The Impact of Underrepresented Minority Scientists on Today's Understanding of Biology
FYOS 1001 CRN 39966
Fall 2019 (1 credit hour); Thu 3:30 PM – 4:45 PM; course expected to end 10/17/19
Life Sciences (Building 1057), Room C130

Instructor: Walter K. Schmidt; office hours by appointment
A414B Life Sciences; 583-8241; wschmidt@uga.edu; http://schmidtlab.uga.edu

Prerequisites, Required Course Materials, Exams: None

Focus: Students taking this course will learn about the research and career paths of accomplished scientists from socioeconomic backgrounds that have been historically underrepresented in the sciences. The course will primarily be seminar-driven. The instructor will introduce the topic with a series of presentations. Additional topics will be explored by student presentations/class discussions of biographies related to the topic.

Course Letter Grade will be based on the following criteria:
- Attendance 50% (Attendance is mandatory! Remember to sign in for each class)
- Participation 25% (Keep track of your questions on the supplied handout)
- Presentation 25%

Date | Topics | Presenter
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08/15 | Introduction to Course | Dr. Schmidt
08/22 | Case Study – Vivien Thomas - Surgical Pioneer | Dr. Schmidt
08/29 | ...(continuation of previous class) | Dr. Schmidt
09/05 | Case Study – Tyrone Hayes - Ecologist | Dr. Schmidt
09/12 | Student Presentations (3) | TBA
09/19 | Student Presentations (3) | TBA
09/26 | Student Presentations (3) | TBA
10/03 | Student Presentations (3) | TBA
10/10 | Student Presentations (3) | TBA
10/17 (last class)* | Student Presentations (1), Guest Speaker, and/or lab tour | TBA

* completion of this class is estimated to yield a running total of 750 minutes of instruction (equivalent of 15 weeks x 50 min)

Presentations: Presenter – A presentation is required on an individual scientist of your choice. You should be knowledgeable of the background material and prepared to make an effective presentation of approximately 15-20 minutes inclusive of interruptions for taking several questions. Topics are on a first-come first-served basis. Inform Dr. Schmidt of your choice no later than 9/05/19. Audience – Everyone should be prepared to discuss the topic. Questions are encouraged during presentations and each student is expected to record one or more questions of interest for each presentation.

Goals of the FYOS Program: Goal 1: Introduce first-year students to the importance of learning and academics so that we engage them in the academic culture of the University. Goal 2: Give first-year students an opportunity for meaningful dialogue with a faculty member to encourage positive, sustained student-faculty interactions. Goal 3: Introduce first-year students to the instruction, research, public service, and international missions of the University and how they relate to teaching and learning in and outside the classroom so that we increase student understanding of and participation in the full mission of the University.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

As a University of Georgia student, you have agreed to abide by the University’s academic honesty policy, “A Culture of Honesty,” and the Student Honor Code. All academic work must meet the standards described in “A Culture of Honesty” found at: www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.
**Pre-Approved Presentation Topics.** Please get approval from Dr. Schmidt if you want to present on an individual not on the list.

**Historical Figures:**
- Karen Ramey Burns - Forensic Anthropology
- George W. Carver – Biochemical Engineer
- Mildred Cohn - Biochemist
- Marie Curie – Chemist
- Marie Maynard Daly – Chemist
- Charles Drew – Physician researcher
- Gertrude Belle Elion - Biochemist
- Rosalind Franklin – X-ray Crystallographer
- Percy Julian – Chemist
- Ernest Everett Just – Zoologist
- Henrietta Lacks
- Linda Laubenstein – AIDS researcher
- Henry Cecil McBay – Chemist
- Lise Meitner – Physicist
- Barbara McClintock – Geneticist
- Rita Levi-Montalcini - neuroscientist
- Ibn Seena (Avicenna) - Physician
- Nettie Maria Stevens – Cytogeneticist
- Jokichi Takamine - Chemist
- Alan Turing – Computer Scientist
- Chien-Shiung Wu - Physicist
- Levi Watkins Jr. – Doctor
- el-Zahrawi (Albucasis) - Physician

**Present-Day Scientists**
- Cornelia Bargmann – Neurobiologist
- Elizabeth Blackburn – Cancer biologist
- David R. Burgess – Cell Biologist
- Carlos Bustamante – Molecular Physicist
- James Hildreth – HIV expert
- Shirley Ann Jackson – Physicist / RPI Presid.
- Erich D. Jarvis – Neurobiologist
- Cynthia Kenyon – Biochemist
- George Langford – Cell Biologist
- Walter Eugene Massey – Physicist
- Mario J. Molina – Chemist
- Kenneth Olden – Cell Biologist
- Ida Stephens Owens – Biochemist
- Arlie Petters – Mathematician/Cosmologist
- Clifton Poodry – Biologist
- Frank Talamantes – Endocrinologist
- Neil deGrasse Tyson – Physicist
- Paul Turner - Virologist
- Richard Alfred Tapia – Mathematician
- Lydia Villa-Komaroff – Molecular Biologist
- Martha Zuniga – Virologist

**UGA Scientists†**
- Samuel Aggrey – Poultry Science
- Casimir Akoh – Food Science
- Mary Atwater – Chemist, Science Education
- K. Paige Carmichael – Vet Med Pathology
- Sarah Covert – Forestry Scientist
- Julia Diaz – Marine Biology
- Kelly Dyer – Population Genetics
- Vanessa Ezenwa – Ecology
- MariCarmen Garcia – Medical Microbiology
- Cheryl Gomillion – Tissue Engineer
- Arthur Grider – Food Nutritionist
- Cecil A. Jennings – Fisheries Ecologist
- John Motivo – Engineering, Education
- Kojo Mensa-Wilmot – Parasitologist
- Michelle Momany – Fungal biologist
- Deborah Mohnen – Carbohydrate Scientist
- Ynes Ortega – Food Science
- Greg Robinson – Chemist
- Susan Sanchez – Veterinary Microbiologist
- Mary Alice Smith - CAES
- Marshall Shepherd – Geography
- Guillermo Zavala – Population Health

* The UGA library or Dr. Schmidt may have a book/video suitable for use as a reference for your presentation. Many web resources are also available, and Google searches should identify appropriate sites (e.g. [http://www.thehistorymakers.com](http://www.thehistorymakers.com)). If the scientist is local, feel free to interview the individual or ask him/her to give a short presentation to the class.

† Double check UGA affiliation before choosing as a topic; some may have retired or moved to other positions elsewhere.
Suggested Outline of Presentation

Resources:
University of Georgia Libraries
Various Web sites
Phone and email interviews (see Dr. Schmidt if you wish to pursue this option)
Dr. Schmidt (call or email for an appointment)

Format: A PowerPoint or electronic slide presentation is strongly preferred; other types of presentation will require instructor pre-approval. Bring the electronic file on your own laptop, a USB drive, or email the file to yourself. A file that cannot be played will constitute loss of a letter grade if the presentation cannot be rescheduled.

Sample Questions and Points to Consider in each presentation:
• Personal History
  • What is the full name of individual (not just Dr. X)?
  • Where was the scientist born?
  • What is the scientist’s cultural and socioeconomic background?
  • What spurred the scientist’s interest in science?
• Education History
  • Where was the scientist educated?
  • What degrees did the scientist earn?
  • Was mentoring an important component of the scientist’s success?
  • How and when was the scientist exposed to research?
  • Who were the scientist’s academic mentors?
  • What kind of support network did the scientist have (e.g., financial, family, or psychological)?
  • What social, economic, or cultural hurdles did the scientist face?
  • Where is the scientist now?
• Research History
  • What is the scientist’s field of study?
  • Why is this field important (e.g., medical relevance, promoting science and/or education)?
  • What system/organism is used for study and why is this system/organism a good choice?
  • What techniques or approaches did the scientist use or pioneer?
  • What is the scientist’s publication and patent history?
  • How significant have the scientist’s contributions been to science?
• Political and Award History
  • Is the scientist involved with professional societies?
  • Does the scientist have personal and/or political views on diversity in the sciences?
  • What are the scientist’s awards and honors?
• Citations & References
Example of Email that can be sent to a Faculty Member:

Dear Dr. X,

I am freshman at the University of Georgia, and I would like to interview you for a presentation that I am to give about a prominent scientist from an underrepresented background. This presentation is in conjunction with Dr. Schmidt’s FYOS 1001 class – The Impact of Underrepresented Minority Scientists on Today's Understanding of Biology. A letter from Dr. Schmidt is attached.

I have selected you for my report, and I respectfully request your willingness to participate in this project. Please acknowledge your interest of becoming involved in this project by providing responses to the following questions or by providing a time when I can call to personally ask these questions.

[Add your list of questions here:]

Sincerely,

[Your name]
[Your contact info (email and/or phone #)]
Letter to be given to a Faculty Member (a signed letter will be emailed to you upon request):

Dear Colleague,

I am a Professor of Biochemistry & Molecular Biology at UGA, and I teach an Odyssey seminar course that exposes entering students to the accomplishments of scientists from underrepresented backgrounds. The course is titled “The Impact of Underrepresented Minority Scientists on Today's Understanding of Biology.” As the title implies, the course explores and advertises the accomplishments that have been made by scientists from historically underrepresented backgrounds. My long-term goal is to provide positive role models and to encourage students of all backgrounds to consider science as a possible career.

The students in the class have been asked to identify a notable minority scientist and to make a short 20-25 minute presentation on that scientist’s personal and scientific history. If you are receiving this letter, a student has decided to highlight your research accomplishments for his/her presentation. I respectfully request your participation in this project, which can range from simply directing the student to the appropriate resources to accommodating a telephone interview. The student is following this letter with a specific request, which I hope that you can accommodate. Any information that you volunteer will be used strictly for teaching purposes only.

Thank you in advance for your participation in this project.

Sincerely,

Walter K. Schmidt, Ph.D.
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