

Spaceward Bound North Dakota 2008

Mars in our Midst:

A Field Course Relating Mars to the Landscapes/Ecosystems of North Dakota



NDSU



A field-oriented course/workshop for North Dakota K-12 science teachers supported by the North Dakota Space Grant Consortium and the NASA Exploration Systems Mission Directorate

DATES: June 1-June 7, 2008, Departing from NDSU.

ENROLLMENT: Limited to 20 North Dakota, K-12 science teachers.

See: <http://quest.nasa.gov/projects/spacewardbound/NDak2008/index.html>

SEMESTER-HOUR CREDITS: Three. You have the option of having the course number assigned to either Geology 695 or Biology 695.

OVERVIEW OF COURSE: Participants will join the instructional staff from NASA Ames Research Center, North Dakota State University, and University of North Dakota on an educational program organized at NASA Ames in partnership with The Mars Society, and funded by the Exploration Systems Mission Directorate (ESMD) at NASA Headquarters and the North Dakota Space Grant Consortium. The focus of Spaceward Bound is to train the next generation of space explorers by having teachers participate in the exploration of scientifically interesting but remote and extreme environments on Earth as analogs for human exploration of the Moon and Mars. 2006 was the first year of the program. Pre-selected field sites will provide opportunities for studies in regional geology, field ecology, field sampling and statistical analyses, and environmental studies. Transportation will be by charter bus. Participants will be given "hands-on" instruction in field-oriented geology, botany, and zoology. We expect to have ample opportunities for specimen collection. Tours will be arranged wherever available. Lodging is provided. Participants should be physically prepared to undertake moderate amounts of hiking and hill climbing.



PREREQUISITES FOR PARTICIPATION: All participants must be North Dakota public or private school teachers or previous Spaceward Bound teachers.

Course registration is open immediately. Priority registration will be granted to those who teach science at the K-12 level in North Dakota.

After May 1st, all course communication will be relayed to registrants via e-mail. You must commit to regular access, review, and response to e-mail communication system.

GRADUATE SCHOOL ENROLLMENT: You need not be enrolled in a graduate degree program to take these field courses. However, you must be enrolled at the NDSU Graduate School. (See NDSU Graduate School bulletin for information on the quick-and-easy “Non-degree enrollment” procedures. www.ndsu.edu/gradschool/bulletin)

TOTAL EXPENSES PER PARTICIPANT: \$225 to include your course recording fee, lodging, tour and entrance fees, text materials, field notebook, and transportation. Your own food expenses are additional.

Your registration represents a commitment to participate in this course. Do not register if you have any doubts about your ability to follow through with this commitment.

GRADING: Participants will be evaluated according to the following criteria.

1. The quality of your participation in the field trip, as is evidenced by interest, cooperation, and activity;
2. The quality of individual assignments to be completed during the field course (mapping, statistical analyses, etc.);
3. The quality of a field notebook journal of observations to be maintained for the trip;
4. The quality of a lesson plan (minimum of five class days) to be prepared by each teacher immediately following the trip; and
5. The quality of e-mail projects, to be assigned as part of the course follow-up.

DISCLAIMER: Field courses are not “luxury” courses. The course and trip are lightly-budgeted to provide maximum opportunities at minimal cost to all participants. We cannot guarantee regarding weather-related conditions, the regular presence of flush toilets, regularity of meals (or other forms of regularity!), the quality of lodging, etc. During the daytime, the trip follows no definite hour-by-hour schedule; instead, stops will be made where field observations can be opportunely made. Breakfast and lunch are often at the “nearest grocery store,” and suppers will likely not be “elegant.” Participants should prepare themselves in advance for moderate amounts of walking and climbing. Participants are expected to carry their own medical/disability insurance. The course starts and ends at Fargo, and full participation in all aspects of the course is expected.

INSTRUCTIONAL STAFF:

Christopher McKay, Ph.D., Planetary Scientist and Astrobiologist, NASA Ames
Donald P. Schwert, Ph.D., Professor of Geosciences, NDSU
Gary Clambey, Ph.D., Professor of Ecology and Biogeography
Jon Rask, M.S., Senior Scientist, NASA Ames (Trip Coordinator)
Suzette Rene Bieri, M.S. Deputy Director of the North Dakota Space Grant Consortium

CONTACT INFORMATION:

Jon Rask
Senior Scientist
NASA Ames Research Center
Building 239 Room 238
Moffet Field, CA 94035
Phone: (650) 604-5363
E-mail: jon.c.rask@nasa.gov
Fax: (650) 604-3954

Donald P. Schwert, Ph.D.
Professor of Geology
Director, Center for
Science & Mathematics Education
FLC 314E North Dakota State University
Fargo, ND 58105-5057
Phone: (701) 231-7496
E-mail: donald.schwert@ndsu.edu
Fax: (701) 231-5924

**REGISTRATION FORM:
GEOLOGY/BIOLOGY 695 SUMMER, 2008**

NAME _____

HOME ADDRESS (IN FULL) _____

HOME PHONE _____

SCHOOL NAME _____

SCHOOL ADDRESS (IN FULL) _____

YOUR E-MAIL ADDRESS _____

SCHOOL TELEPHONE (Please give best hours to call) _____

I WISH TO REGISTER FOR: BIOLOGY 695 _____ GEOLOGY 695 _____ (check one)

DO YOUR RESPONSIBILITIES INCLUDE K-12 SCIENCE TEACHING? YES _____ NO _____

IF NOT, PLEASE OUTLINE OUR PRESENT RESPONSIBILITIES _____

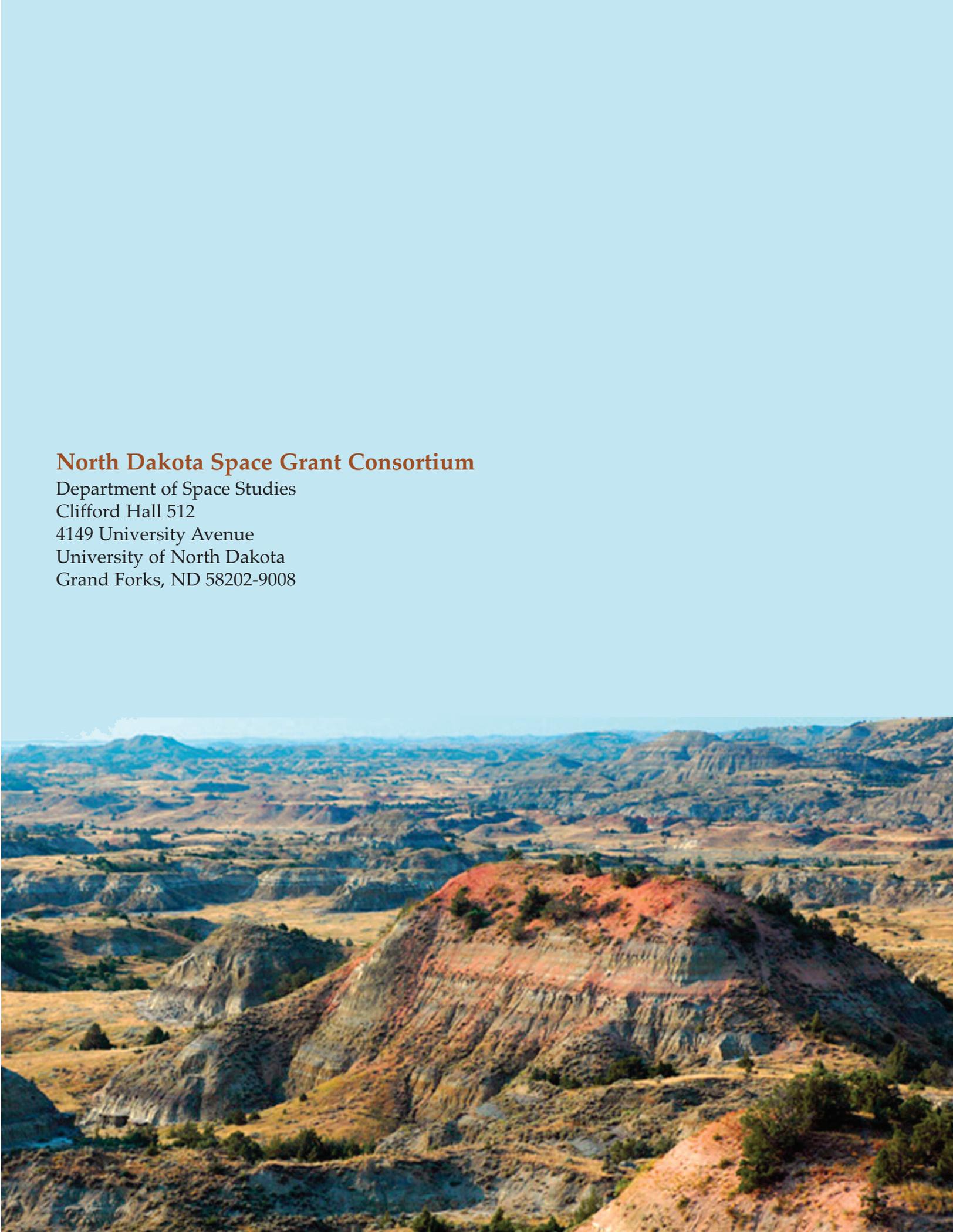
NAME OF ROOMMATE (if known) _____

PARTICIPANTS PLEASE ENCLOSE WITH THIS FORM A CHECK FOR \$225 PAYABLE TO:
"NDSU Center for Science & Mathematics Education." Acceptance of this deposit confirms
your seat in the course. A confirmation will be e-mailed to you. This deposit is refundable
only if the course has a "waiting list " for enrollment.

Participants will begin receiving e-mail communications after May 1, 2008. Additional materi-
als will be mailed to all course registrants in late May.

PLEASE RETURN THIS FORM WITH PAYMENT TO:

Ruth Ann Faulkner
Center for Science & Mathematics Education
Family Life Center
North Dakota State University
Fargo, ND 58105-5057



North Dakota Space Grant Consortium

Department of Space Studies

Clifford Hall 512

4149 University Avenue

University of North Dakota

Grand Forks, ND 58202-9008