

Richard S. Lapidus, Ph.D.

PRESIDENT

MEMO

TO: Board of Trustees

FROM: Dr. Richard S. Lapidus
President

RE: Sabbatical Leave Requests AY2021-2022

DATE: November 10, 2020

In accordance with the agreement between the Board of Higher Education and the Massachusetts State College Association, I am recommending approval of sabbatical leaves for the 2021-2022 academic year. Such leaves are granted on the basis of academic quality of the proposal, as well as other criteria. Prior to my review requests were initially reviewed by department chairs and Dr. Alberto Cardelle, Provost and Vice President for Academic Affairs.

Fall Semester 2021 —09/01/21-01/12/22:

Cheryl Armstrong (pre-approved deferral from FY20)	Psychological Science
Christopher Cratsley	Biology/Chemistry
Danette Day	Education
Robin Dinda	Humanities
M. Zachary Lee	Communications Media
Nadimpalli Mahadev	Computer Science
Christa Marr	Economics, History and Political Science
Les Nelken	Communications Media
Reid Parsons	Earth and Geographic Sciences
Kori Ryan	Behavioral Sciences
David Weiss	Behavioral Sciences

Spring Semester 2022—01/13/22-05/31/22:

Kevin Austin	Computer Science
Andrew Chan	Business Administration
Emma Downs	Biology/Chemistry
Lisa Gim	English Studies
Beverley Hollingsworth	Business Administration
Michael Hove	Psychological Sciences
Wendy Keyser	English Studies
Sara Levine	Psychological Sciences
Benjamin Lieberman	Economics, History and Political Science
Janette McMenemy (pre-approved deferral from FY20)	Psychological Sciences
Sarah (Sally) Moore	Humanities
Michael Nosek	Biology/Chemistry

Christopher Picone
Rene Reeves
Jessica Robey
Ricky Sethi

Biology/Chemistry
Economics, History and Political Science
Humanities
Computer Science

Full Year—09/01/21-05/31/22:

Nermin Bayazit
Christine Dee
Adem Elveren

Mathematics
Economics, History and Political Science
Economics, History and Political Science

While the proposals in their entirety are attached, please find a brief description of each proposal below:

Fall 2021

Cheryl Armstrong Psychological Science 9/01/21 to 1/13/22
Pre-approved deferral from FY20

Christopher Cratsley Biology/Chemistry 9/01/21 to 1/12/21
Dr. Cratsley is the Citizen Science "Czar" for the *International Union for the Conservation of Nature* (IUCN) Firefly Specialist Group. During this sabbatical, he will establish partnerships with all of the other firefly Citizen Science projects globally in order to create consistent research methodologies and educational outreach materials that will allow us to effectively use Citizen Science data as part of the IUCN red list process. He will convene virtual meetings with the researchers leading firefly Citizen Science projects across the world (with a focus on existing partnerships in Mexico, Switzerland, Thailand, and the United Kingdom). These meetings will focus on creating pilot standardization techniques for measuring population sizes from flash counts carried out by Citizen Scientist volunteers. And then compile, develop, and adapt Citizen Science education and outreach materials for use across the range of international programs.

Danette Day Education 9/01/21 to 1/12/21
During Dr. Day's sabbatical, she will revisit the work of mindfulness and its impact on teachers' professional lives that was the basis of her graduate research. She will return and explore how the novice teachers who were the subjects of this original research have been able to cultivate mindfulness through participation in yoga. She will expand the work and launch a new area of research looking at how mindfulness may be of importance for inclusive teaching and supporting underrepresented students. So, she will work with a librarian colleague and explore the role of the library in supporting students of underrepresented groups as well as expand the literature review of mindfulness and underrepresented students. The plan is to have the results disseminated through a podcast as well as in the implementation of a project titled – *Investigating a theory of mindfulness-based Inclusive Practice (m-bIP) in Early College High Schools*.

Robin Dinda Humanities 9/01/21 to 1/12/21
Dr. Dinda will work with The Leupold Foundation during this sabbatical. The mission of The Leupold Foundation is the reproduction, preservation, and dissemination of the culture of the pipe organ. He has been asked by the foundation to work on publishing a series of volumes on the performance practice of organ music throughout history, titled *Historical Organ Techniques and Repertoire*. Dr. Dinda will write the volume on "The American Orchestral School, 1900 - 1940." His intention is to go to Colfax, NC to do research in the Foundation's vast library of organ music scores, periodicals, and books.

M. Zachary Lee Communications Media 9/01/21 to 1/12/21
Professor Lee is a filmmaker, who claims that he views his primary responsibility, in regards to both research and teaching, as creating new work. During this sabbatical, he would write, think, research, read, experiment, and, ultimately, finishing the screenplay of his second feature-length film currently titled an *Untitled Wester*. The film is, at this point, not so much about the west as an exterior space at a specific historic moment as much as it is about the west as an interior state of mind. His plans are to submit the screenplay to various outlets including peer-reviewed festivals, labs, and institutes. He may also create a proof-of-concept short film that captures the mood, tone, and form of what the longer film would be.

Nadimpali Mahadev Computer Science 9/01/21 to 1/12/21
The main goal of this proposal is to research the knowledge base in the area of cybersecurity training so as to identify curricula, as well as research topics in cybersecurity. Dr. Mahadev will explore the literature including existing training programs and products to determine the extent of cybersecurity knowledge base that needs to be part of college- and university-level education and research. As a result of the research, Dr. Mahadev will develop detailed plans for implementing a) non-credit-bearing cybersecurity certification programs, b) an undergraduate major in cybersecurity that is consistent with ABET criteria and meets NSA standards, and c) an online graduate program in cybersecurity that can combine courses offered by computer science and other departments.

Christa Marr Economics, History, and Pol. Science 9/01/21 to 1/12/21
During this sabbatical, Dr. Marr will pursue her scholarship and develop courses in the economic program. The time will allow her to publish her scholarly works in progress and to develop new projects in community-based research and in behavioral economics. She would also like to develop a new course and review our courses based on our Economics Assessment Plan. She plans to use the sabbatical leave to work on the goals set forth in the Fitchburg Local Innovation Project (FLIP) proposal. These include a) continue to collect and analyze suggested datasets and areas of interest based on feedback from the university, city, and private clients, b) start a working-paper series compiling relevant academic research from faculty, students, and the community regarding issues in our local area, and c) identify multiple sources of alternate funding including grants and a proposal for a client fee-based model. Her work on Behavioral Economics will focus on Intergenerational Mobility. She is currently working on a paper to explore the impact of parental investment on intergenerational mobility. This paper contributes to the literature by exploring how much time and money a parent invests in her child during her youth matters for the child's economic outcomes.

Les Nelken Communications Media 9/01/21 to 1/12/21
Professor Nelken's professional experience in the game industry to this point has been in designing, conception, and developing video games in traditional graphical formats. During this sabbatical, Prof. Nelken will expand his experience with virtual reality (VR) technology by exploring and experimenting with how recently-developed tools, specifically created for VR art, might be utilized in the conception and visualization process for VR games. He will focus on using VR art tools to complete VR concept sketches for iconic types of game environments/settings (Medieval fantasy, Space sci-fi, Post-apocalyptic, Cyberpunk), 3D design concepts of game-level building assets for those environments, 3D VR environment prototypes of game levels, and portions of game levels based on these environments and, finally, a VR storyboard for a sequence in a VR game.

Reid Parsons Earth and Geographic Sciences 9/01/21 to 1/12/21
Dr. Parsons will do background research and submit a research grant proposal to NASA's Mars Data Analysis Program (MDAP) in the hopes of funding his research addressing Ice Ages on Mars. He has previously served as a Co-I on two MDAP proposals, and has been able to prepare for the work by using a Linux desktop "supercomputer" with specialized software that can perform computer simulations of glacial ice sheets. While in Japan on a previous research leave, he applied this computer model to study Martian ice sheets, which resulted in a peer-reviewed science journal publication in 2020.

Kori Ryan Behavioral Sciences 9/01/21 to 1/12/21
Dr. Ryan's sabbatical is focused on crafting an edited book, tentatively titled, "Antiracism in Police and Forensic Psychological Settings." The book will be aimed at an audience of practitioners and educators, and it will include interactive case studies and real-world examples, discussion questions, and suggested readings to be utilized in a classroom or practice setting. The intent is to provide an empirically-based guide not to just address racism, but actively combat racism in the criminal justice system. The chapter topics will include antiracism practice, strategies, interventions, and research-

based interventions for criminal justice practitioners. The chapters examine ways of changing racism from within forensic and police psychological settings. They also articulate the need for cross-culturally responsive and innovative approaches to public safety. Finally, chapters will also focus on action-restorative justice actions, abolition, and restructuring the role of police.

David Weiss Behavioral Sciences 9/01/21 to 1/13/22

The goal of Dr. Weiss's sabbatical is to learn Spanish to attain conversational proficiency. He will work with a Spanish immersion program geared toward working adults, followed with academic course work at the appropriate level augmented with self-paced training programs. The goal of language acquisition is always noble, but in this case, it is also of high value for Dr. Weiss's role as a faculty member including serving as a better instructor, mentor, and advisor for our growing Latinx criminal justice students. Overall learning professional Spanish reflects the growing diversity and need for CJ professionals able to communicate with an increasingly diverse population.

Spring 2022

Kevin Austin Computer Science 1/13/22 to 5/31/22

During the sabbatical time Prof. Austin will build the central processing unit (CPU) for a computer from the ground up using fundamental building blocks and modern technologies. The process will produce a consistent step-by-step practical approach to understanding computer organization across a series of 10-to-12 student activities that take advantage of modern logic circuit development technology.

Andrew Chan Business Administration 1/13/22 to 5/31/22

Dr. Chan will develop and implement an empirical research project that examines if an organization can improve its decision in capital budgeting process when Geographic Information System (GIS) is incorporated in the process. GIS could be employed to assess how revenues recognized and expenses incurred are related and integrated with the business regions or sectors where the business operations generating the revenues and expenses are in most cases spatially related or linked to specific locations. The research incorporates an application of GIS and accounting information (AIS) systems in the context of reporting and disclosure for cost accounting and managerial accounting.

Emma Downs Biology/Chemistry 1/13/22 to 5/31/22

Dr. Downs will engage in two different projects. The first project entails research and completion of a manuscript on how nanoparticles affect insect herbivory of plants. Nanoparticles are an interesting topic for undergraduate research due to their ubiquity in commercial products as antimicrobial agents and the lack of understanding of their effects on the environment. All these factors make the study ideal for publication in a chemistry education journal, possibly the *Journal of Chemical Education*. This journal has already published many papers detailing undergraduate laboratory experiments using silver nanoparticles, but only a few including plants. She will also develop a course in science writing geared toward sophomore- and junior-level science majors, which would address both technical and popular science writing. Such a course would be beneficial to students, who would be better prepared for later courses where writing is required, as well as for employment.

Lisa Gim English Studies 1/13/22 to 5/31/22

During the sabbatical, Dr. Gim will continue both the reading of the primary texts in her field of study Shakespeare's dramatic works and drama of the Early Modern period and explore the study of the existing scholarship in this area. Through the research, Dr. Gim will develop areas of exploration to turn into a course titled "Shakespeare and His Contemporaries," which would treat not only the literature, but also the gender and historical implications. Through the research, she will also write a conference paper presentation for the Shakespeare Association Convention in 2022. Finally, she will

develop a third outcome of her sabbatical project, which would be the completion of a manuscript on Elizabethan and Jacobean tragedy centered around the topic of incest.

Beverley Hollingsworth Business Administration 1/13/22 to 5/31/22

In 2002, the Securities and Exchange Commission (SEC) enacted the Sarbanes Oxley Act (SOX). During this sabbatical, Dr. Hollingsworth will contrast the period immediately before SOX, with the subsequent years. The examination will focus on the factors that contributed to audit failures before and compare them with the post-audit failure factors. The purpose of the research is to ascertain differences and similarities in the contributing factors and reasons why failed audits are still a problem for the Public Company Accounting Oversight Board (PCOAB). The project will be carried out by using SEC and PCOAB public databases to extract restatements of financial statements--a usual 'first indicator' that firms may have auditing issues, and actual documented audit failures to reach an informed and substantive conclusion. The study proposes a cross-sectional, multiple-regression model covering reasonable periods to evaluate the relationships.

Michael Hove Psychological Science 1/13/22 to 5/31/22

During his sabbatical, Dr. Hove will reside in Montreal and complete a research task at the Center for Research on Brain, Language, and Music (affiliated with McGill University). The project expands on his current research on auditory-vibrotactile stimulation. The research will be in collaboration with experts in the field and a world-leading research hub on these topics. The projects to be completed include 1) how vibrotactile stimulation can improve speech and music perception in individuals with and without hearing loss; and 2) how vibrotactile stimulation can increase the perceived loudness of sound and thereby decrease music-loudness preference and risk of hearing loss. The collaboration throughout the sabbatical will also foster a long-term international collaboration.

Wendy Keyser English Studies 1/13/22 to 5/31/22

The purpose of Dr. Keyser's sabbatical is to write a pedagogical book on the teaching of poetry. Her motivation for this work came initially from her work as a high school English teacher, and an English education professor teaching future teachers. The work will start before the sabbatical during the Fall '21 during which time she plans to complete the literature review, which includes surveying other books with similar purposes and define how the book is different, and to collect and synthesize current research, as well as begin the work of collecting lesser-known poems from a diverse collection of poets, including those who have recently published, which entails reading a lot of poems to find ones that apply best to the purposes of the book. In the spring semester, during sabbatical, she plans to begin by writing the introduction and one focus chapter, and complete the book proposal, as well as begin work on the other chapters as she awaits a response from the publishers.

Sara Levine Psychological Sciences 1/13/22 to 5/31/22

As a social psychologist, Dr. Levine seeks to understand the nature and causes of individual behavior and thought in social situations. Since the onset of COVID, the understanding of what it means to be social has changed substantially—from Zoom cocktail hours, face-to-face conversations conducted while wearing masks, to backyard BBQs conducted 6-feet apart. To this end, she will use this sabbatical to explore previous research related to the effects of social isolation and social distancing, as well as the new research that will likely emerge in the next year on these topics. The research will result in a new Advanced Psychology Seminar for her department. In addition, she will explore how our altered, everyday social experiences may be changing the applicability of previous research findings related to social interactions in our new environment, and examine how our differences in access and quality of access to different forms of technology might influence our social experiences.

Benjamin Lieberman Economics, History, and Pol. Science 1/13/22 to 5/31/22

This project builds on Dr. Lieberman's previous research and writing on ethnic cleansing, genocide and magic, and on climate change and history to take a new approach by re-conceptualizing a key period of world history. Through the project, he will set up the hypothesis and investigate case studies from frontier zones in Asia, Africa, and the Americas to show how a Long World War of Imperialism shattered and remade the modern world. The second thread of research will build on and extend his previous work on ethnic cleansing, genocide, and nationalism and, most specifically, on a question that fascinates students: what motives lead perpetrators to carry out genocide? The research will result in proposals for conference papers, an article, and a foundation for a longer book-length manuscript.

Jeanette McMenemy Psychological Science 1/13/22 to 5/31/22

Pre-approved deferral from FY20

Sarah (Sally) Moore Humanities 1/13/22 to 5/31/22

Professor Moore will be applying for a fellowship in Peterborough, New Hampshire at the MacDowall Art Colony where she will be surrounded by artists and musicians and writers who meet in the evening and work in quiet solitude during the day for a month-long period. During the fellowship and at her studio, she will be working on figures in plastic, as well as crumpled paper. She will be experimenting with using fabric strips and jute twine in the figures. Additionally, she intends to explore and extend the possibilities of mixing different materials and found objects into paper clay, and merging human and animal together. The figures are striking elegant, imaginative poses, but are stuck in impossible situations from their own lack of judgement, atop tall narrow structures, alluding to all of our stuckness -environmental, political, pandemic. They also are open to interpretation as to include personal associations of the viewer. She will also create jointed marionettes / sculptures using these methods so she can bring them to life. In collaboration with musician, Keith Kirchoff, she will make videos that intermingle her work with his work as a pianist and composer.

Michael Nosek Biology/Chemistry 1/13/22 to 5/31/22

During his sabbatical, Dr. Nosek will focus on laboratory research that continues to expand his research on mitochondrial physiology and genomics, as well as develop undergraduate laboratory course activities. There are three areas of investigation: 1) the Phylogeny of chipmunk species in Southern California, 2) progression of mtDNA Heteroplasmy using a cell line from a patient with Kearns-Sayre syndrome (a disorder with a specific segment of mtDNA) and, finally, 3) studies of Defensins in HL-60 cells by using a L-60 cell line that is a human promyelocytic leukemia cell line that exhibits several properties of human neutrophils.

Christopher Picone Biology/Chemistry 1/13/22 to 5/31/22

Dr. Picone plans to pursue several projects during his sabbatical, both research based and curricular development based. Working with the World Farmers organization based out of Flats Mentor Farm in Lancaster, MA, he will pursue a research project looking to see if plowing at an organic farm would select for fungus species that are less adapted to cementing soil particles into aggregates. He will also work with the Yard Futures Project to prepare to run an Environmental Science lab similar to the lab run at the lawns around McKay Academy where he investigates percolation rates of water and soil organic matter. He will also launch the Eco-sociology lab in response to the social unrest and Courageous Conversations of 2020. He is creating a new Ecology lab to study correlations between biotic traits of neighborhoods (e.g. tree cover) and social traits that indicate wealth (e.g. housing characters, graffiti, trash). The lab practices basic statistical skills like correlation analysis, but also gets students thinking about the drivers of ecological factors that vary among neighborhoods (e.g. redlining), and the impacts of that variation (e.g. heat island effects). This lab is still in its infancy, but he hopes to have a manuscript ready for a conference in June 2022.

Rene Reeves Economics, History, and Pol. Science 1/13/22 to 5/31/22

Dr. Reeves will use his sabbatical to advance an open educational resource (OER) text for his Latin American Revolutions course (HIST2770). The textbook currently used for HIST2770 presents a significant financial burden for students. He will build on his work on drafting a wide-ranging article about how to approach teaching Latin America's twentieth-century revolutions and a course reader containing the primary and secondary sources to complete the work. Dr. Reeves will combine the article draft and the course reader to create a comprehensive textbook that is based on open resources and, therefore, allows students to avoid the expense of the textbook.

Jessica Robey Humanities 1/13/22 to 5/31/22

During her sabbatical, Professor Robey will complete the capstone project for her M.Ed in Art Education, which will allow her to begin teaching art studio classes. She will also work and complete a book project in collaboration with Maine artist, Peter Beerits. This book is based on work started in the summer of 2018, during which time she interviewed Peter and photographed his work. She will return to Maine in the summer of 2021 and do the work necessary to start writing in spring, 2022. She presented an early version of this project for the FSU Speakers Series, titled "Collective Memory and the Roadside Mythologies of Peter Beerits."

Ricky Sethi Computer Science 1/13/22 to 5/31/22

During the sabbatical, Dr. Sethi will serve as the chief editor for a new collection entitled, "Identifying, Tracking, and Fact-Checking Misinformation." The research is of critical timing as the spread of misinformation threatens to become a virtual pandemic. The speed of the growth requires tools to combat disinformation analogous to the way we mitigate biological pathogens: approaches to identify, track, and verify potential misinformation. The edited piece will invite novel theoretical, experimental, survey-based, and industry experience contributions. This research area covers challenging topics in fact-checking misinformation such as the use of automated, computational, crowd-sourced, provenance and sources, knowledge graphs, network flows, social media proliferation, viral models, satire, manipulated content, imposter content, deep fakes, social bots, and reporting and tracking of real-world events.

Spring/Fall – full year

Nermin Bayazit Mathematics 9/01/21 to 5/31/22

As co-founders of New England Inquiry Based Learning in Mathematics Consortium Prof. Bayazit has served as faculty coach for teaching others in Inquiry Based Learning. During this sabbatical Dr. Bayazit will focus designing a research study to evaluate the impact of the coaching, collect the data, analyze the data, and complete one to two manuscripts. She will also use the information to secure another grant to support our program to systematically recruit new coaches to extend the program in our region.

Christine Dee Economics, History, and Pol. Science 9/01/21 to 5/31/22

Dr. Dee will use the sabbatical to continue her research and the writing of a manuscript project currently titled *Without My Son: Widowed Mothers and the Cost of War in Nineteenth-Century America*. The inspiration for this project was the small pocket diary of private Sewall Randall killed defending a small railroad cut in western Georgia. On the diary's back cover, Sewall transcribed a single verse two months before his death: "In brighter realms where sorrows cease and loved ones greet each other' Where storms are hushed and all is peace, we hope to meet thee—Mother." The words demonstrated the strong bond between him and his widowed mother, who after his death navigated her economic world alone, availing herself of the 1862 federal legislation that enabled mothers of soldiers who were widowed or married to disabled husbands to apply for pensions upon the death of their sons. By studying this process, it will be possible to measure women's grass-roots

activism and economic activity and to advance recent scholarship that considers areas such as female credit networks and women's business litigation in state courts.

Adem Elveren Economics, History, and Pol. Science 9/01/21 to 5/31/22

Dr. Elveren is planning to study the effect of militarism on gender inequality. He is working on a book proposal titled *Militarization and Gender: Theoretical and Empirical Perspectives* that has been accepted by the University of Michigan Press. This book takes the feminist research on militarization and women forward through an empirical analysis of the effects of militarization on gender inequality and women's participation in the labor market. It also contributes to the literature by providing detailed case studies on different country groups, including the Middle East and North Africa, and Muslim majority countries, to better understand the mechanisms whereby militarization and patriarchy interact.