CALL FOR PROPOSALS

http://spacegrant.montana.edu

COMPETITION FOR RESEARCH INITIATION

and

SCIENCE & ENGINEERING EDUCATION ENHANCEMENT FUNDING

Proposal submission deadline:
5:00 p.m., Friday, October 16th, 2009
The Montana Space Grant Consortium (MSGC) is pleased to announce a call for two categories of proposals:

(1) Montana NASA EPSCoR RESEARCH INITIATION PROPOSALS:

Proposals are welcome in all fields of science and engineering normally funded by NASA (refer to http://nasaresearchers.nasaprs.com/RESEARCH/index.cfm and the MSGC office for guidance). Research Initiation Grants from the Montana NASA EPSCoR Program are intended to help faculty at MSGC member institutions develop nationally competitive research programs in fields related to NASA’s mission. Grants are generally for a period of one year (see note on page 2 below), and all grantees are expected to submit a follow-on proposal to NASA for continued funding within the period of the grant.

It is strongly suggested that faculty make contact with NASA researchers in their field before submitting a proposal to determine and document NASA’s interest in the proposed research area. Proposals should include evidence of interest and potential support from NASA, e.g., in a letter (or letters) of support. The stronger the indicated support, the better the chance of obtaining funding from MSGC. The Consortium office can assist in establishing NASA contacts.

(2) SCIENCE & ENGINEERING EDUCATION ENHANCEMENT PROPOSALS:

Proposals should present a plan for significantly improving educational programs and resources in fields of science, technology, engineering and/or math (STEM) at the MSGC member colleges and universities and/or K-12 school systems. Proposed projects that focus on those aspects of STEM education that connect to NASA’s mission, aeronautics and space receive preference. Specific goals of the National Space Grant Program in this area are:

- Interdisciplinary training in areas related to the aerospace sciences and engineering,
- Recruitment and training of professionals--especially women, underrepresented minorities, and persons with disabilities--for careers in aerospace science and technology;
- Promotion of a strong science, mathematics, and technology education base from elementary through university levels.

Proposals may be for the enhancement of existing classes or curricula, or to provide start-up funding to develop new class offerings such as offerings in remote sensing, planetary science, or aerospace engineering. Grants are for a period of one year. Proposals that address university/college level education (including pre- and in-service education and training of K-12 teachers) will be favored. Projects focused on secondary, elementary, and informal (general public) education will not be funded. Proposals involving curriculum changes or additions should provide clear documentation of support for the proposed project (change) by appropriate administrators (department heads, deans, etc.). Proposals for course development or modifications should be accompanied by an explanation of why funds are not available from other sources, such as the home institution.
Important Details

- **TIME FRAME:** Proposals must be sent electronically to msgc@montana.edu as a PDF file. In addition, the original plus 10 copies should be sent to the Montana Space Grant Consortium Office, 416 Cobleigh Hall, Montana State University, Bozeman, MT 59717-3835. Both the electronic and hard copies are due **Friday, October 16th, 2009 at 5:00 p.m. MST.**

Failure to provide all information required with your proposal will delay the review process and may jeopardize your proposal’s review.

- **FUNDING PERIOD:**
  - Both Research Initiation and Educational Enhancement grants are for 1 year.
  - We plan to be able to accommodate start dates as early as January 1, 2010 (ending December 31, 2010). Your proposal should state what start date you desire.
  - No-cost extensions of the funding period may usually be arranged.

- **ELIGIBILITY:** Faculty or appropriate professionals at MSGC member campuses are eligible to apply. (View the list of Consortium member campuses at: http://spacegrant.montana.edu/Text/Introduction.html#Members)

  - **Research Initiation** Proposals are especially encouraged from new faculty, faculty changing research directions, and tenured faculty who wish to become research competitive in a space-related field. Faculty who already have substantial off-campus funding are not encouraged to apply (unless working with NASA represents a significant new direction for your research).

  - **Educational Enhancement** Proposals should clearly show how the proposed funding and program will substantially enhance space-related science, math, and engineering education in the state of Montana. Proposals in which it can be demonstrated that the new programs or enhancements created will be able to continue into the future without continuing Space Grant funding will be favored.

- **PREVIOUS GRANTEES:**
  - Recent recipients of a **Research Initiation** grant who have not submitted a follow-on proposal directly to NASA will generally not be considered eligible for additional funding until such time that attempts to secure off-campus funding can be demonstrated. If you have recently (three years) held a Montana Space Grant Consortium/NASA EPSCoR Research Initiation Grant, include in your proposal a discussion of your efforts to obtain competitive NASA funding since the original award, including a listing of all proposals submitted to NASA and other agencies, indicating whether declined, pending, or awarded.

  - Those who currently hold Montana Space Grant Consortium funding for **Educational Enhancement** activities are eligible to apply for additional funding. Proposals which seek to use continued funding to simply maintain programs
created with Montana Space Grant Consortium funding in previous years will be viewed less favorably than proposals to further enhance and enlarge space science and engineering education opportunities in the state of Montana.

- **BUDGET:** The amount requested is not restricted, but large budget requests reduce your chance of obtaining funding. The amounts suggested below are (somewhat flexible) ceilings, not “targets” or averages. Facilities and Administration (F&A, also known as “indirect” or “overhead”) costs will be charged to MSGC grants, using the appropriate rules and rates for your campus.

It is recommended that proposals should use the two-column budget form available at: [http://spacegrant.montana.edu/Text/budget.xls](http://spacegrant.montana.edu/Text/budget.xls)

- **Non MSU-Bozeman proposals:** A two-column budget must be submitted, and all proposals should include at least a 1:1 non-federal match for requested NASA/MSGC funds. Requests for less than $50,000 (total, including F&A or indirect costs) of NASA/MSGC funding per proposal are preferred since funds are limited. An (at least) equal amount of non-federal matching funds, provided by your campus or other non-federal source, should be shown in the second column, labeled “cost sharing”. Match may be in the form of hard money, faculty release time, etc. Proposals submitted with less than a 1:1 match offered will be reviewed and considered for funding. However, the amount of match offered (if less than 1:1) will be an evaluation criterion. It is suggested that you contact your campus Research Office to discuss possible sources of matching funds. Questions may also be directed to the MSGC office.

- **MSU-Bozeman proposals:** A two-column budget must be submitted. Requests for less than $50,000 (total, including F&A or indirect costs) of NASA/MSGC funding per proposal are preferred since funds are limited. The MSU-Bozeman Research Office is providing MSGC with some direct matching assistance for on-campus proposals. The matching requirement for MSU-Bozeman proposals in this 2009 round is 1:3 or greater. All proposals from MSU-Bozeman faculty must utilize the two-column budget form, with the cost-sharing column indicating what (non-federal) resources the PI may offer as partial match (e.g., commitment of faculty time). The amount of match offered above 1:3 will be an important positive evaluation criterion.

When considering possible sources of matching funds for an MSU-Bozeman proposal, be aware that there will be no return of indirect costs on these grants to college, department, or PI. For help with questions about MSU-Bozeman proposal budgets, please call the Montana Space Grant Office. **DO NOT CONTACT THE MSU RESEARCH VICE PRESIDENT’S OFFICE CONCERNING POSSIBLE MATCH FOR YOUR PROPOSAL.**

- For **Educational Enhancement** proposals, funds (whether NASA or matching) may not be used to purchase permanent equipment (the legal definition of “permanent equipment” varies from campus to campus; consult your Research office to find your campus’ definition).
• For **Educational Enhancement** proposals, all personnel funded in any way (including travel) on both NASA and matching funds must be U.S. Citizens. A non-citizen may be PI on Educational Enhancement proposal, but they cannot receive any funding from the grant.

• For **Research Initiation** proposals, personnel who are non-citizens may be funded. However, there must be clear indication in the proposal budget explanation as to which personnel are non-citizens. Any students or personnel who are not identified by name in the proposal and who receive funds from the grant must be U.S. Citizens.

• For all proposals, no funds may be used for foreign travel.

• Requests may be made for (expendable) supplies, faculty summer salary, graduate or undergraduate assistants, technical help, academic year faculty release time, travel, or other communication costs.

• Fringe benefits for salaries should be shown as a line item; benefits must be included on personnel.

• For more budget guidance, see the "Budget Preparation Guide" at the end of this document for specific requirements. Please do not hesitate to contact the MSGC office if you have budget questions. Submitted proposals often have errors in the budget, which lead to difficulties in review and evaluation. Let us help you fix these before submission.

> **CAMPUS CLEARANCE & CERTIFICATION:** All investigators are required to advise the appropriate administrator and/or department head on their campus of their plans by submitting a copy of the proposal to them.

All proposals must include a campus proposal clearance form (complete with signatures **INCLUDING BUDGET APPROVAL** and **CERTIFICATION OF NON-FEDERAL MATCH** by your campus research office).

> **SELECTION PROCESS:** All proposals will be reviewed internally by the Montana Space Grant Consortium Proposal Evaluation Committee. This committee consists of respected scientists, engineers, and educators from around the state. The evaluation committee's rankings are used together with MSGC’s overall budget constraints to determine which proposals may be funded.
Evaluation Criteria

- For NASA EPSCoR Research Initiation proposals, the panel will consider the quality of the work proposed, the ability of the PI to accomplish the research, evidence of contact and communication with NASA scientists and/or engineers, and the potential for the project (idea) to attract future regular competitive NASA funding.

- For Educational Enhancement proposals, criteria include the extent to which the proposed project enhances space-related science, math, and engineering education in Montana in the long term, as well as how the proposed goals support the general national NASA Space Grant program goals.

There is no a priori division of funding for the different member campuses of MSGC, nor between the two categories of proposal.
IF YOU HAVE QUESTIONS, CONTACT THE CONSORTIUM OFFICE:

MSGC
416 Cobleigh Hall
Montana State University
Bozeman, MT 59717-3835

Glenda Winslow
Program Coordinator
(406) 994-4223
(406) 994-4452 (FAX)
winslow@physics.montana.edu

Dr. Angela Des Jardins
Interim Director
(406) 994-6172*
desjardins@physics.montana.edu

*For proposal discussion, e-mail is preferable

Note: The MSGC office will be closed September 11th, 17th-18th and October 21st-23rd, 2009 for local and national meetings.
OUTLINE FOR PREPARING Montana NASA EPSCoR RESEARCH INITIATION PROPOSALS

(Submit electronically as a PDF file, as well as the original plus 10 copies, and one signed copy of your campus Proposal Clearance Form) Note: Failure to provide all information requested below may delay the review process and jeopardize your proposal's review.

I. TITLE PAGE: proposal title, P.I. name, address, phone number, FAX number, e-mail address and total budget request (indicate both amount of NASA funding requested and amount offered as match).

II. TABLE OF CONTENTS

III. ABSTRACT: limit to 250 words

IV. BODY of proposal (8 page maximum). Single spacing is acceptable but double spacing is preferred; 12 pt font.
   A. 1-2 pages introductory material (stress your contributions to the field).
   B. Rationale for doing the work as it relates to the corpus of knowledge already available.
   C. Goals of the project (be specific).
   D. Statement on how you plan to proceed: Approach & Methods.
   E. Description of all contacts and communications with NASA Centers regarding this proposal. Explain how the proposed research relates to NASA's mission and needs. Include letters of support from NASA personnel if available.
   F. References.

V. COMPETITIVE STATEMENT: Indicate how this proposal, if funded, will improve your national competitiveness for regular NASA (or other appropriate agency) funding. Describe plans for subsequent research and grant activity that will be enabled by this seed funding.

VI. BIOGRAPHICAL INFO and list of pertinent publications (for last five years). Vita should include a list of grant support, title of proposals, dates, funding agency, and amount of awards. Particularly note previous involvement with NASA-funded research. Include biographical information for all faculty involved, and (if available) students to be involved in the project if the identity of students is known at this point.

VII. BUDGET: See "Budget Preparation Guide" (final page of this announcement). Use a two-column format, showing NASA and non-federal matching funds for all expenditures. Non-MSU-Bozeman proposals should contain a certified 1:1 non-federal match; MSU-Bozeman proposals should contain at least a certified 1:3 non-federal match. Budget (and particularly, form and amount of matching funds) must be approved and certified by signatures on a Proposal Clearance Form from your campus. Clearly indicate source of matching funds, including a breakdown of cash match and/or non-cash contributions.

VIII. JUSTIFICATION/EXPLANATION OF BUDGET: Describe how the budget will allow the proposed research; be generous in providing explanatory detail.

IX. PRESENT FUNDING: Provide a listing of all current and pending support. For pending grant proposals under review, include amount of request, title, award status, and dates.

X. CONTINUED FUNDING JUSTIFICATION (prior grantees only): List all proposals submitted to NASA as a result of prior funding, their outcome (funded, pending, rejected). Explain why further funding of your program by the Consortium is appropriate: will one more year's funding strongly enhance the probability of your program being funded directly by NASA?
OUTLINE FOR PREPARING Montana Space Grant Consortium
EDUCATIONAL ENHANCEMENT PROPOSALS

(Submit electronically as a pdf file, as well as the original plus 10 copies, and one signed copy of your campus Proposal Clearance Form) Note: Failure to provide all information requested below may delay the review process and jeopardize your proposal’s review.

I. TITLE PAGE: proposal title, P.I. name, address, phone number, FAX number, e-mail address and total budget request (indicate both amount of NASA funding requested and amount offered as match).

II. TABLE OF CONTENTS

III. ABSTRACT: limit to 250 words

IV. BODY of proposal (8 page maximum). Single spacing is acceptable but double spacing is preferred; 12 pt font.

A. Introduction (describe the general notion of the proposed project, explain why you are the right person to implement it).

B. Rationale for doing the work as it relates to the state of science, technology, engineering and math (STEM) education in Montana at present.

C. Goals of the project (be specific).

D. Statement on how you plan to proceed (describe schedule and milestones).

E. Description of long-term impact of your project, if funded: will your "improvements" to the state of STEM education in Montana extend beyond the funding period? Give details.

F. How will your project be evaluated? Provide specific metrics, plan, and timeline.

G. If your proposal is for pre-college educational enhancement, you must address the following issues (briefly): How will your efforts address the state of Montana Science Education Standards (http://www.opi.state.mt.us/pdf/standards/ContStds-Science.pdf), the National Education Standards in Mathematics and Science, the NASA Education Strategic Coordination Framework (available at: http://education.nasa.gov/about/strategy/index.html), and the National Space Grant objectives?

V. BIOGRAPHICAL INFO for all faculty members (and, if appropriate, students) involved in the project. Professional qualifications in areas of STEM education and research should be clearly stated: publications, previous NASA grants, aerospace-related classes previously taught, etc.

VI. BUDGET: See "Budget Preparation Guide" (final page of this announcement). Use a two-column format, showing NASA and non-federal matching funds for all expenditures. Non-MSU-Bozeman proposals should have a certified 1:1 non-federal match; MSU-Bozeman proposals should contain at least a certified 1:3 non-federal match. Budget (and particularly, form and amount of matching funds) must be approved and certified by signatures on a Proposal Clearance Form from your campus. Clearly indicate source of matching funds, including a breakdown of cash match and/or non-cash contributions.

VII. JUSTIFICATION/EXPLANATION OF BUDGET: Describe how the budget will support the proposed project.

VIII. SUMMARY OF PROJECT PROGRESS (prior grantees only): Describe in detail the progress made to date on your project. Describe impacts in terms of number of students involved, for what time period, evaluations of new classes offered, etc. Describe also specific plans for the remainder of your currently funded period. Report any permanent equipment enhancements, publications, meetings attended, talks given, classroom materials created, syllabi for new classes offered, etc. Be quantitative whenever possible (estimate impacts if necessary).
1. Salary breakdown must include amount of time each person being paid from the grant devoted to the Space Grant/NASA EPSCoR Program. It should be indicated in staff hours as well as by the percentage of the individual's total effort (FTE). For Educational Enhancement proposals, all persons receiving support must be U.S. citizens. For Research Initiation proposals, specifically named non-citizens may receive support. *In this case, the budget explanation must clearly indicate which personnel are non-citizens.*

2. Show a complete breakdown of estimated travel costs, including airfare and per diem, registration fees and car rental costs. No foreign travel can be charged to a MSGC/Montana NASA EPSCoR grant or matching funds.

3. Computer hookup costs must include computer model number(s) and cost per hour.

4. The use of a consultant requires the submission of his/her resume, work statement, and a breakout of his/her hourly rate.

5. Non-expendable (i.e., permanent) equipment may not be charged to Educational Enhancement grants.

6. Postage and general office supplies may not be charged to the grant. (See OMB Circular A-21 for additional general grant restrictions and rules).

7. Questions regarding the validity of a matching fund source should be directed to the local office of sponsored programs.