

App 4/15/05

LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No. 03-893	UWUCC Action-Date: 04-3	Senate Action Date: App 4/26/05
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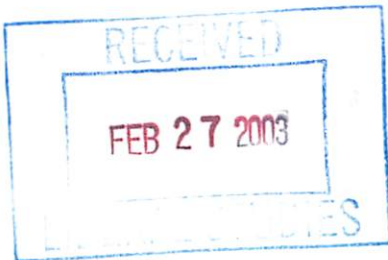
Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person Dr. Art Hulse	Email Address ntcc
Proposing Department/Unit Biology	Phone 72279

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. Course Proposals (check all that apply) <input checked="" type="checkbox"/> New Course <input type="checkbox"/> Course Prefix Change <input type="checkbox"/> Course Deletion <input type="checkbox"/> Course Revision <input type="checkbox"/> Course Number and/or Title Change <input type="checkbox"/> Catalog Description Change		
<u>Current Course prefix, number and full title</u>	<u>Proposed course prefix, number and full title, if changing</u>	
2. Additional Course Designations: check if appropriate <input type="checkbox"/> This course is also proposed as a Liberal Studies Course. <input type="checkbox"/> Other: (e.g., Women's Studies, Pan-African) <input type="checkbox"/> This course is also proposed as an Honors College Course.		
3. Program Proposals <input type="checkbox"/> New Degree Program <input type="checkbox"/> Program Title Change <input type="checkbox"/> Other <input type="checkbox"/> New Minor Program <input type="checkbox"/> New Track <input type="checkbox"/> Catalog Description Change <input type="checkbox"/> Program Revision		
<u>Current program name</u>	<u>Proposed program name, if changing</u>	
4. Approvals		
Department Curriculum Committee	<i>Arthur C. Hulse</i>	2-11-03
Chair(s)		
Department Chair(s)	<i>Arthur C. Hulse</i>	2-13-03
College Curriculum Committee Chair	<i>[Signature]</i>	2/26/03
College Dean	<i>John D. Ed</i>	2/26/03
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate:		
(include title)		
UWUCC Co-Chairs	<i>Gail S. Schuist</i>	4/6/05

* where applicable



SYLLABUS OF RECORD

I. Catalog Description

BIOL 490/590	Field Studies in Biology	variable class hours variable lab hours variable 1 to 4 semester hours (var. c-var. l-var. sh)
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Prerequisites: Specific prerequisites, as are appropriate to the course, will be set by individual instructors, permission of instructor.

Various specialized field courses instructed by biologists from IUP. In this course students will explore the rich diversity and ecology of the flora and fauna that inhabit specialized regions of Pennsylvania, the United States or other countries. Emphasis will be placed on the ecology, behavior and natural history of organisms in their natural surroundings. Students should be prepared to meet travel and living expenses. May be taken more than once for credit and grade if course content is different.

II. Course Objectives

Students will be able to:

- 1- Develop an understanding of complex environmental relationships between interacting organisms in their natural environment.
- 2- Develop the skills necessary to carry out joint research activities and group projects
- 3- Make field observations and record the observations in a manner consistent with practices standard to field research
- 4- Gain an appreciation for the rich biological diversity of ecological systems
- 5- Develop an appreciation for the logistics necessary to conduct field research away from their home environment

III. Course Outline

Since this course is designed to be offered at different locations and by a variety of instructors there is no specific course outline. However a common theme will unite all of the different offerings. That theme is the opportunity for the student to study and discover a specific ecosystem or community of organisms through hands-on experience in the field. Prior to the start of the course students will be given a series of readings or textbook assignments by the instructor of record. The students will then meet with the instructor of record (either individually or in a group) prior to departure for the field location. At this time the students will be informed as to the nature of the field studies that are going to be conducted and what will be required of them during the course.

Once on site the students will engage in both class and small group or individual study of the system under investigation. Whole class activities will involve orientation to the system and a general discussion of the abiotic and biotic components of the system. The students will also be instructed in the techniques appropriate to engage in field studies of organisms within the system. After the orientation programs the students will select mini-field projects of their own design. Much of the remainder of the course will then be associated with the students conducting their field research activities. In addition to the independent or small group studies the students will continue to engage in class activities led by the instructor or by local experts in different groups of plants and animals.

During the course the students will be expected to maintain field notebooks in a manner consistent with accepted standards for field observations and experimentation. Classroom type lectures will continue to be provided throughout the course at times that will not interfere with the students selected field projects. These will generally be given at night after field work for the day is completed or at the beginning of the day before the start of fieldwork.

IV. Evaluation Methods

Since the course will be offered by a variety of different instructors specific aspects of the evaluation system will be provided by the instructor of record prior to the beginning of the course. Standard components of the evaluation will include, but may not be limited to quality of student participation in course activities, quality of their field notebooks, and the final report of their field projects which will be due no later than one week after return to campus.

If the nature of the course is such that it is open to graduate students the graduate students will be expected to produce a detailed review paper (using primary literature) of a topic germane to the ecosystem under investigation and of interest to the student. A first draft of this paper will be due prior to the beginning of the field course and a final draft will be due one week after return to campus. This review paper will be in addition to the final report of their field project. During the time in the field graduate students will meet with the instructor to discuss their first draft and be given assistance in the revision of the draft. The review paper will contribute 25% to the grade of graduate students. Reduction in percent value for the requirements for both undergraduate and graduate students will be made on a pro-rated basis.

V. Example Grading Scale

Undergraduate Grading Scale: A: $\geq 90\%$, B: 80 – 89%, C: 70-79%, D: 60-69%, F: $<60\%$
Graduate Grading Scale: A: $\geq 90\%$, B: 80-89%, C: 70-79%, F $<70\%$

VI. Attendance Policy

Students will be expected to conform to the attendance policy of the University. Specific attendance policies may be set forth by individual instructors. Since the course is to be offered in the field it is unlikely that students will miss classes.

VII. Required Textbooks

Students will be told, by their instructor, of necessary textbooks, field guides and/or readings at least one month prior to the start date of the course so that they may be purchased prior to the start of the course.

VIII. Special Resource Requirements

The course will be offered off campus and involve travel to and from the course locations as well as living and field study expenses while taking the course. A detailed breakdown of these expenses will be provided to the students at least one month prior to their formal enrollment in the course.

IX. Bibliography

Since the content of the course will vary, individual instructors will develop an appropriate bibliography that will be given to the students at least one month prior to the start of the course.

SYLLABUS of RECORD

(1)

I. Catalog Description

BIOL 490/590 **Field Studies in Biology** **var-1-4cr**

Prerequisites: Specific prerequisites, sessions and hours are arranged by individual instructors. The courses may be scheduled by non-biology majors with the instructor's permission.

Specialized field courses instructed by biologists from IUP at various times during the year. In these course offerings, students will explore the rich diversity and ecology of flora and fauna that inhabit specialized regions of Pennsylvania, the United States, and other countries of the world. Students should be prepared to meet travel and living expenses.

II. Course Objectives

These courses include learning across the various scientific disciplines. A major portion of class time will be spent in the field: making observations, conducting field explorations, developing and completing individual and/or group projects. The students will develop an understanding of environmental relationships through on-hands experiences and assigned readings from various authors. While the courses have biology call numbers, the students will participate in cross-cultural interactions with the people of the specific area where the classes are held. Students should expect 30-40 hours per week of class work.

Potential courses of study: Biology of the African Highlands (Zimbabwe), Biology of the Wildlife of Southern Africa (South Africa & Zimbabwe), Rocky Mountain Ecology (Wyoming), Ecological Studies of the American Southwest (Arizona), Aquatic Biology Studies in Belize, Coral Reef Ecology (Bahamas)

III. Detailed Course Outline

The course outline and syllabus will vary with each class. The following is a sample course outline and syllabus for the field studies class "Biology of the African Highlands" in South Africa in Summer, 2001:

BIOL 490/590* **Field Studies: Biology of South African Wildlife**
(3-credit field course meets minimum of 6 hrs per day, 7 days per week)

COURSE DESCRIPTION:

(2)

The Biology of South African Wildlife is an introduction to African wildlife through guided field trips and lectures dealing with the wildlife, ecology, history, and sociology of the Republic of South Africa. It is a unique opportunity to study African animals, plants and culture on an African ranch/safari headquarters and in national parks/game reserves.

This course will take place in four geographic areas of South Africa (the immediate surroundings of Johannesburg, the low veld near the Limpopo River, the coastal plain of KwaZulu-Natal extending into the foothills of the Drakensburg Mts.). While the course has a biology title and emphasis will be on the diverse adaptations of fauna and flora of the different areas, the students will participate in cross cultural interactions with many people. There are guided field trips and lectures on wildlife, ecology, history, politics, and sociology of the country. While a zoology or general biology class is prerequisite for this course, the course can be scheduled with instructor's permission. The studies are equally applicable to biologists, sociologists, political scientists, ethnologists, anthropologists, historians, etc. The course also may be applied to the Pan-African Studies Minor at IUP (with PAS director's approval).

We are based a few days in Johannesburg from where we will tour Krugersdorp Game Reserve (many species of antelope and smaller mammals, lots of birds, and the "Big Five") and Kromdraai Lion/Rhino Park (lion and rhino breeding/reintroduction facility). Near Johannesburg is the sprawling township of Soweto. We will spend a half day in Soweto visiting Freedom Square, a large government hospital, a local sangoma (witch doctor), a shebeen, Desmond Tutu's home, Nelson and Winnie Mandela's home (now a museum), etc.

The Staff from Marula Lodge Safaris will transport us from Johannesburg to their ranch near Alldays. Enroute we will tour the Wildlife Breeding Farm near Potgietersrus. Owned by the National Botanical Gardens, they breed rare and scarce species of antelope (especially the endangered bontebuck here). We will spend 6 days/nights at Marula Lodge situated just south of the Limpopo river on the South Africa/Botswana border. This ranch supports 23 species of plains game plus 280 species of birds. We will experience day and night game drives, a couple of game rides via horses; plant identification hikes; insect, reptile, and small mammal collection and identification; bird identification; elephant-viewing along the Limpopo River; evening activities will include socializing, slide shows and talks by local wildlife experts, question and answer, and a night of star gazing at the Southern Cross and other southern hemisphere constellations. We will leave Marula and travel to Kruger National Park entering at Punda Maria Gate. We will spend two days transversing KNP studying plants, animals, and geology. Our one overnight in KNP will be at Letaba Rest Camp. This will be a tented safari-camp arrangement. The camp has films on various nature projects for evening viewing. The Elephant Museum dedicated to the "magnificent seven"—the largest elephants ever viewed in KNP is housed at Letaba. We will continue southward and exit KNP at Orpen Gate then return to Johannesburg.

(3)

We will fly from Johannesburg to Durban in KwaZulu/Natal. We will spend a half-day guided tour of Durban visiting the Vasco Da Gamma Clock, National Botanical Garden (20 plus species of eucalyptus grow here), Indian Marketplace, and Victoria Market. We will spend day on the campus of the University of Natal at Durban—visiting with students and faculty and attending a life science seminar. Not far from Durban we will tour a Zulu village in the Valley of 1000 Hills—foothills of the Drakensburg Mountains. In Durban we will be housed at the Marine Parade Holiday Inn which is 500 yards from the Indian Ocean beaches. Snake World, Sea World, and Natal Shark Board are optional tours for the group or individuals.

Departing Durban, we will drive up the coast to Hluhluwe Game Reserve (home of the largest concentration of black and white rhino in Africa) and spend a day of game viewing in the reserve.

Following the Hluhluwe excursion, we go back to Durban, pack, catch a flight to Johannesburg. From there we return to the U.S.A.

Day by day outline (hours spent in lecture, discussion, field studies and lab work are in parentheses):

- July 15(Sun) 7:15AM Depart Pittsburgh for Atlanta (Delta 1084)
9:20AM Arrive Atlanta
10:30AM Depart Atlanta for Johannesburg (South Africa Air 212)
- July 16(Mon) AM Arrive Jo'burg
Check in through customs, short bus ride to and check-in at Airport Holiday Inn. Afternoon and evening—sleep, read, watch South African TV, catch up from jet lag;
1-hr. evening orientation meeting with students to discuss coming events, safety precautions, etc. (L, D oyo*)
- July 17(Tue) AM Pickup for all day trip: (10 hrs) at Krugersdorp Game Reserve,
1-hr lecture at beginning to introduce students to animals and plants to be viewed today and their environmental adaptations; 2 ½ -hr field trip in the reserve
- PM Kromdraai Lion/Rhino Park (1-hr lecture, 2 ½ -hr field trip in the reserve)
- Evening Instructions in traditional living and tour of Lesedi Cultural Center, traditional Zulu dinner at the center; return late to Holiday Inn (B oyo*)
- July 18(Wed) AM Meeting with professor to summarize yesterday's events and instructions for Soweto tour (1-hr)

- (4)
- PM Pick up and transport to Soweto; guided lecture/tour (4-hr) of Apartheid Museum, Winnie and Nelson Mandela's home (museum); return at 5PM to Holiday Inn (B, L, D oyo*)
- Evening Summary of today's tour and discussion of tomorrow (1-hr)
- July 19(Thu) AM Early morning pickup and transport to Marula Lodge, Alldays stops at various geologic and biological sites along the route (6-hr trip). Arrive and check-in at Marula; night game drive and evening discussion with hosts (3-hr) (B, L oyo*)
- July 20(Fri) AM 3-hr game drive and hike in the reserve identifying plants and animal signs
- PM 1-hr lecture on mammal trapping/parasite research; 3-hr field trip to set rodent traps followed by game drive until dark.
- Evening 2-hr seminar/discussion on wild dog breeding/restoration project
- July 21(Sat) AM 2-hr field trip/tour of commercial crocodile ranch; 1 ½-hr tracking elephants along the Limpopo River
- PM 5-hr field trip to Venitia Wild Dog Breeding Project; lecture to our group by project personnel then we visit the dog den to view adults and pups; after-dark tracking via satellite of the hunting pack; return late to Marula
- July 22(Sun) AM 3-hr field trip to check traps, pick up and process mice for parasite studies
- PM 5-hr field trip to Venitia Wild Dog Breeding Project; lecture to our group by project personnel then we visit the dog den to view adults and pups; after-dark we track the hunting pack via satellite; return late to Marula
- July 23(Mon) AM 1 ½-hr lecture on biologics, economics, and social aspects of game ranching in South Africa
- PM 5-hr field trip: observation and participation in the capture of large game animals (impala, zebra, giraffe, wildebeest, etc.) and preparation for transport to auction
- Evening 2-hr campfire question/discussion of the day's events plus entertainment (African music)

- (5)
- July 24(Tues) AM 1½ -hr processing of rodent samples; 3-hr game drive and bird identification
- PM Prepare biological samples for returning to IUP; pack, 1½ -hr nature hike along nyala breeding project to baobab tree (baboon roost) for group picture.
- Evening Final campfire and chance to socialize with the staff at Marula Lodge Safaris; get to bed early
- July 25(Wed) **4:00AM** Departure from Marula to Kruger National Park; early morning breakfast at Pafuri in Fever Tree Forest ; work our way south through Shingwidzi and Mopani Camps to Letaba Rest Camp identifying and discussing plants and animals we encounter on the way ; spend the night in safari tented camp at Letaba; restaurant dinner at Letaba; attend evening seminar by park ranger. (B, L oyo) (17-hr day)
- July 26(Thu) AM 1 ½-hr tour of special Elephant Museum then continue through Kruger NP to Jo'burg (several stops enroute to view geologic formations and historical sites); overnight at International Airport Holiday Inn (B, L, D oyo*) (12-hr day)
- July 27(Fri) AM Bus trip to airport; 10:00AM departure for Durban/Kwa Zulu/Natal (South Africa Air 543); arrive Durban at 11:10 AM; check into Marine Parade Holiday Inn
- PM Afternoon at leisure to tour Zulu craft, marine museums, Snake World, or beach (MPHI is about 500 yards from the Indiana Ocean) (B, L, D oyo*)
- July 28(Sat) AM Guided tour/lecture of Durban (South Beach, Vasco Da Gama Clock, yacht club, Sugar Terminal, University of Natal campus, National Botanical Garden, Indian marketplace; lunch, afternoon visit to Umgeni Bird Park, return to MPHI by 5:30PM (B, D oyo*) (8 ½-hr day)
- Evening Free time
- July 29(Sun) AM Depart for Hluhluwe National Park; discussion of history, economy and politics of KwaZulu/Natal, guided game drives, lunch at Hilltop Camp; return to MPHI at 7:00PM (B, D oyo*) (12-hr day)
- Evening: Free time

July 30(Mon)	AM	Free time	(6)
	PM	Visit to University of Natal; attend seminar in Department of Medical Microbiology; tour of campus; meet students, etc.; return to MPHI (B, L, D oyo*)	
	Evening	Free time	
July 31(Tues)	AM	Free time (optional visit to Natal Shark Board)	
	PM	Pack, get ready to leave for USA	
	Evening	Group dinner/social. (B, L, D oyo*)	
Aug 1(Wed)	AM	Finish packing, final shopping, etc. (B, L oyo*)	
	1:00PM	Depart Durban for Jo'burg (SAA 554)	
	2:10PM	Arrive International Airport, Jo'burg; check through emigration	
	5:20PM	Depart Jo'burg for Atlanta (SAA 209)	
Aug 2(Thur)	8:20AM	Arrive Atlanta; check in through US Customs	
	10:10AM	Depart Atlanta for Pittsburgh (Delta 1506)	
	11:51AM	Arrive Pittsburgh – Have someone there for pickup (probably need truck or trailer to haul your baggage and souvenirs)	

* (oyo—you will need to purchase the indicated meals on these days)

IV. Evaluation Methods

85% Students are required to maintain a daily field studies journal in which they will record observations and solutions to questions/assignments for the day. It is expected that a student will spend a minimum of one hour per day writing in the journal. This journal must be submitted to the instructor no later than one week after the end of the course.

15% Class participation in discussions and field activities.

V. Example Grading Scale

The final grade is based upon 100 pts total.

90 pts = A; 80 pts = B; 70 pts = C; 60 pts = D; <60 pts = F

VI. Undergraduate Course Attendance Policy

Students are expected to be in class and participate in all field activities, lectures and tours. There is ample free time provided for the student to seek out extracurricular activities, rest, visit, and explore on his/her own. Since many of the field events will be “one time occurrences” (example: in most cases we will

have limited transportation to events; the van is available to take us to the (7) crocodile ranch today; it is not available tomorrow for a “make up visit; plus we have additional items scheduled to be done tomorrow) it will be impossible to makeup missed classes/events. If a student misses an activity because of illness or some unforeseen problem, we will have to make allowances via extra written work/assignments when we return to IUP from the field.

VII. Required Textbooks, Supplemental Books and Readings

The instructor may recommend a field guide or text for use by the students; generally for student use **the instructor will provide** a series of field guides/keys for the specific area of study. (NOTE: these field guides were used by the students in 2001 South Africa class):

Alden, P.C. 1995. National Audubon Society Field Guide to African Wildlife. Alfred A. Knopf. New York, NY

Estes, R.D. 1993. The Safari Companion: A guide to Watching African Mammals. Chelsea Green Publishing Co. White River Junction, VT

Broadbent, P.J. 1993. Snakes of Zimbabwe and Southern Africa. Bundu Series. Longman Zimbabwe Ltd. Harare, Zimbabwe

Ginn, P. 1987. Birds of the Highveld. Bundu Series. Longman Zimbabwe Ltd. Harare, Zimbabwe

Ginn, P. 1991. Mammals of Zimbabwe. Bundu Series. Longman Zimbabwe Ltd. Harare, Zimbabwe

Kingdon, J. 1997. The Kingdon Field Guide to African Mammals. Academic Press. San Diego, CA

Maclean, G.L. 1984. Robert's Birds of Southern Africa. John Voelcker Bird Book Fund. Cape Town, RSA

van Wyk, B and Piet van Wyk. 1997. Field Guide to the Trees of Southern Africa. Struik Publishers Ltd. Cape Town, RSA

VIII. Special Resource Requirements

none

IX. Bibliography not applicable; will vary depending upon the specifics of the field course See VII above for examples.

COURSE ANALYSIS QUESTIONNAIRE

Section A: Details of the Course

- A1 This course may be taken as biology elective(s) for biology majors. With the instructor's permission, non-majors may also enroll in the class(es) and the course will count as a free elective. It is intended that the courses be offered first as BIOL 481/581 Independent Studies. If successful in enrollment, the course will be submitted to the appropriate college and senate committees for review and inclusion under BIOL 290/590 Field Studies in Biology: *specific course name*.
- A2 This course does not require changes in the content of existing courses nor requirements for a program.
- A3 Some of these course offerings have been offered with great success in the past: BIOL 297 Introduction to Rocky Mountain Ecology; BIOL 481 Biology of the African Highlands
- A4 These courses may be dual-level
- A5 This course will be for variable credit.
- A6 Other institutions offering a similar course:

San Francisco State University **BIO 315 Field Studies:** Ecosystems and Cultures of New Zealand, Hawaiian Island Ecosystems, Ecology of Nepal, Ecology and Conservation of Kenya, Geology, Ecology, and Culture of the Wrangell Mountains

IUP offers a similar course: **BIOL 450-550 Pymatuning: Field Studies** – various courses available to IUP students via this title
- A7 This course is not recommended nor required by any accreditation agency.

Section B: Interdisciplinary Implications

- B1 One instructor will teach the course.
- B2 NA
- B3 No seats will be offered for Continuing Education students

Section C: Implementation

- C1 No new faculty are required. (9)
- C2 Current resources are adequate; no additional resources are needed.
- C3 No resources of this course are funded by a grant.
- C4 The course will be offered as needed in interim sessions and summers
- C5 One section
- C6 Class size must be determined by the instructor. Class size will vary among the course offerings. The instructor is teaching, living, and socializing with and supervising the students almost on a 24 hr/day, 7 day/week basis.
- C7 No

Section D: Miscellaneous

Additional information for students in BIOL 490-590

ACCOMMODATIONS:

When in the city of Johannesburg, our group will stay at the Johannesburg Garden Court Airport Holiday Inn. The hotel is about 3 kilometers from the airport and is a hub for public transport into Johannesburg. It is also a pick-up-point for many tours. Twin rooms are available. An informal restaurant and coffee bar provide food during regular hours and room service is available round-the-clock. We are close to shopping malls, restaurants, etc. Gardens and an outdoor pool provide a relaxing setting. At Marula Lodge, we will be housed in 2 persons-sharing thatch roof rondavels with private bath (hot and cold running water, flush toilets). Bedding and towels are provided. A large variety of traditional African and European dishes will delight you at early breakfast, brunch and dinner. Roast, stewed, barbecued venison (impala, kudu, eland, buffalo, etc.) will be served at brunch and dinner. Traditional beef, pork and chicken dishes are also served. Vegetarian meals can be provided. In Durban we will be housed in double rooms at the Marine Parade Holiday Inn.

HEALTH PRECAUTIONS:

Malaria tablets are a must! Mefloquine is the preferred medicine. LARIUM is the brand name available in the U.S. A physician must prescribe them. Students should update their tetanus shot. The CDC recommends Hepatitis A vaccine. Hospital and dental care are excellent in South Africa. At Marula Lodge we will be about one hour's drive from a hospital.

CURRENCY:

South Africa's unit of currency is the Rand (100 cents). The rate of exchange in July, 2001 was 8 Rand to \$1 US. Currency can be easily exchanged at the airport bank or at the front desk of the Holiday Inn. Your tour fees, air fare, lodging, and food at Marula Lodge Safaris are covered by your fees. You will need money for additional meals in Johannesburg, Durban, and Kruger National Park. If you check on the itinerary sheet, you will find the meals which you must purchase on your own. Also, you will need to pay for taxi/bus transport (about \$10 US per cab; you can crowd 3 people and luggage into their small cabs) from the airport to your hotel. You will also need money for any souvenirs which you purchase (in shops you can use VISA; on the street you'll need Rands). Carry a minimum of cash with you. Traveler's checks are a safer and acceptable medium of exchange. VISA Card is widely accepted anywhere we will be with the exception of Marula Lodge Safaris. You must pay Marula Lodge fees in traveler's checks or \$US cash upon arrival at Marula.

CLOTHING:**(10)**

You will not need a lot of clothing for your African trip. At Marula Lodge Safaris laundry is done on a daily basis. Your soiled clothing is picked up in the morning and returned washed (laundry) and pressed (usually) by evening. In Johannesburg and Durban laundry service is available (it is somewhat expensive in the hotels, less expensive in the laundromats). Light to medium weight clothing is satisfactory. You will want a warm jacket (or sweater) for evening wear in camp and on overcast mornings. It can be very cold on game drives. Temperatures can be in the low 40's at night and in the high 80's by mid-day. It is advisable to wear some type of hat. The near-equatorial sun will "fry heads" until you become accustomed to it. For shirts and trousers medium weight khakis are excellent. Jeans are good. We will have the opportunity for a couple of horseback game drives at Marula; you'll need long pants/trousers for these. For best game viewing avoid bright colors. Shorts are appropriate and you may want a swim suit. Sneakers or soft walking shoes are adequate footwear. As minimum clothing you should have 3 pair trousers/slacks, 3 shirts, 3 changes of underwear, 4-5 pair of socks, a warm jacket, a pair of soft shoes, and a pair of sneakers. Don't forget sunglasses; you may want a pair of gloves. Casual dress is acceptable during the day, but in the cities it is appropriate and sometimes required for men to wear jackets and ties in lounges and restaurants after 6:30 PM. Ladies attire would be pantsuit or dress for like occasion. Men and women in jeans or shorts are not admitted into formal lounges and restaurants.

OTHER SUPPLIES:

Film: You can buy it there but it's somewhat expensive. Take all that you will need! You should consider investing in a film shield (a lead-lined bag) that will protect your film from airport X-rays. We'll get very close to many animals so a camera is highly recommended; you will re-live this trip many times via your photos. Camcorders will get you some memorable footage but be sure to bring your cassettes and battery charger with you. You can't buy suitable ones in South Africa. The animals "don't care" but you should always ask a person if you may take his or her photo.

Flashlight: This is called a "torch" in Africa; you must have one! Bring some extra batteries and a spare bulb. Batteries in South Africa can be expensive.

Notebook: For your field journal/diary (your course grade is based upon this; even if you are auditing the class, I highly recommend that you keep one!); also bring pen/pencil.

Binoculars: Optional but great for viewing game at a distance.

Pocket knife: Optional, very useful in the field; pack it in your suitcase; don't carry it on your person when boarding an airplane.

Small backpack and water bottle: Optional; extremely handy in the field.

Personal items: Be sure to pack personal items such as prescriptions (keep prescriptions in original bottles with pharmacy information on the label) and toilet articles. Pack a small towel. Generally towelings are available but you may need one in Kruger NP at the safari tent camp. There are no "stores" once we leave the cities. We will ask you to carry a couple of items of field equipment in your luggage (dissection kits, insect nets, or rubber gloves, for example) which our class will use in South Africa. They won't take up much space and we will get them to you well in advance of our departure. Also, we may get a "wish list" from the Fouries for items which they cannot get in South Africa. I'll ask you to carry a couple of those items with you also. Plan on about a "shoe-box" sized package. Take along something to read on the plane. It's a 17-hr flight!

Passport/Visas: You must have a current passport. Apply for one early since the process from application to receipt is about 6 weeks. You may pick up an application at the Prothonotary's Office at any county court house. You do not need a visa for South Africa if you are a US citizen (if you are not a U.S. citizen, I must know immediately).

TIPPING:**(11)**

Tipping is a "way of life" in South Africa. It is expected by those providing services (taxi and bus drivers, waiters, etc. and sometimes they are rather obnoxious if a tip isn't given). General tipping amounts to very little. A couple of Rand is satisfactory in most cases. Remember, at the current exchange rate a Rand will cost you 12 cents in US value. On the other hand, it is customary to tip \$100 in US currency for the staff at Marula Lodge Safaris. These are the people who will be making your bed, cleaning your living quarters and bath, washing and ironing your clothes, cooking your meals, etc. This is a collective \$100 tip from the entire group and will be collected from those wishing to participate on the day that we depart from Marula Lodge. On the national park game drives, we "pass the hat" at the end of the drive and make a collective award to the driver.

FEES:

Marula Lodge Safaris: room, board, Kruger National Park, transport fee of \$1003 (based upon 12 people; if fewer, then the fee rises to \$1250. A non-refundable deposit of **\$125 (check payable to Biology Department Transport Fund) is due by March 10, 2001**(we are limited to twelve students on the trip-- "first come, first served!"); **the remainder is due in traveler's checks (or cash) upon your arrival at Marula Lodge in July.**

Airfare: \$1578 (round trip from Pittsburgh to Johannesburg as of November 1, 2000). This price is firm based upon a \$100 deposit **by March 10, 2001** and **the remainder paid in full by May 5, 2000 ***

Hotels: Four nights at the Airport Holiday Inn, Johannesburg; five nights at the Marine Parade Holiday Inn, Durban @\$34 = \$306 (**This will have to be prepaid in early June**)

Meals "on your own": figure approximately \$135 for those meals which you must buy on your own. This allows \$5 per meal.

Taxi fares: taxis are expensive in South Africa; plan around \$100 for this item

IUP tuition and fees: \$677 (based on November, 2000 rates; **you will be billed by IUP when you register for the course**)

Tours of Komdraai Lion/Rhino Park, Krugersdorp Game Reserve, Soweto, Zulu village, and Hluhluwe Game Reserve: \$300 (**must be prepaid by 25 May 2001**)

ALL FEES EXCEPT Marula Lodge Safaris and air fares ARE SUBJECT TO CHANGE! These are current estimates; we will keep you posted if changes occur.

SPENDING MONEY: I cannot judge this one for you. In both Johannesburg and Durban, there are "side trips" that you can take to botanical gardens and museums (minimal entrance fees), bus tours of the city, etc. South Africa abounds with traditional native crafts (ebony walking sticks, hand-carved animals of wood or stone, hand-woven baskets, tanned antelope hides, jewelry, etc.) Most of these can be purchased for a few \$US. There are a lot of modern art works (wooden carvings, stone carvings, paintings) which are reasonably priced. You be the judge on how much you can spend for souvenirs.

For further information contact:

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*Note: \$250 deposit (South Africa Air and Marula Lodge) is due March 10, 2001. Basically, this deposit is non-refundable (once it has left the US, we'll never get it back; I can tell you some interesting stories about this; ask me sometime). A single check should be made payable to the IUP Biology Department Transport Fund. In the event that on March 10, 2001 we don't have enough people for the course to "go", we will immediately return your \$250 deposit