Doctor of Medicine programme (M.D.)

Saba University School of Medicine

Extensive programme accreditation **Assessment Panel Report**

January 12, 2018

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Report on the master's programme Doctor of Medicine (M.D.)

This report is written according to the standards of the framework for extensive programme assessments of the NVAO.

Administrative data Saba University School of Medicine (institution)

Name of the institution:	Saba University School of Medicine (SUSOM)
CROHO Brin-code:	30VF
Status of the institution:	legal entity providing higher education
Result institutional audit:	n/a

Administrative data Master's programme Doctor of Medicine (M.D.)

Name of the programme:	Doctor of Medicine (M.D.)
CROHO registration name:	M Medicine
CROHO number:	60154
Level of the programme:	master's
Orientation:	academic (wo)
Degree:	Master of Science (MSc)
Number of credits:	240 EC
Specializations or tracks:	-
Mode(s) of study:	fulltime
Location(s):	Saba
Expiration of accreditation:	31 December 2018

Summary judgement

This assessment report provides an overview of the panel's findings and considerations regarding the master's programme Doctor of Medicine (M.D.) of Saba University School of Medicine (SUSOM). The judgement of the panel is based on information acquired from the critical reflection (information dossier), the interviews held during the site visit and additional material that was made available during the site visit.
Judgements were made on the eleven standards of the NVAO assessment framework for extensive programme accreditation. Eight standards were assessed as satisfactory, three as good. The panel assesses the quality of the programme Doctor of Medicine (M.D.) as satisfactory.

The structure and content of SUSOM's four-year degree programme complies with curricula and training as offered by medical schools in the United States and Canada. The Basic Sciences programme comprises 5 semesters (75 weeks) offered on the island, and the Clinical Medicine programme comprises an 80 - week curriculum.

The panel studied the level, the content, the orientation and the intended learning outcomes of the programme. It considers the subject-specific framework of reference to be adequate. The panel appreciates the academic and practical orientation of the programme as well as the multidisciplinary and integrated curriculum. The intended learning outcomes are linked with international standards on medical education and have a clear link with the Dublin descriptors.

The panel noted that the new Research Focus Committee (RFC) aims to focus the schools' research on medical education. Medical Education is a realistic approach for both students and faculty and can add to their collaboration on research considering the limited research facilities and resources based on geographic location of a small island. In onsite reviews, the clinical learning environment and quality of teaching was consistently noted to be excellent. The breadth and depth of the volume of clinical cases provides a rich resource (learning lab) for the SUSOM students.

The panel establishes that since the programme's initial accreditation and midterm review in 2016, SUSOM made good progress in further implementating its curriculum towards an adequate level of multidisciplinarity and integration. All clinical sites make use of the same SUSOM core clinical curriculum. Process standardization of clinical sites contributes substantially to improving the learning of students. The panel values the strong clinical monitoring of learning and assessment beyond all clinical sites.

The panel appreciates the integration of Basic and Clinical sciences in both didactic sessions (team based learning, clinical correlation sessions) and in addition during practical clinical learning laboratories to develop core history and exam skills in preparation for USMLE Step 1.
According to the panel SUSOM has proven that it is adequately in control of the learning of students.

The panel investigated the admission requirements and the admission selection procedure and considers these to be adequate. Admission requirements and selection procedures are transparent and widely spread. The panel establishes that the admission policy of SUSOM and its implementation allows incoming students to achieve the intended learning outcomes.

The panel recognizes the educational and didactic qualifications and expertise as well as the teaching experience of the allocated staff. The panel establishes that a number of young and talented teachers where recently recruited from first-class medical schools. The panel is aware that faculty members have a teaching appointment and not a research appointment. Considering the resources on the island faculty members guide students on realistic research projects. All faculty members are appropriate educated for the discipline they taught. In the ACGME - approved clinical teaching sites

there is a strong oversight over residency faculty. The panel considers the present staff - student ratio of 1: 8 in the Basic Sciences programme to be excellent.

The panel is impressed by SUSOM's effective and efficient approach in providing an educational infrastructure for students and teaching staff. External reviewers inspected the quality of the facilities and services of the affiliated ACGME- approved hospitals during the period 2014 – 2017 and described a high standard of the teaching - learning environment including the educational infrastructure.

SUSOM offers students a support mechanism that provides multiple levels of guidance and tutoring during the four years of preclinical and clinical medical education. The panel appreciates the well-structured system of monitoring and guidance of the students.
Students are satisfied with the information on learning and teaching as provided by SUSOM in both the Basic Sciences as well as the Clinical medicine phase of their study. On completion of their core clerkships students are provided with extensive information and guidance to apply for a residency. The panel considers the information provision for students to be adequate.

The panel examined the latest version of the school's Quality Assurance Plan (January 2017) that describes the approach with regard to safeguarding SUSOM's quality assurance system in a structural setting. The panel endorses the descriptions of the quality assurance principles in the Quality Assurance Plan. The key process is the Plan-Do-Check-Act cycle (Deming Quality Cycle). The panel is positive about the ambitions of the school and advises to further develop and implement this cyclic iterative process of Quality Assurance. The panel concludes that academic policies at SUSOM support the regularly programme evaluation processes as well as the committee structure overseeing the content and delivery of the curriculum.

The panel establishes that the assessment system functions well. The formalisation of the assessment policy and the implemented standardized assessment procedures are adequate indicators for this. The panel is impressed with the performance of the Examination Committee which it qualifies as professional and effective. The Evaluation Committee evaluates the assessment practice and initiates necessary changes.

The panel considers the performance of the SUSOM students on the national licensing examinations to be successful. The panel is impressed that over the years the USLME Step 1 and Step 2 (CK & CS) passing rates from students maintain over the years on a very high level. The panel considers the numbers of graduates placed in academically affiliated programmes and the diversification of residencies to be successful. The panel is convinced that the intended learning outcomes are achieved by students upon graduation.

Finally, recommendations for improvement are listed in a separate paragraph of the report.

Given the above assessment, the panel advises the NVAO to accredit the programme leading to the Doctor of Medicine (M.D.) degree as offered by Saba University School of Medicine.

Place: Leiden

Date: January 12, 2018

Prof. dr. F. C. Breedveld
Chair

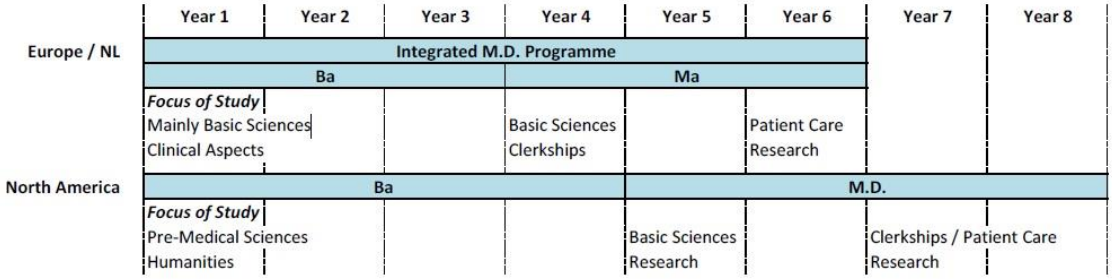
drs. N.Pronk
Secretary

Introduction

Positioning of SUSOM

The programme leading to the Doctor of Medicine (M.D.) degree has been offered by Saba University School of Medicine (SUSOM) since 1993. As the majority of applicants to SUSOM are from the United States and Canada, the academic model established at SUSOM is similar to the format used by North American medical schools. This format requires high school graduates to complete their undergraduate study at an accredited college or university, including prerequisite courses in basic sciences, before they are eligible to apply. The general structure of the SUSOM-curriculum parallels the courses and training offered by medical schools in North America. There are distinguishing features between the European and the North American model.

Comparison of European Integrated M.D. Programme to North American B.A./ M.D.



Accreditation status

In 2010, the Island of Saba attained the status of a special municipality of the Netherlands, and so higher education on Saba came under the oversight of the Netherlands. In September 2012, SUSOM's Doctor of Medicine programme was initially accredited by the NVAO. Subsequently the Dutch Minister of Education granted SUSOM the status of legal entity providing higher education (rechtspersoon voor hoger onderwijs).

The United States Department of Education, via the National Committee on Foreign Medical Education and Accreditation (NCFMEA), reviews the standards that countries use to accredit medical schools. The NCFMEA has determined that the accreditation standards used by the NVAO to accredit Saba's medical programme are comparable to those used by the Liaison Committee on Medical Education (LCME), the accrediting body that accredits M.D.-granting medical programmes in the United States.

SUSOM is one of the few international medical school's, with approvals from the states that independently assess international medical schools: New York, California and Florida. Additionally, SUSOM's M.D. programme is approved by the Kansas State Board of Healing Arts.

Assessment procedure

Task of the panel

The task of the panel is to review the master's programme Doctor of Medicine (M.D.) at Saba University School of Medicine according to the assessment standards set by NVAO. By using these standards, the panel is expected to assess different aspects of the quality of the programme, based on the information provided by the programme in the critical reflection (information dossier), as well as interviews during the site visit and additional marerials provided during the site visit. The emphasis in the assessment report lies on the assessment and justification of the quality and level of the programme. In addition, the report contains recommendations by the panel.

Composition of the panel

The NVAO has approved the composition of the panel on July 10, 2017.
The panel that assessed the master's programme Doctor of Medicine (M.D.) consisted of a chairman and four members:

- Prof. dr. Ferry Breedveld (chair); professor emeritus internal medicine and rheumatology; former CEO Leiden University Medical Centre (LUMC);
- Prof. Alice Fornari Ed.D.R.D.; professor Science Education, Occupational Health and Family Medicine, Hofstra Northwell School of Medicine, New York;
- Prof. dr. Dirk Ruiter; professor emeritus pathology, former dean and vice president Radboud University Medical Centre, Radboud University, Nijmegen;
- Dr. Susan Cox, MD; Executive Vice Dean for Academics, Dell Medical School at the University of Texas, Austin, Texas;
- Joseph Wiley, MD (student member); resident physician - family medicine, Charleston Area Medical Centre.

Dr. Susan Cox did not take part in the Saba campus site visit; she acted as external reviewer for the clinical teaching sites.
The panel was supported by Nic Pronk, MBA; he acted as secretary of the panel.

Appendix 10 gives short descriptions of the curricula vitae of the panel members.

The site visit by the assessment panel (panel) to Saba University School of Medicine (Doctor of Medicine programme) took place on 15 and 16 November 2017. The programme of the site visit is included as *Appendix 9.*

The panel members and the secretary signed a declaration of independence as required by the NVAO-protocol to ensure that the panel members judge without bias, personal preference or interest, and the judgement is made without inappropriate influence from the institution, the programme or any other stakeholder.

Working method of the panel

Preparatory phase
In early October 2017 the critical reflection report was sent to the panel members.
The secretary checked the quality and completeness of the critical reflection submitted by the programme and after establishing that the report met the requirements, the content of the site visit programme was discussed with representatives of the institution/programme. The panel then communicated about its working methods in preparation of the site visit. The panel had insight into the structure, content and assessment of all courses through the course syllabi and the Clinical Medicine Handbook.

The panel members read the report and formulated questions and comments on the content. Next to the critical reflection, the panel read a selection of fifteen RLRA (research-based) papers. Following the NVAO guidelines, these papers were at random - within a range of grades -chosen by the chair of the panel from a list of graduates of the last two academic years.

Site visit
Prior to the site visit the draft agenda was discussed with the institution. The panel and SUSOM agreed upon the selection of the interview partners. Meetings were scheduled for interviews with various delegations representing (programme) management, curriculum developers, students, teaching staff, graduates, the Examination Committee and the Quality Assurance Committee.

During the preparatory meeting at the start of the site visit on 15 November 2017 the panel discussed its tasks, the subject-specific framework of reference and the intended learning outcomes of the programme (*Appendix 1*). The agenda also included the findings of the panel based on the critical reflection, the working methods, and questions and issues to be raised in the interviews with representatives of the programme.

During the site visit the panel received and studied additional information (for example annual reports and minutes of Committees, weekly schedules, list of study books/literature) and learning materials made available by SUSOM. An overview of the documents reviewed by the panel is included in *Appendix 8*. Finally, the panel visited the school's accommodations and facilities.

The panel provided students, faculty members and other staff the opportunity to speak confidentially to the panel during an open consultation hour, which was scheduled on November 15, 2017. A couple of weeks before the site visit students and teaching staff were activeley offered this opportunity. No requests were received for this consultation hour.

The panel used the final part of the site visit for an internal meeting to discuss its findings and to draw provisional conclusions. The site visit was concluded with a presentation of the preliminary findings by the chair of the panel. This presentation for the president and the management of SUSOM consisted of a general assessment and a few recommendations.

<u>Assessment scales and definitions for extensive programme assessment</u>
Assessment scales
In accordance with the NVAO's assessment framework for extensive programme assessments (as of 19 December 2014), the panel used the following definitions for the assessment of the standards and on the programme level.
Generic quality
The quality that can reasonably be expected in an international perspective from a higher education master's programme.
Unsatisfactory
The programme does not meet the current generic quality standards and shows serious shortcomings in several areas.
Satisfactory
The programme meets the current generic quality standards and shows an acceptable level across its entire spectrum.
Good
The programme systematically surpasses the current generic quality standard.
Excellent
The programme systematically well surpasses the current generic quality standard and is regarded as an international example.

Report

After the site visit the secretary wrote a draft version of the report based on the findings of the panel. This report describes the programme's strengths and weaknesses and reflects on ambitions and achievements of the proramme.

The report was then presented to the panel members participating in the site visit.

After implementing their comments and receiving approval, the draft report was sent to SUSOM with the request to check for factual inaccuracies. Any comments received from SUSOM were discussed with the chair of the panel and if necessary with the other panel members. After that the final report was approved and sent to Saba University School of Medicine (SUSOM).

Framework for extensive programme assessment: assessment per standard

Intended learning outcomes

Standard 1

The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements.

Explanation: As for level and orientation (master's; academic), the intended learning outcomes fit into the Dutch qualifications framework. In addition, they tie in with the international perspective of the requirements currently set by the professional field and the discipline with regard to the contents of the programme. Insofar as is applicable, the intended learning outcomes are in accordance with relevant legislation and regulations.

Findings

The mission of Saba University School of Medicine is formulated as follows:
"To provide students of diverse backgrounds who exhibit a passion for the field of medicine with the opportunity to acquire the medical and clinical expertise needed for a successful career as a practicing clinician along with the skills and confidence needed to critically evaluate and apply new information."

Framework of reference

The main benchmarks used for the subject-specific frame of reference are the USLME Content Outline (2014) and the Raamplan – 2009 (Framework for Medical Education (Raamplan) from NFU (The Netherlands Federation of University Medical Centres).
Additionally, the curricular content of various associations (e.g. the Association of Biochemistry Course Directors) were uitilized in validating the overall SUSOM framework.
The process of redefining the learning outcomes of SUSOM started in 2013 after the initial accreditation of the Doctor of Medicine (M.D.) programme by the NVAO in 2012.

Level and orientation

As SUSOM offers a programme oriented towards the United States and Canada. SUSOM's standards are closely correlated with nationally (USA) and internationally accepted standards on medical education including the physician competencies as defined by ACGME (Accreditation Council of Graduate Medical Education) and the descriptions of a physician by LCME (Liaison Committee on Medical Education).
The school is listed with the World Health Organisaton (WHO), and is recognized by the ECFMG (Education Commission for Foreign Medical Graduates). Graduates of SUSOM are eligible for residency and licensure in the United States. Canadian citizens are eligible to take the Canadian Medical Licensing examinations.
According to the information dossier further evidence of the correlation between SUSOM's M.D. programme and (international) medical education standards is provided by the recognition from accreditation agencies including the NCFMEA.

Intended learning outcomes

SUSOM defines its intended learning outcomes for the M.D. programme in terms of competencies. These SUSOM competencies are: Patient Care; Scientific and Medical Knowledge; Lifelong Learning, Scholarship, & Collaboration; Professionalism; Communication & Interpersonal Skills; Social & Community Context of Healthcare.

SUSOM's six competencies are broken down on the level of educational programme objectives (*Appendix 2*). In the course syllabi the 35 programme objectives are further broken down into specific course objectives.

Considerations

The panel discussed the mission and educational vision related to the programme with SUSOM's programme management and other interview partners. The school considers itself as mission driven with the main objective – to prepare students for the North American market – the successful preparation of students to pass the USLME Step1 and Step 2. The gradual implementation of the new - multidisciplinary and integrated - curriculum is essential in this approach. After passing the USLME Step 2 graduates obtain the M.D. degree and are prepared to go into residency.

The panel agrees with the positioning of SUSOM as a North American medical school with the USLME Content Outline (2014) and the Raamplan – 2009 (Framework for Medical Education (Raamplan) as the two key benchmarks for its subject-specific frame of reference. The panel considers the intended learning outcomes - defined in terms of competencies - to be strong and appropriate.

The SUSOM intended learning outcomes are compliant with the physician competencies as defined by ACGME and with the standards of LCME. The panel also establishes that the intended learning outcomes of SUSOM are linked to the Dutch Qualifications Framework and are consistent with the second cycle qualifications in European Higher Education (Dublin descriptors). There are some minor differences e.g. the structure and financing of the Dutch health care system and Dutch language skills which are not relevant for SUSOM's student population. The panel considers this approach to be adequate for SUSOM's ambitions.

The redesign of the preclinical and clinical curriculum after the initial accreditation by NVAO in 2012 has given SUSOM the opportunity to fundamentally review the intended learning outcomes. The panel appreciates the operationalization of translating the six SUSOM general competencies into educational programme objectives that are broken down into course objectives. By using the curriculum standard software LCMS+ it can be ensured that all defined learning outcomes are covered in the curriculum as well as in the assessments.

According to the panel this is in line with a standard approach well represented in USA schools-comprehensive objectives with the additional positive feature that the two competencies Lifelong Learning, Scholarship & Collaboration and Social Community Context of Health Care have special emphasis in the SUSOM approach.

The panel establishes that the intended learning outcomes are widely published in relevant documents for students and faculty (SUSOM Catalog, Student Handbook, Clinical Medical Handbook) and on SUSOM's website.

The panel studied the level, the content, the orientation and the intended learning outcomes of the programme. It considers the subject-specific framework of reference to be adequate. The panel appreciates the academic and practical orientation of the programme as well as the multidisciplinary and integrated curriculum. The intended learning outcomes are linked with international standards on medical education and have a clear link with the Dublin descriptors.
Being an international school of medicine, the panel considers SUSOM to be an example of good practice in the national (US) context.

Conclusion

The panel assesses standard 1 as satisfactory

Curriculum

Standard 2

The orientation of the curriculum assures the development of skills in the field of scientific research and/or the professional practice.

Explanation: The curriculum has demonstrable links with current developments in the professional field and the discipline.

Findings

Skills in the field of scientific research

The SUSOM-curriculum has increased its emphasis on the development of skills in the field of scientific research during the preclinical phase by developing courses with special focus on research. This explicit research curriculum has the following components:

- the student's knowledge and understanding of research is developed by following the courses Evidence-Based Medicine (2nd semester), Epidemiology (3rd semester) and Critical Appraisal (5th semester)
- students can enroll in 2 elective courses: Epidemiology and Preventive Medicine Research and an Independent Research Elective
- final element of the research curriculum is the Research: Literature Review and Analysis course (RLRA paper)

The RLRA course being the final component of the research curriculum functions as an "interface" between the preclinical and the clinical curricula. This course leads students through a genuine research process resulting in a publication quality manuscript. Students select topics that relate to contemporary topics or issues in medicine. The final deliverable of this research module is a paper that is reviewed and graded by a committee comprised of senior faculty and staff.

Additionally, during the Foundational/Applied Clinical Correlate sessions newly learned material is linked to the clinical practice as well as to fundamental research. Therefore, students can gain experience in reading and critiquing primary scientific literature.

During 2016, the Research Focus Committee was tasked with identifying research opportunities for the school. A first outcome of this committee is the decision to focus the school's research on medical education - with emphasis on student selection and predictors for academic success - in order to support the research mission as well as the overall mission of the school. By the end of 2016, the decision to pilot the "Partnership for Research in Medical Education" (PRIME) was made. If the pilot proves to be successful, the intention is to provide additional scholarly opportunity for both faculty and students.

Skills in the field of professional practice

The 2014 USLME Content Outline as well as the 2009 Framework for Medical Education (Raamplan) were important guidelines in considering the redesign and development of the clinical skills courses in the Basic Sciences curriculum. Students are developing clinical reasoning skills in the Applied Clinical Correlate sessions and during the clinical skills exercises in the five clinical skills courses.

The medical education for the student in the Cinical Medicine phase of the programme starts only after the approval of the student's RLRA paper.

For the revision of the Clinical Medicine curriculum SUSOM ensured that the clerkship learning outcomes matched national standards and before the implementation of the new Clinical Medicine curriculum an external expert review was carried out.

The new curriculum was designed and implemented (since 2013) based on the recommendations made during the previous site visit and reassured during the recent midterm review in 2016. It has a much stronger focus on competency development and all competencies are explicitly assessed in both phases of the programme. Throughout the curriculum, students must score passing grades on all competencies. They all have a competency based student transcript to support the competency based assessments.

The revised clinical curriculum offers a more comprehensive central oversight into the progress of each student. It also ensures comparability of the educational programme between sites. Students are highly monitored in their progress in achieving clerkship objectives and are given formative assessment and feedback

SUSOM integrated the USLME Step 2 examinations into its curriculum. Before being eligible to graduate, the USLME Step 2 Clinical Knowledge and USLME Step 2 Clinical Skills exams must have successfully been completed by all graduating students. This ensures that all graduates are fully competent in the required skills of the professional practice. External formative testing for Step 2 CS is required to assure students are better prepared for the USLME Step 2 CS examination.

Considerations

With regard to terminology the panel notes the interpretation by SUSOM of the word 'research': "*which covers a wide variety of activities, with the context often related to a field of study; the term is used here to represent a careful study or investigation based on a systematic understanding and critical awareness of knowledge. It is not used in any limited or restricted sense, or relating solely to traditional 'scientific method'.*"

The panel appreciates that the recently installed Research Focus Committee (RFC) aims to focus the schools' research on medical education. Medical Education is a realistic approach for both students and faculty and can add to their collaboration on research considering the limited research facilities and resources based on geographic location of a small island. A focus on medical education research would further stimulate the quality of the learning and teaching programme of the school, create a platform for faculty development in terms of scholarship, and could be an important input for an international network with outstanding medical schools active on medical education research in Canada, the USA, and The Netherlands. Publications and dissemination in this area will help the North American continent to recognize SABA as a quality education institution.

The information dossier contains a list with RLRA papers of 120 graduates from the period October 2016 – October 2017. In consultation with the chair of the panel 15 RLRA papers were selected (*Appendix 3*). All panel members read five of these recent papers with various topics and covering the range of grading. RLRA papers are presented as a state-of-the-art scientific publication: Introduction, Materials and Methods, Results, Discussion, and References. The papers (with gradings from A to C) varied in scientific quality with some strong (A) papers and some weaker (C) papers. Overall the panel members agreed with the final grading given by the SUSOM faculty.

The panel values the idea of a research review and appreciates SUSOM's efforts in that field. It studied the learning outcomes of the RLRA course and finds these rather ambitious. According to the panel the RLRA process could be further improved by more guidance, education and mentorship (*see p.33: Recommendation 1*). Regarding the writing skills of students (to assure an improved quality paper) the panel is aware that this is hard to address in a medical school being a teaching university.

From the interviews with the students (both preclinical and clinical) it became clear that they feel well prepared and supported by their mentor and the librarian for writing the RLRA paper. Graduated students considered the literature review as a distinguishing feature in finding an adequate residency. This aspect is recommended in the dean's letter for residency. One alumnus/resident - working in a research oriented environment - reported very positive on this point.

The panel appreciates that during the first two semesters, the Clinical Skills courses have a heavy emphasis on the basic communication skills using the Calgary-Cambridgemodel which is an excellent and well evidenced model. The panel establishes that the role of clinical skills in the Basic Sciences curriculum has been strengthened considerably and it values that early in the curriculum the students are able to work with standardized patients. Standardized patients are nowadays recruted from the island.

The Clinical Medicine curriculum requires that students are intensively monitored in their weekly activities to demonstrate their progress in achieving the clerkship objectives and the learning objectives of SUSOM. These activities consist of patient logs (minimum of 10), reporting on Patient Encounters for each core clerkship, submitting a minimum of two Patients Notes per week and completing online cases (with a reflection) using Saba courses (LMS). Students are given adequate feedback on these activities by the Clinical Department Chairs and the core clinical faculty. Clinical students and alumni affirmed this was happening during the on-site interviews.

The panel is convinced that that a main objective of the revised clinical curriculum: "to provide a more comprehensive oversight into the progress of each student, as well as to ensure comparability of the educational programme between sites" has been achieved.

The panel acknowledges that the key elements in the revision of the Clinical Medicine curriculum - to comply with national standards and the external review before implementation - are vital for the successful redesign of the clinical curriculum.

In onsite reviews, the clinical learning environment and quality of teaching was consistently noted to be excellent. The breadth and depth of the volume of clinical cases provides a rich resource (learning lab) for the SUSOM students. Clinical students complete at least two on-line cases per week to augment their learning. The panel values the integration of USLME 2 in the curriculum, and the requirement for students to finish successfully USLME Step 2 CK and CS before being eligible to graduate. The panel considers the required formative assessment of clinical skills prior to the USLME Step 2 CS as a quality improvement measure to increase the pass rate of clinical students.

Conclusion

The panel assesses standard 2 as good

Standard 3

The contents of the curriculum enable students to achieve the intended learning outcomes. *Explanation: The learning outcomes have been adequately translated into attainment targets for (components of) the curriculum. Students follow a study curriculum which is coherent in terms of content.*

Findings

The Basic Sciences programme has a duration of 5 semesters (75 weeks) and can be completed in 20 months. The Clinical Medicine programme comprises an 80 - week curriculum divided in 72 weeks of

clinical clerkships in hospitals and starts with eight weeks for the Research module: Literature Review and Analysis. An overview of the curriculum in diagram form is given in *Appendix 4*.

As mentioned under Standard 1 SUSOM has redesigned its curriculum and also redefined its learning outcomes since 2013. In defining the contents of the curriculum, the intended learning outcomes were leading. These learning outcomes were translated into course learning objectives on which the type and amount of contact hours, assignments and self-study were all determined (cf Standard 1). In the development of the new curriculum, the curriculum mapping software LCMS+ has played a key role. This enabled the designers and the reviewers of the curriculum to determine where and how each specific intended learning outcome is addressed in the curriculum.

In the recent years SUSOM implemented its new curriculum with a focus on the following characteristics: competency oriented, systems based; and both horizontally and vertically integrated. The curriculum starts with foundational knowledge courses followed by integrated courses and finally by a systems-based approach. By combining different diciplines within one course the horizontal integration is realised. The vertical integration is realised by integrating scientific foundations with clinical reasoning. The courses gain in complexity through the curriculum.

Another characteristic are the three linear elements throughout the new Basic Sciences curriculum:
Foundational/applied applied clinical correlate sessions

- students actively explore the relationship between basic science and clinical medicine

Clinical skills

- clinical skills courses offering clinically relevant instruction beginning in semester 1. Through the clinical skills curriculum the topics increase in complexity.

Research curriculum

- student's knowledge and understanding of research is developed by following the courses Evidence-Based Medicine (2nd semester), Epidemiology (3rd semester) and Critical Appraisal (5th semester)
- elective courses: Epidemiology and Preventive Medicine Research and an Independent Research Elective.
- the Research: Literature Review and Analysis course (RLRA paper)

The performance of students on in-house developed examinations and on the NBME subject exams provides an important indicator for the effectiveness of the contents and modes of delivery of the curriculum. Finally, the students' performance on USLME Step 1 exam is an external indicator of the effectiveness of the Basic Sciences curriculum.

The clinical medicine curriculum underwent considerable scrutiny when the curriculum was redesigned. For each core clerkship, the intended learning outcomes were considered and revised. The curriculum is defined, and the amount and type of clinical encounters and procedures are specifically described. The assessment instruments align with the intended learning outcomes and the defined competencies.

All clinical sites make use of the same SUSOM core clinical curriculum. To validate the appropriateness of the intended learning outcomes as well as the required clinical encounters, SUSOM sent the core clerkship syllabi for external review before implementation.
To determine whether the curriculum is successful in helping students achieve the intended learning outcomes, students are required to take the national subject NBME exams as part of their clerkship assessment. Halfway through each clerkship students are required to discuss and document their progress with a clinical faculty member in order to provide them with formative feedback on their progression through the competencies.

Discipline-specific NBME shelf exams at the end of each clerkship and are required to pass these to move forward to the next clerkship. Another important indicator of the effectiveness of the Clinical Medicine curriculum is the performance of the students on the USMLE Step 2 CK and CS exams. Student's result on these exams are monitored closely as external indicators or for preparing students to be competitive for residency applications.

In SUSOM's Curriculum Committee, faculty members, staff and students are represented. The educational programme objectives are leading for the Curriculum Committee to determine the programme's effectiveness.
a. the Curriculum Committee examines and maps the curriculum with respect to session objectives, course and clerkship objectives, goals and competencies in each course
b. as part of the evaluation process, the Curriculum Committee also evaluates student course and clerkship evaluations and student performance data. This is reviewed and discussed with each course director and planned adjustments based on these outcome data are documented.
c. curriculum mapping serves to confirm that the curriculum is designed to allow students to achieve competencies in preparation for graduation.
d.if cohorts of students are not meeting expectations when assessed for specific competencies, the Curriculum Committee communicates its findings and makes recommendations to address and improve student learning in those curricular areas.

Considerations

The panel values the redisign and full implementation of the curriculum with the underlying elements of being systems based, competency oriented and both horizontally and vertically integrated. The interview with the programme management, the teaching staff and members of the curriculum committee confirmed that SUSOM is gradually developing an integrated and system based curriculum. Faculty members admittted that there still is room for improvement on certain aspects. Although the student cannot be considered yet as being owner of their learning process, the panel establishes that considerable improvements have been made e.g. clinical correlation sessions weekly in a team based format; increased clinical skills components in the curriuclum; a continued focus on decreasing face to face class time.

For faculty and students, the assurance of adequate time for more self-directed learning needs to be a priority. This would require that entering students have the skills to self-regulate their learning, and requires a gradual process of transition, monitored by all internal and external assessment data.

Recent minutes of the Curriculum Committee reflect an adequate functioning of this Committee. On the agenda are course evaluations including the results of student feedback, course action plans, interprofessional education (IPE) activities in the clinical curriculum (cf Standard 10) and narrrative assessments. Discussions during the meetings are followed by decisions and by actions to be taken. The panel interviews with faculty and students confirm these findings of the panel. IPE is realised through online cases as the resources on the island are not there to all for IPE in real time. This is an adequate subsititute for didactic focus on IPE. In the clinical setting students are in contact with IPE disciplines outside of medicine on a daily basis.

Students are required to receive a satisfactory assessment for all six competencies. These competencies cover the intended learning outcomes. For each student SUSOM maintains a competency based transcript. On request of the panel at the site visit an anonymized competency based transcript was provided as an example.

During the site visit the panel was informed in detail about the functioning of the LCMS+ tool. The panel studied the print out for several courses covering session objectives, category, goal, objective and objective description. The panel highly appreciates the application of this mapping software tool for the whole curriculum.

The panel is impressed by the design and execution of the Clinical Anatomy courses. The handbooks are excellent, and the Clinical Handbook is comprehensive with narrative evaluation forms used with students and faculty. The panel appreciates, in case a student is in jeopardy of failing, SUSOM's remediation policy in both the basic sciences curriculum and the clinical setting when back in US or Canada.

As described before, the students who take the NBME exams are required each clerkship to discuss and document their progress with a clinical faculty member halfway through with the aim to get formative feedback on their progression through the competencies during the clerkships. The panel is pleased about this approach of both summative and formative feedback. During the interviews clinical students and graduates were positive about the preparations for exams and their guidance by clinical faculty. It became clear that students feel well prepared for the core clerkships at the start of their Clinical Medicine programme despite the "isolated" Basic Sciences programme on Saba.

All in all, the panel establishes that since the programme's initial accreditation and midterm review in 2016, SUSOM made good progress in further implementating of its curriculum towards an adequate level of multidiciplinarity and integration. All clinical sites make use of the same SUSOM core clinical curriculum. Process standardization of clinical sites contributes substantially to improving the learning of students. According to the panel SUSOM has proven that it is adequately in control of the learning of students.

Conclusion

The panel assesses standard 3 as satisfactory

Standard 4

The structure of the curriculum encourages study and enables students to achieve the intended learning outcomes.

Explanation: The teaching concept is in line with the intended learning outcomes and the teaching formats tie in with the teaching concept. Factors pertaining to the curriculum and hindering students' progress are removed as far as possible. In addition, students with a functional disability receive additional career tutoring.

Findings

As indicated before, the structure of the revised SUSOM curriculum complies with curricula and training as offered by medical schools in the United States and Canada. The new Basic Sciences programme is 5 semesters and can be completed in 20 months. The Clinical Medicine programme comprises an 80 - week curriculum.

The Basic Sciences curriculum developed towards a competency-based curriculum with a decrease in the passive learning component and with an increase in active learning. So overall the time spent in the classroom is decreased, and there is an increase in student-centred activities. The incorporation of enhanced clinical skills instruction is another key feature. In addition, critical appraisal of the primary literature is incorporated throughout the curriculum, allowing students to become facile with this important skill that will continue to be central to their life-long learning. The revised curriculum evolves from foundational material through integrated courses towards a systems-based approach.

According to the information dossier the goals for the Basic Science curricular revision include alignment with the SUSOM principles including an integrated approach to medical education, more clinicall skills training early in the curriculum, providing students with opportunities for research, more focus on critical appraisal of the primary literature and delivering of the curriculum in varied formats. In addition to increased vertical and horizontal integration, the coherence of the curriculum has increased considerably by introducing the linear elements (cf Standard 3). These "threads" still consist of identifiable separate courses that build upon one another, and together form one coherent line within the Basic Sciences curriculum.

With the implementation of the new curriculum, SUSOM has introduced several new didactic formats (e.g. interactive lectures, small group learning, competency driven assignments, formative (self) assessment sessions, peer-learning). Despite these didactic innovations, the delivery still remains to a large extent lecture based. This has been an explicit choice by SUSOM with the argumentation that the learning community, students and faculty alike, needs to gain experience with these new modes of delivery. Any potential further increase is subject to demonstrated effectiveness and student satisfaction.

The Clinical Medicine phase of the programme starts with a period of 42 weeks of required core clerkships: Internal Medicine, OB/GYN, Pediatrics, Psychiatry and Surgery. During the following 30 weeks in the fourth year, students enroll in elective rotations including a four-week rotation in Primary Care.

The revised Clinical Medicine curriculum contributes to an increased level of central oversight and control. The main principal features are: revised core clerkship assessments, NBME Clinical Subject Shelf Exams, revised clinical faculty evaluations, required patient notes & patient logs, and engaged learning experiences with reflections.

At the request of SUSOM and in agreement with NVAO Dr. Susan Cox acted since August 2017 as an external reviewer for the evaluation of SUSOM's clinical teaching sites with residency training programmes (ACGME- approved). She started her site visits on 21 September 2017 at Greater Baltimore Medical Center Baltimore and St. Agnes Health Care Ascension and she recently reviewed O'Connor Hospital, San Jose (13 October 2017). The focus of her review is to ensure the quality of teaching and the adequacy of the clinical experiences at each site as well as adequacy of supervision. She reviews submitted materials prior to arrival, then interviews leadership, faculty and staff, as well as clinical students to confirm experiences and standardization. Additionally, she inspects the physical facilities. Her predecessor visited 26 clinical sites during the period 2014 – 2017. Dr. Cox reviewed so far nine of the site visit reports done by her predecessor. In a letter dated November 13, 2017 (*Appendix 5*) the panel was informed of her findings

Considerations

Despite encouraging didactic developments, SUSOM has made the explicit choice that the delivery - to a large extent - still remains lecture based. According to the school the learning community, students and faculty alike, needs to gain experience with these new modes of delivery and further developments will be subject to demonstrated effectiveness and student satisfaction. Given the specific position and mission of the school, the panel considers this as a reasonable argument. Nevertheless, the panel advises SUSOM to intensify its efforts to deliver the curriculum in varied formats.

The panel establishes that the introduction of the new curriculum resulted in a decrease of traditional frontal lectures and in an increase of:
- variation in lecturing formats, including large group interactive sessions,

small group interactive sessions and laboratory exercises
- time for reflection and integration of subject matter as well as formative exercises
- the use of technology to stimulate and maintain student interest in the content presented
The panel observed students after a large group anatomy session able to approach faculty and ask questions and clarify what they are uncertain about. Faculty are very available for these tutorials both in their office and as needed in the sessions.

The panel appreciates the increase in student-centred learning. The panel attended during the site visit a team-based learning activity. Faculty members and students reported positive about the increasing non-graded formative assessments during a weekly cycle.

Students declared their full support for these student-centred developments evidenced with examples of interactive sessions including small groups, laboratory exercises, clinical correlations sessions using team based learning, and self-regulated activities. The average number of students for clinical reasoning sessions, and sessions for dissection is 5 – 7 students for each session.

On request of the panel SUSOM provided a sample of a weekly schedule that evidenced the variety in lecturing formats from Basic Sciences semester 5, including traditional lectures, clinical correlates, critical appraisal (research curriculum) and clinical skills (*Appendix 6*).

Clinical students gave positive feedback on the dedicated teaching during the clerkships, inspiring experiences, the good functioning feedback mechanism, and the adequate preparation for the interviews (webinars) when applying for residency.

SUSOM has made provisions in Article 4.4 of the OER to accommodate for students with a functional disability. The Examination Committee has the authority to arrange special provisions to facilitate access to examinations and/or the taking of examinations. As for all students, counseling services are tailored to the individual student's needs.

While it is required that the fourth year (elective) rotations include a 4-week rotation in Primary Care, students are given the flexibility, and are indeed encouraged, to pursue elective rotations based on their academic performance, academic and professional interests, and future career goals. All students in US medical schools do a minimum of a one month "acting internship" in the discipline they are applying in. The panel would recommend this is a requirement in the SUSOM 4th year Clinical Phase in US/Canada to assure that students are competitive with US applicants. This is a more stringent rotation than a traditional elective. The required Primary Care 4-week rotation however is an excellent feature to keep as well.

The panel considers the comprehensive Clinical Medicine Handbook of vital importance for clinical students and clinical faculty. It contains for each core rotation a syllabus and the intended learning outcomes. The Clinical Medicine Handbook is a leading document for all clinical students, faculty and clinical sites. The panel acknowledges and appreciates the increased level of central oversight and control that SUSOM has realised by redesigning the Clinical Medical curriculum.

The panel establishes that the clinical teaching during the core rotations take part in ACGME-approved hospitals affiliated with SUSOM. The panel is confident that ACGME-approved residencies safeguard the quality of teaching and learning during the clerkships. The reports and the reviews conducted at the clinical training sites by the external reviewer confirm that teaching and supervision are consistent with the standards of SUSOM.

The Saba Outpatient Clinic run by Dutch Primary Care Physicians provides an opportunity for students to come into contact with patients on the island and outside a regular hospital.

The panel concludes that the Basic Sciences curriculum and the Clinical Medicine curriculum are well integrated, adequately structured and enable students to achieve the intended learning outcomes.

Conclusion

The panel assesses standard 4 as satisfactory

Standard 5

The curriculum ties in with the qualifications of the incoming students. *Explanation: The admission requirements are realistic with a view to the intended learning outcomes.*

Findings

The majority of SUSOM's applicants come from the United States or Canada. Applicants are expected to have a minimum of three years of under-graduate studies, including premedical requirements from an accredited college or university. Applications are accepted throughout the year and incoming classes start in January, May and September with a current class size of approximately 80 students. Each semester represents 15 weeks of full time study. Students can complete the five semesters of Basic Sciences in 20 months, and then start with clinical rotations at ACGME-approved teaching hospitals in the U.S. and Canada that are affiliated with Saba University.

The following courses are considered standard pre-medical requirements for admission:
1. *General biology* or *zoology* - one academic year
2. *Inorganic chemistry* (with lab) – one academic year
3. *Organic/Biochemistry* (with lab) – one academic year
4. *Physics* (recommended) - one academic year
5. *English* - one academic year
6. *Other* - background in humanities, social/physical sciences and computer skills

Additional coursework in biology and related disciplines is highly recommended by the school. Students completing courses in biology and related disciplines e.g. anatomy and physiology, genetics, biochemistry, molecular biology are given preference in admissions.

Applicants from countries with educational standards, similar to the U.S. are evaluated by the Admissions Committee. Each applicant, in general, should meet the educational requirements for admission to medical school in the country of origin. Applicants must at least have completed three years of university education at bachelor's level complying with U.S.-standards.

Additional requirements

The Medical College Admission Test (MCAT) is required for all applicants who are U.S. citizens, nationals, or permanent residents. All other applicants are strongly recommended to take the MCAT. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL).

Finally, all applicants are expected to have a minimum of 50 hours of direct patient care experience to be eligible for admission to Saba University School of Medicine.

Admission selection
Applicants are encouraged to submit their documents early (generally six to eight months in advance). The number of applicants for the M.D. programme enables SUSOM be to highly selective; the applicant to enrollment ratio is five to one.

Completed applications are reviewed and evaluated by the Pre-Screening Committee. Applicants are selected for interview on the basis of the candidate's ability to meet the requirements of the medical school's curriculum. Factors such as motivation, perseverance, scholastic record, letters of recommendation and personal statement are important in the selection process. Further, applicants are encouraged to visit the Basic Sciences campus during or before the admission process. After a (preferably) in-person interview the student file is reviewed by the Admissions Committee. This personal interview plays a major role in the selection of students. The information dossier provided the SUSOM admission interview template.

Considerations

For applicants a minimum of three years of under-graduate studies is expected (besides other requirements). The panel establishes that completion of a bachelor degree is not mandatory, though on SUSOM's website is stated that preference will be given to applicants who have completed a bachelor's degree or higher.

The panel considers the courses that are indicated as standard pre-medical requirements to be adequate and realistic. The panel appreciates that additional coursework in biology and related disciplines is highly recommended for applicants. The panel would recommend SUSOM to follow the new premed requirements set for US students that each student has at least one semester of each of these courses.

The panel investigated the admission requirements and the admission selection procedure and considers these to be adequate. From the student interviews it became clear that students are positive about the intake procedures. Admission requirements and selection procedures are transparent and widely spread (website, Student Handbook etc.).

Of all students that successfully complete the programme, 88% complete the programme in 4 years. The school's results show a high retention rate as well as success rate. In the years 2013 - 2015 nearly 100% of the students passed USLME Step 1 at the first attempt. These figures show the effectiveness of admission requirements and admission selection process.

The panel has studied the lists of residency appointments over the years 2015 – 2017 and considers the numbers of graduates placed in academically affiliated programmes and the diversification of residencies as successful. All in all, the panel concludes that the admission policy of SUSOM and its implementation allows incoming students to achieve the intended learning outcomes (cf Standard 11).

Conclusion

The panel assesses standard 5 as satisfactory

Staff

Standard 6

The staff is qualified, and the size of the staff is sufficient for the realisation of the curriculum in terms of content, educational expertise and organisation. *Explanation: The factual expertise available among the staff ties in with the requirements set for professional or academic higher education programmes.*

Findings

In order to facilitate the implementation of the new curriculum and to allow for the required increase of small group learning activities, SUSOM expanded its faculty considerably. As of June 2017, the Basic Sciences teaching faculty consists of 41 full-time teachers in the rank of assistant professor, associate professor or professor as depicted in the table below. All Basic Science faculty at the Saba campus reside full-time on Saba and dedicate the vast majority of their time to teaching.

SUSOM Basic Science Faculty
by Department and Rank

Department	Assistant Professor	Associate Professor	Professor	Total[14]
Anatomical	1	5	2	8
Behavioral	--	1	3	4
Molecular	--	1	4	5
Pathology / Physiology	3	2	3	8
Pre-Clinical	6	5	4	15
Total	**14**	**16**	**11**	**40**

ref: 14: Count excludes Library director

Of the 41 faculty members there are 23 who hold an M.D. or equivalent degree (58%), and 18 who hold a Ph.D. The faculty mix represents a variety in clinical and research experience. The nature of the course is leading in determining the required degree (M.D. and/or Ph.D.). All research courses are taught by Ph.D.'s (with exception of the classes taught by the librarian who holds an MLS degree).

In the past years, SUSOM further formalized its working relationship with its faculty at the clinical teaching sites. All clinical faulty members have been formally appointed as SUSOM teaching faculty in one of the three faculty ranks. The number of clinical faculty that are appointed by the University is depicted in the following table.

SUSOM Clinical Medicine Faculty at Clinical Teaching Sites
by Department and Rank

Department	Assistant Professor	Associate Professor	Professor	Total
Internal Medicine	89	27	22	138
OB/GYN	31	21	8	60
Pediatrics	10	3	4	17
Psychiatry	58	8	4	70
Surgery	45	15	19	79
Clinical Medicine[15]	--	--	8	8
Total	**233**	**74**	**65**	**372**

ref: 15: Administrative offices – Devens, MA

The implementation of the new curriculum required investments in faculty for the Basic Sciences phase of the program, both in terms of quantity as well as in terms of quality. The growing use of small scale interactive, case-based learning implied an increase in the number of faculty. Furthermore, the University felt the need to intensify its faculty development, especially in relation to facilitating small groups. Faculty in the Basic Sciences on the main campus are involved in regular faculty development activities, the majority of which focus on helping them improve their skills in teaching and assessment. The faculty development workshops are archived for later review.

In addition, all faculty are provided funding support for continuing education credit and are encouraged to participate in national and international conferences that will augment their knowledge and experience, as well as contribute to the development of their teaching and assessment skills. The faculty participated in a series of faculty development workshops in the Fall 2014 that concentrated on small group teaching and evaluation skills, as well as, methods to integrate student learning throughout the curriculum. These workshops were aligned with the objectives and methods of the new curriculum introduced in January 2015. The faculty development workshops are also ongoing.

The school also provides regular webinars targeted for faculty at clinical sites - available to all faculty members - that provide teaching techniques across a variety of clinical settings, as well as methods for both formative and summative assessment of student performance.

The faculty development events maintained on the learning management system cover a series of workshops and lectures on topics in active learning techniques, integrated learning, teaching and learning, research education, educational theory, student evaluation and student lectures. Additionally, SUSOM conducts each semester faculty development lectures for clinical faculty through live webinars that are also available to Basic Sciences faculty members. Topics covered through these sessions include for instance: evidence-based healthcare, clinician-patient relationship, narrative assessments, grading policy reviewsmeeting clerkship educational goals.

Considerations

The interview with faculty members focused on the curriculum transition and their participation in faculty development workshops that concentrated on small group teaching and evaluation skills. These workshops comply with objectives and methods of the new curriculum. Faculty development was thoroughly planned, intensified and structured during the implementation of the curriculum

during the period 2013-2016. The panel values SUSOM's policy of building of a faculty development archive in order to make (clinical) webinars, workshops and lectures available for all faculty members. The panel considers the topics covered by workshops and webinars as important topics. The panel appreciates SUSOM's faculty policy that is emphasizing improvement of skills in teaching and assessment and that this policy is considered by the management as a continuing effort.

As part of the external reviews of the ACGME-approved clinical teaching sites (cf Standard 4) there were interviews with the involved faculty and staff. All relevant documentation was provided in advance, including CV's. These curricula vitae were reviewed. and all deemed satisfactory. All teaching faculty have active appointments at SUSOM.

Faculty members explicitly declared their affinity with and support for the new teaching concept of SUSOM medical school. It was stated though that some faculty members left SUSOM during the transition period. The panel was impressed by good and dedicated faculty members and the high caliber of the Dean leadership. The staff exposed a strong teamspirit and enthusiasm about their teaching mission. During the interviews the students declared support for the curriculum revision resulting in new teaching formats and more active student learning. Students (preclinical and clinical) were extremely positive about the availability and accessibility of the faculty members e.g when writing the RLRA paper after they already had left the island.

The panel establishes that sufficient faculty members are available to assure the desired quality of the programme. During the site visit, the panel noted that both students and faculty members affirm that there is an adequate student-staff ratio. The panel considers the present staff - student ratio of 1: 8 in the Basic Sciences programme to be excellent.

The panel recognizes the educational and didactic qualifications and expertise as well as the teaching experience of the allocated staff. The panel establishes that a number of young and talented teachers where recently recruited from first-class medical schools. The panel is aware that faculty members have a teaching appointment and not a research appointment. Considering the resources on the island faculty members guide students on realistic research projects. All faculty members are appropriate educated for the discipline they taught. In the ACGME - approved clinical teaching sites there is a strong oversight over residency faculty.

Conclusion

The panel assesses standard 6 as good

Services and facilities

Standard 7

The accommodation and the facilities (infrastructure) are sufficient for the realisation of the curriculum.

Findings

In order to facilitate the new curriculum (small group working spaces) and to accommodate for the increase of the number of faculty, SUSOM has made considerable investments in its physical

infrastructure in the past years. The physical infrastructure is summarized in the critical reflection and provides SUSOM's learning community with well equipped classrooms, laboratories, secure testing center, medical library, meeting rooms, student spaces, faculty offices, fitnesscenter, and a cafetaria. Classrooms and lecture halls are wifi-enabled and air-conditioned. The Anatomy lab has 9 dissection tables and the secure testing center 114 individual terminals.

The W.F.M. Johnson Library provides access to electronic journals, print journals, several medical databases (e.g. clinical decision database and USLME ExamMaster study online database), medical literature, medical DVD's, CD-Roms, audiotapes and kits. The library also enables students to make use of a learning resource center and a computer center.

In addition to physical provisions to support the medical education program, SUSOM continues to invest in, and develop, Information Systems & Technology including IT infrastructure, software applications, services and modern learning technologies to support the medical education program. SUSOM's Information Systems and Technology ("IS&T") architecture includes personnel and system redundancy as well as backup policies that provide for availability and remote administrative support. Security practices in managing access to servers and other networks are operational. SUSOM develops and maintains affiliations with ACGME-approved teaching hospitals in the United States and Canada to provide clinical rotations. ACGME-approval implies standards for the availability of a learning infrastructure for SUSOM's students at all clinical sites.

Considerations

The panel brought an extensive visit to the SUSOM-campus and appreciates the functional quality of the accommodations. Substantial investments in the physical infrastructure of the last few years are the small group working places and accommodation for a growing number of faculty members. The most recent investment is the Clinical Skills laboratory. Given the number of students (>300) on the Saba campus the panel is impressed by SUSOM's effective and efficient approach in providing an educational infrastructure for students and teaching staff.

The panel establishes that the new accommodations are in favor of faculty and students. It is important for the educational and didactical qualities of faculty that facilities are present to foster it. In the interview students gave positive feedback on the campus facilities. The access to the library is very flexible (open during the weekend and evenings). At the clinical teaching sites, the students have access to well equipped hospital libraries. All large group rooms have diverse capability for technology enhanced learning.
According to the students the IT-facilities on the Saba campus are up to date and the new dormitories, the cafetaria and the fitnesscenter are highly appreciated.

As stated SUSOM continues to invest in, and develop, Information Systems & Technology including IT infrastructure, software applications, services and modern learning technologies to support the medical education program. The panel is impressed by these excellent resources.

The panel studied the clinical site reports over the period 2014 – 2017 from the external reviewers. These reviewers inspected the quality of the facilities and services of the affiliated ACGME- approved hospitals. In general, the external reviewers described a high standard of the teaching - learning environment including the educational infratructure.

Conclusion

The panel assesses standard 7 as good

Standard 8

Tutoring and student information provision bolster students' progress and tie in with the needs of students.

Findings

The admission process to SUSOM is administered with the expectation that students admitted to the M.D. programme will successfully complete the study programme. The student support system provides multiple levels of guidance throughout the ten-term curriculum. The type of student support varies from academic support via USLME-counselling and clinical rotations/residency placement support to information provision and housing.

During the first semester all new students are assigned a faculty advisor and are paired with a student mentor who provides each student with a foundation for a support mechanism, and source for advice throughout their medical education.

The small class size at SUSOM and low overall student to faculty ratio allows each instructor to fulfill their responsibility of ensuring that each student is learning and performing adequately. After successfully passing USLME Step 1, each student has an individual interview with the clinical coordinator to discuss hospital placement. As SUSOM students complete their core clerkships, they are guided and monitored in order to be prepared for application for residency.

In support of the students' health and wellbeing, personal counseling is available at the Basic Sciences campus through a qualified clinical psychologist who keeps confidential records.

For students participating in the core clerkships the Clinical Medicine faculty members serve as valuable role models and students have the opportunity to interact with interns and residents. All students are assigned to a coordinator within the office of the Associate Dean, Clinical Medicine. Clinical faculty provide guidance for students as they prepare for the residency match process.

Student participation at SUSOM is realised via the student council (the Student Governance Association), student participation in select committees, and elected class officers. Students elect a president, vice president, and secretary for each semester. At the Saba campus several student-run organizations and intramural sports organisations are present and active.

SUSOM endeavors to make all necessary information available for students as efficient as possible. Information about the programme and the individual courses is contained in the OER (Teaching and Examination Regulations), the University Catalog, on the University website and on the Campus website. Students have access to academic schedules for at least two years in advance. Further, grades from both mid-term and final exams are available to students within five days of the exam.

Considerations

SUSOM offers students a support mechanism that provides multiple levels of guidance and tutoring during the four years of preclinical and clinical medical education. The panel appreciates the well-structured system of monitoring and guidance of the students. Students comfirm that teaching staff, mentors and faculty advisors are available and accessible in an optimal way (cf Standard 6). The panel appreciates the policy that first semester students are provided with adequate new housing and can stay on campus to get adjusted to student and island life.

Students are positive about the structured, comprehensive review in semester 5 of the material covered in the Basic Science phase of the programme. For the USLME Step 1 examination, the NBME Shelf Examinations and for the Clinical Medicine part of the programme students feel well prepared. The panel is convinced that this approach contributes to a smooth transition to the Clinical Medicine phase of the programme. As preparation for USLME Step2 CS, SUSOM has successfully introduced mock (OSCE) exams.

Counseling for residency is completed and overseen by the office of the Associate Dean of Clinical Medicine. There are clinical deans that work with students to plan their 4th year schedule of electives and application to residency based on a selected career path; a dean's letter is prepared for each student as part of their residency application. Students can request mock residency interviews as well

Student participation at SUSOM is realised via a student council (Student Governance Association), student participation in select committees and elected class officers. The panel establishes that students and graduates are represented in the Curriculum Committee (2) and the Quality Assurance Committee (3). The panel appreciates the student representation in these relevant committees.

Students are satisfied with the information on learning and teaching as provided by SUSOM in the various phases of their study. The school's website, the Campus website and the Student Handbook are good examples regarding Basic Sciences programme. The Clinical Medicine Handbook is a comprehensive and appropriate document for students, teaching staff and other stakeholders.

On completion of their core clerkships students are provided with extensive information and guidance to apply for a residency. The panel considers the information provision to students to be adequate.

Conclusion

The panel assesses standard 8 as satisfactory

Quality assurance

Standard 9

The programme is evaluated on a regular basis, partly on basis of assessable targets.

Explanation: The programme monitors the quality of the intended learning outcomes, the curriculum, the staff, the services and facilities, the assessments and the learning outcomes achieved through regular evaluations. The outcomes of these evaluations constitute the basis for demonstrable measures for improvement that contribute to the realisation of the targets. Programme committees, examining boards, staff, students, alumni and the relevant professional field of the programme are actively involved in the programme's internal quality assurance.

Findings

The information dossier describes the periodical evaluation of courses and clerkships. Each basic science course is reviewed each semester. These reviews include student academic performance as

well as feedback from surveys of students. The student survey results are also reviewed by the Quality Assurance Committee (QAC), Examination Committee, and the Curriculum
Each basic science course is reviewed each semester. These reviews include student academic performance as well as feedback from surveys of students. The student survey results are also reviewed by the Quality Assurance Committee (QAC), Examination Committee, and the Curriculum Committee.

Additionally, feedback from students' end of clerkship surveys is reviewed each term by the three mentioned committees. Core clinical clerkships are reviewed at least annually by the Clinical Department Chairs. In addition to reviewing curricular content, the clinical teaching sites are reviewed. To this end, SUSOM periodically hires external, independent reviewers to evaluate the sites (cf Standard 4). Site visit reports are included as an appendix to the critical reflection.

At the end of a semester each faculty member's performance will be reviewed. This review includes students' responses to surveys and student academic performance (grades and NBME subject examinations). Faculty teaching performance is monitored, particularly with regard to student feedback. Faculty with particularly low ratings are noted and monitored by the QAC and a remediation plan will be developed.

At the end of each core rotation preceptors complete the clinical evaluation form. After every core clinical rotation, students complete an evaluation of their clerkship that includes the quality of teaching at that site. These end-of-clerkship evaluations are reviewed by the clinical staff. If end-of-clerkship evaluations indicate issues with a particular site or clinical faculty member an intervention for remediation will be made.

The elements that SUSOM collects and uses to evaluate student educational experiences include: student evaluations of clerkships, core clerkship examination performance, OSCE results, required clinical encounters and procedures, and USMLE performance.

The information dossier describes the organisational structure, competencies and responsibilities of individual administrators and faculty members in the evaluation process of Clinical Experience. On request of the panel SUSOM provided an organisational chart (*Appendix 7*).

The Quality Assurance Committee is responsible for overseeing the quality assurance function at the School and identifying opportunities for improving its educational programme. During the site visit SUSOM provided the panel with the minutes of the QAC meetings (2016/2017), the annual report and the Quality Plan (version 2017).

Committees involved in quality assurance are the Quality Assurance Committee (QAC), the Curriculum Committee, and the Examination Committee. In the QAC and Curriculum Committee at least two faculty members are appointed. Students and graduates/residents are represented in the QAC (2 students, 2 graduates) and the Curriculum Committee (2 students).

Considerations

The QAC consists of faculty members, students, a graduate and administrators/academic staff. From the interview with the QAC members it became clear that the mainly reactive approach of the Committee in the past gradually shifts towards a proactive approach. In function of the recent implementation of the new curriculum the QAC keeps its main focus on monitoring activities. The SUSOM Quality Dashboard will continue to play a central role in the communication of aggregated management information. In the present phase (late 2017) the committee started working in a proactive role aimed at its broader scope and function. A first effort will be to increase SUSOM

community's awareness of the role, scope and function of the QAC. Although the panel is pleased with this realistic vision of the QAC, it advises to accelerate the operationalisation of this proactive role.

Regarding the independency of the QAC the panel establishes that two senior faculty members are recently acting as co-chairs of the committee. The panel qualifies the present composition of the QAC as strong and dynamic and is confident that with the increasing proactive approach of the QAC the involvement of administrators will decrease so a formally independent committee will be realised in the near future.

The panel examined the latest version of the SUSOM Quality Assurance Plan (January 2017) in which the Quality Assurance Committee (QAC) describes the approach in fulfilling its duty with regard to safeguarding SUSOM's quality assurance system in a structural setting. The panel appreciates the descriptions of the QA principles and the quality control function of the QAC. The key process is the Plan-Do-Check-Act cycle (Deming Quality Cycle). The intention of the underlying quality management system is that quality continuously improves. The committee has the ambition to contribute to a quality aware culture in which all stakeholders contribute. The panel endorses this ambition of the school and advises to further develop and implement this cyclic iterative process of QA.

The QAC minutes 2016 – 2017 and the 2016 annual report were examined by the panel and this evidenced an explicit QA-policy. Issues on the agenda include:
- student representation with a mechanism via the Student Governance Association (SGA)
- the broadened concept of QA in terms of scope and function
- preceptor evaluations
- work on awareness of the QAC among students and other stakeholders -
- surrvey on the student learning environment
The overall aim of the QAC is to contribute to the process of SUSOM becoming a community of learners.

The panel appreciates the strong interrelationship between the three committees involved in quality insurance. After each QAC-meeting the draft minutes from that meeting are shared with both the Curriculum Committee, and the Examination Committee (and vice versa).

USLME Step 2 CS figures show rather low scores of the entry cohort 2013 (126 students took Step 2 CK and only 110 took Step 2 CS). SUSOM's programme management agreed this to be an area of improvement (cf Standard 11). The revised policy is that all students take a national mock Step 2CS exam prior to the actual exam to increase skills and assure that they are ready for the national test.

As described in the information dossier Competency Directors support the offices of the Associate Deans of Basic Sciences and Clinical Medicine. They are comprised of six individuals, each representing one of the School's competencies. The panel is pleased by the existence of these six Competency Directors. These individuals are responsible for developing remediation plans consistent with course syllabi and assuring that students who receive unsatisfactory assessments of competency in their coursework are remediated.

From the interview with students and graduates/residents the panel notes that the existing relations between clinical students and graduates (and among each other) are quite weak. There is a common feeling that strengthening the SUSOM network on the level of students and alumni might be beneficial for SUSOM's students and for the institution (see p. 33: Recommendation 2). Clinical students and graduates informed the panel that is hard to get into residencies because of heavy competition for graduates from international (off shore) schools of medicine (regular M.D. and D.O. graduates).

The panel concludes that academic policies at SUSOM support the regularly programme evaluation processes as well as the committee structure overseeing the content and delivery of the curriculum.

Conclusion

The panel assesses standard 9 as satisfactory

Assessment

Standard 10

The programme has an adequate assessment system in place. *Explanation: The tests and assessments are valid, reliable and transparent to the students. The examining board of the programme safeguards the quality of interim and final tests*

Findings

The critical reflection document gives a detailed description of SUSOM's assessment policy with the following elements. Students are assessed against the six competencies throughout their programme of study and SUSOM maintains a competency based transcript. Students are required to receive a satisfactory assessment against each competency assessed (or remediate unsatisfactory assessments) in each course or clerkship in order to graduate from the programme.

Outcome measures in the preclinical and clinical years are employed to determine individual competency achievement. The rubrics and criteria are provided to students in syllabi for individual courses and clerkships for reasons of transparency and awareness. This policy is followed for every method of assessment including, written assignments, oral assessments, participation and preparation, patient logs, patient notes, engaged learning experiences, and summative exams.

In all syllabi the standards for competency achievement are indicated and the remediation policy is detailed and transparent. In order to progress to the next semester, the student in the Basic Sciences phase must achieve each competency. A remediation plan is developed in case the student does not pass the exam. Before graduation the students in the clinical programme must achieve each competency.

The Examination Committee (EC) "*is responsible for determining, in an objective manner, whether each student meets the conditions of education and examination regulations, regarding knowledge, competencies, understanding and skills needed to obtain a degree."*

This responsibility implies full coverage of the programme objectives and the alignment of assessments with the intended learning outcomes. The EC is also responsible for the quality of examinations (validity, reliability, objectivity, transparency), due process in the design of examinations, due process in the administration of examinations and all regulations pertaining assessment, examinations and student progress through the programme.

The EC delegates the monitoring of individual student progress to the Promotions Committee. This committee monitors the individual progress of students through the curriculum and hears student appeals. The EC oversees the functioning of the Promotions Committee.

Each competency or intended learning outcome is assessed through several assessments. An appropriate mix of different types of assessments is used for each programme assessment. The course syllabi contain a description of the different assessments and the composition of the grades. All procedures are published in the OER, University Catalog, Student Handbook and Clinical Medicine Handbook.

During the Clinical Medicine phase of the programme, students' progress is intensively monitored. The required clinical experience for each core clerkship consists of the following: Hospital Clinical Experience, Patient Log/Encounters, Patient Notes, Engaged Learning Experience, Mid-Clerkship Assessment, and Core Clerkship Exam.

The critical reflection provides a table with an overview of faculty monitoring student clinical experience and an extensive description of the systems used by clinical faculty to monitor the progress of each student in clinical experience.

Considerations

The panel establishes that SUSOM developed a robust and adequate assessement system during the recent years. Assessments are competency based and in line with the educational goals of SUSOM. The followed procedure safeguards that all course objectives and course competencies (intended course learning outcomes) are assessed and that the form of assessments matches with the nature of the learning objectives. In this process the advisories and recommendations of the Examination Committee are of crucial importance.

From the panel's interview with the EC it became clear that the committee develops a proactive and comprehensive approach to its task. The committee takes up its duties in a professional way. During 2017 the emphasis was still on monitoring the implementation of the new curriculum and for the near future the focus will be on the evaluation of the overall and specific quality of the assessments. The EC-members consider Interprofessional Education (IPE) as a distinguishing feature of the new clinical curriculum. On request of the Curriculum Committee the EC approved inclusion of IPE activities as part of the core rotations. IPE involves the interaction of medical students with professionals from other health disciplines. Students are expected to write a reflection on the IPE competencies. The panel endorses this initiative.

As stated before the faculty development workshops - in the context of the new curriculum implementation - have a focus on improving skills in teaching and assessment (cf Standard 6). The policy of the EC is to give the construction of exam question - in conjunction with the examiners - a strong emphasis during these workshops. As stated before the faculty development workshops in the context of the new curriculum implementation have a focus on improving skills in teaching and assessment (cf Standard 6). Regularly new examiners who meet the educational and didactic requirements of the new curriculum are appointed on proposal by the EC.

In 2017 two new committee members with educational and assessment expertise – including a senior faculty member – were appointed.

Feedback from students and faculty is of great importance for a successful implementation of the new curriculum. Recently the EC considered the assessments of the new curriculum. The result was an advisory to the Board of Trustees to amend the OER on a few aspects. The panel appreciate that the EC intends to lower the weight of theoretical exams, and to support developments such as the increase of use of standardized patients. Students have the option to meet and get feedback from examiners (not for shelf exams). Students reported quite positive during their interview about the

(formative) mid-clerkship self-assessments and the oral case pesentations as part of the preparation for residency interviews.

The panel examined recent minutes and the 2016 annual report of the EC and appreciates the fact that the committee is not working in isolation. The committee has a broad scope and is working in close relationship with the Curriclum Committee and the Quality Assurance Committee. The committee acts on policy level as well as on operational level e.g. formulating recommendations regarding the OER, forward proposals for appointing examiners, monitoring exam results, discussing grading policy and guidelines, overseeing the functioning of the Promotions Committee, and implementing the new curriculum in terms of assessment. Finally, the EC is safeguarding on various levels that processes, decisions and regulations are compliant with the regulations of the Teaching and Examination Regulations (OER) so meeting the requirements of the Dutch law.

The panel concludes that the assessment system functions well. The formalisation of the assessment policy and the implemented standardized assessment procedures are adequate indicators for this. The EC evaluates the assessment practice and initiates necessary changes. The panel is impressed with the performance of the Examination Committee which it qualifies as professional and effective.

Conclusion

The panel assesses standard 10 as satisfactory

Learning outcomes achieved

Standard 11:

The programme demonstrates that the intended learning outcomes are achieved. Explanation: The level achieved is demonstrated by interim and final tests, final projects and the performance of graduates in actual practice or in subsequent programmes.

Findings

Students must pass USLME Step 1 and must achieve approval for their RLRA paper prior to entering clinical rotations. Students must pass Step 2 Clinical Knowledge (CK) and Clinical Skills (CS) before being eligible to graduate. These exams are the same as the standardized exams students have to pass to be eligible for residencies (post-graduate taining programmes).

The programme has an overall graduation rate of 80%. Of all students that successfully complete the programme, 88% complete the programme in four years.

The most important overall indicators of achievement of the intended learning outcomes are the students' performance on the national licensing examinations as well as number of graduates accepted into residency programmes. The panel reviewed the performance of SUSOM students and graduates in all these areas, as well as the list of individual SUSOM residency placements for 2015, 2016 and 2017 which were provided in the information dossier.

Considerations

The panel considers the performance of the SUSOM students on the national licensing examinations to be successful. The panel is impressed that over the years the USLME Step 1 and Step 2 (CK & CS) passing rates from SUSOM students maintain on a very high level. The overall graduation rate of 80%

and the figure of 88% of the students completing the programme in four years are positive indicators.

After successfully passing USLME Step 1 students are not yet allowed to start with their clinical rotations. The 8-weeks course Research: Literature Review and Analysis course must be accomplished (RLRA paper) before students are allowed to start their rotations (cf Standard 3). The panel selected 15 RLRA papers and all panel members read five of these papers covering the range of grading (A to C). Overall the panel members agreed with the final grading given by the SUSOM faculty (cf Standard 2).

An important performance indicator for measuring the achievement of the intended learning outcomes is the number of graduates that are accepted into residency programmes of academially affiliated programmes. The panel establishes that for the period 2010 – 2015 the average percentage of SUSOM graduates accepted into residencies is 94%. The panel considers this as a successful performance. The panel is convinced that the intended learning outcomes are achieved by students upon graduation.

Conclusion

The panel assesses standard 11 as satisfactory

General conclusion

In conformity with the NVAO decision rules for extensive programme assessments, the panel assesses the quality of the programme Doctor of Medicine (M.D.) offered by Saba University School of Medicine as satisfactory.

Recommendations for improvement

Recommendation 1 The panel recommends SUSOM to consider that students with the final score C for their RLRA paper should not pass. By demanding a higher level of skills from students in writing literature reviews on a scientific topic (basic, clinical or social sciences) SUSOM's ambitions can be better realised. There should be adequate mentoring of students by both knowledge and process experts to assure they can achieve a B or better grade. This includes faculty, the medical librarian as well as the Dean of Research.

Recommendation 2: SUSOM should stimulate and support the development a strong and viable network of it's clinical students and graduates/residents e.g. establishing an Association for Alumni that supports coaching and mentorship for (clinical) students. This will establish a track record data system for future students to use and seek advice from when they return to USA for clinical and residency placements. Also, the further development of a system which follows the performance of SUSOM graduates and keeps track of the career choices and locations of graduates/residents might generate valuable data for SUSOM. The development of SUSOM students and alumni into a community of life long learners will benefit Saba as an institution as well as the students.

Overview of the Assessments

Standard	
1. The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements.	Satisfactory
2. The orientation of the curriculum assures the development of skills in the field of scientific research and/or the professional practice.	Good
3. The contents of the curriculum enable students to achieve the intended learning outcomes	Satisfactory
4. The structure of the curriculum encourages study and enables students to achieve the intended learning outcomes.	Satisfactory
5. The curriculum ties in with the qualifications of the incoming students.	Satisfactory
6. The staff is qualified, and the size of the staff is sufficient for the realisation of the curriculum in terms of content, educational expertise and organisation.	Good
7. The accommodation and the facilities (infrastructure) are sufficient for the realisation of the curriculum.	Good
8. Tutoring and student information provision bolster students' progress and tie in with the needs of students.	Satisfactory
9. The programme is evaluated on a regular basis, partly on basis of assessable targets.	Satisfactory
10. The programme has an adequate assessment system in place.	Satisfactory
11. The programme demonstrates that the intended learning outcomes are achieved.	Satisfactory
CONCLUSION	**Satisfactory**

Appendices 1 - 10

Appendix 1

Subject-specific frame of reference and Intended Leaning Outcomes

Considering that SUSOM mainly educates North American students the most recent version of the USLME Content Outline (2014) served as an important benchmark for determining the learning outcomes. At the same time, SUSOM is now a Dutch institute for higher education and SUSOM participates in the peer review system with Dutch universities providing medical education. The Netherlands Federation of University Medical Centers (NFU) published a (revised) Framework for Medical Education in 2009 (in Dutch: Raamplan). It was decided that the NFU 2009 Framework for Medical Education in the Netherlands was to be used as a second benchmark, parallel to the 2014 USLME Content Outline.

In addition, the curricular content guides from individual associations (e.g. Biochemistry Learning Objectives and Competencies, Association of Biochemistry Course Directors, and the Clerkship Directors in Internal Medicine (CDIM) Core Medicine Clerkship Curriculum) were utilized in validating the overall framework.

Overall the curriculum is compliant with both the 2014 USLME Content Outline as well as the 2009 Framework for Medical Education. SUSOM's standards remain closely correlated with nationally (United States) and internationally accepted standards on medical education and descriptions of a physician including the Liaison Committee on Medical Education (LCME) and the physician competencies as defined by the Accreditation Council for Graduate Medical Education (ACGME).

SUSOM's intended learning outcomes (as described in this appendix) fit into the Dutch qualifications framework and are consistent with the second cycle qualifications in European Higher Education (Dublin Descriptors).

Intended Learning Outcomes of the Programme

Institutional Competencies SUSOM

1 **PATIENT CARE:** Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of illness and the promotion of health.

a. Perform a history, physical examination and basic procedures with competence and sensitivity in order to identify clinical problems and assess their urgency
b. Select and interpret appropriate laboratory and diagnostic studies
c. Analyze and synthesize data from history, physical exam and diagnostic studies
d. Develop hypotheses, diagnostic strategies and management plans
e. Document data, assessment, and plans in the patient's record
f. Make use of the scientific foundation for clinical decision making
g. Use information technology to support care decisions and patient education

2 **SCIENTIFIC & MEDICAL KNOWLEDGE:** Students must demonstrate knowledge about established and evolving biomedical, clinical, and associated sciences and application of this knowledge to the practice of medicine throughout the life cycle

a. Demonstrate knowledge of the scientific and humanistic foundations of medicine
b. Demonstrate knowledge of etiology, pathophysiology, clinical expression and natural history of illnesses
c. Demonstrate knowledge of health maintenance and disease prevention

3 **LIFELONG LEARNING, SCHOLARSHIP, & COLLABORATION:** Students must be able to examine and evaluate their patient care practices, appraise and assimilate scientific evidence, and use this information to improve their abilities.

a. Display intellectual curiosity, willingness to examine assumptions and commitment to lifelong learning
b. Examine the prevalence of specific disease patterns in the larger population from which their patients are drawn
c. Use information technology to access medical information and support his or her own education
d. Apply knowledge of scientific methods to locate, appraise, and assimilate evidence from scientific studies
a. Use scientific inquiry and methods to initiate and evaluate research

4 **PROFESSIONALISM:** Students must demonstrate a commitment to the highest standards of professional responsibility, adherence to ethical principles, and sensitivity in all interactions with patients, families, colleagues, and others with whom physicians must interact in their professional lives.

a. Show compassion in the treatment of patients and respect for their privacy, dignity and beliefs
b. Demonstrate personal integrity, ethical behavior and altruism
c. Exhibit dependability and responsibility
d. Acknowledge and accept the limitations in his or her knowledge and clinical skills
e. Demonstrate the ability to deal with uncertainty
f. Demonstrate skills in effectively reconciling conflicts
g. Demonstrate the ability to identify and utilize effective personal coping strategies
h. Develop sensitivity to discuss the ethical issues involved in clinical practice and the use of human subjects in clinical research

5 **COMMUNICATION & INTERPERSONAL SKILLS**: Students must display interpersonal and communication skills that foster effective information exchange and build rapport with patients, their families, and professional associates.

a. Communicate effectively in order to create and maintain a therapeutic and ethically sound relationship
b. Exhibit empathic, respectful and non-judgmental behaviors
c. Address sensitive issues with compassion
d. Demonstrate sensitivity to human differences and understanding of the impact of gender, ethnic, cultural background, socioeconomic and other social factors
e. Counsel and educate patients and their families
f. Promote wellness and preventive strategies

6 **SOCIAL & COMMUNITY CONTEXT OF HEALTHCARE:** Students must demonstrate knowledge of and responsiveness to the larger context of health care and the ability to effectively call on system resources to provide care that is of optimal value to the health of the individual and of the community.

a. Make use of the unique contributions of other health care professionals
b. Demonstrate the ability to work effectively with other health care professionals, to provide patient-focused care in compliance with institutional and community policies
c. Discuss potential conflicts that arise between the physician's responsibility to the patient and to society and express ideas for resolving these conflicts
d. Demonstrate knowledge of critical global health issues and the potential role of the physician as an effective participant
e. Demonstrate an ability to respond appropriately to medical errors if they arise

Appendix 2

Six SUSOM competences broken down in educational programme objectives

General Competency	Educational Program Objectives
1 PATIENT CARE: Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of illness and the promotion of health.	a. Perform a history, physical examination and basic procedures with competence and sensitivity in order to identify clinical problems and assess their urgency
	b. Select and interpret appropriate laboratory and diagnostic studies
	c. Analyze and synthesize data from history, physical exam and diagnostic studies
	d. Develop hypotheses, diagnostic strategies and management plans
	e. Document data, assessment, and plans in the patient's record
	f. Make use of the scientific foundation for clinical decision making
	g. Use information technology to support care decisions and patient education
2 SCIENTIFIC & MEDICAL KNOWLEDGE: Students must demonstrate knowledge about established and evolving biomedical, clinical, and associated sciences and application of this knowledge to the practice of medicine throughout the life cycle.	a. Demonstrate knowledge of the scientific and humanistic foundations of medicine
	b. Demonstrate knowledge of the scientific and humanistic foundations of medicine (Continued...)
	c. Demonstrate knowledge of etiology, pathophysiology, clinical expression and natural history of illnesses
	d. Demonstrate knowledge of health maintenance and disease prevention
3 LIFELONG LEARNING, SCHOLARSHIP, & COLLABORATION: Students must be able to examine and evaluate their patient care practices, appraise and assimilate scientific evidence, and use this information to improve their abilities.	a. Display intellectual curiosity, willingness to examine assumptions and commitment to lifelong learning
	b. Examine the prevalence of specific disease patterns in the larger population from which their patients are drawn
	c. Use information technology to access medical information and support his or her own education

	d. Apply knowledge of scientific methods to locate, appraise, and assimilate evidence from scientific studies
	e. Use scientific inquiry and methods to initiate and evaluate research
4.PROFESSIONALISM: Students must demonstrate a commitment to the highest standards of professional responsibility, adherence to ethical principles, and sensitivity in all interactions with patients, families, colleagues, and others with whom physicians must interact in their professional lives.	a. Show compassion in the treatment of patients and respect for their privacy, dignity and beliefs
	b. Demonstrate personal integrity, ethical behavior and altruism
	c. Exhibit dependability and responsibility
	d. Acknowledge and accept the limitations in his or her knowledge and clinical skills
	e. Demonstrate the ability to deal with uncertainty
	f. Demonstrate skills in effectively reconciling conflicts
	g. Demonstrate the ability to identify and utilize effective personal coping strategies
	h. Develop sensitivity to discuss the ethical issues involved in clinical practice and the use of human subjects in clinical research
5 COMMUNICATION & INTERPERSONAL SKILLS: Students must display interpersonal and communication skills that foster effective information exchange and build rapport with patients, their families, and professional associates.	a. Communicate effectively in order to create and maintain a therapeutic and ethically sound relationship
	b. Exhibit empathic, respectful and non-judgmental behaviors
	c. Address sensitive issues with compassion
	d. Demonstrate sensitivity to human differences and understanding of the impact of gender, ethnic, cultural background, socioeconomic and other social factors
	e. Counsel and educate patients and their families
	f. Promote wellness and preventive strategies
6 SOCIAL & COMMUNITY CONTEXT OF HEALTHCARE: Students must demonstrate knowledge of and responsiveness to the larger context of health care and the ability to effectively call on system resources to provide care that is of optimal value to the health of the individual and of the community.	a. Make use of the unique contributions of other health care professionals
	b. Demonstrate the ability to work effectively with other health care professionals, to provide patient-focused care in compliance with institutional and community policies.
	c. Discuss potential conflicts that arise between the physician's responsibility to the patient and to society and express ideas for resolving these conflicts
	d. Demonstrate knowledge of critical global health issues and the potential role of the physician as an effective participant
	e. Demonstrate an ability to respond appropriately to medical errors if they arise

Appendix 3

Prior to the site visit, the panel studied a selection of 15 RLRA papers of students

RLRA papers with studentnumbers and grading

SSAB909823 10/25/2016 Improving childhood vaccination coverage by helping parents to overcome their hesitancy to vaccinate B

SSAB909842 10/3/2016 Six Factors Leading to the High Prevalence of Cervical Cancer in Latin America as Compared to the United States C

SSAB909861 10/3/2016 Assessing changes in cognitive function in Alzheimer's disease patients treated with passive immunotherapy: A review of literature A

SSAB909850 11/30/2016 The effects of using probiotic therapy in conjunction with the standard triple drug therapy on the eradication rates of Helicobacter pylori B

SSAB909783 1/26/2017 Targeting Epidermal Growth Factors by Tyrosine Kinase Inhibitors and Emerging Resistance B

SSAB909827 2/7/2017 NSAID and Statin Exposure Decreases Melanoma Risk in Women C

SSAB909975 1/23/2017 Early Palliative Care Interventions in Oncology Patients B

SSAB909698 4/3/2017 Limited English Proficiency and Diabetes Care B

SSAB909945 4/3/2017 Correlations between the Usage of Amino Acids and proteins in Adults and an Increase in Lean Body Mass and Strength: A Systematic Review B

SSAB909965 4/11/2017 Preventive medicine: Education and health interventions will improve population's health C

SSAB909928 5/23/2017 Early Peanut Introduction Reduces the Risk of Childhood Peanut Allergy B

SSAB910013 6/6/2017 Sodium Oxybate Treatment for Narcolepsy-Cataplexy B

SSAB909902 7/28/2017 Impact of Language Barrier on Healthcare Outcomes in Immigrant Population of Canada C

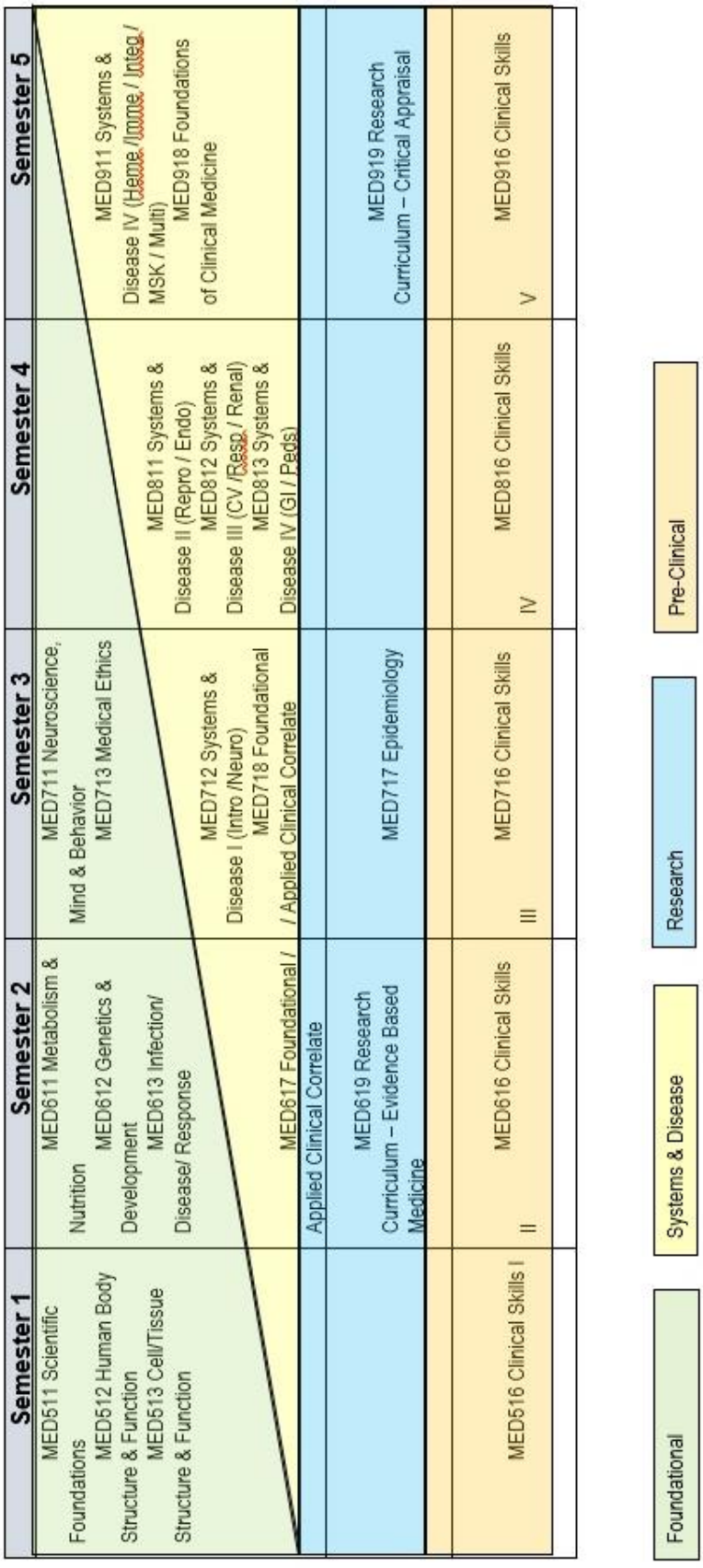
SSAB910063 7/31/2017 Alcohol Consumption and Pregnancy A

SSAB910079 9/19/2017 Alternative Therapies for Chronic Lower Back Pain B

Appendix 4

Appendix 4

Overview of the Curriculum in diagram Form



SUSOM Clinical Medicine Curriculum (Semesters 6-10)
Semester 6[1]
Semester 7
Semester 8
Semester 9
Semester 10
Research: Literature Review & Analysis (8 Weeks)
Core Clinical Clerkships (42 Weeks)
Internal Medicine
OB/GYN
Pediatrics
Psychiatry
Surgery
Elective Clinical Clerkships (30 Weeks)
Family Medicine (Reqd.)
Other per academic & professional needs

Appendix 5

The University of Texas at Austin
Dell Medical School
Medical Education • 1501 Red River St • Austin, TX 78712 • T: 512-495-5100 • dellmeded@austin.utexas.edu

November 13, 2017

Saba University School of Medicine NVAO Panel

I have completed my review of the site visits conducted at the following Saba University School of Medicine affiliated clinical sites:

- Community Health of South Florida (CHI)
- Harbor Hospital
- Interfaith Medical Center
- Larkin Hospital
- Manatee Memorial Hospital
- Northern Virginia Mental Health Institute
- Sheppard Pratt Hospital
- St. Elizabeth's Hospital
- Wyckoff Heights Medical Center

My review included the following materials:

- Clinical site visit report
- Student evaluations of the site
- Examples of student patient logs
- Teaching faculty CVs
- Hospital statistics
- Residency program affiliations
- Student examination performance

Based on my review of the materials listed above, I believe the core clinical rotations being conducted at each site are of a very high standard. There is adequate clinical volume and a breadth of pathology. Further, the preceptors that oversee each of these core rotations are dedicated, capable, and qualified. Additionally, the teaching and supervision would appear to be consistent with the standards of the university.

Sincerely,

Susan M. (Sue) Cox, MD
Executive Vice Dean for Academics
Chair of Medical Education
Distinguished Teaching Professor

Appendix 6

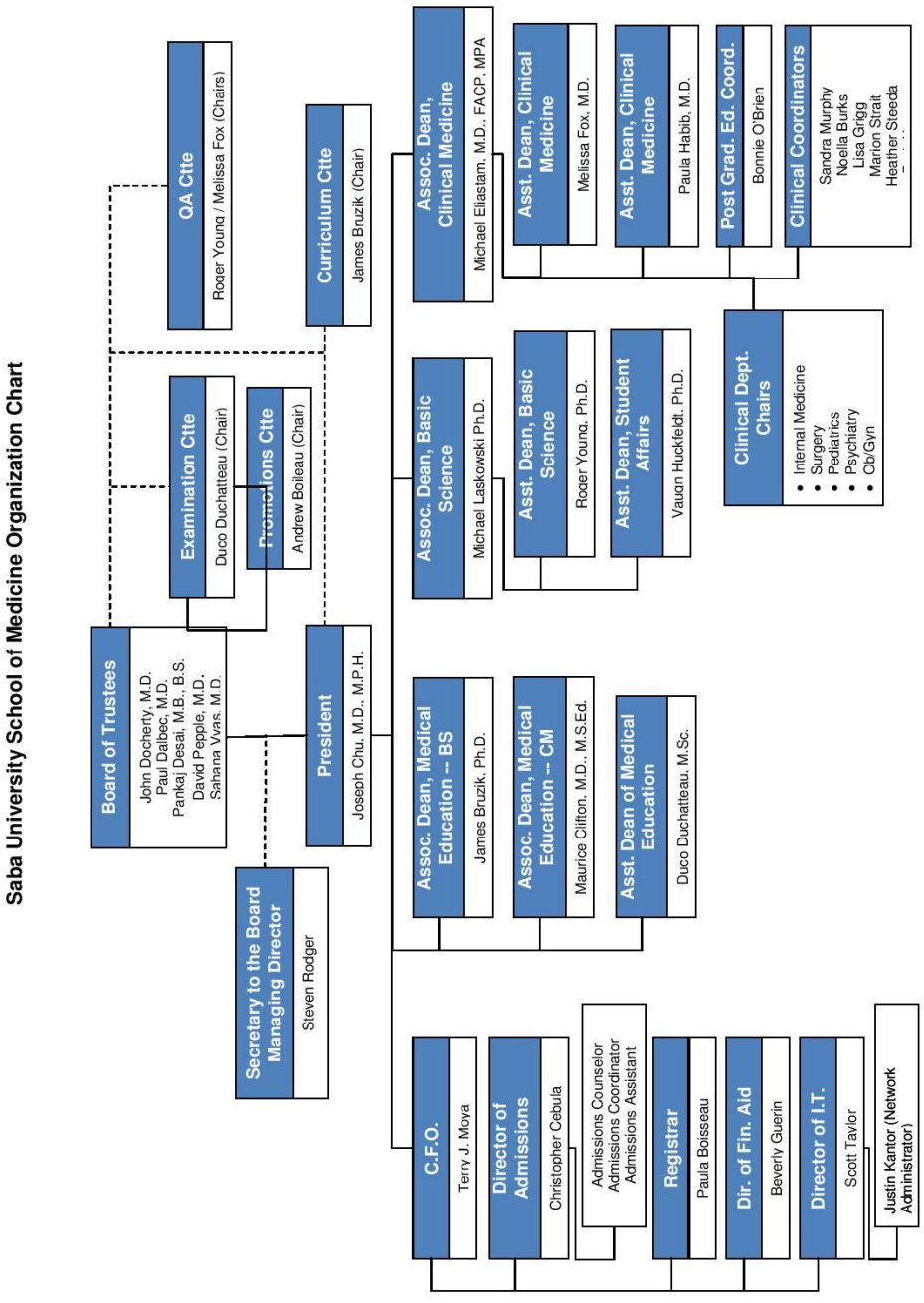
Sample Weekly Schedule (5th Semester)

Date	Day	Start Time	Course	S&D V System	Topic	Department	Faculty
18-Sep	Monday	08:00	CS V		Cultural Competence		Johnson
		09:00	CS V		Cultural Competence		Johnson
		10:00	S&D V	Immune	Immunodeficiencies	Pathology	Tsivis
		11:00	S&D V	Immune	Immunodeficiencies	Pathology	Tsivis
		12:00	Lunch Break				
		01:00	S&D V	Immune	Amyloidosis,Transplantation and Rejection	Micro/Immuno	Tsivis
		02:00	S&D V	Immune	Immunodiagnostics and Immunotherapy	Pathology	Tsivis
		03:00	S&D V	Immune	Rheumatoid Arthritis	Medicine	F. Turpie
19-Sep	Tuesday	08:00	CSV	Immune	Cross Cultural Notes		L. Johnson
		09:00	CS V	Immune	Cross Cultural Notes		L. Johnson
		10:00	CS V	Immune	Immune CR	Medicine	K. Amla
		11:00	S&D V	Integument	Skin Histology/Cell Functions	Histology	Mhawi
		12:00	Lunch Break				
		01:00	S&D V	Integument	Skin Lesions	Pathology	Akpan
		02:00	S&D V	Integument	Skin, Pigmented Lesions 1	Pathology	Akpan
		03:00	S&D V	Integument	Skin, Pigmented Lesions 2	Pathology	Akpan
		04:00	S&D V	RC CA	RC-CA Integumentary	Medicine	J. Banez
20-Sep	Wednesday	08:00	S&D V	Integument	Inflammatory Skin Diseases 1	Pathology	Akpan
		09:00	S&D V	Integument	Inflammatory Skin Diseases 2	Pathology	Akpan
		10:00	S&D V	Integument	Inflammatory Skin Diseases 3	Pathology	Akpan
		11:00	S&D V	Integument	Chronic Non-Inflammatory Skin Disease 1	Pathology	Akpan
		12:00	Lunch Break				
		01:00	S&D V	Integument	Chronic Non-Inflammatory Skin Disease 2	Pathology	Akpan
		02:00	S&D V	Integument	Skin Non-Neoplasias	Pathology	Akpan
		03:00	S&D V	Integument	Skin Diseases Clinical 1	Medicine	J. Banez
21-Sep	Thursday	08:00	CS V		Practice for CSA (Interviewing)	Medicine	L. Johnson , J. Banez. R. Calton
		09:00	CS V		Practice for CSA (Interviewing)	Medicine	L. Johnson , J. Banez. R. Calton
		10:00	CS V		Practice for CSA (Interviewing)	Medicine	L. Johnson , J. Banez. R. Calton
		11:00	S&D V	Integument	Skin Diseases Clinical 2	Medicine	J. Banez
		12:00	Lunch Break				
		01:00	S&D V	Integument	Skin Neoplasia 1	Pathology	Akpan
		02:00	S&D V	Integument	Skin Neoplasia 2	Pathology	Akpan
		03:00	S&D V	Integument	Skin Cancer Clinical Correlate	Medicine	K. Amla
		04:00	S&D V	Integument	Skin Cancer Clinical Correlate	Medicine	K. Amla
22-Sep	Friday	08:00	CS V		Identifying Skin Lesions - lecture	Medicine	J. Banez
		09:00	CS V		Lesion biopsy; wound care/dressing change; draining of abscess	Medicine	R. Sarmiento
		10:00	S&D V	Integument	Skin Cancer Clinical	Medicine	J. Banez
		11:00	S&D V	Integument	Skin Infections 1	Pathology	Akpan
		12:00	Lunch Break				
		01:00	S&D V	Integument	Skin Infections 2	Pathology	Akpan
		02:00	S&D V	Integument	Review Immunology	Immunology	Tsivis
		03:00	S&D V	Integument	Pathology Review	Pathology	Akpan

Key

Clinical Skills
Clinical Reasoning
Research Curriculum - Critical Appraisal
Clinical Correlates
Lunch Break

Appendix 7


Saba University School of Medicine Organization Chart
Board of Trustees
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Examination Ctte
Duco Duchatteau (Chair)
Promotions Ctte
Andrew Boileau (Chair)
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Admissions Counselor
Admissions Coordinator
Admissions Assistant
Registrar
Paula Boisseau
Dir. of Fin. Aid
Beverly Guerin
Director of I.T.
Scott Taylor
Justin Kantor (Network Administrator)

Appendix 8

Materials studied by the panel during the SUSOM site visit 15 – 16 November 2017

- Committees
    - Quality Assurance Committee
        - Quality Assurance Plan
        - 2016 Annual Report
        - 2017 Meeting Minutes
    - Examination Committee
        - 2016 Annual Report
        - 2017 Meeting Minutes
    - Curriculum Committee
        - 2016 Meeting Minutes
        - 2017 Meeting Minutes

- Course Textbooks – Systems & Disease 1-5

- Grading Guidelines & Policy Manual (2018 – 2018)

- Metrics & Satisfaction
    - Quality Assurance Dashboard
    - ECFMG Reports on USMLE Results
    - Student satisfaction surveys on courses & faculty
    - Student satisfaction surveys on clinical rotations (summary)
    - Student satisfaction surveys on clinical rotations (detail)

- Student Work
    - Sample Examination
        - Clinical Skills IV
        - Systems & Disease V
    - Sample Student Presentation
        - Neuroscience Mind & Behavior

- Other
    - Student weekly schedule (sample semester 5)
    - Organization chart

Wednesday 15 November 2017

Time	Session	Location	Attendees	
09.00—12.00	Preparatory panel meeting (closed meeting)	Queen's Garden	NVAO Panel	
12.00—12.45	Lunch	Queen's Garden	NVAO Panel	
13.00—13.45	Programme management and curriculum developers	Saba Campus	Steven Rodger Joe Chu, M.D. Jim Bruzik, Ph.D. Maurice Clifton, M.D. Michael Eliastam, M.D. Michael Laskowski, Ph.D.	Managing Director President Assoc. Dean, Med. Ed. -- Basic Sci. Assoc. Dean, Med. Ed. – Clin. Med. Associate Dean, Clinical Medicine Associate Dean, Basic Sciences
14.00—14.45	Teaching staff	Saba Campus	Frank Ling M.D. (OB/GYN) Estevan Garcia M.D. (Ped.) Pete Hanna M.D. (Surgery) Michael Eliastam, M.D. (Clin Med) James Bruzik, Ph.D. (RLRA)	Mark Lea, M.D. (Anatomy) Teresa Pinlac, M.D. (Clinical Skills) Roger Young, Ph.D. (Genetics) Emma Figures, MA, MB, BChir (Clinical Skills)
15.00-15.45	Quality Assurance Committee	Saba Campus	Melissa Fox, M.D. (co-chair) Trevor Dorey (student) Patrick Donnellan	Vaughn Huckfeldt, Ph.D. Roger Young, Ph.D. (co-chair) Steven Rodger
16:00—16:45	Examination Committee	Saba Campus	Duco Duchatteau, M.Sc. (chair) Melissa Fox, M.D. Roger Young, Ph.D.	Maurice Clifton, M.D. Michael Laskowski, Ph.D.
16:45—18:00	Open consultations for potentially interested students and faculty (from 16:45 to 17:30) + Panel meeting (closed meeting remaining time)	Saba Campus	NVAO Panel + open consultations first 45 minutes	

Thursday 16 November 2017

Time	Session	Location	Attendees	
09.00—9.30	Panel meeting (closed meeting)	Saba Campus	NVAO Panel	
09.30—10.15	Basic Science students	Saba Campus	2nd Semester 3rd Semester 4th Semester 5th Semester	Akshita Sahi, Christopher Theriau Anaam Mubin, Thomas Mayerhofer Ryan Monsberger, Kaitlin Strong Trevor Dorey, Morgan Birrell
10.30—11.15	Clinical students	Saba Campus (telecon)	Lauren Bridges Michael Lane Mehwish Siddiqui	
11.30—12.15	Alumni	Saba Campus (telecom)	Ryan Duhe Kayla Donnawell	David Fuller
12.15—13.00	Campus tour	Saba Campus	Michael Lascowski, Ph.D.	Associate Dean, Basic Sciences
13.00—15.00	Panel meeting (closed meeting over lunch)	Saba Campus	NVAO Panel	
15.00—16.00	Feedback on review	Saba Campus	Steven Rodger Patrick Donnellan Joseph Chu, M.D.	Managing Director Executive Vice President President

Appendix 10

Curriculum vitae of the members of the assessment panel

Professor dr. F.C. (Ferry) Breedveld is Professor Emeritus of Rheumatology in Leiden University Medical Centre. His research is focused on the pathophysiology of rheumatoid arthritis and rational treatments. He trained in Leiden and Boston, did his PhD in Leiden and was appointed to be chair of Rheumatology in 1989. In 1999 he became Chairman of medicine and from 2006 to 2015 he was CEO of Leiden University Medical Centre.
He guided 69 PhD studentes and authored more than 900 peer reviewed papers.

Dr. A. (Alice) Fornari is the Associate Dean of Educational Skills Development Zucker SOM at HofstraNorthwell and is the Assistant Vice President of Faculty Development for the 23 hospitals of the Northwell Health organization. Her faculty development role at both institutions is designed to align the UME, GME and CME continuum. Serving in these roles for the past 8 years allows her to bring UME curricular innovations to the GME programs and recruit educators from GME to participate in faculty development and teaching at the School of Medicine. Recognizing a need for additional faculty development to align UME and GME education, in 2016 she created and admitted the inaugural cohort to a Masters of Health Professions Pedagogy and Leadership program.
Dr. Fornari obtained her EdD, Higher Education, College Teaching and Academic Leadership at Columbia University, Teachers College in 2001. Her research interest was focused on curriculum to support ethical decision making for healthcare professionals.

Prof. dr. D.J. (Dirk) Ruiter is Professor Emeritus of Pathology at Radboud University Nijmegen and Radboud University Medical Center. He studied Medicine at Leiden University and obtained his PhD in 1976 under supervision of Prof. Theo van Rijssel. His main topics of research were tumor progression, especially in melanoma, and tumor angiogenesis. He was professor of Oncological Pathology at Leiden University (1983-1986) and of Pathology in Nijmegen (1986-2012), chairman of the department of Pathology in Nijmegen (1992-2004), and of the Division of Paraclinic Specialisms (1993-2004). From 2004-2008 he was dean of the Radboud University Medical Center and vice chairman of the Executive Board. He was chairman of the department of Anatomy from 2008-2012, and research fellow on learning and memory at the Donders Center on Neuroimaging. He supervised forty PhD students and published 340 scientific papers on various aspects of tumor pathology, and more recently on medical education.

Dr. Susan (Sue) Cox (M.D.) is Executive Vice Dean for Academics, Chair of Medical Education (2014-Present), Department of Medical Education, Dell Medical School, The University of Texas at Austin, Austin, Texas. She was Regional Dean for Austin Programs (2011-2014) and Professor of Obstetrics & Gynecology, University of Texas Southwestern Medical Center, Austin, Texas (2011-2014); *Education:* M.D., Baylor College of Medicine, Houston, Texas/USA (1982); M.A., Cell Biology & Human Genetics, University of Texas Medical Branch, Galveston, Texas/USA (1978); B.S., Biology, West Texas State University, Canyon, Texas/USA (1975).
Postdoctoral Training: Fellowship, Maternal-Fetal Medicine, Department of Obstetrics & Gynecology and the Cecil H. & Ida Green Center for Reproductive Biology Sciences, University of Texas Southwestern Medical Center, Dallas, Texas (1986-1988); Internship/Residency, Obstetrics & Gynecology Baylor College of Medicine Hospitals, Houston, Texas (1982 - 1986).

Dr. Joseph Z. (Zack) Wiley is a family medicine resident at Charleston Area Medical Center in Charleston, WV. He attended West Virginia University School of Medicine and received his M.D. in 2016. He was awarded the honor of Rural Scholar for his dedication to provide service to the underprivileged populations in his state.

Abbreviations

ACGME	Accreditation Council for Graduate Medical Education
CK	Clinical Knowledge (Step 2 USMLE)
CS	Clinical Skills (Step 2 USMLE)
DO	Doctor of Osteopathic Medicine
EC	European Credit point
ECFMG	Educational Commission for Foreign Medical Graduates
IPE	Interprofessional Education
LCME	Liaison Committee on Medical Education
LCMS+	Learning Content Management System
LMS	Learning Management System
MCAT	Medical College Admissions Test
M.D.	Doctor of Medicine
MSc	Master of Science
NBME	National Board of Medical Examiners (United States)
NCFME	National Committee on Foreign Medical Education and Accreditation
NVAO	Nederlands-Vlaamse Accreditatieorganisatie / Accreditation Organisation of the Netherlands and Flanders
OER	Onderwijs- en Examenregeling (Teaching and Examination Regulations)
OSCE	Objective Structured Clinical Examinations
PRIME	Partnership for Research in Medical Education"
PDCA	Plan-Do-Check-Act
RFC	Research Focus Committee
RLRA	Research: Literature Review and Analysis
SGA	Student Governance Association
SUSOM	Saba University School of Medicine
TOEFL	Test of English as a Foreign Language
USMLE	United States Medical Licensing Examination
WHO	World Health Organisation
wo	wetenschappelijk onderwijs / academic education