



#### **MD PROGRAM**

Personalized Education Global Perspective

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### **SERVICE-LEARNING AT AUC**

Service is firmly woven into the culture of American University of the Caribbean School of Medicine (AUC).

Service learning is one important strand of the tapestry that forms American University of the Caribbean School of Medicine's culture. The strand represents the university's desire to produce physicians with a lifelong commitment to community engagement and social responsibility. The value is made real through investment in connections with the St. Maarten community to address community priorities and to create rich learning opportunities for our students.

These relationships take many forms. AUC's signature event, Community Action Day, brings our university community together to participate in projects across the island to meet the immediate needs of local organizations. For example, students collaborate to develop research or services to address island health issues and offer screening events with the Sint Maarten Ministry of Public Health, Labour, and Social Development to learn more about the prevalence of chronic conditions and deliver education for prevention and healthy living.

In addition to these activities, AUC is connected with many more initiatives and groups, including the Tzu Chi Foundation, Breakfast Club, Safe Haven, Windward Island Emergency Medical Services, Red Cross, The Windward Island Medical Association, Salvation Army, and SXM Paws.





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#### **AUC/USM SCHOLARS**

The American University of the Caribbean School of Medicine/University of St. Martin (AUC/USM) Scholars Program supports individuals attending the University of St. Martin as they endeavor to earn a post-secondary degree and to develop abilities to contribute to St. Maarten. Scholarships are awarded to legal residents currently residing in St. Maarten who have been accepted at the University of St. Martin. Other requirements are two years of employment on the island, a GPA of at least 2.75, an excellent employment record, evidence of leadership ability and high moral and ethical standards, and financial need. Between fall semester 2011 and spring semester 2017, the AUC/USM Scholars Program awarded \$166,935.40 in scholarships to attend the University of St. Martin.

#### **BODY SMAART**

Our collaboration with Phillipsburg Jubilee Library was initiated when AUC Assistant Dean for Service-Learning and Community Affairs Golden Jackson met Library Director Monique Alberts at a Rotary Club meeting in 2015. The introduction and brief chat was followed by a meeting arranged in June 2015 to explore ways that students enrolled at AUC could engage with Phillipsburg Jubilee Library to support children's learning about the body and health. A subsequent meeting was held with students who were interested in developing a series of health education lessons for children.

Students initially developed lessons based on the OrganWise curriculum from the library's collection. The first session was held on November 7, 2015, with about 15 AUC students and 25 children in attendance. Since that time, AUC students have provided two or three sessions during each of AUC's three semesters per year.

The program, now titled "Body Smaart", features a series of lessons on the heart, lungs, digestive system, brain, and senses.

#### Features of each lesson:

- Anatomy and function(s) of a particular organ
- · Active learning/crafts, e.g., making a model lung "breathe" to observe lung function or making and wearing a brain hat
- Activities such as walking through a large heart to experience how blood travels out of the heart, through the body, and back to the heart
- Exercise
- Healthy snacks

In May 2016, AUC student Hillary Daugherty received the Karl Stockehausen Student of the Semester Award. She consulted with Ms. Alberts about using funds to enhance health education at the library. A plan to create a health center in the library was developed. The center includes a glass case to store and display a life-size skeleton; a life-size model of a torso with exposed and removable organs, so that organs can be removed for close-up viewing; a brain model; a heart model; a collection of books for a range of ages; and a bookcase for storage. All planning was done in collaboration with Ms. Alberts to ensure alignment with priorities of the library.

AUC students continue to visit the library between six and nine times a year and provide lessons/activities for children. AUC remains eager to continue discussions of ways that AUC students can contribute to the programs of the library.







# BREAST HEALTH EDUCATION AND SCREENING FOR BREAST ABNORMALITIES

In collaboration with the Ministry of Public Health, Labour, and Social Development Collective Prevention Services and the Positive Foundation, AUC faculty, students, and Clinical Fellows, under the leadership of Dr. Naira Chobanyan, provided four educational sessions on breast health at different locations around the island during 2016. Since June 2017, 75 patients have been screened at four events providing education, general health and breast health histories, chronic disease screening, and clinical breast exams. Regularly scheduled events are held each semester. The events include collection of data for the assessment of risk factors for breast abnormalities in the local population.

#### **COMMUNITY ACTION DAY**

Community Action Day (CAD) is a day to celebrate engagement with the Sint Maarten community. CAD was the vision of an AUC student who imagined setting aside a day when all of AUC would focus on service to Sint Maarten. The vision became a reality; in fall 2008, thanks to AUC graduates Emmanuel Ofori and Beatric Keno (both Class of 2012). CAD continues and has grown over the years in numbers and types of activities. On average, between 30 and 40 percent of the St. Maarten campus students plus families, faculty, and staff participate in CAD and, as a group, contribute at least 700 collective hours of service at 12 or more sites during a morning of work.

Many of AUC's 20+ student organizations volunteer to coordinate a site each semester, with the added benefit of building lasting connections with a particular St. Maarten organization, including Collective Prevention Services, the St. Maarten AIDS Foundation, the Diabetes Foundation, Hillside Christian School, Ideal Nursery School, the Tzu Chi Foundation, and White and Yellow Cross.

# DIABETES FOUNDATION OF ST. MAARTEN

The connection of AUC and the Diabetes
Foundation of St. Maarten is a great example
of collaboration. AUC students participate in
the Diabetes Foundation's weekend screenings.
Volunteers from the Diabetes Foundation
support training for AUC students to screen
for glucose levels in a variety of settings. The
Diabetes Foundation regularly participates with
students at Project H.E.L.P. screening events.
They provide coaching for techniques such as
finger sticks, obtaining an adequate and clean
sample, and using the testing meters. And, just
like neighbors, we share testing equipment when
one of us has a big event and needs a few extra
meters or strips.

#### **DIABETES RESEARCH**

In collaboration with the Ministry of Public Health, Labour, and Social Development Collective Prevention Services and local physicians, and under the leadership of Dr. Chobanyan, AUC Clinical Fellows and first- and second-year medical students are collecting data to assess risk factors, complications, and treatment of type 2 diabetes on St. Maarten. The project was initiated in 2014-2015 and continues today.





### **ELECTIVE CREDIT SERVICE-LEARNING COURSES**

Elective service-learning credit courses provide an opportunity to pursue development of a community based program over one or more semesters. Students select a topic area, study the literature, and develop a question or approach. They demonstrate skills in synthesis and application of basic medical science content, teamwork and collaboration, and effective communication. Examples of elective service-learning credit courses include the following:

- Development of training materials for an emergency responder training course in St. Maarten, including scenarios for emergency response calls, videos of patient/responder interaction, and community evaluation of materials. Over the course of three semesters, AUC students developed more than 20 case scenarios and a portfolio of case scenario training videos.
- Living a healthy lifestyle is a worldwide concern, including on the island of St. Maarten. One disease that is of growing concern is diabetes, with a prevalence of 13.4% of the population (International Diabetes Federation). Through research and collaboration with the Sint Maarten Ministry of Public Health, Labour, and Social Development Collective Prevention Services, students can enroll in an elective credit service-learning course designed as a ten-month program to increase awareness and knowledge to support health and prevent diabetes as well as other long-term health risks. The program aims to improve the children's knowledge of healthy eating, exercise, and handling stress. The program follows a weeklong Summer Fit Camp offered by Collective Prevention Services to provide tools for making smart healthy living choices. Youth enrolled in Fit Camp will be invited to participate in monthly sessions to support continued learning and maintain behaviors.
- AUC faculty and students continue to collaborate with the Ministry of Health in current efforts to address the spread of Zika, a mosquito-borne virus. Students enrolled in a service-learning elective credit course have conferred with Ministry staff, identified effective approaches for increasing knowledge and motivating behavior change, and implemented a series of events in the process of developing a model. Approaches were based on best practices for engaging community members. An example is a presentation for school-age children focused on behavior change and addressing source reduction and vector control. The overall goal of the program is to increase source reduction behaviors, with a positive impact on Zika-related health outcomes and vector control.

#### **HEALTHY ME FAIR**

More than 350 children attend this annual event, which is sponsored by Seventh Day Adventist Churches of St. Maarten. Children learn about the Zika virus and oral health, undergo blood pressure, vision, and height and weight screenings, and participate in various activities.





#### HILLSIDE CHRISTIAN SCHOOL

AUC has been engaged with the Hillside Christian School (HCS) for many years, perhaps beginning with a memorable day of assembling a new playground at the campus in St. Peter's. More recently, AUC has provided shelving and contributed books for the school's library and conducted developmental screening for preschoolers. AUC was fortunate to be a part of a vision for learning about healthy eating through development of an edible garden; students experienced the hard work of preparing a series of plots and endured a temporary interruption due to the reality of Caribbean weather, followed by more work. This resulted in a rebirth of the concept with a new and innovative design. Conversations around healthy lifestyles, especially healthy eating, have been ongoing. AUC continues to partner with HCS as they follow a vision to teach children about growing, preparing, and eating nutritious foods.

#### I CAN

The I Can Foundation has cared for children of St. Maarten for over twenty years, giving foster care and shelter to over 30 children since its inception. Students of AUC and I Can have a longstanding and deeply valued relationship. AUC students look forward to the Saturday after each block exam to spend time with their young friends from I Can. The day is spent with fun at the beach or workshops/lessons to promote and learn about health and sharing a meal. The AUC chapter of the Christian Medical and Dental Association sustains this beautiful friendship.

## LIONS CLUB HEALTH FAIR

At the most recent Fair, AUC students volunteered with at least four organizations for the annual Lions Club Health Fair, the largest health fair on St. Maarten. AUC students assisted the Diabetes Foundation of St. Maarten in screening over 400 people for glucose levels, worked with the Sickle Cell Foundation to provide information about sickle cell disease to 200 people, collaborated with Collective Prevention Services to provide information about Zika and to collect data on prevalence of Zika infection, and offered HIV screening to 140 people with the St. Maarten AIDS Foundation.



#### LITTLE LEAGUE PLAYER DEVELOPMENT

Little League Player Development is an afterschool program that provides a safe and supportive environment for learning followed by fun with baseball and physical activity. The program is focused on the values of work and learning. The children do homework, reading, math worksheets, and/or science lessons. After completing three assignments, they can play ball or do fun activities. An AUC student who was looking for a way to get involved in youth sports in St. Maarten found the program in the summer of 2015, and AUC students began participating in the program during the following fall semester. An AUC student organization, the Pediatric Interest Group, coordinates visits to Player Development at least three times each semester, and AUC spouses participate at least weekly.

Baseball cards are used as a reward for completing work and as a teaching tool —learning geography by identifying and finding hometowns of players, locations of baseball teams and stadiums, developing math knowledge by calculating batting averages, RBI, on-base percentages, and more. To extend the geography lessons, a group of AUC students presented stories about their home countries, all of which were on the continent of Asia (India, Philippines, Taiwan, and Japan). The students showed flags from their countries, talked about their food and culture and then gave the children a little treat from their homeland. The children made paper lanterns and origami cranes, found the countries on a map or globe, completed word searches, and read or heard stories from the various countries.

AUC has supported infrastructure development at Player Development through the Karl Stockhausen Student of the Semester Award. Two students receiving the award in January 2016 and September 2016 chose to use the stipend for physical improvements and resources (purchase of shipping containers, upgrade of containers with windows and electricity, overhang for shade over a graveled area, purchase of picnic tables, purchase of learning resources, and a donation of microscopes).

# MINISTRY OF PUBLIC HEALTH, LABOUR, AND SOCIAL DEVELOPMENT

AUC faculty are engaged with St. Maarten governmental and health facility leaders in a formal, shared platform designed to facilitate collaboration on initiatives to address St. Maarten's public health needs. Membership includes the Minister and senior staff from the Ministry of Public Health, Labour, and Social Development; directors/representatives of key country health services (the White and Yellow Cross Foundation, Ambulance Services, the Mental Health Foundation, and Sint Maarten Medical Center); and eight AUC faculty. The Platform is organized around three task forces: collaboration in public health research and service-learning projects of mutual benefit and need; collaboration with NASHKO to provide training/education across the healthcare continuum; and professional opportunities for AUC physicians. Current projects include maintenance and expansion of Project H.E.L.P., diabetes research, sickle cell research and screening, exploratory and prevalence study of Staphylococcus aureus nasal carriage rate and associated risk factors, environmental and seroconversion study of dengue and chikungunya fevers, and breast health and abnormalities research.

#### **POSITIVE FOUNDATION**

AUC is fully aligned with the Positive Foundation and its focus on breast health and awareness. This includes breast self-examination and proposed research on prevalence and causes of breast cancer in St. Maarten. AUC is also fully engaged in the annual Pink Parade, held in remembrance of loved ones who lost the struggle, celebration of those who survived, and determination to educate for early detection and contribute to research for a cure.

#### PROJECT H.E.L.P.

Project H.E.L.P. started as a collaborative, community-based initiative envisioned by two medical students seeking to enhance the clinical experience for basic medical science students at AUC. The initiative reflects collaborative planning by AUC administration, faculty and students, and staff from the Ministry of Public Health, Labour, and Social Development Collective Prevention Services. Foundational principles of authentic collaboration are beneficial for all involved, with development and operation based on mutual trust and respect and open and regular communication among groups. These principles guided development of Project H.E.L.P. to provide opportunities/benefits for AUC, the Ministry, and St. Maarten residents.

The scope and operation was developed to:

- · Enhance learning experiences for students
- · Address public health priorities
- Increase understanding of incidence of health risks and chronic disease in St. Maarten
- Promote health, educate participants about healthy living choices, increase literacy/understanding of health risks and indicators, and focus on prevention of illness through adoption of healthy practices

#### Operation

- Regularly scheduled events to be held on Saturdays or Sundays in different locations (e.g., community centers and/or schools) in St. Maarten over the course of a year.
- Offer screenings to measure and record height, weight, waist circumference, blood pressure, blood glucose, and lipids.
- AUC students present results for each patient to an AUC faculty physician and an attending Dutch-licensed physician. The physician discusses results with patients as needed.
- Each patient receives a card with screening results to take to their general practitioner.





### **RESEARCH DAY**

Research Day, an annual event at AUC, provides an opportunity for students to showcase the breadth and depth of research they conduct across four years of medical school. Students select a research topic and engage with faculty during the project's formative stages, later submitting 250-word abstracts for poster and podium presentations. Students share findings and answer questions from event attendees. Students of all semesters are invited to attend.

Research Day participants develop critical qualities, skills, attitudes, and behaviors inherent to lifelong learners and physicians—attributes like curiosity, problem solving, teamwork, initiative, perseverance, discipline, respect, and humility.

#### SICKLE CELL FOUNDATION

AUC first connected with the Sickle Cell Foundation in May 2014. After meeting to develop an approach, AUC sponsored a session in July 2014 to provide facts about the medicine, current research, treatment in St. Maarten, and the reality of life as a sickle cell patient. Since the first event, AUC has sponsored speakers from other islands to participate in educational sessions and AUC faculty have participated as speakers at three community events, including one at AUC, one at the University of St. Martin, and one at St. Maarten Medical Center. The Black Medical Students Association has staffed awareness tables in community locations such as Cost U Less, Grand Marche, Ace, and the Lions Club Health Fair.

#### ST. MAARTEN AIDS FOUNDATION

AUC engages with the St. Maarten AIDS Foundation around the shared support for testing, prevention, and care/treatment. The St. Maarten AIDS Foundation engages in multiple outreach programs to educate both the general public and atrisk populations about the risks of HIV infection. AUC is committed to supporting regular testing events.

#### ST. MAARTEN ZOO

The St. Maarten Zoo is a perennial favorite among students for volunteering. The Zoo staff are welcoming and grateful for assistance with maintaining this place of refuge for animals, birds, and reptiles on St. Maarten. One of the highlighted events was the cleanup following Hurricane Gonzalo; students provided hastily arranged and much needed cleanup after this weather event.

#### **TUTORING**

AUC collaborated with Source of Inspirational Learning (SoIL) to provide tutoring in math and science for persons preparing for the GED exam. Twelve AUC students organized a schedule to offer twice-weekly sessions for 12 participants of varying ages, from late teens to mothers of teens. AUC IT leadership and staff were active participants and offered support by providing laptops for practice tests, a valuable experience for simulating actual test-taking conditions.

#### WHITE AND YELLOW CROSS

AUC is pleased to work collaboratively with the White and Yellow Cross (WYC) as the major provider of elderly and disabled care. Projects include collection of oral histories of residents, diabetes research, and regular engagement through games, conversation, and other forms of interaction to improve motor and cognitive skills and memory. Student learning is enhanced through a unique service experience that provides exposure to rich life experiences and fosters development of empathy, understanding, and compassion. The projects at WYC are supported by the Karl Stockhausen Student of the Semester Award, the Clinical Research Fellows program, and the Office of Service-Learning and Community Affairs.

#### WINDWARD ISLANDS EMERGENCY MEDICAL SERVICES

Windward Island Emergency Medical Services (WIEMS) approached AUC in 2015 to explore ways that the university could contribute to training for emergency responders. WIEMS was interested in developing the interviewing skills of the students in their training program, especially in regards to taking a comprehensive patient history.

After several discussions, the group decided to use a service-learning model, enrolling first- and second-year AUC medical students in a service-learning course to develop case scenarios for the EMT course program with the purpose of teaching, practicing, and testing interviewing skills of the trainees. AUC students developed scenarios for common medical cases, participated in role-playing the scenarios, and demonstrated feedback/debrief. Under the leadership of faculty member Dr. Athena Andreadis, the course was offered in three semesters in 2016. WIEMS staff provided a scenario outline to provide information that a responder should observe upon entering a site and to guide questions that needed to be answered within the case, debriefing/feedback points, response algorithms (if student asks A, patient will do B, for example), and descriptions of patient behavior. Over the course of three semesters, AUC students developed more than 20 case scenarios and a portfolio of case scenario training videos. The service-learning course has not only benefited the WIEMS students, it has also benefited the AUC students as they have had the opportunity to tie their basic science knowledge together and apply it to clinically based case scenarios.

Plans for the future include ongoing collaboration between AUC and WIEMS to develop additional training and examination case scenarios and record further training videos. In addition, AUC hopes to evaluate the benefit of clinical scenario writing as a tool for integrating medical student knowledge.





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