attending classes.

Test	Score	Placement Status
AUST English Entrance Examination (EEE)	Score between 300-350	Remedial ENG 000
	Score between 351-450	Remedial ENG 000
	Score between 451-500	Remedial ENG 001
	Score between 501-550	Remedial ENG 200
	Score above 551	English remedial courses exempted
AUST Math Placement Test	Score between 0-49%	Remedial MAT200X
	Score above 49%	Math remedial course exempted
English SAT scores	Below 500	Student has to repeat the AUST EEE
	500 - 599	Student has to repeat the essay part of the AUST EEE only
	600 - 800	No entrance exam required – English remedial courses exempted
Math SAT scores	400 - 525	Remedial MAT200X
	526 and above	Math remedial course exempted

Recognition of qualification

Candidates transferring from recognized institutions of higher learning to AUST must have met similar admission requirements to those of AUST in their previous institutions. Moreover, they should pass the AUST English Entrance requirements. A maximum of 55% of total credits may be transferred, and the remaining 45% must be completed at AUST. Transfer applicants may be given transfer credits for courses in which they had obtained a grade of C (70%) or above, on condition that the concerned academic units evaluate the course content and approve it is equivalent to AUST counter courses.

Desks are comfortable, classrooms are air-conditioned and cleaned both in the evening and once during the day. Each classroom is equipped with an electronic smartboard that replaces traditional black, green, or whiteboards. These boards are internet-connected and serve as both a writing surface and a computer interface, enhancing the learning experience.

AUST faculty, staff, and students also have full access to the EBSCO online library service, which provides a wide range of academic resources. Training on how to use EBSCO is offered individually to new faculty and staff, and in group sessions for all new students. In addition, the library staff is always available to assist and train anyone in need of support.

Throughout their academic journey, students at FHS receive structured and ongoing support to promote engagement, academic achievement, and professional preparedness. At the start of the academic year, they are provided with a student handbook containing important academic regulations, assessment procedures, advancement guidelines, grading systems, and behavioral standards.

In addition, faculty provide comprehensive course syllabi each semester, outlining weekly topics, learning objectives, assessment methods, and recommended readings.

Each student is also assigned a faculty advisor who offers at least one in-person advising session per semester, with additional meetings available upon request, to support academic success and career development. Advisors assist students with course selection, understanding program requirements, tracking academic progress, and addressing probationary or graduation-related concerns.

Furthermore, the faculty conducts department-level orientation sessions at the beginning of each semester, particularly for new and transfer students. Under the guidance of department heads and program coordinators, these sessions provide essential information on academic structures, registration procedures, clinical training expectations, available student services, curriculum learning objectives, assessment methods, and the importance of professionalism in healthcare.

Beyond classroom comfort and academic resources, AUST places great importance on student life and physical activity. The Sports and Activities Office (SAO) oversee non-academic campus life, manages all student-organized clubs, and ensures that AUST actively participates in inter-university sports. Each student club is assigned a faculty advisor, selected by the club's members. Club options include the Social Club, Cultural Club, Music Club, Dance Club, Chess Club, Backgammon Club, Cheerleading Club, and Horseback Riding Club.

AUST also boasts competitive male and female varsity teams in basketball, football, volleyball, tennis, table tennis, hip hop, futsal, and handball. These teams regularly achieve top placements in national competitions and have proudly represented AUST in international university tournaments held in countries such as Jordan, Iraq, Cyprus, Greece, Italy, Austria, Poland, Russia, and others. Students are usually encouraged to help fund part of their travel expenses through fundraising events, while AUST covers the remaining costs.

Moreover, SAO organizes trips for students to archaeological, cultural, and touristic sites—primarily across Lebanon, but also occasionally in Europe and neighboring countries—fostering cultural appreciation and community engagement.

Currently, most of the courses are held on campus. However, some technical courses that require input from multiple instructors are offered partially online. This ensures that instructors who are not based in Lebanon can still participate.

As part of its commitment to accessible and flexible education, AUST has implemented a course recording policy. Instructors are required to record each session, allowing students who are unable to attend—due to personal

circumstances or work commitments—to revisit the material at a time that best suits their schedule. This initiative supports inclusive learning and ensures that all students can stay on track, regardless of their individual situations.

In compliance with its mission, AUST aims on helping students on the financial level. For this purpose, AUST has established the Student Financial Aid Program to provide qualified students with financial aid. Furthermore, the FHS actively upholds these values, particularly through its student advising process. Advising begins as soon as a student joins the FHS and selects a program. New students meet with their advisor to discuss their study plan from the first semester through to graduation. These advisory meetings are held before the start of each semester to ensure the students' academic and personal needs are addressed. Furthermore, if a student is employed, becomes employed during their studies, or simply needs to reduce their course load for valid reasons, advisors are always available to offer personalized study plans. These plans are designed to meet both the program learning outcomes and the students' circumstances.

In addition to addressing students' needs, advisors at the FHS closely monitor students' academic performance after each examination period. The Chairperson or Coordinator reviews all grades within their respective departments to identify students who may be falling behind. Meetings are then scheduled with these students to discuss their academic progress and determine the reasons behind any low performance. This ongoing academic follow-up, combined with regular advisory meetings at the start of each semester, helps ensure a balanced distribution of students' workload and supports their overall success.

At the FHS, classes are not solely theoretical; instead, theoretical components are complemented by practical lab sessions. These practical labs provide students with valuable experience even before they graduate.

During practical lab sessions, the FHS guarantees that each student works independently, with their own bench and equipment. To effectively blend teaching and hands-on experience, lab courses are developed for a small number of students. This enables instructors to provide individual support while closely monitoring each step of the practical activity.

Hands-on experience at FHS begins in the first semester, when students are enrolled in introductory lab courses. Completing these labs is required to continue through the FHS curriculum, as they are part of a systematic sequence of prerequisites and corequisites. For example, in their first semester, students typically register the BIO 210 – Cells & Molecules course, along with its corequisite lab, BIO210L – Cells & Molecules Lab. This course serves as a prerequisite for more advanced classes such as the BIO 310 – Introduction to Microbiology and CLS 320 – Molecular Genetics. By following the prerequisite and corequisite structure across all FHS majors, students can achieve the program learning outcomes.

Managing student workload is the responsibility of the academic advisor at the FHS. Advisors ensure that students follow the correct course sequence, proper course workload, and approve the exam schedule. These three key components help guarantee that students are enrolled in the appropriate courses needed to successfully progress into the following semester.

Advisors can evaluate the nature of the workload, the level of continuous engagement required, the number and frequency of quizzes, the types of assignments given, and the amount of time allotted for self-learning. This allows advisors to collaborate with instructors to make any necessary adjustments to the course structure - such as reducing excessive workload or increasing opportunities for independent learning. In addition, advisors monitor students' exam schedules to ensure a fair distribution of assessments, making sure that no more than two exams are scheduled on the same day.

AUST is committed to upholding its non-discrimination statement. On campus, students of various nationalities, ethnicities, religions, and backgrounds interact with mutual respect and ease. Diversity often focuses on race, religion, gender, and nationality, overlooking students with academic, physical, or mental challenges. FHS supports them through the 'A Students Club'. It allows academically strong students to support their peers through mentoring and tutoring, offering guidance and motivation. This peer-to-peer support system not only helps struggling students improve their grades but also fosters a sense of community, responsibility, and collaboration among all students.

The Learning Support Office at AUST is responsible for two service programs, the Learning Enhancement and Assistance Program (L.E.A.P.), and the Learning Support Service (LSS). L.E.A.P. is a 3-year program that was established at AUST in 2007 to help students with learning difficulties reach a certain level of independence and be able to work and make a living. L.E.A.P enrolls 20 to 30 students per year and the feedback from parents is very positive.

The LSS is a new service designed for students who apply to AUST, and who might need certain accommodation due to any Learning Disability (LD) or certain academic difficulties. The Learning Support Office follows certain steps in identifying and addressing special learning needs of students in mainstream classes. This is done in consultation with AUST administration. There are four essential steps that form the core of the procedure for designing and providing appropriate accommodation for students who might need them.

As part of their academic journey, students are required to complete a set number of hours dedicated to community service and volunteer work, which are embedded throughout their major courses. For instance:

- Clinical Laboratory students offer free blood testing services to underserved communities.

- Optics and Optometry students organize mobile eye clinics across the country - especially in underserved areas - and distribute free eye-glasses.
- Radiology students participate in public health campaigns, including breast and prostate cancer awareness and screening events.
- Forensic Science students engage in drug awareness campaigns and educational outreach.

Student's life cycle and student care services

All FHS students are encouraged to actively participate in faculty-wide events such as the Truth Rally Paper, Open Doors, and Health Days. Through these experiences, students not only reinforce their academic knowledge but also develop a strong sense of civic responsibility, empathy, and real-world problem-solving skills - essential qualities for future healthcare professionals.

In its commitment to student development, the FHS offers a variety of courses, technical electives, and external qualifications designed to enrich students' academic and professional experience. These opportunities are made accessible and feasible for all FHS students depending on their majors to register and benefit from. In 2023, AUST partnered with Coursera to offer students a technical elective that includes a recognized Coursera certificate upon completion. This collaboration allows students to gain additional skills through globally recognized platforms. Given the importance of practical health training, the FHS also provides Red Cross certifications, ensuring students acquire essential emergency response knowledge. Forensic Science students benefit from specialized workshops with external reviewers such as Anthropology and the Criminal Mind, allowing them to explore niche areas of their field and gain hands-on experience beyond the classroom. Through these initiatives, the FHS ensures that its students graduate not only with academic knowledge but also with valuable, real-world competencies that enhance their readiness for the job market.

Recruiters from AUST actively engage in outreach by visiting over 400 schools across Lebanon, where they introduce students in the two final years of high school to AUST and its wide range of academic programs. Additionally, senior students are invited to attend the university's open doors usually on Fridays, during which they tour the campus facilities and have the opportunity to interact with AUST faculty members to explore potential academic paths.

Moreover, the FHS hosts a recurring event called the "FHS Truth Rally Paper", where visiting students explore all the departments within the faculty through interactive activities, lab work, and games. Participants have the chance to win prizes, in the form of financial aid upon registration, while learning about the various health sciences disciplines, making the experience informative, engaging, and providing the students insight to the nature of their future career.

Students' application can be submitted by mail, online, or hand delivery. On successful completion of studies an annual commencement ceremony takes place. Despite that AUST maintains an Alumni Association.

The Dean of Students' Admission (DOSA) office is considered one of the main student care services at AUST.

In coordination with academic advisors, they closely monitor students' academic progress. Under the umbrella of DOSA, students also have access to a clinical psychologist for support with interpersonal conflicts, family issues, or personal challenges that may require professional care or ongoing follow-up. The Continuing Learning Department (CLD), also part of DOSA, assists students in finding part-time jobs during their studies and full-time employment after graduation. Additionally, AUST organizes an annual Spring Job Fair, bringing companies to campus in search of qualified candidates among the student body.

Students may register for courses each semester through the Student Information System (SIS), either remotely, from campus, or with the assistance of their advisor. While many senior students prefer to register independently, most students feel more confident having their selections reviewed by an academic advisor. SIS can flag scheduling conflicts or prerequisite issues, but the advisor's check - followed by a final screening by the Registrar's Office - ensures a smooth academic path with no unexpected complications before graduation.

Final grades are made available online through SIS at the end of each semester. If a student wishes to challenge a grade, they may submit an appeal up to the level of the Executive Council. Students can access and review their transcripts online at any time (view-only), while official transcripts can be requested from the Registrar's Office and are typically dispatched to their destination within 24 hours.

Commencement is a landmark event at AUST, marked by ceremony and celebration. Attended by government officials, diplomats, distinguished guests, faculty, staff, students, and parents, the event receives significant media coverage. Over the years, keynote speakers have included the Maronite Patriarch, the Prime Minister, Army Commanders, former Presidents, Ministers, Members of Parliament, and university leaders from around the world.

DOSA also oversees the Career Center, which compiles and shares job opportunities from Lebanon and the Gulf region. The Career Center provides training in CV writing, interview preparation, and professional etiquette. Additionally, all students are required to complete the Work Ready Now (WRN) course, which equips them with the practical skills necessary to succeed in the professional world.

Moreover, FHS implemented advising forms for every program to improve student advising even more. Students receive these directly, making the advising process more organized and transparent.

The faculty actively participates in alumni networking events and job fairs, providing students with practical insights and preparing them effectively for entering the healthcare industry. AUST's alumni frequently return to campus to share their experiences, mentor current students, and maintain their connection with the university. While these interactions are meaningful, AUST continues to work toward more structured and comprehensive alumni engagement in the future.

Faculty management

The FHS is organized based on a certain hierarchy to ensure strong academic management, high-quality education, and adhere to the faculty and program learning outcomes.

The dean of the faculty is the chief academic and administrative officer, reporting to the university's provost. The dean enforces AUST's policies and regulations. The dean guides academics in conveying the department's vision, mission, and goals to alumni, professionals, and other stakeholders. She keeps the faculty on track and focused on achieving the desired results.

The departmental chairperson at the FHS is the program director, who reports to the dean of the FHS. Additionally, the chair may oversee grant-funded programs linked to their respective programs. The chair is in charge of planning, coordinating, evaluating, and assessing the instructional program, advising and supervising students, reviewing peer performance, preparing department reports, administering the department budget, and communicating administrative directives to faculty and students.

The departmental coordinator has three main responsibilities: providing administrative support to the chairperson, managing and coordinating events and projects in the program area, such as mobile clinics and meetings that promote evidence-informed innovation in healthcare organizations and connect healthcare leaders with strategic priorities, and providing general program assistance and coordination to the team, including the creation of briefing documents to assist with planning and program development. These duties can fall under the responsibilities of the Chairperson in case the department does not have a current coordinator.

At the FHS full-time and part-time instructors are responsible for delivering the courses to the students, evaluate and provide timely feedback on students' assignments, presentations, and projects, encourage students on extracurricular activities and community service, and finally, respond to students' requests as much as feasible.

The assistant supports the dean, chairperson, and coordinator, handles alumni affairs and public relations, prepares correspondence and reports, coordinates automation activities, maintains files and records, compiles Dean's Office reports, brochures, and printings, and provides backup to office staff.

Handled diverse administrative tasks including event planning, student advising and registration, preparing official documents (MEMOs and MOUs), supporting academic leadership, coordinating course offerings, and maintaining communication with part-time and full-time instructors.

All of the academic staff from the dean to the administrative assistants are responsible for aiding the students, from advising to following up on abiding by the program. This is made more possible specially at the FHS, which follows the open-door policy. All personnel should remain accessible beyond their posted office hours.

AUST internal support

All the students at AUST have access to immediate support just by accessing the website or the mobile app. Students can submit any type of petition through the online portal. Those petitions can be:

Withdrawal: This petition is accessible for all students wishing to drop from a specific course. After talking with their academic advisors, students may take this step to drop from a course, for several reasons, such as low grades, inability to attend, or to deliver deadlines.

- Make-Up Exam: Students who miss any of the three exams on the course level, or two exams on the lab level, can submit a petition to sit for a make-up exam.
- Absence: If in any case students are not able to attend a specific session, they can submit an absence petition to be exempted.
- Financial Aid: in alignment with AUST's mission, applying for the financial aid is accessible for all students.
- Student Petition: Students may use this petition, to apply for any help, or guidance. They may use this petition to drop from a semester, and if they decide to uphold their studying for later or to withdraw from the university.

Petitions are first processed by the Dean of Student Affairs office. The DOSA office may call students for a meeting to follow up, call hospitals or doctors to check the validity of medical reports and have one on one meeting with the students and their advisors. With the help of the DOSA, the FHS is able to help students abide by the program.

AUST external support

At the FHS and in the mission of continuing development, the FHS advisory board was developed. This advisory board has a lot of roles and responsibilities such as:

- Provide insights and recommendations on the faculty's strategic direction, including academic programs, research initiatives, and community engagement.
- Help updating and defining the long-term goals and vision for the faculty.

- Assist in the review of curricula and academic offerings and suggest improvements to ensure they meet industry standards and student needs.
- Encourage innovative teaching methods and interdisciplinary approaches.
- Facilitate connections with industry partners, alumni, and other stakeholders to enhance opportunities for students and Faculty.
- Act as ambassadors for the faculty, promoting its strengths and achievements.
- Support fundraising initiatives whenever possible and provide insights into grant opportunities for the up keeping of Faculty development and research.
- Support efforts to maintain and enhance academic quality and accreditation standards.
- Provide feedback on program assessment and evaluation processes.
- Offer mentorship to Faculty members whenever possible, especially early-career educators and researchers.
- Support Faculty development initiatives, including workshops and training programs.
- Encourage Faculty involvement in community service and outreach programs that benefit both the faculty and the local community.
- Promote public understanding of the faculty's role in societal development.
- Gather and relay feedback from external perspectives regarding the faculty's performance and reputation in the community and industry.
- Provide counsel during challenging times or crises, offering perspectives that can guide effective response strategies.

In addition, to the role of the advisory board, the FHS is keen on updating and signing Memorandums of Understanding, with various facilities in the Lebanese health sector. Those MOUs include agreements with hospitals, private laboratories, imaging centers, F&B sector, ISF, primary healthcare centers, optical shops, and edging and dispensing laboratories. Those MOUs are another way for the faculty to allow the students to get used to work environment, enhance their communication skills, and allow them to see the various possibilities of their job.

Signing MOUs and having students finalize their trainings and internships is crucial but monitoring them throughout the process is as important. Preceptors appointed by the FHS are responsible for monitoring students as they are completing their trainings and internships. Preceptors are experienced employees working in the specified sector, appointed by chairpersons and coordinators to follow up on students, help them in knowing and understanding the work environment and eventually grading their general and specific performance.

Financial needs

Students with financial needs are encouraged to apply for financial aid. DOSA evaluates the financial situation of the student and accordingly provides discount percentage. Scholarships are also provided to students with high academic standing encouraging them to maintain a high GPA throughout their studies. AUST also encourages students to join different sports clubs in return of financial discount.

The Faculty of Health Sciences also provides discounts for the students who work as laboratory assistants. Students are given a 1% discount for each one hour of work per week. The laboratory assistantship not only helps students financially, but also develops their work ethics, shapes their personality, and allows them to grow professionally. It also helps students gain the technical skills needed in CLS.

Advising and career guidance

Students benefit from dedicated academic advising throughout their studies, ensuring they are guided in course selection, research opportunities, and career planning. Faculty maintain open-door policies and regular office hours to support individualized learning needs. Career workshops and the HMS 300 "Work Ready Now" course further prepare students for employment through soft skill development and job market orientation. A high percentage of the students already work to support themselves financially. They are also driven by the thirst to gain, as much as possible, experience to excel in their respective field. The departments help students in finding suitable opportunities to meet their expectations.

Students' diversity

Building on AUST's mission to provide quality education to everyone regardless of their economic, educational, cultural, and socioeconomic backgrounds. The university fosters an inclusive learning environment, providing scholarships and support systems also for students from underprivileged backgrounds. Moreover, diverse faculty members bring international expertise, allowing students to learn from professionals with varied backgrounds. The departments attract students from different nationalities. They mainly come from Lebanon, Syria, Palestine, and Iraq. Were the country politically stable and more secure, student diversity would be wider to include more nationalities.

BS in Clinical Laboratory Science

Current status

Please refer also to the cross-program aspects outlined above: applicable to all degree programs.

In 2022, the FHS launched a double degree program in partnership with Université Catholique de Lille for the CLS program. This initiative allows CLS students to spend one year studying abroad at the partner university and graduate with two degrees upon completing their BS, highlighting the effectiveness and high standards of education at the FHS.

Assessment

The reviewers conclude that the implementation of the study programs at AUST is highly effective and fully supports the achievement of intended learning outcomes. Admission requirements and regulations for recognition of qualifications are appropriate and in accordance with the principles of the Lisbon Recognition Convention. The programs' structure and workload, as well as the number and density of examinations, enable students to complete their studies within the standard period.

The institution demonstrates a strong commitment to a student-centered learning environment. Students benefit from comprehensive support services, including individual academic monitoring, open-door policies, guidance for internships, and opportunities to work as laboratory assistants. Extracurricular offerings, such as sports facilities, further contribute to students' personal development. Faculty members are highly accessible, both during office hours and via email, and provide dedicated supervision, guidance, and support throughout the study process. Students consistently reported high satisfaction with the quality of teaching, advising, and overall academic experience during the site visit. The proportion of working students is higher than at comparable institutions, indicating that support structures effectively enable students to balance academic and professional commitments.

The reviewers positively note that cooperation with external partners at AUST is well organized and effective. The university maintains strong affiliations with major hospitals, clinical centers, and universities, including the University of Beirut, which provide students with extensive opportunities for internships and practical training. The Forensic Science Department, in turn, maintains affiliations primarily with national institutions, ensuring relevant practical exposure for its students. Part-time faculty holding professional appointments at these institutions further enhance the quality and relevance of practical learning. Preparatory meetings and structured communication with students ensure that they are well-informed and adequately prepared for all practical placements.

For the CLS program, the reviewers commend the launch of the double degree program in 2022 in partnership with Université Catholique de Lille. This initiative demonstrates the high standards of education at FHS and the institution's commitment to internationalization and providing students with valuable global learning opportunities. The reviewers consider this initiative fully

aligned with the objectives of enhancing academic quality and international exposure for students.

Moreover, the reviewers positively recognize that the university demonstrates a strong commitment to diversity and inclusion across its study programs and administrative structures. Students from diverse cultural, social, and educational backgrounds are welcomed and supported, and the institution takes deliberate measures to ensure that their individual needs are recognized and addressed.

Overall, the reviewers consider the implementation of the study programs and the associated student support services to effectively foster a holistic, student-centered learning environment. Students benefit from close supervision and support by highly committed and competent academic staff.

According to the reviewers, all the requirements of the fourth criterion regarding student organization are fully met.

BS in Optics and Optometry

Current status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Radiologic Sciences

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Forensic Science

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

5. Resources

This criterion focuses on the adequacy and sustainability of resources allocated to the program. The reviewers assess whether the involved faculties are sufficiently equipped in terms of personnel, infrastructure, and financial resources to deliver the program effectively. This includes an evaluation of the sustainability of funding and the institution's financial management practices.

The qualifications and number of academic and administrative staff are reviewed in light of their ability to ensure the achievement of the intended learning outcomes. Furthermore, the reviewers analyze the higher education institution's strategies and procedures for staff recruitment, retention, and professional development.

The reviewers also examine whether the quantity and quality of facilities and equipment - such as libraries, laboratories, teaching spaces, and IT infrastructure - are suitable for the implementation of the program and aligned with its objectives.

Current Status

Cross-disciplinary aspects: applicable to all degree programs

Physical resources

All classrooms are equipped with computers and audiovisual equipment as well as with smart boards with touch screens and windows operating systems that can operate software. These boards provide immediate access to the Internet during class discussions. Although classroom presence became obligatory as of Fall 2022, the smart 9/boards provided easy and total access for students who opt to follow online, if they are incapacitated or outside Lebanon. Furthermore, with these boards, students have the extra option to review the whole class session even after the live session is terminated.

Although the Lebanese Ministry of Education and Higher Education does not recognize online education and has a penchant for face-to-face education, AUST was allowed delivery through a blended approach. AUST has taken full advantage of this breakthrough and had notable proficient faculty members who could not be found in Lebanon to teach classes online and finish the course with minimum physical presence in the classroom. AUST faculty, staff and students have access to the library holdings of EBSCO (online library service) which offers access to a wide range of library services. Training on the use of EBSCO is done on individual basis for new faculty and staff and in groups to all new students. The library staff are always ready to train individuals who need assistance.

Digital access and learning resources

To support diverse learning preferences and needs, AUST provides students with access to online platforms, digital libraries, and e-learning tools. The university ensures equitable access to course materials and lecture content, fa-

cilitating both in-person and asynchronous learning. This has proven particularly valuable for students balancing academic work with part-time employment or family responsibilities.

The FHS offers its instructors and students the following:

Media in faculty library (books, journals, digital media):
More than 10,900 hard copy books that are growing at the rate of 500 items annually.
21,970 soft copy books of all majors available on the searching engine "Business Source Complete" by EBSCO and SCOPUS
Online memberships to 2,365 scientific journals
Computers connected to the Internet
Subscription to EBSCO and SCOPUS Host for scientific publications

Furthermore, AUST library has concluded an agreement with the library of the leading older university in Lebanon. Whereby AUST members may have access and borrowing privileges to their holdings through the Librarian. One of the main factors that sets AUST apart is the high tech and well-equipped laboratories where students can practice the theoretical learning spread over a space of 1210 m². The following table represents the different labs at the faculty:

Facility	Space m²
Bio-Analytical Chemistry Laboratory	80
Biology Laboratory	54
Chemistry and Food Science Laboratory	66
Computer Laboratories	500
Nutrition Laboratory	40
Microbiology Laboratory	55
Molecular Biology Laboratory	82
Crime scene lab	55
Research lab	52
Contact Lenses Laboratory	32
Refraction Laboratory	12
Dispensing Laboratory	32
Offices	150

A detailed representation and explanation of each instrument displayed in the labs for teaching purposes during classes as well as for research projects has been attached to the SER.

Periodic evaluation of resource sufficiency is conducted to ensure alignment with program evolution, student feedback, and international standards.

Faculty

The FHS offers six undergraduate programs along with eight graduate programs. The total number of students is 450 with 25 postgraduates. To date, the faculty has 15 full-time academic staff with a teaching load of 12 credit hours per semester, 52 part-timers and 19 FTE. In parallel, seven administrative and technical staff covering academic affairs, student services, IT, finance, HR, and maintenance. The table below represents the details of the distribution of the academic staff and the students in each department in the FHS.

	BS in Clinical Laboratory Science	BS in Optics and Optometry	BS in Radiologic Sciences	BS in Forensic Sciences
Credits	120*	120*	105*	106*
Capacity per semester/study year	30 students	50 students	40 students	70 students
Number of students (actual semester)	85	109	66	116
Full-time academic staff in the program	3	4	2	3
Part-time academic staff in the program	10	8	6	11

Distribution of the academic staff vs students in each department of the Faculty of Health Sciences. *For students starting the sophomore year.

The institution's human resources (HR) strategy has been developed to support its academic mission and strategic goals. HR functions are integrated with the teaching, research, and administrative functions of the institution with regard to staffing and staff training activities. The HR strategy supports transparency in hiring, advancement opportunities, equal employment opportunity, and staff retention. The Faculty Affairs Policy describes the processes, among them faculty recruitment and promotion of the faculty. Faculty positions are identified based on the needs of individual academic programs, student enrolment trends, and research requirements. The final hiring decision is made on the basis of academic qualifications, research potential, and teaching abilities in alignment with the goals of the respective department.

Involvement of faculty in the governance of the institution is guaranteed in their participation in council meetings, departmental meetings and faculty meetings. The promotion of a faculty member is based on the evaluation of teaching effectiveness, research productivity and record of service. The university provides all requirements that a faculty member needs to be judged worthy of promotion such as access to unlimited internet, e-mail, library facilities, seed money for research, computers, laboratory equipment, needed software, travel to conferences and payment for publishing research output

in refereed journals. Faculty members are consulted when a new Chair or a new Dean is appointed.

Research funds and financing

Good teaching and classroom delivery are prioritized but research remains a Sine Qua Non requirement for advancement in professorial rank. The research conducted by AUST faculty members is generally characterized as applied research. However, there is also some fundamental research, particularly in the field of biology.

The allocation of research funds from the revenues collected from students is kept to the minimum limits stipulated by the government (5% of the operating budget). The funds allocated for research are dispensed and used as follows:

- a) seed money for research
- b) travel subsidy to deliver papers ensuing from research done at AUST
- c) cost of publishing (journals and books)

Seed money, travel subsidy and cost of publications are all governed by requests made by the researcher to the University Research Council (URC) and dispensed according to amounts approved by the Executive Council based on recommendation by the URC. Research that deals with humans requires further approval of the Institutional Review Board (IRB).

Faculty members with doctorate degrees need to show visibility through published work in internationally referred journals in order to qualify for consideration for advancement in professorial rank. Faculty members are encouraged to seek funding for their research projects from outside AUST.

The National Council for Scientific Research (CNRS) has traditionally been a key funding body for faculty research, with several AUST researchers benefiting from its grants. Since the 2020 economic crisis, however, its financial resources have been severely limited. A resumption of full funding activities is anticipated in the future. Despite all the negatives that have tainted the Lebanese scene, some faculty members have secured international research support, including collaborative projects in the biological sciences and grants from the private sector for research in health-related fields.

AUST has established cooperations with European universities, particularly in France, through co-tutelle and co-direction of Ph.D. research, including partnerships with Université de Lille, Université de Nantes, and Université Catholique de Lille. Since 2003, all faculty promotions in rank were tightly tied to research visibility as evidenced by publications in international refereed journals.

Research requirements typically apply to PhD faculty seeking promotion, with or without graduate student assistance. There is a growing emphasis on involving undergraduate students in research activities. Faculty members with master's degrees are not required to conduct research, though they may receive similar support if they choose to do so. Some are actively engaged in

research across fields such as Engineering, English, Education, and Design. Research requirements apply only to full-time faculty with doctoral degrees. Part-time faculty may receive travel funding for conferences if the research is conducted at AUST and the institution is credited in any resulting publication.

Except for the Lebanese University, all universities in Lebanon are private and rely primarily on tuition for revenue. AUST's funding comes almost entirely from tuition, with occasional donations directed to the student scholarship fund. From its inception, AUST has emphasized providing American-style higher education to financially disadvantaged students, and current fundraising efforts remain focused on student aid.

In a context of social, economic and political uncertainty, AUST and the FHS had to adapt continuously to challenges. The most important consequences that hit the education sector in Lebanon as a direct result of war are:

- Widespread students and university displacement
- Financial barriers to education and brain drain
- Psychological impact on students
- Disruption of academic year
- Ongoing recovery efforts

Facing all these challenges the aim of AUST was to maintain a credible operation in face of the economic collapse. The administration had to figure out how to adapt to an escalating situation and an unpredictable and dangerous war affecting the whole country. AUST has been considering increasing the geographical reach of its course offering a year before the economic crisis. "Blackboard", an online system for online teaching was purchased, and staff and faculty received a training prior to this crisis affecting Lebanon. This online solution was used during COVID and can be used also as an emergency plan to overcome the complex situation in case of any escalation of the war.

The Vice President for Finance and Administration (VPFA) is the key person in the Budget cycle. It is the office of the VPFA that initiates the Budget Cycle and follows it up to a conclusion. The offices directly involved in collecting and dispensing funds according to the approved budget employ nine full timers (with college degrees). An internal auditor rechecks all income and expense statements. The university also employs RSM as the external auditing firm (historically, RSM was derived from the initials of the three original founding firms - Robson Rhodes of the UK, Salustro Reydel of France and McGladrey of the USA). The annual budget as approved by the Board ensures that the salaries are guaranteed and that the plans for growth requested by cost centers and approved by the Board are to be financed a year ahead of implementation.

BS in Clinical Laboratory Science

Current status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

The reviewers commend that the resources allocated to the programs at AUST are fully adequate and sustainably managed.

Academic and administrative staff are well qualified and sufficient in number to ensure that the intended learning outcomes are achieved. The institution demonstrates effective strategies for staff recruitment, retention, and professional development. They have diverse international backgrounds and degrees from renowned universities, and demonstrate strong professional engagement, including participation in international conferences and the organization of voluntary training sessions. In this context, reference is also made to the evaluation presented in the Quality Management chapter in this report. Some courses are also delivered online by faculty based in Canada and the United States, while all examinations are conducted on campus, ensuring both flexibility and academic integrity.

The institution provides state-of-the-art infrastructure to support student learning. This includes classrooms equipped with cameras and sound systems to facilitate remote participation, well-resourced libraries, modern laboratories, and comprehensive IT facilities. The reviewers think, it is highly commendable that students are granted access to the practice rooms outside of regular lab hours.

They have seen sufficient evidence that students have reliable online access to course materials, research papers, and other academic resources. Overall, from the reviewers' perspective, the library's facilities ensure that students have the necessary resources to succeed.

Although AUST's funding comes almost entirely from tuition, with only occasional donations directed to the student scholarship fund, the reviewers were informed that the program benefits from secure and sustainable funding, and the institution demonstrates sound financial management practices that ensure both the long-term stability and the continued development of the program.

Affiliated institutions and memoranda of understanding further strengthen practical training and applied learning opportunities. Taken together, the reviewers have no doubt that the financial, human, and physical resources fully support the achievement of intended learning outcomes and enable students to acquire both theoretical knowledge and practical skills. The reviewers consider the resources provided by AUST to be well-suited to the objectives of the program, and fully supportive of high-quality teaching, learning, and professional preparation.

The reviewers conclude that all requirements of the fifth criterion concerning resources have been fully met.

BS in Optics and Optometry

Current status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Radiological Sciences

Current Status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

BS in Forensic Science

Current Status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

6. Quality assurance

This criterion addresses the internal and external quality assurance mechanisms applied to the design, implementation, and continuous improvement of the study program.

The reviewers evaluate the overarching quality assurance concept of the program, including the processes, instruments, and indicators used to monitor the achievement of its objectives. Attention is given to how the institution and program management collect, analyze, and utilize relevant data to inform decision-making and enhance quality.

The reviewers assess whether quality assurance measures are applied regularly, systematically, and effectively, and whether feedback loops are closed to support continuous improvement. Additionally, the involvement of key stakeholders—such as students, academic staff, administrative personnel, and external partners (e.g. employers)—in quality assurance processes is reviewed. The panel also examines the availability and clarity of program-related information provided to current and prospective students.

Current status

Cross-disciplinary aspects: applicable to all degree programs

Accreditations

The new Higher Education Law (285/2014) specifies certain requirements that a tertiary education institution must meet to be recognized and maintain good standing. For example, institutions cannot be established or add programs, colleges, or campuses without a decision from a national committee of educational reviewers. Universities must also seek accreditation from recognized and respected international bodies for both their quality management systems and the quality of their study programs.

All the programs at the FHS are accredited by the MEHE. In addition, the FHS laboratories are either ISO 17025 accredited – such as the microbiology labs – or currently in the process of renewing their accreditation, as is the case for the Genetically Modified Organisms (GMO) testing lab. Meanwhile, the forensic analysis lab is working toward receiving ISO 17025 accreditation as well. As for the toxicology lab, it is accredited with a Good Laboratory Practice (GLP) certificate. The institution obtained reaccreditation for its Computer & Communications Engineering program from the Accreditation Board of Engineering & Technology (ABET) and accreditation for its Business programs from the International Accreditation Council for Business Education (IACBE). The Computer Science program is also accredited by ABET. The relevant certificates are attached to the SER.

Moreover, AUST holds institutional accreditation from EVALAG.

Quality management system

AUST adopts a quality management system that mainly focuses on the effectiveness of teaching and student learning, the validity of the programs that it offers, and the good running of the functions that ensure a smooth and safe life on campus. The FHS ensures that all academic programs meet the requirements established by the Ministry of Education and Higher Education. In addition, the faculty works closely with national professional bodies such as the Lebanese Syndicate of Medical Laboratory Technologists, the Syndicate of Opticians and Optometrists, the Lebanese Syndicate of Radiographer, the Order of Nurses, and the Lebanese Order of Dietitians to ensure that courses satisfy professional license criteria and adhere to the highest ethical and practice standards.

The evaluation of program validity falls under the jurisdiction of the respective faculty. FHS departments work extensively to keep the programs in line with national qualifications frameworks, accreditation requirements, and labor market demands. This approach incorporates input from academic staff, industry partners, advisory board, alumni, and student representatives. In ad-

dition, they carry out benchmark analysis to guarantee competitive and relevant comparable national programs. FSH regularly updates its references and enhances course materials through ongoing advisory board meetings, effective collaboration with the MEHE, and consistent departmental meetings to ensure that student needs are aligned with learning outcomes. These initiatives support continuous development through curriculum upgrades, syllabus revisions, and content updates.

Defined academic policies, certified teaching staff, and standard course specifications serve as guidelines for the implementation of the study program. The chairpersons assess that the program objectives align with the course learning outcomes. They also collaborate with the Quality Assurance Department (QAD) to verify that the teaching quality and learning activities, assessment techniques, and student support services adhere to predetermined criteria. The "Planned semester Activities" structure organizes each semester's activities, including course offerings, faculty meetings, advising, and examination periods, with weekly progress reports to the QAD.

A defined quality assurance (QA) framework exists at the program level, fully integrated with the institution's overarching QA system. Each academic program follows a structured QA process encompassing curriculum development, instructional planning, implementation monitoring, and periodic evaluation. These processes are aligned with the university's central QA framework, coordinated by the QAD. The QAD oversees a set of "Planned semester activities" outlining the processes and procedures required from both academic and administrative departments. These activities are distributed across the semester, including registration week(s), the 15 weeks of instruction, the final examination period, and the grade posting period. A process manual, developed in collaboration with the relevant departments, ensures proper implementation of these activities.

Department chairs and/or program coordinators report on the execution of these processes weekly, submitting their reports to the QAD. The QAD consolidates the reports and monitors whether the scheduled tasks were completed and whether they meet the established standards based on predefined indicators. Indicators may be quantitative or qualitative. Examples of quantitative academic indicators include: the percentage of instructors attending faculty meetings, the percentage of new students participating in general orientation, the percentage of senior students receiving advising to ensure timely graduation, and the number of industry contacts for student training and job placement. Examples of qualitative indicators include: the preparation of preliminary course offerings for the next semester and the revision of syllabi.

Administrative departments also report quantitative indicators, such as the percentage of target schools visited by the admissions office, the number of students issued acceptance letters by the registrar, and the percentage of tuition fees collected by the bursar's office, as well as qualitative information,

such as whether the registrar submitted the course offerings to the IT department on time for online posting and whether the bursar's office reminded students of tuition installment deadlines.

Certain tasks within the "Planned semester activities" are interlinked between academic and administrative departments. For example, the registrar provides lists of senior/graduating students to academic departments for advising and graduation clearance, and the IT department issues usernames and passwords for instructors, while academic departments ensure that course materials and syllabi are uploaded to Blackboard.

The QAD ensures that effective feedback mechanisms are in place to support continuous improvement. Feedback is collected from external stakeholders, instructors, and students, with any discrepancies or quality gaps reported to the dean's office. This approach facilitates timely decision-making and follow-up, ensuring that program-level QA initiatives are fully integrated into the faculty's overall quality management system.

Continuous monitoring of student progress

Formative and summative assessments are strategically embedded across the curriculum to monitor student performance and support learning progression. Instructors provide constructive feedback, and struggling students are identified early and referred to academic support services when needed. AUST meets students' needs through a combination of curriculum relevance, practical engagement, academic advising, responsive feedback systems, and inclusive values, thus enhancing the overall quality and relevance of the student learning experience.

Students' voice and feedback mechanisms

Students actively engage in quality assurance through a variety of organized and informal methods. At the end of each academic term, students assess both theoretical courses and clinical training components. AUST encourages student feedback through course evaluations, student representation in academic committees, and periodic satisfaction surveys. At the end of every semester, students evaluate both courses and instructors as part of AUST's commitment to continuous improvement. Informal input is also encouraged through open-door office policy, designated student liaisons, and frequent meetings, which provide students with numerous chances to express problems, make changes, and participate in academic decision-making. This feedback loop contributes to continuous program improvement and the adjustment of teaching strategies, course content, and administrative processes. Recent changes to course content and teaching delivery methods have directly responded to student input regarding workload balance, assessment clarity, and engagement levels.

Quality assurance processes and instruments

The evaluation of the validity of the programs is within the jurisdiction of the FHS. The academic departments regularly evaluate the validity of their programs and report it to the Executive Council through the faculty dean. This is done through evaluating student learning outcomes from each course and the whole program through a variety of defined indicators such as course exams, course projects, senior projects, internships, practicum, exit exams, colloquium, students' performance in exchange programs, and graduate studies.

The scope of work of the QA covers the following functional areas:

- Monitoring the execution of academic processes, rules, regulations, and procedures, such as: presenting the course offering on set deadline, courses offered match the needs of students, courses' capacities are met, books are available for students on the set deadline, process of approving courses syllabi, course materials and syllabi are posted online on the set deadline, process of hiring new faculty members, process of evaluating faculty members, process of submitting final examinations, proctoring of exams, process of posting of final grades, process of changing a grade, change major process, advising of students during advising periods, process of evaluating senior projects, process of execution of events, clearances for graduation process, process of make-up exams, branch visitations.
- Monitoring the execution of administrative activities pertaining to administrative rules, regulations, and procedures, such as students' admission process, hiring of staff process, staff evaluation process, staff development process, school orientations process, students' requests (absence, withdrawal, certificates, transcripts, counselling, make-up exams...) processes, graduation process, purchasing process.
- Students' feedback is incorporated as well in the decision-making process. Students' evaluation of courses is considered to be an essential criterion in the evaluation of faculty members' teaching effectiveness. The chairperson of each academic department conducts an evaluation of the faculty members in the department on a yearly basis. The evaluation is based on several criteria that include the faculty members' performance in academic and administrative duties. Respectively, the students' and the chairperson's evaluation hold 52% of the total score of the faculty member evaluation. A faculty member who receives a weighted score less than 3.0/4.0 will have to discuss the reasons behind this "low score" with the chair and the dean, and an improvement plan will be drafted and monitored by the chair. If the score of less than 3.0/4.0 persists in a subsequent semester, the contract of the faculty member is not renewed.
- Representatives from the job market attend Advisory Board meetings to review, recommend enhancements, and approve meeting minutes.

The FHS will gradually incorporate the comments into the assessment of the program's objectives.

- Students who petition the concerned chairperson/dean on any issue pertaining to academic or administrative matters receive a message/email of their petition indicating the decision regarding the petition and the actions to be taken if applicable.

Quality enhancement

AUST fosters a quality culture through the participative system that is adopted by AUST management as a whole. All chairpersons, deans, and heads of administrative departments are involved in updating the process and procedures manual on a yearly basis. Such a participative system enables everyone in the institution to recognize the relevance of the quality processes and actively participate in the development and enhancement.

Regular, data-driven, faculty-wide quality improvement is guaranteed by this integrated QA system. Depending on the procedure, quality assurance activities are carried out weekly, semesterly, or annually and are incorporated into the university's operating calendar. The way the "Planned semester activities" are carried out serves as a gauge for performance quality and compliance.

Students' course evaluations after each semester are used by FHS as both a source of feedback and a catalyst for quality enhancement. For instance, the academic departments updated the syllabi after several students expressed concerns with the clarity of the evaluation criteria in particular courses.

Additionally, the FHS has embraced a data-driven strategy for quality control. Midway through the semester, project ideas/progress are examined and approved under the mid-project checkpoint system implemented by the FHS. This intervention dramatically increased project outcomes and decreased the failure rate.

The QAD also makes sure that industry, alumni, and student input are used effectively when the Educational Objectives are reviewed regularly.

Feedback loop cycle

The various quality assurance instruments that are detailed above are regularly and systematically used for quality assurance purposes. These instruments are used on a weekly, monthly, semester, and/ or yearly basis depending on the instrument. The "Planned semester activities" are used on a weekly basis, students' evaluation are conducted at the end of each semester, data on graduate's employment status is updated yearly, and feedback on students and graduate's performance in the workplace is received regularly by the Job Placement Office as part of its daily task. The QAD reports the outcome of the various instruments to the concerned academic and administrative department and the Executive Council to close the feedback loop. Therefore, as per the quality principle "factual approach to decision making", all analyzed efficient decision making for continual improvement of the faculty.

Chairperson's role in quality assurance

To guarantee ongoing program improvement, the program's responsible party - usually the department chairperson or program coordinator - systematically gathers, examines, and applies pertinent data in collaboration with the QAD. The QAD collects feedback from other University constituents:

Online course assessments are used to gather student input. The program chair discusses recurring problems with faculty members during departmental meetings. Examples of these problems include unclear assessment criteria or low satisfaction with course delivery. The improvement is put into practice in the following semester.

Every year, alumni are sent an online survey to collect data about graduate employment. This data is analyzed by the program chair to assess how well program outcomes match labor market demands. The curriculum may be modified to include new courses or improve the practical training components if trends reveal deficiencies (such as a skills mismatch).

The job market provides valuable feedback on the performance of students and graduates hired by various institutions. Many companies operating in Lebanon regularly reach out to the chairs of the FHS to recruit students and graduates for available job opportunities. The departments maintain regular follow-ups with these employers to assess whether students were successfully hired and to gather feedback on their performance. In addition to post-graduation feedback, follow-up also occurs during the internship and clinical training periods, where the Chairperson closely monitors and evaluates students' progress, engagement, and overall status. This ongoing oversight ensures early identification of any concerns and allows for timely intervention. Any quality-related issues identified during these follow-ups - whether in training or employment - are reported to the concerned department, which takes appropriate corrective actions to enhance program quality and student preparedness.

Quality complaints from any of the University's stakeholders pertaining to non-adherence to set processes and procedures are reported to the FHS for corrective action with the concerned department.

Stakeholder involvement in quality assurance

Stakeholder participation is critical to the QA procedures of the Faculty of Health Sciences. By incorporating students, professors, administrative staff, and external stakeholders such as healthcare employers and clinical partners, we guarantee that our academic programs are up to date, responsive, and in line with educational standards and healthcare sector expectations. Across all disciplines, this cooperative approach helps to continuously enhance graduate abilities, teaching methods, learning environments, and curriculum material.

Faculty involvement

Faculty members across all health science programs at the FHS play a central role in quality assurance by maintaining academic rigor, ensuring alignment with professional standards, and responding to the evolving needs of the healthcare sector. They regularly assess and update course syllabi and program learning outcomes, integrating the latest research, technological advancements, and regulatory guidelines.

Teaching practices, assessment tools, and clinical supervision methods are also subjected to peer review and internal audits to uphold consistency, fairness, and instructional excellence. A structured classroom visitation system is also in place to support instructional quality and professional growth. Senior faculty, department heads, or program coordinators conduct regular classroom visits, particularly for new instructors, to observe teaching techniques, classroom engagement, and the use of instructional materials in relation to the approved syllabus and learning outcomes.

To further strengthen teaching and learning, FHS supports robust faculty development through ongoing training initiatives. In collaboration with the Higher Education Center for Development (HECD), faculty members participate in workshops and seminars on outcome-based education, curriculum mapping, student-centered teaching, assessment strategies, simulation-based learning, interprofessional education, accreditation standards, and research ethics. Additionally, faculty are encouraged to engage in self-paced certification programs offered through online platforms such as Coursera with whom AUST has signed a MoU. These programs cover topics including academic writing, educational technology, instructional design, and healthcare innovation, with completion officially recognized as part of faculty development records.

Administrative involvement

Across all programs at the FHS, administrative departments are essential to the implementation and upkeep of quality assurance measures. By using written regulations, standardized assessment instruments, and frequent audit procedures, the administration enforces the faculty's quality assurance system, guaranteeing adherence to accreditation and institutional norms. The QA Unit and the Dean's Office are in charge of gathering and maintaining important data, such as student and stakeholder input, graduate employability statistics, and academic performance measures. These data are examined methodically to facilitate evidence-based decision-making and ongoing program enhancement. The administrative staff is also crucial in planning and organizing recurring accreditation visits and external reviews. Additionally, they support the faculty's dedication to upholding high standards in instruction, evaluation, and graduation results.

Employer and clinical partner involvement

Enhancing the relevance and quality of academic programs at the FHS requires the participation of external stakeholders, including advisory board, clinical supervisors, employers, and alumni. Their efforts guarantee that the curricula continue to reflect the changing demands of the healthcare industry. Members of the Advisory Boards to offer strategic feedback on curriculum development, new developments in healthcare, and graduate performance. Additionally, during clinical rotations, students receive organized assessments from clinical supervisors and preceptors that emphasize professionalism, practice preparedness, and core skills. Employer input on recent graduates' performance, especially in areas like communication, critical thinking, and technical abilities, is gathered through graduate follow-up studies, which are carried out to further evaluate the efficacy of the program. In order to provide students with career counselling, the FHS works with the Career Learning Development (CLD) office. Career counselling services include interview preparation, CV writing, job search tactics, and career planning.

Department heads and clinical supervisors are important liaisons between students and healthcare facilities. They organize internships and clinical placement assistance and help students ace national certification examinations (colloquium exam).

All procedures and policies are regulated within the Governance and Quality Management Manual of AUST.

BS in Clinical Laboratory Science

Current status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

The reviewers acknowledge that the institution has established a comprehensive quality assurance framework that supports the systematic design, implementation, and ongoing improvement of the study programs. Internal and external mechanisms are in place, and the reviewers were informed that processes and tools for monitoring the achievement of objectives are applied with diligence. Apart from that, the reviewers recognize that the university continuously seeks to improve its mechanisms and welcomes the proactive engagement of all stakeholders in enhancing program quality. The university demonstrates a strong commitment to collecting and analyzing relevant data in order to inform decision-making and to foster a culture of continuous improvement.

Moreover, the reviewers note that the university has effective procedures in place to inform current and prospective students about its programs, ensuring that relevant information is clear, accessible, and well-communicated.

Nevertheless, the panel identified areas where the quality assurance system requires further refinement to ensure its full effectiveness and sustainability.

Although students are represented in academic committees and regularly participate in course evaluations, they reported that they are unable to access the survey results. Likewise, student feedback was not available to the reviewers. To further strengthen the system, students are to be granted access to the survey results and actively involved in discussions of identified shortcomings. Clear communication of follow-up measures and implemented changes is essential to complete the feedback loop and to reinforce continuous improvement. Therefore, the reviewers issue the following condition: Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.

The reviewers thank the university for their statement and welcome the initiatives outlined therein. They commend AUST for reinforcing the role of the Quality Assurance Department through comprehensive access to survey results and the corrective measures implemented by departments and faculties, thereby ensuring the effective closure of the quality assurance loop. Furthermore, the reviewers appreciate the measures taken to promote student engagement in quality assurance, notably the provision of survey results and corresponding improvement actions each semester via the Blackboard System. The approach of reporting student-instructor evaluation results using instructor identifiers is also welcomed, as it safeguards individual privacy while maintaining the meaningfulness of the feedback. The reviewers take a positive note of the scheduled implementation of this process in Spring 2026.

The reviewers note that the current quality assurance of internships and practical components is not sufficiently transparent, and mechanisms to ensure consistent quality are not clearly documented. Given that, for the majority of study programs, more than 50% of the curriculum takes place outside the university, this represents a significant reliance on external partners, which could pose a potential risk to the continuity and academic integrity of the program. Additionally, rotations currently vary between the university clinic and community services, highlighting the need for a standardized oversight framework. Therefore, the reviewers issue the condition that the university shall implement a formal quality assurance mechanism for all internships and practical components. This mechanism shall monitor, support, and ensure that external learning experiences consistently meet academic standards. Clear procedures, responsibilities, and monitoring tools are to be established to guarantee transparency and maintain the high quality of the programs, regardless of the involvement of external partners. The reviewers welcome AUST's initiative to use the existing Symplicity platform for managing and tracking student internships. The first phase of implementation is planned for Spring 2026, with full deployment across all programs scheduled for the next academic year.

The reviewers have identified an additional area with potential for improvement, namely dropout rates. In reviewing the data on dropout rates, they note that the quality management system could be further enhanced through a more detailed analysis and the systematic implementation of measures to address these issues. Accordingly, the reviewers recommend that the university conduct a comprehensive analysis of dropout rates across all programs to identify underlying causes and implement targeted interventions. In addition, these efforts should be thoroughly documented, and their impact continuously monitored, with outcomes communicated to stakeholders to support ongoing improvement. The reviewers are pleased to note the planned implementation of the recommendation through the introduction of a key performance indicator, which will be analyzed at the end of each semester, with the results reviewed and corresponding actions implemented in the following semester.”

With regards to the training and professional development opportunities for staff, the reviewers have identified scope for development. They note that while regular meetings of instructors are held, no formal didactic or pedagogical training is currently required, nor is there structured mandatory training on diverse teaching methods for instructors including those collaborating in clinics and laboratories. Training is primarily provided by software vendors or faculty themselves. From the reviewers’ perspective, it would be beneficial for such training to be provided by independent educational specialists to strengthen teaching methods and ensure consistent instructional quality.

The reviewers recommend the introduction of a mandatory structured foundational course in didactics and pedagogy, including guidance for supervising internships. This course should target all instructors, with particular focus on new faculty members and professionals working in hospital and medical center laboratories and should cover essential teaching skills and diverse instructional methods to ensure consistent quality across all teaching activities and to promote effective student learning.

The reviewers express their appreciation to AUST for its prompt proactive approach to this recommendation and faculty development. They thank AUST for providing information on three training courses in didactics and pedagogy for all instructors. Upon review of this information, the reviewers wish to offer the following feedback:

In their opinion, the initiatives provide a solid foundation for enhancing teaching quality since the training courses appear well designed.

Workshop 3 focuses on active learning, employing a practical and well-structured approach, with learning outcomes being evaluated.

Workshop 2 covers Bloom’s taxonomy as a didactic concept. The workshop is detailed and thorough, with well-structured and comprehensive content. However, it remains unclear whether faculty are evaluated on their mastery of the learning material.

Workshop 1 on artificial Intelligence fulfils the reviewers' requirements, notably by addressing ethical considerations and issues of transparency. It remains, however, unclear how the content will be conveyed to students, and further clarification is required.

The reviewers recognize the university's positive progress in this area and offer the following recommendations to guide its continued development: In the future, the mandatory training courses should be expanded into multi-day courses to cover a broader range of pedagogical and didactic competencies.

At the same time, the reviewers emphasize that the workshops' effectiveness should be ensured through a structured system to monitor outcomes, particularly regarding active participation, engagement, and the practical application of acquired skills. Implementing such a system will strengthen the impact of professional development measures and support continuous improvement in teaching and learning.

The reviewers positively welcome AUST's initiative to monitor the effectiveness of newly introduced training sessions and workshops. Evaluation forms will be completed by participants and trainers at the end of each activity, assessing training effectiveness, trainer performance, and participant engagement. The results will be analyzed and discussed with relevant stakeholders, and corrective actions implemented as needed.

Overall, the reviewers acknowledge the university's significant achievements in quality assurance while highlighting constructive measures that will further strengthen the programs and its positive impact on students.

Conditions

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

- R3 The university should conduct a thorough analysis of dropout rates across all programs to identify causes and implement targeted measures. Furthermore, these efforts should be documented and their impact continuously assessed, with outcomes shared with stakeholders to ensure continuous improvement.

- R4 The didactic or pedagogical training courses should be expanded into mandatory multi-day programs to cover a broader spectrum of pedagogical and didactic competencies.
- R5 The university should implement a structured system to monitor and evaluate the effectiveness of its training workshops. This system should specifically track indicators such as active participation, engagement, and the practical application of skills acquired during the sessions.

BS in Optics and Optometry

Current status

Please also refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please refer to the cross-program assessment provided under the bachelor's degree program in CLS above.

Conditions

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

- R3 The university should conduct a thorough analysis of dropout rates across all programs to identify causes and implement targeted measures. Furthermore, these efforts should be documented and their impact continuously assessed, with outcomes shared with stakeholders to ensure continuous improvement.
- R4 The didactic or pedagogical training courses should be expanded into mandatory multi-day programs to cover a broader spectrum of pedagogical and didactic competencies.
- R5 The university should implement a structured system to monitor and evaluate the effectiveness of its training workshops. This system

should specifically track indicators such as active participation, engagement, and the practical application of skills acquired during the sessions.

BS in Radiological Sciences

Current Status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please also refer to the cross-program assessment provided under the bachelor's degree program in CLS as well as under the bachelor's program in OAO.

Conditions

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

- R3 The university should conduct a thorough analysis of dropout rates across all programs to identify causes and implement targeted measures. Furthermore, these efforts should be documented and their impact continuously assessed, with outcomes shared with stakeholders to ensure continuous improvement.
- R4 The didactic or pedagogical training courses should be expanded into mandatory multi-day programs to cover a broader spectrum of pedagogical and didactic competencies.
- R5 The university should implement a structured system to monitor and evaluate the effectiveness of its training workshops. This system should specifically track indicators such as active participation, engagement, and the practical application of skills acquired during the sessions.

BS in Forensic Science

Current Status

Please refer to the cross-program aspects outlined above: applicable to all degree programs.

Assessment

Please also refer to the cross-program assessment provided under the bachelor's degree program in CLS as well as under the bachelor's program in OAO.

Conditions

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

- R3 The university should conduct a thorough analysis of dropout rates across all programs to identify causes and implement targeted measures. Furthermore, these efforts should be documented and their impact continuously assessed, with outcomes shared with stakeholders to ensure continuous improvement.
- R4 The didactic or pedagogical training courses should be expanded into mandatory multi-day programs to cover a broader spectrum of pedagogical and didactic competencies.
- R5 The university should implement a structured system to monitor and evaluate the effectiveness of its training workshops. This system should specifically track indicators such as active participation, engagement, and the practical application of skills acquired during the sessions.

V. Final assessment

The reviewers find that the programs' objectives are well aligned with the institution's profile and strategic goals, ensuring coherence with its overall mission. The learning outcomes are designed to equip graduates with the knowledge, practical skills, and professional competencies required in their respective fields. The programs' integration of research, interdisciplinary approach, and practical orientation - especially through extensive laboratory work - are highlighted as key strengths that effectively prepare students for the labor market. Moreover, the academic staff are deemed well qualified, ensuring high-quality teaching. The programs meet academic, professional, and international standards.

Nevertheless, the reviewers note that the intended learning outcomes are not yet clearly described and distinctly defined for all programs. They recommend that the syllabi of all programs be revised to provide more comprehensive and detailed descriptions, with both the module content and the intended learning outcomes clearly defined, explicitly articulated, and distinctly differentiated.

The reviewers find the curricula of the programs coherent, well-structured, and aligned with the intended learning outcomes. They combine subject-specific knowledge with methodological and practical competences, emphasizing student-centered learning and interdisciplinary integration. The programs maintain a sound balance between theory and practice, supported by solid laboratory components and collaborative frameworks with partner institutions. The ECTS is applied transparently, and students express high satisfaction with the programs interdisciplinary and flexible structure.

Overall, the curriculum provides a solid foundation for academic and professional development.

The CLS program is academically well-structured and demonstrates sufficient research orientation. In particular, the university's laboratories and the access granted to students outside of regular class hours are considered highly advantageous by the reviewers. The Double Degree Program with Université Catholique de Lille is recognized for strengthening international competencies, fostering intercultural awareness, and supporting student mobility without extending the study period.

The reviewers commend the OAO program for its strong and comprehensive curriculum that effectively prepares students beyond WCO Level 2 requirements, combining solid theoretical foundations with extensive clinical rotations. However, the experts think that the university might consider exploring options to improve access to diagnostic equipment or to include external laboratory sessions to ensure consistent hands-on training.

The reviewers appreciate that the university has implemented structured components for optics and clinical training with clear standards for the number and types of patient cases. This will ensure consistent quality control and provide all students with comprehensive and comparable clinical exposure. After revision by the university, the practicum booklet now includes case log forms, dispensing of spectacles (e.g., monofocal, prismatic, multifocal/bifocal), fitting and dispensing of contact lenses (hard and soft), and binocular vision abnormalities, including pediatric cases. The reviewers specify that the practicum booklet be extended to incorporate additional elements. Patient case history shall be added to all case reports, the current field 'DOB' shall be replaced by 'AGE', and the field 'gender' shall be replaced by 'sex'. Furthermore, the booklet shall explicitly clarify the procedure to be followed if, during practical rotations, students do not succeed in meeting the minimum required number of patient cases for each pathology.

The reviewers commend the Radiologic Sciences program for providing students with practical research experience, including hands-on training and research internships that promote independent scientific thinking and professional readiness. Collaboration with hospitals and universities through formal MoUs and part-time clinical placements is viewed as a valuable asset. While the curriculum is well-conceived in terms of content and application-oriented, the reviewers suggest improving the logical sequencing of procedural content across courses.

The program has successfully introduced a standalone course in Radiation Protection, meeting a previous requirement.

The reviewers find the Forensic Science program methodically organized and coherent, providing a solid scientific curriculum that meets academic requirements. The mandatory internship is highlighted as a major strength, providing valuable practical experience. However, from the reviewers' perspective the program should place greater emphasis on professional practice by integrating real-world applications, a focus on quality and hands-on experience into the curriculum to strengthen its professional relevance and better prepare students for their future careers.

Moreover, the reviewers believe that incorporating topics such as ethics, bias, statistics, and critical thinking as additional modules would benefit the further development of the program. As point of consideration this might strengthen the forensic orientation of the program and give the program its distinctive forensic focus.

The reviewers find the assessment system transparent, cohesively arranged, and aligned with the intended learning outcomes. Responsibilities are clearly defined, and students are informed of assessment methods in advance. The number and type of examinations are appropriate, and final exam requirements reflect the qualification level of the degree. Assessments are applied

consistently using the American grading system, and teaching staff are suitably qualified. Clear regulations ensure fairness and reliability, including provisions for absences and mitigating circumstances.

The reviewers conclude that the study programs at AUST are highly effective and fully support the achievement of intended learning outcomes. Admission requirements, program structure, workload, and examinations are appropriate, enabling students to complete their studies on time. The institution demonstrates a strong commitment to a student-centered learning environment, offering comprehensive academic support, guidance for internships, extracurricular activities, and accessible faculty supervision.

Cooperation with external partners, including hospitals and universities, provides extensive practical training, reinforced by part-time faculty with professional appointments. During the discussion with students, it became evident that they face challenges arising from the different laboratory machine systems used across hospitals. According to the reviewers, a possible suggestion would be to offer guidance on operating these systems, for example through manuals for the various types of equipment.

The reviewers commend AUST for providing fully adequate and sustainably managed resources. Academic and administrative staff are well-qualified, internationally experienced, and sufficient in number, with effective recruitment, retention, and professional development strategies. State-of-the-art infrastructure - including modern laboratories, IT facilities, libraries, and flexible access to practice rooms - supports student learning, while online resources and remote teaching enhance accessibility and integrity. Despite tuition-based funding, the program benefits from secure and well-managed finances. MoUs further strengthen practical training. AUST's commitment to diversity and inclusion ensures that students from varied backgrounds are supported. Overall, the reviewers find that financial, human, and physical resources fully support intended learning outcomes, high-quality teaching, and professional preparation.

The reviewers acknowledge that AUST has established a comprehensive quality assurance framework supporting program design, implementation, and continuous improvement. Internal and external mechanisms are in place, with active stakeholder engagement and effective communication of program information.

However, the reviewers emphasize that it is required that students have access to evaluation survey results and be actively involved in discussions addressing identified shortcomings, with follow-up actions clearly communicated to complete the feedback loop.

Additionally, given that, for the majority of programs, over 50% of the curriculum takes place outside the university, the reviewers find it is essential to establish a formal quality assurance mechanism for internships and practical

components to ensure that external learning experiences consistently meet academic standards. They issue the following condition: The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs.

Furthermore, to further strengthen the quality and effectiveness of the programs, the reviewers recommend conducting a detailed analysis of dropout rates, implementing targeted interventions, documenting outcomes, and continuously monitoring their impact. They also advise expanding didactic and pedagogical training for university staff into mandatory multi-day courses to cover a broader spectrum of teaching competencies and implementing a structured system to monitor and evaluate the effectiveness of these training sessions, specifically tracking student participation, engagement, and the practical application of acquired skills.

Overall, the reviewers recognize significant achievements in QA but highlight these measures to strengthen student involvement, teaching quality, and the oversight of practical training.

Results of the assessment

Assessment grades

No	Assessment criteria	Assessment
1	Program profile	A
2	Curriculum	B
3	Student assessment	A
4	Organization of the study program	A
5	Resources	A
6	Quality assurance	B

Assessment levels

Level	Assessment	Description
A	Passed.	The program fulfils or exceeds all criteria. All activities are in line with the profile and objectives of the program and provided at a high academic level.
B	Passed subject to conditions	The program does not fulfil some relevant criteria. However, the institution should be able to

		remedy the shortcomings within twelve months after the assessment.
C	Suspension of the accreditation procedure	The program does not fulfil relevant criteria, but it is likely that it will be able to remedy the shortcomings within 18 months after the assessment. The HEI may apply for a resumption of the accreditation procedure.
D	Failed	The program does not fulfil relevant criteria and is not expected to be able to meet all assessment criteria within 18 months' time.

VI. Statement of the university

The university submitted a statement as well as the following additional documents on November 19, 2025:

- EVALAG Assessment report for statement with factual corrections
- FHS Reply Cluster 1
- FHS Internship Process
- OAO Courses Descriptions
- OAO Final Training Booklet
- Radiologic Sciences Curriculum Change

We would like to extend our appreciation to the EVALAG experts for their constructive feedback on our programs. Please find below our responses to the conditions and recommendations outlined in the report.

Section A – Conditions

Condition C1

We have completed the revision of the Practicum Booklet for the Optics and Optometry Program. The updated booklet now incorporates detailed sections in line with the experts' recommendations. It is currently being finalized at AUST Design Office and will be distributed to students and supervisors during the Spring 2025–2026 semester. (**Attachment OAO_Final_Training_Booklet**)

Students will be required to fill in a minimum of 50 patients per practicum, in addition to detailed case reports that include refractive status, diagnostic tool/imaging used, diagnosis and plan of treatment for specific cases of cataract, glaucoma, various retinal conditions, various corneal conditions and various ocular surface conditions. The total number of specific cases adds up to a total of 80 patients divided as a minimum number of 10 patients for cases like cataract and glaucoma plus a minimum of 20 patients for the various retinal, corneal and general ocular surface conditions. Per recommendation of ECOO (total 130 patients), OAO students will have to keep record of a minimum of 160 patients divided into 120 basic corrections in optical clinic settings, 20 contact lens case fittings (minimum of 5 specialty contact lens fitting of RGPs, Hybrids, Ortho-K, Multifocal), 10 binocular vision abnormalities (assessment and solutions) and 10 low vision cases (assessment and solutions).

Condition C2

In compliance with Lebanese regulations, the total number of credits for a program already accredited by the Ministry of Education and Higher Education must remain unchanged. Accordingly, we have removed FHS 200 (Introduction to Health Sciences Professions) from the curriculum and replaced it

with RAD 440 (Radioprotection for Radiologic Science) as a major course. It is important to note that the critical content of FHS 200 has been integrated into RAD 201, the foundational introductory course for all radiology courses. **(Attachment Radiologic_Sciences_Curriculum_Change)**

Condition C3

I would like to note that AUST is reinforcing the role of the Quality Assurance Department by providing it with comprehensive access to survey results, as well as to the measures implemented by departments and faculties to address findings, ensuring that the quality loop is effectively closed. Moreover, to further promote student engagement in quality assurance, survey results and the corresponding improvement measures will be made available to students each semester via the Blackboard System. For student-instructor evaluations, results will be reported using instructor identifiers, ensuring that feedback is meaningful while preserving individual privacy. Implementation of the process is scheduled for Spring 2026.

Condition C4

The Faculty of Health Sciences has implemented a structured mechanism for monitoring internships across all programs. AUST already uses the Platform Symplicity to manage employability services for current students and alumni. The same platform will also be used to manage and track student internships **(Attachment Internship)**. We anticipate initiating the first phase of implementation in Spring 2026; however, full deployment across all programs is expected to begin in the next academic year. To support this transition, we are currently finalizing the configuration of Symplicity for internship management and will be organizing meetings to explain the process to all training stakeholders.

Section B – Recommendations

Recommendation R1

A comprehensive review of all syllabi across the Faculty of Health Sciences is currently being completed in accordance with the experts' recommendations.

Recommendation R2

The Optics and Optometry Department has introduced an anonymized database for clinical cases handled during practicum courses.

Recommendation R3

The Forensic Science Department will strengthen its collaboration with forensic institutions and the Internal Security Forces to enhance students' practical exposure.

Recommendation R4

A key performance indicator (KPI) related to student dropout rates will be established and monitored. This KPI will be analyzed at the end of each semester, and the results will be reviewed with the relevant stakeholders, including the dean, the chairpersons, and the Dean of Students Office. Recommendations arising from these discussions will be implemented in the following semester to ensure continuous improvement and timely intervention.

Recommendation R5

In collaboration with colleagues from the department of Teaching Diploma at AUST, the Faculty of Health Sciences is preparing a comprehensive training course for all faculty members that addresses both didactic instruction and pedagogical strategies. The course will be offered on campus and online, twice per year - following the fall and spring semesters - to allow maximum participation. It will include clearly defined learning outcomes, and structured mechanisms for feedback and evaluation.

Recommendation R6

To monitor the effectiveness and impact of newly introduced training sessions and workshops, evaluation forms will be administered at the end of each activity. Participants will complete a form assessing both the effectiveness of the training and the performance of the trainer, while trainers will complete a form evaluating the participants' engagement. The results of these evaluations will be analyzed and discussed with relevant stakeholders, and corrective or preventive actions will be implemented based on the findings.

VII. Accreditation recommendation of the reviewers to the Accreditation Commission

The review panel concludes that the study programs Clinical Laboratory Science (B.Sc.), Optics and Optometry (B.Sc.), Radiologic Sciences (B.Sc.) and Forensic Science (B.Sc.) meet the EVALAG criteria for international program accreditation. Accordingly, the panel recommends granting accreditation with recommendations and conditions and awarding the EVALAG label for international program accreditation. The panel also advises AUST to take into account the conditions and recommendations presented in this report to further enhance the quality of these programs.

Conditions

Curriculum

Optics and Optometry

- C1 The practicum booklet, including specific case log forms, shall be extended to incorporate the following items:
- Patient case history shall be added to all case reports.
 - The current field 'DOB' shall be replaced by 'AGE'.
 - The field "gender" shall be replaced by "sex".
 - The booklet shall explicitly clarify what procedure will be followed if, during practical rotations, students do not succeed in meeting the minimum required number of patient cases for each pathology.

Quality Assurance

All study programs

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

Program Profile

All Study programs

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

Curriculum

Forensic Science

- R2 The Forensic Science program should place greater emphasis on professional practice by integrating real-world applications, a focus on quality standards and practical experience into the curriculum to enhance its relevance and better prepare students for the profession.

Quality Assurance

All study programs

- R3 The university should conduct a thorough analysis of dropout rates across all programs to identify causes and implement targeted measures. Furthermore, these efforts should be documented and their impact continuously assessed, with outcomes shared with stakeholders to ensure continuous improvement.
- R4 The didactic or pedagogical training courses should be expanded into mandatory multi-day programs to cover a broader spectrum of pedagogical and didactic competencies.
- R5 The university should implement a structured system to monitor and evaluate the effectiveness of its training workshops. This system should specifically track indicators such as active participation, engagement, and the practical application of skills acquired during the sessions.

VIII. Accreditation decision of the Accreditation Commission

The accreditation commission unanimously decides to accredit the degree programs Clinical Laboratory Science (B.Sc.), Optics and Optometry (B.Sc.), Radiologic Sciences (B.Sc.), and Forensic Science (B.Sc.) at the University of Science and Technology (AUST) in Beirut, Lebanon, with the following conditions and recommendations, until December 31, 2031.

Conditions

Curriculum

Optics and Optometry

- C1 The practicum booklet, including specific case log forms, shall be extended to incorporate the following items:
- Patient case history shall be added to all case reports.
 - The current field 'DOB' shall be replaced by 'AGE'.
 - The field "gender" shall be replaced by "sex".
 - The booklet shall explicitly clarify what procedure will be followed if, during practical rotations, students do not succeed in meeting the minimum required number of patient cases for each pathology.

Quality Assurance

All study programs

- C2 Students shall be given access to the results of evaluation surveys and be actively involved in discussions addressing identified shortcomings. To ensure continuous improvement, follow-up actions and implemented changes shall be clearly communicated, thereby closing the feedback loop.
- C3 The university shall implement a formal quality assurance mechanism to monitor and support internships and practical components of the programs. Given that, for the majority of programs, over 50% of the curriculum occurs outside the university, it is essential to ensure that these external learning experiences consistently meet academic standards.

Recommendations

Program Profile

All Study programs

- R1 The syllabi for all programs should be revised to provide more detailed descriptions, with both the module content and the intended learning outcomes clearly defined and distinctly differentiated.

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Forensic Science

- R2 The Forensic Science program should place greater emphasis on professional practice by integrating real-world applications, a focus on quality standards and practical experience into the curriculum to enhance its relevance and better prepare students for the profession.

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Annexes

Annex 1: EVALAG assessment criteria for international program accreditation

Annex 2: ESG

Annex 3: Study plans for all programs

Annex 4: Site visit schedule

Annex 1

Assessment criteria for international program accreditation¹¹

The accreditation criteria used by the EVALAG international program accreditation have been put into effect by the EVALAG Foundation Board. They refer to the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and include an analysis of Part 1 of the ESG.

1. Program profile

Profile and objectives of the program

The expert team checks

- 1.1. whether the objectives of the program are in line with the profile and the strategic goals of the institution
- 1.2. whether the intended learning outcomes of the program are well defined and publicly accessible
- 1.3. whether the intended learning outcomes correspond to the type and level of qualification provided by the program
- 1.4. whether the intended learning outcomes are based on academic or professional requirements (standards), public needs and the demands of the labor market and contribute to the employability of the graduates
- 1.5. whether the (academic) study program is related to research (procurement of scientific methods in theory and practice, research based teaching)
- 1.6. whether the profile and objectives of the program comply with internationally accepted standards
- 1.7. the international dimension of the program
- 1.8. whether the qualification of the academic staff is adequate with regard to profile and objectives of the program.

¹¹ Decision of the Foundation Board, February 18th, 2016, updated December 1st, 2017

2. Curriculum

Curriculum and teaching and learning methods

The expert team checks

- 2.1. whether the curriculum of the program is adequately structured to achieve the intended learning outcomes
- 2.2. whether the curriculum provides the necessary knowledge and methodological expertise of the relevant discipline(s)
- 2.3. whether the learning experience is organized in a way that takes the diversity of students and their needs into account, employs appropriate student-centered teaching and learning methods and encourages students to take an active role in creating the learning process.

3. Student assessment

Organization of student assessments

The expert team checks

- 3.1. how the assessment of intended learning outcomes is organized
- 3.2. whether the amount and requirements of assessments are adequate with regard to the intended learning outcomes
- 3.3. whether the requirements of the thesis reflect the level of the degree
- 3.4. whether the assessment criteria are transparent and used in a consistent way
- 3.5. whether the staff undertaking assessments is adequately qualified
- 3.6. whether examination regulations exist and
- 3.7. whether they provide clear and fair regulations for student absence, illness and other mitigating conditions.

4. Organization of the study program

Implementation of the program

The expert team checks

- 4.1. the appropriateness of entry qualifications
- 4.2. the regulations for the recognition of qualifications (i.e. Lisbon Convention)
- 4.3. whether the organization of the study process allows the program to be carried out in such a way that the intended learning outcomes will be achieved and whether the organization of the study process also takes the diversity of students and their needs into account
- 4.4. how the implementation of the program is managed (roles and responsibilities)
- 4.5. whether the workload of the program is adequate with respect to the necessity to reach the intended learning outcomes in the scheduled time frame

- 4.6. how the student life cycle is organized (i. e. all (organizational) relationships between the student and the institution from enrolment to graduation)
- 4.7. whether the care services and student advisory services are suitable
- 4.8. in case of a cooperation with internal and external partners: how the cooperation is organized.

5. Resources

Deployment of resources (finances, personnel, facilities) to sustain HEI programs

The expert team checks

- 5.1. the sustainability of funding and financial management
- 5.2. whether the number and qualification of academic staff (full-time and part-time) is adequate to ensure intended learning outcomes
- 5.3. which strategies and processes for the staff recruiting and staff development are used
- 5.4. whether amount and quality of facilities and equipment allow the provision of the program (library, laboratories, teaching rooms, IT equipment)
- 5.5. whether the amount and quality of the resources provided are adequate to reach the objectives of the program.

6. Quality assurance

Internal and external quality assurance of the program

The expert team checks

- 6.1. how study programs are designed and implemented and how their improvement is organized
- 6.2. whether a quality assurance concept of the program is available and how it is connected to the quality assurance system of the institution
- 6.3. what kind of quality assurance processes and instruments for programs are implemented
- 6.4. whether quality assurance is regularly, systematically and effectively used for quality enhancement
- 6.5. whether quality feedback loops are closed
- 6.6. how the persons responsible for the program systematically collect, analyze and use relevant information
- 6.7. how stakeholders (students, teachers, administration, employers) are involved in quality assurance)
- 6.8. whether relevant program information for students and prospective students is provided.

Annex 2

European Standards and Guidelines for Quality Assurance in the European Higher Education Area:

<https://www.enqa.eu/esg-standards-and-guidelines-for-quality-assurance-in-the-european-higher-education-area/>¹²

Annex 3

Clinical Laboratory Science

Three-Year Study Plan		
Total First Year – 41 Credits		
Fall – 15 Credits		
CSI 200	Computer Literacy	3
ENG 201	Composition & Rhetoric I	3
BIO 210	Cells & Molecules	3
BIO210L	Cells & Molecules Laboratory	1
CHE 205	Chemical Principles and Analysis	3
CHE205L	Chemical Analysis Laboratory	1
CHE205P	Chemical Principles & Analysis Problem Solving	0
CLS 210	Laboratory Safety & First Aid	1
Spring – 17 Credits		
BIO 213	Introduction to Physiology	3
BIO213L	Introduction to Physiology Laboratory	1
BIO 310	Introduction to Microbiology	3
CHE 215	Principles of Organic Chemistry	3
CHE210L	Organic Chemistry Laboratory	1
CLS 212	Fundamentals of Laboratory Analysis	3
ENG 202	Composition & Rhetoric II	3
FHS 220	Infections and Preventions in the Workplace	0
Summer – 9 Credits		
ENG 205	English Communication Skills	3
HMS 300	Work Ready Now	3
Free Elective		3
Total Second Year – 42 Credits		
Fall – 17 Credits		
BIO 220	Cytology & Histology	3
BIO220L	Cytology & Histology Laboratory	1
BIO 320	Biostatistics & Epidemiology	3
CLS 320	Molecular Genetics	4
CLS320L	Molecular Genetics Laboratory	1
CLS 370	Clinical Bacteriology	3
CLS370L	Clinical Bacteriology Laboratory	1
CLS 470	Process of Research	1
Spring – 17 Credits		
CHE 220	Introduction to Biochemistry	3
CLS 213	Phlebotomy	1
CLS360L	Histopathology Laboratory	1
CLS 452	Clinical Virology	3
CLS 455	Clinical Mycology	2
CLS457L	Clinical Virology & Mycology Laboratory	1

¹² Last accessed on July 22nd, 2025.

CLS 472	Special Topics in Clinical Lab Science	1
Technical Elective		3
CLS 481	Internship I	2
Summer – 8 Credits		
HMS 301	Western Civilization	3
CLS 483	Internship II	2
Free Elective		3
Total Third Year – 37 Credits		
Fall – 21 Credits		
CLS 330	Clinical Chemistry	3
CLS 340	Hematology & Hemostasis	3
CLS340L	Hematology & Hemostasis Laboratory	1
CLS 350	Immunology & Immunohematology	3
CLS350L	Immunology & Immunohematology Laboratory	1
CLS 450	Clinical Parasitology	3
CLS450L	Clinical Parasitology Laboratory	1
CLS 480	Biology Samples and Body Fluids Analysis	3
CLS 486	Internship III	3
Spring – 16 Credits		
CLS 440	Clinical Hematology & Hemostasis	3
CLS440L	Clinical Hematology & Hemostasis Laboratory	1
CLS 430	Clinical Chemistry II	3
CLS 460	Clinical Immunology & Immunohematology	3
CLS460L	Clinical Immunology & Immunohematology Laboratory	1
CLS 487	Internship IV	5
FHS 230	Health Sciences Seminars	0

In the four-year study plan, summer courses are not included. However, students can take summer courses if they wish to. In this case, tailored advising plans are conducted for each student. It is important to mention that prior to each semester, advising sessions are scheduled to help students choose their courses based on their financial status, work commitment, and capabilities.

Four-Year Study Plan		
Total First Year – 32 Credits		
Fall – 15 Credits		
CSI 200	Computer Literacy	3
ENG 201	Composition & Rhetoric I	3
BIO 210	Cells & Molecules	3
BIO210L	Cells & Molecules Laboratory	1
CHE 205	Chemical Principles & Analysis	3
CHE205L	Chemical Analysis Laboratory	1
CHE205P	Chemical Principles & Analysis Problem Solving	0
CLS 210	Laboratory Safety & First Aid	1
Spring – 17 Credits		
BIO 213	Introduction to Physiology	3
BIO213L	Introduction to Physiology Laboratory	1
BIO 310	Introduction to Microbiology	3
CHE 215	Principles of Organic Chemistry	3
CHE210L	Organic Chemistry Laboratory	1
CLS 212	Fundamentals of Laboratory Analysis	3
ENG 202	Composition & Rhetoric II	3
FHS 220	Infections and Prevention in the Workplace	0
Total Second Year – 31 Credits		
Fall – 15 Credits		

BIO 220	Cytology & Histology	3
BIO220L	Cytology & Histology Laboratory	1
BIO 320	Biostatistics & Epidemiology	3
CLS 320	Molecular Genetics	4
CLS320L	Molecular Genetics Laboratory	1
Free Elective		3
Spring – 16 Credits		
CHE 220	Introduction to Biochemistry	3
CLS360L	Histopathology Laboratory	1
CLS 452	Clinical Virology	3
CLS 455	Clinical Mycology	2
CLS457L	Clinical Virology & Mycology Laboratory	1
Technical Elective		3
HMS 300	Work Ready Now	3
Total Third Year – 30 Credits		
Fall – 15 Credits		
CLS 330	Clinical Chemistry	3
CLS 340	Hematology & Hemostasis	3
CLS340L	Hematology & Hemostasis Laboratory	1
CLS 370	Clinical Bacteriology	3
CLS370L	Clinical Bacteriology Laboratory	1
CLS 470	Process of Research	1
CLS 213	Phlebotomy	1
CLS 481	Internship I	2
Spring – 15 Credits		
CLS 440	Clinical Hematology & Hemostasis	3
CLS440L	Clinical Hematology & Hemostasis Laboratory	1
CLS 430	Clinical Chemistry II	3
CLS 483	Internship II	2
Free Elective		3
ENG 205	English Communication Skills	3
Total Fourth Year - 27 Credits		
Fall – 14 Credits		
CLS 350	Immunology & Immunoematology	3
CLS350L	Immunology & Immunoematology Laboratory	1
CLS 450	Clinical Parasitology	3
CLS450L	Clinical Parasitology Laboratory	1
CLS 480	Biology Samples and Body Fluid Analysis	3
CLS 486	Internship III	3
Spring – 13 Credits		
CLS 460	Clinical Immunology & Immunoematology	3
CLS460L	Clinical Immunology & Immunoematology Laboratory	1
CLS 487	Internship IV	5
HMS 301	Western Civilization	3
CLS 472	Special Topics in Clinical Lab Science	1
FHS 230	Health Sciences Seminars	0

Optics and Optometry

Divided into eight semesters with the following distribution of courses:

First Year (Total 31 credits)

Fall Semester 15 Credits

CSI 200	Computer Literacy	3
ENG 201	Composition and Rhetoric I	3
BIO210H	Cells and Molecules	3
OPT 201	Optics I	3
OPT 210	Ocular Anatomy	3

Spring Semester 16 Credits

ENG 202	Composition and Rhetoric II	3
BIO 213	Introduction to Physiology	3
BIO213L	Introduction to Physiology Laboratory	1
CHE 200	Principles of Chemistry	3
OPT 215	Ocular Physiology	3
OPT 302	Optics II	3

Second Year (31 credits)

Fall Semester 16 Credits

ENG 205	English Communications Skills	3
BIO220H	Cytology and Histology	3
OPT 222	Technology of Ophthalmic Lenses I	3
OPT222L	Dispensing Laboratory I	2
OPT 350	Introduction to Optometry	3
OPT350L	Introduction to Optometry Lab	1
FHS 230	Health Sciences Seminars	0
OPT 298	Practicum I	1

Spring Semester 15 Credits

OPT 270	Clinical Practical Guidelines, Ethics, and Professional Development	3
ACC 201	Principles of Accounting	3
OPT 322	Technology of Ophthalmic Lenses II	3
OPT322L	Dispensing Laboratory II	2
OPT 450	Optometry	3
OPT450L	Optometry Laboratory	1

Third Year (30 credits)

Fall Semester 16 Credits

CHE 301	Organic Chemistry	3
BIO 310	Introduction to Microbiology	3
OPT 330	Introduction to Contact Lenses	3
OPT330L	Introduction to Contact Lenses Laboratory	1
OPT 398	Practicum II	1
OPT 422	Technology of Ophthalmic Lenses III	3
OPT422L	Dispensing Laboratory III	2

Spring Semester 14 Credits

HMS 300	Work Ready Now	3
OPT 340	Contact Lenses	3
OPT340L	Contact Lenses Laboratory	1
OPT 365	Introduction to Ocular Pharmacology	3
OPT 410	Optical Instrumentation	3
OPT410L	Optical Instrumentation Laboratory	1

Fourth Year (28 credits)

Fall Semester 14 Credits

FE	Free Elective	3
OPT 485	Ocular Therapeutics I	3
OPT 480	Binocular Vision	3
OPT480L	Binocular Vision Laboratory	1
BIO 420	General Pathology	3
OPT 390	Optometric Clinical Application	0
OPT 490	Process of Research	1

Spring Semester 14 Credits

OPT 495	Ocular Therapeutics II	3
OPT 492	Special Topics in Optics and Optometry	1
OPT 462	Introduction to Physiologic Optics	3
OPT 461	Visual Impairment	3
OPT 498	Practicum III	1
FE	Free Elective	3

RAD 306	Imaging Procedures II	3	BIO360 L	Histopathology Laboratory	1
RAD306L	Imaging Procedures II Lab	1		Free Elective 1	3
		16			14

Summer 6 Credits

	Free Elective 2	3
RAD306P	Clinical Imaging Practicum II	3
		6

THIRD YEAR

5th Semester 16 Credits

6th Semester

14 Credits

BIO 320	Biostatistics & Epidemiology	3	RAD 310	Radiological Pathology	3
RAD 210	Radiologic Imaging and Processing	3	RAD 405	Imaging Procedures III	3
RAD210L	Radiologic Imaging and Processing Lab	1	RAD 406	Special Procedures in Radiological Sc.	3
RAD 402	Computer Applications in Imaging	3	RAD 470	Process of research	1
RAD410L	Quality Assurance Lab	3	RAD 472	Special Topic in Radiologic Sciences	1
	Technical Elective	3	RAD405P	Clinical Imaging Practicum III	3
		16			14

New Curriculum for Radiologic Science (November 19, 2025)

Contract Sheet Template

RADIOLOGIC SCIENCES - FALL Semester 2025-2026

FRESHMAN		0 Cr.Hours		
COLLEGE REQUIREMENTS		15 Cr.Hours		
CSI 200	Computer Literacy	3	0	0
ENG 201	Composition & Rhetoric I	3	0	0
ENG 202	Composition & Rhetoric II	3	0	0
ENG 205	English Communication Skills	3	0	0
HMS 300	Work Ready Now	3	0	0
FREE ELECTIVES		6 Cr.Hours		
ENG 200	Writing Skills	3	0	0
MAT200X	College Algebra	3	0	0
GENERAL SCIENCE REQUIREMENTS		26 Cr.Hours		
BIO 213	Introduction To Physiology	3	0	0
BIO 217	Sectional Anatomy	3	0	0
BIO 320	Biostatistics & Epidemiology	3	0	0
BIO 420	General Pathology	3	0	0
BIO210H	Cells & Molecules	3	0	0
BIO213L	Introduction To Physiology Laboratory	1	0	0
BIO220H	Cytology & Histology	3	0	0
BIO360L	Histopathology Laboratory	1	0	0
CHE 200	Introduction to Chemistry	3	0	0
CHE 301	Organic Chemistry for Health Sciences	3	0	0
MAJOR REQUIREMENTS		55 Cr.Hours		
RAD 201	Fundamentals of Radiologic Sciences	3	0	0
RAD 210	Radiologic Imaging and Processing	3	0	0
RAD 301	Physics of Medical Imaging I	3	0	0
RAD 302	Physics of Medical Imaging II	3	0	0
RAD 304	Contrast Agents and Radiopharmaceuticals	3	0	0
RAD 305	Imaging Procedures I	3	0	0
RAD 306	Imaging Procedures II	3	0	0
RAD 310	Radiological Pathology	3	0	0
RAD 402	Computer Applications in Imaging	3	0	0
RAD 405	Imaging Procedures III	3	0	0
RAD 406	Special Procedures in Radiological Sciences	3	0	0
RAD 440	Radioprotection for Radiologic Sciences	3	0	0
RAD 470	Process of Research	1	0	0
RAD 472	Special Topic in Radiologic Sciences	1	0	0
RAD210L	Radiologic Imaging and Processing Laboratory	1	0	0
RAD301L	Physics of Medical Imaging I Laboratory	1	0	0
RAD302L	Physics of Medical Imaging II Laboratory	1	0	0
RAD305L	Imaging Procedures I Laboratory	1	0	0
RAD305P	Clinical Imaging Practicum I	3	0	0
RAD306L	Imaging Procedures II Laboratory	1	0	0
RAD306P	Clinical Imaging Practicum II	3	0	0
RAD405P	Clinical Imaging Practicum III	3	0	0
RAD410L	Quality Assurance Laboratory	3	0	0
TECHNICAL ELECTIVES		3 Cr.Hours		
BME 340	Computer-Aided Design in Biomedical Engineering	3	0	0
CLS 382	Molecular Epidemiology	3	0	0
CLS 485	Biotechnology	3	0	0
FST 310	Forensic Science	3	0	0
FST 415	CBRN Operations	3	0	0
RAD 480	Clinical Epidemiology for Radiologists	3	0	0
RAD 482	Risk Management in Radiology	3	0	0
RAD 485	Molecular Imaging	3	0	0
RAD 487	Clinical Decisions in Radiology	3	0	0
RAD 490	Special Medical Diagnostics Studies	3	0	0
RAD 495	Biotechnology for Radiological Sciences	3	0	0
RAD406P	Clinical Imaging Practicum IV	3	0	0

Forensic Science

First year

Fall semester		18 credits	Spring Semester		17 credits
ENG 201	Composition & Rhetoric I	3	ENG 202	Composition & Rhetoric II	3
CHE 205	Chemical Principles & Analysis	3	CHE 210	Organic Chemistry I	3
CHE 205L	Chemical Principles & Analysis Lab	1	BIO 213	Introduction To Physiology	3
CHE 205 P	Chemical Principles & Analysis Problem solving	0	BIO 213 L	Introduction To Physiology Lab	1
BIO 210	Cells & Molecules	3	PHY 235	Physics for Forensic Science	3
BIO 210L	Cells & Molecules Laboratory	1	CLS 212	Fundamentals Of Lab Analysis	3
CSI 200	Computer Literacy	3	CHE210L	Organic Chemistry Lab	1
CLS 210	Lab Safety & First Aid	1			
HMS 301	Western civilization	3			

Second Year

Fall semester		18 credits	Spring Semester		18 credits
CHE 220	Introduction To Biochemistry	3	FST 370	Crime and Security of Information Technologies	3
BIO 320	Biostatistics & Epidemiology	3	FST 380	Introduction to Biometrics	3
CLS 320	Molecular Genetics	4	ENG 205	English Communication Skills	3
CLS 320L	Molecular Genetics Laboratory	1	Technical elective (1)		3
FST 310	Forensic Science	3	Free elective (1)		3
FST 420	The Judicial Process	3	HMS 300	Work Ready Now	3
FST 330L	Forensic Imaging Laboratory	1			

Third year

Fall semester		18 credits	Spring Semester		18 credits
CLS 495	Instrumental Chemistry	3	FST 495L	Chemistry Applied to Forensic Lab	3
CLS 495L	Instrumental Chemistry Laboratory	3	FST 460	Forensic Medicine	3
CLS 493	Introduction To Pharmacology	3	FST 470	Human Identification	3
FST 430	Crime Scene Management and Investigation	3	FST 480	Special Topics in Forensic Science I	3

FST 442	Principles and Applications of Trace Analysis	3	FST 499	Practicum	3
Technical elective (1)		3	CLS 497	Toxicology	3

Annex 4

Program accreditation of the study programs Clinical Laboratory Science (B.Sc.), Optics and Optometry (B.Sc.), Radiologic Sciences (B.Sc.) and Forensic Science (B.Sc.) at the American University of Science and Technology in Beirut, Lebanon

Schedule for the virtual site visit on 30th June and 02nd July 2025:

Day 1, Monday, 30th June 2025			
Time slot CEST	Topic/Group to be interviewed	Participants in the slot	
08:30-08:45	Short welcome by the university and introduction of all participants at the beginning	AUST: President Vice President	Reviewers and EVALAG
08:45-09:45	Management representatives of AUST and representatives from quality assurance and resource equipment on the level of all programs, i. e. Forensic Science (B.Sc.), Clinical Laboratory Science (B.Sc.), Optics and Optometry (B.Sc.) and Radiologic Sciences (B.Sc.)	Academic Dean Departmental Assistant to Dean Directors & Chairpersons of Departments Testing & Research Advisor Registrar Chief Transformation Officer Director of IT Laboratory Manager & Purchasing Officer Quality Management Faculty members	
09:45 – 10:00	Break		
10:00 – 11:15	Teaching staff and academic staff from the study programs Optics and Optometry (B.Sc.) and Radiologic Sciences (B.Sc.)	AUST: Academic Dean Departmental Assistant to Dean Faculty Staff Laboratory Staff Lecturers	Reviewers and EVALAG
11:15 – 11:30	Break		
11:30 -13:00	Students and alumni from all programs	AUST: Students & Alumni from all programs	Reviewers and EVALAG
13:00	End of day 1		

Day 2, Thursday, 02nd July 2025

Time slot CEST	Topic	Participants in the slot	
08:30 - 09:45	Teaching staff and academic staff from the programs Forensic Science (B.Sc.) and Clinical Laboratory Science (B.Sc.)	AUST: Academic Dean Departmental Assistant to Dean Faculty Staff Laboratory Staff Lecturers	Reviewers and EVALAG
09:45 – 10:00	Break		
10:00 – 12:00	Internal discussion among the reviewers and EVALAG		Reviewers and EVALAG only
12:00 – 12:45	Lunch Break		
12:45 – 13:30	Final meeting with AUST	AUST: President Vice President Academic Dean	Reviewers and EVALAG
13:30	End of day 2		