

# Madagascar



Northern Illinois University

*Study Abroad Office*

## **Madagascar Past and Present: Biodiversity, Extinction and Conservation**

**June 9 - July 9, 2017**



**Coordinated by:**

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## Madagascar Past and Present: Biodiversity, Extinction and Conservation

June 9 – July 9, 2017

This study abroad program is coordinated by the Northern Illinois University Study Abroad Office (SAO), in cooperation with the NIU College of Liberal Arts and Sciences, the NIU Department of Anthropology, as well as the Department of Paleontology and Biological Anthropology of the University of Antananarivo, and SADABE, an NGO based in Madagascar.

**PROGRAM DATES:** The program will officially begin on Saturday, June 10, 2017 in Antananarivo, and will end on Sunday, July 9, 2017 in Antananarivo. Students will be responsible for making their own air travel arrangements in order to arrive in Antananarivo on Saturday, June 10, although the program director will provide information and support.

**PROGRAM DIRECTORS:** Mitchell Irwin is an Associate Professor of Anthropology in the NIU College of Liberal Arts and Sciences. Professor Irwin is a biological anthropologist specializing in primate ecology and behavior. His research focuses on the ecological adaptations of Madagascar's lemurs, and how habitat disturbance affects the ecology, behavior and health of individuals and populations. He has studied feeding ecology, nutrition, body mass and condition, and parasitology, mainly focusing on the diademed sifaka (*Propithecus diadema*) and the brown lemur (*Eulemur fulvus*). He is also interested in how Madagascar's abiotic and biotic environment has influenced the evolution of unusual lemur traits such as low activity levels, cathemerality and female dominance. Professor Irwin has been running a field project in Tsinjoarivo, a high-altitude rainforest site in eastern Madagascar, since 2000.



Karen Samonds is an Associate Professor of Biological Sciences in the NIU College of Liberal Arts and Sciences. Dr. Samonds is a paleontologist and comparative anatomist. Her research focuses on the evolutionary history of Madagascar, which remains largely unknown despite the wealth of research on its living representatives. Her research tools include field paleontology conducted in remote parts of Madagascar, anatomical description of fossil and living species, and biogeographic modeling of colonization and extinction patterns in deep time. She has also worked on several projects examining the variation in development and life history among lemurs and other primates, and the growth and development of living lemurs at Tsinjoarivo.



In addition to their research activities, Professor Irwin and Professor Samonds have also co-founded an NGO called “SADABE” ([www.sadabe.org](http://www.sadabe.org)). This organization is dedicated to promoting research, conservation, and development at Tsinjoarivo, in order to promote the healthy coexistence of humans and wildlife. SADABE’s activities have included reforestation, pisciculture, apiculture, dental clinics, and health workshops for women and children.



Mr. Jean-Luc Raharison, executive director of SADABE, will assist the field school with in-country preparation and logistics. Mr. Raharison earned his master’s degree in primatology from the University of Antananarivo in 2001, and has worked with Dr. Irwin at Tsinjoarivo since that time.

**PROGRAM OVERVIEW/OBJECTIVES:** The primary purpose of this program is to provide participants with the opportunity to learn first-hand about primate biodiversity, extinction, forest fragmentation and conservation in Madagascar, one of the world’s foremost biodiversity hotspots. The program will focus on building an experiential knowledge of:



1. Madagascar’s existing biodiversity, especially its >100 primate species.
2. The 17 primate species that have been lost to extinction in the past few thousand years.
3. The complexities and challenges of conservation in this third-world nation.

This course is intended to expand upon students’ theoretical background in either primatology, biology, or conservation biology.

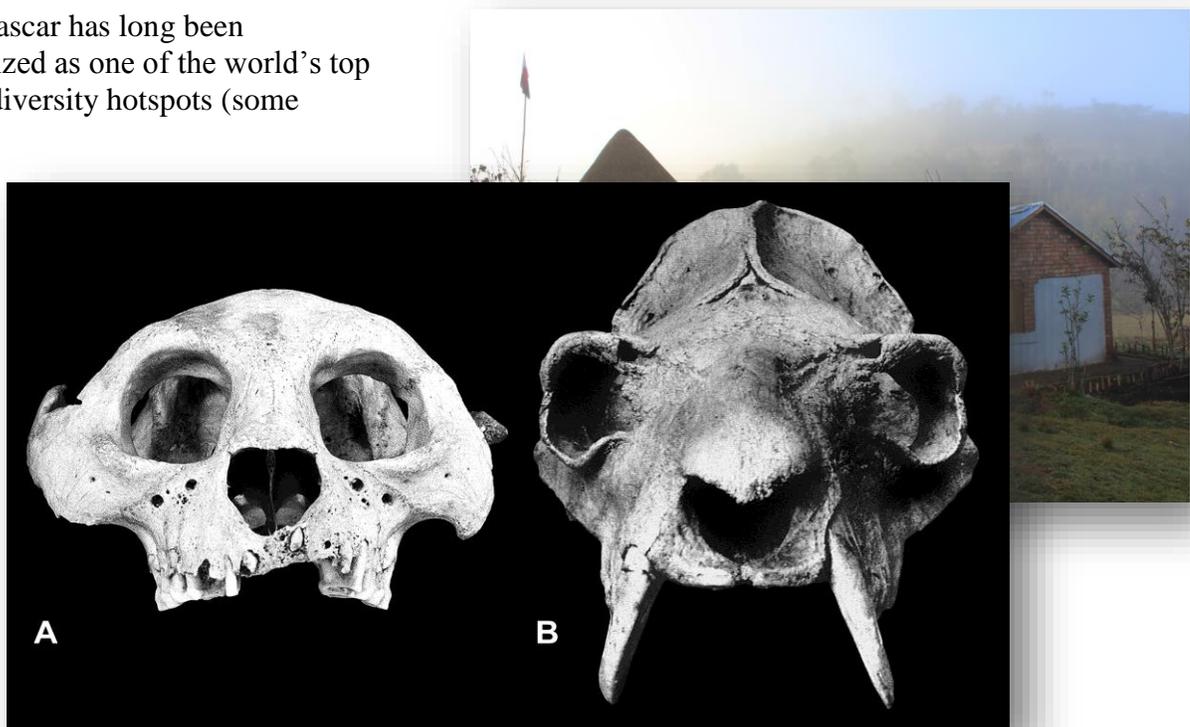
Students and instructors will begin the field school with a field trip to Andasibe, a biologically rich rainforest with active tourism and development programs (we will visit the Mitsinjo association: [www.mitsinjo.org](http://www.mitsinjo.org)). Then, in Antananarivo, we will have an opportunity to hear lectures about Madagascar’s evolutionary history, including the giant extinct lemurs, observe and study fossils of extinct lemurs, as well as learn about data collection techniques for studying the behavior and ecology of living lemurs. Third, we will travel to Tsinjoarivo where we will spend the majority of our trip. Here students will see the lemurs that Dr. Irwin has been studying for 15 years, and apply ecological and behavioral sampling techniques as they work on targeted brief research projects in the surrounding forests. While in this remote village, student groups will also learn about and participate in local conservation efforts and meet local community associations. Finally, we will take a brief trip to Sambaina to observe a subfossil lemur site excavated by Dr. Samonds since 2014, and experience the landscape transformations that have taken place since the extinction of the giant lemurs. At the end of the course, students will present preliminary results at the University of Antananarivo.

This course will focus on Madagascar’s endemic primate radiation, the lemurs. Currently there are just over 100 known lemur species, and 17 more were lost to extinction in just the last few thousand years. Madagascar is universally recognized as a globally important biodiversity

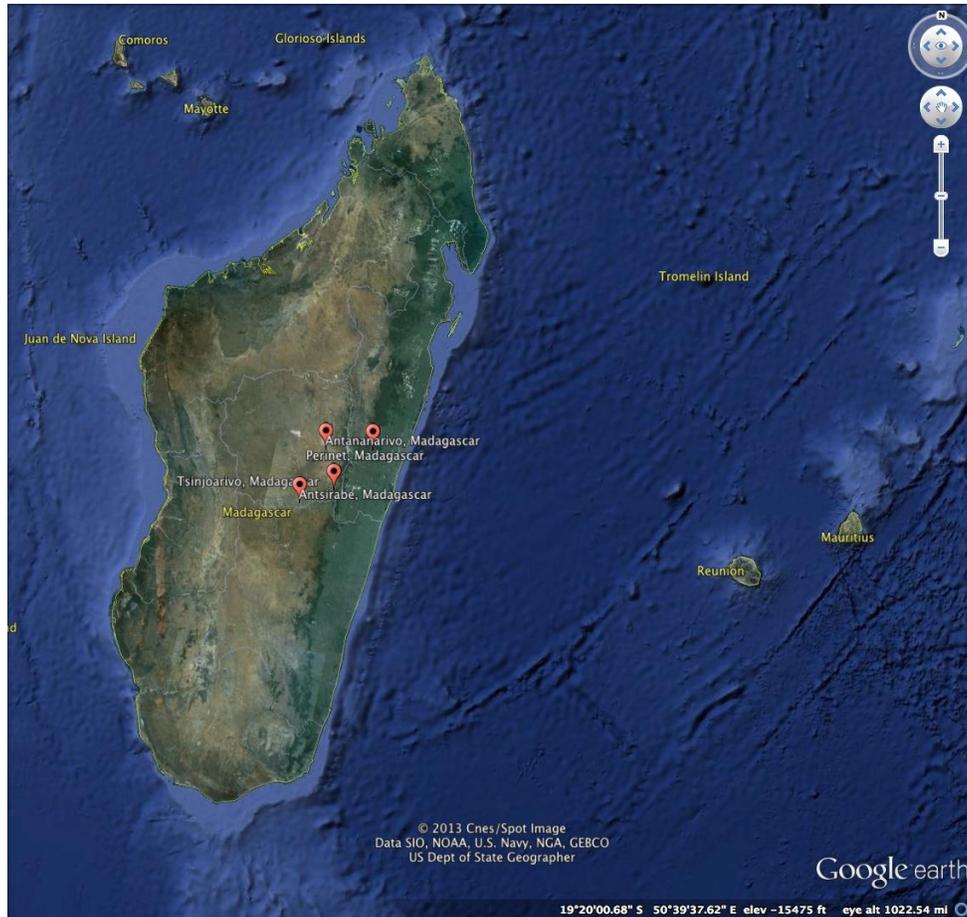
hotspot, yet its natural habitats continue to shrink due to human population growth and illegal exploitation. Its lemurs are a rich source of knowledge (including primatological knowledge which helps with understanding the evolution of humans), a cultural and biological heritage of the Malagasy people, and a key tourist attraction (ecotourism is currently the highest-grossing industry in Madagascar). Lectures will be combined topically based visits to Universities and Zoological Parks, and hands-on research experience to explore Madagascar's past and present primate diversity, as well as the unique and urgent conservation challenges it faces. A large component of the course is the cultural exchange between NIU students and students from the University of Antananarivo who will also participate. In addition to background knowledge about Madagascar's primates, students will learn first-hand the step needed to conduct primatological research, from project design through completion and presentation of results. They will also meet with local community associations at the field site to talk about local perceptions of lemurs and wildlife conservation, and the pressing basic needs faced by rural Malagasy communities today.

**PROGRAM SITE:** The program will take place in Madagascar. Madagascar is a large island (sometimes called the eighth continent) located off the southeastern coast of Africa. Although often considered an "African country", Madagascar was actually first colonized by people from present-day Indonesia, and the island is a true mix (in terms of culture, language and human genetics) of Southeast Asia and Africa.

Madagascar has long been recognized as one of the world's top 25 biodiversity hotspots (some



*Two extinct lemurs: Hadropithecus and Megaladapis*



conservationists consider it the world's most important hotspot). It houses a stunning array of biodiversity, of which large proportions are endemic (found nowhere else in the world).

Tsinjoarivo is a unique, high-altitude rainforest found at the escarpment dividing Madagascar's central high plateau from its eastern lowlands. Tsinjoarivo is ideal for studies of fragmentation because of the existence of an east-west fragmentation gradient over a distance of less than 15 kilometres. Dr. Irwin has established three main research camps within the Tsinjoarivo region – this field school will focus on Mahatsinjo camp, which is located at the center of a network of forest fragments in the western half of the forest corridor – an area where human and nonhuman primate populations literally live side by side.

Like most rural areas in Madagascar, economic and educational opportunities are few and far between, and public and environmental health is suffering. SADABE's mission is to promote environmental health and the healthy coexistence of humans and wildlife at Tsinjoarivo.

### **HIGHLIGHTS:**

- 1) See first-hand the world's leading collection of subfossil lemurs at the Department of Palaeontology and Biological Anthropology at the University of Antananarivo, and have the chance to participate in research projects using these rare specimens.

- 2) See first-hand rare and threatened Malagasy lemurs, such as the diademed sifaka, the aye-aye, and the greater bamboo lemur.
- 3) Work alongside Malagasy students and research assistants.
- 4) Meet with and learn about local community associations in rural Madagascar, and the unique challenges they face in basic subsistence, health and education – and participate in an annual vitamin distribution event to benefit undernourished children.
- 5) Visit subfossil field sites and participate in fossil excavation in the Sambaina basin north of Antsirabe.
- 6) Conduct an independent research project within one of these themes, following all the steps of field research: designing a project, formulating methods, data collection, analysis and presentation. Past students have presented research results at academic conferences and submitted for publication.

**PROGRAM AUDIENCE:** Space is limited and qualified applicants will be accepted on a first-come-first-serve basis. The content of this field course will be geared towards students interested in (1) Anthropology (especially, but not exclusively, physical anthropology and primatology); (2) Biology (especially those students interested in ecology, animal behavior and conservation); and (3) students interested in conservation biology and environmental studies. However, students from all majors would be welcome if a tangible link between their specialty and the course content can be established. Non-traditional students as well as non-NIU students are welcome.

**INSTRUCTION METHOD:**

- 1) NIU students will meet twice with the program directors in the months leading up to the field school. This will provide an opportunity to learn what to expect logistically, and get a head start in designing a feasible independent research project.
- 2) While in Madagascar, NIU students will experience 8 lectures related to the course experience. These will be given at different localities, including the University of Antananarivo, Andasibe, Antsirabe, and the SADABE research station at Tsinjoarivo.
- 3) Lab sessions at the University of Antananarivo will introduce students to the fossil remains of extinct lemurs and the ways palaeontologists use these remain to infer details of ecology and behaviour.
- 4) Lab sessions at Tsimbazaza and Lemurs Park will focus on teaching behavioural and ecological data collection techniques, and students will “practice” on captive and free-ranging lemurs.
- 5) Independent research projects for most students will focus on the living lemurs at Tsinjoarivo, and will involve project design, data collection and preliminary analysis. Selected students may focus on the palaeontology collections for their independent project, but will collect related data on living lemurs to complement the fossil data.

Students will have continual access to the instructors for one-to-one meetings and the instructor accompanies students in the forest during data collection.

Graduate students will be required to meet more often before the field school, write a literature review related to their independent project, and turn in a more detailed final report (this may in many cases be suitable for publication).

Assessment will be based on course participation, literature review (graduate students only), field school journal, preliminary PowerPoint presentation at the University of Antananarivo, and final report of independent research project.

For students not within traveling distance of NIU campus, pre-field school meetings will be held via Skype.

**PROGRAM ACADEMIC CREDIT:** For satisfactory participation in the program, participants will receive **3 or 6** semester hours of undergraduate or graduate credit in one of the following NIU courses. The courses taken while participating in this program *cannot* be audited. Applicants must participate in the *entire* program and satisfy NIU admission and course requirements.

<b>UNDERGRADUATE CREDIT:</b>	
<b>ANTH 493D Anthropology Field Study: Physical Anthropology</b>	<b>6 semester hours</b>
<p><b>Description:</b> Directed field study or field school. Each topic may be repeated to a maximum of 12 semester hours.</p> <p><b>Program Director Prerequisites:</b> ANTH 240 or consent of Professor. Suggested preparation includes one upper-division course in physical anthropology.</p> <p><b>Catalog Prerequisite:</b> Consent of department.</p>	
<b>OR</b>	
<b>BIOS 489 Madagascar Field Biology</b>	<b>6 semester hours</b>
<p><b>Description:</b> Field biology experience devoted to studying the paleontology, evolution, ecology and behavior of the fauna native to the island of Madagascar. Includes lectures, museum field trips, and hands-on experience at a rainforest field camp. Independent research projects, data collection, and results presentation in a research talk and final report.</p> <p><b>Prerequisites:</b> BIOS 209 and BIOS 211</p>	

<b>GRADUATE CREDIT:</b>	
<b>ANTH 593D Anthropology Field School: Physical Anthropology</b>	<b>6 semester hours</b>
<p><b>Description:</b> Directed field study or field school. Each topic may be repeated to a maximum of 12 semester hours.</p> <p><b>Prerequisite:</b> ANTH 240 and at least one graduate-level course relevant to primatology, ecology or conservation, or consent of Professor.</p> <p><b>Prerequisite:</b> Consent of department.</p>	
<b>OR</b>	
<b>BIOS 589 Madagascar Field Biology</b>	<b>6 semester hours</b>
<p><b>Description:</b> Field biology experience devoted to studying the paleontology, evolution, ecology and behavior of the fauna native to the island of Madagascar. Includes lectures, museum field trips, and hands-on experience at a rainforest field camp. Formulation of independent research projects, data collection, and presentation of results in a research talk and final report.</p> <p><b>Prerequisite:</b> Consent of department.</p>	

**PROGRAM ELIGIBILITY REQUIREMENTS:** Brief essay questions on the field school application will ask you to outline your background in physical anthropology, your interest in this program, as well as how the program will assist you academically and in the future.

- Approval from Professor Irwin and Professor Samonds.

**APPLICATION AND ADMISSION PROCEDURES:** The program is open to *undergraduates and/or graduate level students* who meet the NIU general admission requirements, and who are interested in Physical Anthropology, Biological Sciences and/or Environmental Studies. Currently enrolled students must meet College of Liberal Arts and Sciences course GPA requirements. Graduate level students must also meet NIU Graduate School admission, course and GPA requirements.

Students must be in good academic and disciplinary standing at the time of application. Students who are on academic or disciplinary probation are not eligible to participate in study abroad programs. **Applicants must participate in the *entire* program and satisfy NIU undergraduate or graduate admission and course requirements.**

Students cannot have any encumbrances against their NIU records. Any encumbrances placed on a student's records by NIU (i.e., the Graduate School, Undergraduate Admissions, Bursar's Office, Accounts Receivable, Registration and Records, Health Services, Parking Services, etc.) must be cleared before a student is granted admission to a study abroad program.

For undergraduate students to be admitted to the program, an applicant's official transcript must be on file in the NIU Study Abroad Office. Students who are currently enrolled at NIU, or who have previously enrolled at NIU, do not need to request an official transcript; the Study Abroad Office will make this request on behalf of the applicant. Students who want to participate in the program and earn academic credit from NIU who have **not** previously enrolled at NIU, or who are not **currently** enrolled at NIU, should ask the Registrar at their institution to forward an official transcript as soon as possible to the Study Abroad Office. (Student-issued transcripts and photocopies are not acceptable.) Questions relating to the admission requirements or transcripts should be directed to the Study Abroad Office.

Students who desire to obtain graduate credit must either be admitted to a graduate program within the NIU Graduate School, or be admitted to the status of a "student-at-large" (SAL) within NIU's Graduate School. For students to be admitted to the program for graduate credit, the applicant's official transcript must be on file in the NIU SAO. Students who are currently enrolled at NIU, or who have previously enrolled at NIU, do not need to request an official transcript. However, students who will participate in the program in order to earn academic credit as an SAL (students who have not currently enrolled, nor are previously enrolled at NIU) must provide a transcript from the baccalaureate institution and from any institution at which graduate credit has been earned. This document must be provided to the SAO before a student can be admitted as an SAL to the program. (Student issued transcripts and photocopies are not acceptable.)

**APPLICATION:** Click <http://niu.studioabroad.com/?go=Madagascar> or visit the NIU Study Abroad Office website at <https://niu.studioabroad.com> (and search for "Madagascar" or the *Madagascar Past and Present: Biodiversity, Extinction and Conservation program*) to begin the online application process for this program. The online process provides guidance on requesting information, advising, or applying for the program. Please note that at the time of application, Non- NIU applicants will be expected to submit a signature verification form and copy of their ID to the Study Abroad Office. More detailed instructions can be found on the <https://niu.studioabroad.com> website or by contacting the Study Abroad Office at (815) 753-0700 or [niuabroad@niu.edu](mailto:niuabroad@niu.edu).

**\$200 APPLICATION FEE/DEPOSIT:** A \$200 application fee/deposit is required of all applicants. The \$200 is broken down into \$100 for the non-refundable application fee and \$100 for a program deposit. Both the application fee and the deposit will be applied to the total balance of the program cost. The \$100 deposit is refundable only if the participant withdraws prior to the withdrawal deadline indicated on the program materials or for medical reasons verified by a physician if the withdrawal takes place after the withdrawal deadline.

The \$200 application fee/deposit will be charged to NIU students' NIU Bursar's account. (Checks and money orders cannot be accepted from NIU students.) Non-NIU students must submit a check or money order in the amount of \$200. More detailed instructions regarding the application fee/deposit can be found on the seminar application website.

**IMPORTANT** – All applications will be categorized as "Pending – No Deposit" until the \$200 application fee/deposit has been received (or, in the case of non-NIU students, once a check has been

received). The Study Abroad Office will not consider or process applications without the \$200 application fee/deposit. In order to reserve your place in the program you must submit the \$200 deposit within 14 days of application. After 14 days applications without a deposit will be inactivated.

**APPLICATION DEADLINE:** March 15, 2017.

**ACCOMMODATIONS AND MEALS:** In Antananarivo, participants will reside in hotels, in twin bedded rooms with private and/or shared bath and toilet facilities and will be provided three meals daily throughout the period of residency.

At Andasibe and Antsirabe, participants will reside in hotels, in twin bedded rooms with private and/or shared bath and toilet facilities and will be provided three meals daily throughout the period of residency.

At Tsinjoarivo, participants will reside in tents that they supply themselves. The camp contains leveled, covered tent sites, one research lab/storage building, one refectory (covered eating area), one rudimentary toilet and one rudimentary shower. Participants will be provided three meals daily throughout the period of residency in addition to snacks.

**AIR TRANSPORTATION:** Individuals will be responsible for making their own air travel arrangements between the U.S. and Antananarivo and for purchasing their tickets from a travel agent or airline of their choice. However, the instructor will coordinate with students to provide assistance in booking air travel. Travel insurance is recommended. Participants should keep in mind that in order to arrive in Antananarivo in time for the official beginning of the program, they should plan to depart the U.S. no later than June 9, 2017.



For information regarding airfares and airlines students may wish to check out additional airfare sites on the Internet; the professors will provide guidance and referrals.

**Important** - The Study Abroad Office advises all participants that flight reservations for this program should **not** be booked until:

- a. After the March 15, 2017 application deadline
- AND**
- b. The SAO has accepted the minimum number of participants needed to operate this program.

This advisory is given so that participants do not find themselves financially responsible for airline tickets should it be necessary to cancel the program. (See section entitled, **CANCELLATION OF THE PROGRAM**)

**LAND TRANSPORTATION:** For program-related travel the group will travel by minibus and 4x4 truck. This transportation is provided as part of the NIU program cost. (Refer to the *Tentative Daily Schedule* for specific details regarding other program-related transportation.)

**PASSPORT: --IMPORTANT--**All participants are required to possess a valid passport by March 1, 2017. Important Note: U.S. passports must be valid **SIX** months beyond the intended stay overseas. Individuals who do not currently possess a valid passport should apply for one immediately upon acceptance into the program. After March 1, 2017 applicants may need to request expedited services or apply in person at the Chicago Passport Agency. If applicants are not within the Chicago area, they must apply at the nearest passport agency.) Information on acquiring a U.S. passport is available at the U.S. State Department's website: [http://travel.state.gov/passport/passport\\_1738.html](http://travel.state.gov/passport/passport_1738.html). Foreign passport holders may need special visas for travel and are responsible for obtaining all necessary visas.



**VISA:** Participants normally acquire a visa upon arrival in Madagascar. If this should change, and students need to purchase a visa in advance, the program directors will contact participants with further instructions.

**HEALTH REQUIREMENTS/VACCINATIONS:** At this time, in order to enter Madagascar, students will be required to obtain the Yellow Fever vaccination **ONLY IF ARRIVING FROM EAST AFRICA**.

Several serious health risks exist in Madagascar, including malaria. The instructor will provide informal advice, but students must contact their primary care physician and/or the NIU University Health Service as soon as possible, and at least eight weeks before the program begins to acquire the required advisement and vaccinations and malaria prophylaxis. It's imperative to allow time for vaccinations to take effect. The NIU University Health Service can advise students on what immunizations are required and can administer most immunizations. Most immunizations require a fee. Consult the Travel Clinic several months before you travel. Appointments are required. Some vaccines need to be given over a period of months, so participants in this program must **START EARLY!**



**NIU MAJOR MEDICAL INSURANCE:** NIU Student health insurance is required for participation in an NIU study abroad program. Participants not currently enrolled in the NIU Major Medical Insurance Plan will be enrolled by the Study Abroad Office. The NIU Major Medical Insurance Plan has a \$250 deductible clause. Students requiring medical attention will be expected to pay any related costs and then file a claim with the NIU Student Insurance Office after returning to the States. Receipts showing payment for all medical expenses are required for reimbursement.

**INTERNATIONAL STUDENT I.D. CARD:** The ISIC card is provided as part of the program cost. The I.D. card can provide discount on international airfare and other travel. Students will receive an application and instructions for obtaining this card when accepted into the program.

The International Student Identity Card also includes a limited health and accident insurance policy which is only valid outside the U.S. Students will have to pay bills at the time of treatment and will be reimbursed later.

**NIU PROGRAM COST:** The program cost pays for the following cost related services:

- 1) Housing throughout the program.
- 2) All meals.
- 3) Program-related land transportation in Madagascar.
- 4) Admission fees to cultural and historical sites visited as part of the daily schedule.
- 5) Fee for acquiring a visa to enter Madagascar.
- 6) International Student I.D. Card.
- 7) NIU tuition for 6 hours of undergraduate or graduate credit.
- 8) NIU major medical insurance for the duration of the program.

**PROGRAM COST: \$4,060**

All prices quoted are subject to change. The information contained in the program documents and forms is presented in good faith and is believed to be correct as of the date presented. Northern Illinois University reserves the right to amend, modify, revise, or delete any information appearing in these documents, including but not limited to the cost of the program.

Non-NIU students should consult with their home institutions regarding additional costs that may apply to study abroad. Non-NIU students are responsible for any study abroad charges imposed by their home institution.

**ADDITIONAL COSTS TO PARTICIPANTS:**

- Airfare
- Cost of acquiring a passport (approximately \$135).
- Passport size photos.
- Additional costs associated with obtaining a visa for non-U.S. passport holders.
- Immunization fees (*if immunizations are required*)
- \$40 Undergraduate application fee for non-NIU undergraduate students.
- Independent travel and visa costs associated with independent travel.
- Expenses for free-time pursuits.
- Expenses and purchases of a personal nature.

**FINANCIAL AID:** As a participant in a study abroad program through NIU, applicants may be eligible for: Pell Grant, SEOG, Perkins Loan, PLUS Loan, Subsidized or Unsubsidized Stafford Loan, MAP Award or your privately awarded scholarship with consent of awarding organization.

Please contact Pamela Rosenberg, International Programs Business Manager, Williston Hall 407, (815) 753-9530, [prosenberg@niu.edu](mailto:prosenberg@niu.edu) for more information.

**WITHDRAWAL FROM THE PROGRAM:** Applicants withdrawing from the program after March 15, 2017 will not be refunded the \$200 program deposit.

Applicants withdrawing from the program after this date will also be held accountable for any funds obligated to overseas vendors and agents on the applicant's behalf. This provision is in effect even if the applicant has not submitted the \$200 deposit or additional payments, and if the applicant is applying for financial aid.

If the applicant must withdraw after March 15, 2017 for medical reasons, funds obligated on their behalf to overseas vendors can only be refunded if:

- 1) The request is submitted to the Study Abroad Office in writing and accompanied by a signed statement stating that travel is not advised from a physician on the physician's letterhead; **and**
- 2) NIU is able to obtain refunds from overseas vendors and agents.

**CANCELLATION OF THE PROGRAM:** The Study Abroad Office reserves the right to cancel this program if the minimum required enrollment is not attained. If, prior to the commencement of the program, a U.S. State Department Travel Warning is issued for Madagascar, all applicants will be notified promptly of the warning and the possibility of cancellation of the program. If, during the course of the program, a U.S. State Department Travel Warning is issued for Madagascar, students will be promptly notified of the warning and the advisability of canceling the program.

**NORTHERN ILLINOIS UNIVERSITY RESERVES THE RIGHT TO ALTER  
OR CANCEL THIS PROGRAM AS MAY BE DEEMED NECESSARY!**